RCH WSC

2019 Annual Drinking Water Quality Report

(Annual Water Quality Report for the period of January 1 to December 31, 2019)
PWS ID Number TX1990012

Purpose of Report

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

For more information regarding this report contact:

Robin Baley - Administrative Assistant
Phone (972) 722–3203

Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español, favor de llamar al telefono (972) 722-3203

Public Participation Opportunities
To learn about future public meetings, visit www.rchwater.com

Information about your Drinking Water

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

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 at (800-426-4791).

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. We are 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in

(Contaminants that may be present in source water continued)

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.

Where do we get our drinking water?

The RCH Water Supply purchases treated water from the City of Rockwall who purchases treated water from North Texas Municipal Water District (TX0430044) from the Wylie Water Treatment Plant. The water is obtained from surface water sources. The water comes from the following Reservoirs: Lavon located in Collin County, Jim Chapman located in Hopkins and Delta Counties, Texoma located in Grayson County, Tawakoni located in Hunt, Rains, and Van Zandt Counties and East Fork Raw Water Supply Project (Wetland) located in Kaufman County.

Information about Source Water Assessments

TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based 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 contact NTMWD Environmental Services Department at (972) 442-5405 or environmental.info@ntmwd.com.

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

Water Audit Report

In the water loss audit submitted to the Texas Water Development Board for the time period of January – December 2019, our system lost an estimated 3,466,700 gallons of water. If you have any questions about the water loss audit, please call at 972-722-3203.

Water Quality Test Results

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

Definitions and Abbreviations:

Action Level:	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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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 our 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 our water system on multiple occasions.
Maximum Contaminant Level or 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 Contaminant Level Goal or 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 residual disinfectant level or 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.
Maximum residual disinfectant level goal or 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.
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.
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

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	5% of monthly samples are positive	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)	2019	25	17.7 - 27.3	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2019	37	25 - 46.3	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 testing.

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	1.0	0.6 - 0.6	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

Regulated Contaminants (Cont.)

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
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 agricultural activity. If you are caring for an infant you should ask advice from your health care provider.								
Radioactive Contaminants	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Beta/photon emitters	2018	8.0	8.0 - 8.0	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2018	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	2018	Levels lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
2, 4, 5 - TP (Silvex)	2019	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2019	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2019	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Aldicarb	2019	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff from herbicide used on row crops.
Aldicarb Sulfone	2019	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Alsdicarb Solfoxide	2019	Levels 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	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2019	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2019	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2019	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2019	Levels lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2019	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2019	Levels lower than detect level	0 - 0	0	200	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.

Regulated Contaminants (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
Dinoseb	2019	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2019	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2019	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2019	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2019	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2019	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2019	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2019	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2019	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2019	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2019	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Picloram	2019	Levels 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	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	2019	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2019	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2019	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2019	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.

Regulated Contaminants (Cont.)

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorobenzene	2019	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2019	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2019	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2019	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2019	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2019	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2019	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2019	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2019	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2019	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dicholoroethylene	2019	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	0.97	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	95.50%	No	Soil runoff.

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

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2019	1.86	0.30	2.20	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 parts per million (ppm).

Total Organic Carbon

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

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

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	2018	15	1.1	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.
Copper	2018	1.3	0.55	0	ppm	No	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. The City of Rockwall 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	2019	12.8	8.65 - 12.8	ppb	By-product of drinking water disinfection.
Bromoform	2019	2.33	1.00 - 2.33	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2019	14.7	6.62 - 14.7	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2019	10.7	3.94 - 10.7	ppb	By-product of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

UCMR 4 Unregulated Contaminants

Contaminants	Collection Date	Average	Lowest Results	Highest Results	MCL	MCLC	Units	Likely Source of Contamination
HAA5	2019	17.4	8.9	25.9	60	N/A	ppb	Byproduct of drinking water disinfection.
HAA6	2019	14.1	8.5	20.9	N/A	N/A	ppb	Byproduct of drinking water disinfