

2020 Annual Drinking Water Quality (Consumer Confidence Report for the year 2019)

Special Notice

(For people with weakened immune systems)

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (1-800-426-4791)

Our Drinking water meets or exceeds all Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Source Water Susceptibility Assessment (SWSA)

A Source Water Susceptibility Assessment (SWSA) for your drinking water sources is currently being updated by the Texas Commission on Environmental Quality (TCEQ) and should be provided to us this year. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment will allow the NTMWD to focus our source water protection strategies. For more information on source water assessments and protection efforts of our system, contact NTMWD Public Relations Coordinator Denise Hickey at dhickey@ntmwd.com or 972-442-5405.

Unregulated Contaminant Monitoring Regulations (UCMR)

"Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data, visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html> or call the Safe Drinking Water Hotline at (800) 426-4791

Water Sources

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. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

Our drinking water is obtained from **SURFACE** water sources. It comes from the following: Lake/river/Reservoir/Aquifer: **Lake Lavon. & Lake Tawakoni** The TCEQ has completed a source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of contaminants that may come into contact with the drinking water source bases on human activities and natural conditions. The system (s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, please contact us.

En Espanol

Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en espanol, favor de llamar tel. (972) 452-3388— para hablar con una persona bilingue en espanol.

Water is a Necessity Not A Luxury!



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

Maximum Contaminant Level (MCL) - The highest permissible level of a

contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below in which there is no known or expected health risk.

MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition

of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a

drinking water disinfectant below in 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.

MFL - million fibers per liter (a measure of asbestos) (mrem/yr) - millirem/year

(a measure of radioactivity)

N/A - Not Applicable **ND** - Not Detected

Non-Regulated Contaminants - Non-regulated contaminants are those for which

EPA has not established drinking water standards. The purpose of unregulated

contaminant monitoring is to assist the EPA in determining the occurrences in

drinking water and whether future regulations are warranted.

NTU - Nephelometric Turbidity Units (this is the unit used to measure water turbidity)

(oocysts/L) - oocysts per liter (an oocyst is the spore phase, inactive form of *Cryptosporidium*)

(pCi/L) - picocuries per liter (a measure of radioactivity) **(ppb)** - parts per billion, or micrograms per liter ($\mu\text{g/L}$)

(ppm) - parts per million, or milligrams per liter (mg/L) **(ppq)** - parts per quadrillion, or picograms per liter

(ppt) - parts per trillion, or nanograms per liter

Total Coliform - Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing is easily performed. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Total Organic Carbon - Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. 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 in this publication.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Turbidity - Turbidity is a measure of the clarity of water. 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.

Unregulated Contaminants - Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

All Drinking water may contain contaminants.

When drinking water meets federal standards there may not be any health based 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 EPA's Safe Drinking Water Hotline at (1-800-426-4791).

Lead & Copper Information

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. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Secondary 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, secondary's are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli MCL	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	0.00	0	0		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-	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2019	22.7	37.1	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2019	43.3	77.1	No goal for the total	80	ppb	No	By-product of drinking water disinfection.
Bromate	2019	6.3	5.2 - 6.3	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future. TCEQ only requires one sample annually for compliance.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2019	Levels lower than detect level	0 - 0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2019	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	2019	0.044	0.043 - 0.044	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2019	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	2019	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	2019	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2019	0.230	0.215 - 0.230	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2019	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)	2019	0.772	0.083 - 0.772	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	2019	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	2019	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 agri-

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	8.0	8.0 - 8.0	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2018	Lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	2018	Lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2, 4, 5 - TP (Silvex)	2019	Lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2019	Lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2019	Lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Aldicarb	2019	Lower than detect level	0 - 0	0	3	ppb	No	Runoff from herbicide used on row crops.
Aldicarb Sulfone	2019	Lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Alsdicarb Solfoxide	2019	Lower than detect level	0 - 0	3	4	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2019	0.2	0.1 - 0.2	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2019	Lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2019	Lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2019	Lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2019	Lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2019	Lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2019	Lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2019	Lower than detect level	0 - 0	0	200	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2019	Lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2019	Lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2019	Lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2019	Lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2019	Lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2019	Lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2019	Lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2019	Lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2019	Lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2019	Lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2019	Lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Picloram	2019	Lower than detect level	0 - 0	4	500	ppb	No	Herbicide runoff.
Simazine	2019	0.33	0.32 - 0.33	4	4	ppb	No	Herbicide runoff.
Toxaphene	2019	Lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.

Wylie Treatment Plant

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2019	Lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2019	Lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2019	Lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2019	Lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorobenzene	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2019	Lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2019	Lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2019	Lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2019	Lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2019	Lower than detect level	0 - 0	70	70	ppb	No	Discharge industrial chemical factories.
o - Dichlorobenzene	2019	Lower than detect level	0 - 0	600	600	ppb	No	Discharge industrial chemical factories.
p - Dichlorobenzene	2019	Lower than detect level	0 - 0	75	75	ppb	No	Discharge industrial chemical factories.
trans - 1, 2 - Dichloroethylene	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge industrial chemical factories.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.97	No	Soil runoff.
Lowest monthly percentage meeting limit	0.3 NTU	95.50%	No	Soil runoff.

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

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2019	3.87	2.13	3.11	4.00	< 4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2019	0	0	0	0.80	0.80	ppm	Disinfectant.
Chlorite	2019	0.04	0.00	0.42	1.00	N/A	ppm	Disinfectant.

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

Total Organic Carbon

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

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report. Removal ratio is the percent of TOC removed by the treatment process divided by the percent of the 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
Cryptosporidium	2019	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2019	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Lead and Copper

Lead and Copper	Date Sampled	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	2017	15	1.3	1.03	ppb		Corrosion of household plumbing systems; erosion of natural deposits.
Copper	2017	1.3	15	0.1603	ppm		Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.

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. GSSUD 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 @ <http://www.epa.gov/safewater/lead>

Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2019	34.9	17.85	ppb	By-product of drinking water disinfection.
Bromoform	2019	3.7	1.54	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2019	16.6	10.82	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2019	10.2	5.99	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 distribution.

Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Aluminum	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits.
Calcium	2019	60.7	60.6 - 60.7	ppm	Abundant naturally occurring element.
Chloride	2019	65.3	11.6 - 65.3	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Iron	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2019	4.47	4.39 - 4.47	ppm	Abundant naturally occurring element.
Manganese	2019	0.0048	0.0046 - 0.0048	ppm	Abundant naturally occurring element.
Nickel	2019	0.0051	0.0049 - 0.0051	ppm	Erosion of natural deposits.
pH	2019	8.65	7.94 - 8.65	units	Measure of corrosivity of water.
Silver	2019	Levels lower than detect level	0 - 0	0	Erosion of natural deposits.
Sodium	2019	40.0	39.8 - 40.0	ppm	Erosion of natural deposits; oil field activity.
Sulfate	2019	132	34.8 - 132	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO ₃	2019	119	81 - 119	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2019	534	250 - 534	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO ₃	2019	191	114 - 191	ppm	Naturally occurring calcium.
Zinc	2019	Levels lower than detect level	0 - 0	ppm	Moderately abundant naturally occurring element used in the metal industry.

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	0.00	0	0		Naturally present in the environment.

NOTE: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, water-borne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. If coliforms are found, this indicates the need to look for potential problems in water treatment or distribution. When this occurs, systems are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments. A Level 1 assessment must be conducted when a PWS exceeds one or more of the Level 1 treatment technique triggers specified previously. Under the rule, this self-assessment consists of a basic examination of the source water, treatment, distribution system and relevant operational practices. The PWS should look at conditions that could have occurred prior to and caused the total coliform-positive sample. Example conditions include treatment process interruptions, loss of pressure, maintenance and operation activities, recent operational changes, etc. In addition, the PWS should check the conditions of the following elements: sample sites, distribution system, storage tanks, source water, etc. If the number of positive samples is below the required action level, then no assessment is performed. *E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. When E. coli bacteria are found, this indicates the need to look for potential problems in water treatment or distribution. When this occurs, systems are required to conduct level 2 assessment(s) to identify problems and to correct any problems that were found during these assessments.*

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)	2019	22.7	37.1	No goal for the total	60	ppb		By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2019	43.3	77.1	No goal for the total	80	ppb		By-product of drinking water disinfection.
Bromate	2019	Lower than detect level	0 - 0	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future. 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	2019	Lower than detect level	0 - 0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2019	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	2019	0.043	0.043 - 0.043	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2019	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	2019	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	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2019	0.486	0.486 - 0.486	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2019	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.

Tawakoni Treatment Plant

Nitrate (measured as Nitrogen)	2019	0.428	0.428 - 0.428	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	2019	Lower than detect level	0 - 0	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2019	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 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 care provider.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	Lower than detect level	0 - 0	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2018	Lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	2018	Lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2, 4, 5 - TP (Silvex)	2018	Lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2018	Lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2018	Lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Aldicarb	2018	Lower than detect level	0 - 0	0	3	ppb	No	Runoff from pesticide used on row crops.
Aldicarb Sulfone	2018	Lower than detect level	0 - 0	0	2	ppb	No	Runoff from pesticide used on row crops.
Alsdicarb Solfoxide	2018	Lower than detect level	0 - 0	3	4	ppb	No	Runoff from pesticide used on row crops.
Atrazine	2018	0.2	0.2 - 0.2	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2018	Lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2018	Lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2018	Lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2018	Lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2018	Lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2018	Lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2018	Lower than detect level	0 - 0	0	200	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2018	Lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2018	Lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2018	Lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2018	Lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.

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Heptachlor epoxide	2018	Lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2018	Lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2018	Lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2018	Lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2018	Lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2018	Lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2018	Lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Picloram	2018	Lower than detect level	0 - 0	4	500	ppb	No	Herbicide runoff.
Simazine	2018	Lower than detect level	0 - 0	4	4	ppb	No	Herbicide runoff.
Toxaphene	2018	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 De-	Range of Levels De-	MCLG	MCL	Units	Viola-	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2019	Lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2019	Lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2019	Lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2019	Lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Volatile Organic Contaminants	Collection Date	Highest Level De-	Range of Levels De-	MCLG	MCL	Units	Viola-	Likely Source of Contamination
Chlorobenzene	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2019	Lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2019	Lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2019	Lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2019	Lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2019	Lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2019	Lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2019	Lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2019	Lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.

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p - Dichlorobenzene	2019	Lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dichloroethylene	2019	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	0.14	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	100.00%	No	Soil runoff.

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

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2019	3.87	2.13	3.11	4.00	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2019	0	0	0	0.80	0.80	ppm	Disinfectant.
Chlorite	2019	0.12	0.01	0.45	1.00	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	2019	5.71	4.85 - 5.71	ppm	Naturally present in the environment.
Drinking Water	2019	3.04	1.83 - 3.04	ppm	Naturally present in the environment.
Removal Ratio	2019	74.2%	40.6 - 74.2	% removal *	N/A

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

* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Cryptosporidium and Giardia

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Cryptosporidium	2018	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2018	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Lead and Copper

Lead and Copper	Date Sampled	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	207	15	1.3	1.03	ppb		Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Copper	2017	1.3	15	0.1603	ppm		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. GSSUD 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 @ <http://www.epa.gov/safewater/lead>

Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2019	34.9	17.85	ppb	By-product of drinking water disinfection.
Bromoform	2019	3.7	1.54	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2019	16.6	10.82	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2019	10.2	5.99	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
Aluminum	2019	0.041	0.041 - 0.041	ppm	Erosion of natural deposits.
Calcium	2019	34	34 - 34	ppm	Abundant naturally occurring element.
Chloride	2019	15.9	9.22 - 15.9	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Iron	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2019	2.59	2.59 - 2.59	ppm	Abundant naturally occurring element.
Manganese	2019	0.0021	0.0021 - 0.0021	ppm	Abundant naturally occurring element.
Nickel	2019	0.0031	0.0031 - 0.0031	ppm	Erosion of natural deposits.
pH	2019	8.70	7.50 - 8.70	units	Measure of corrosivity of water.
Silver	2019	Levels lower than detect level	0 - 0	0	Erosion of natural deposits.
Sodium	2019	12.2	12.2 - 12.2	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2019	70.3	49.1 - 70.3	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO ₃	2019	67	53 - 67	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2019	268	146 - 268	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO ₃	2019	112	97.6 - 112	ppm	Naturally occurring calcium.
Zinc	2019	Levels lower than detect level	0 - 0	ppm	Moderately abundant naturally occurring element used in the metal industry.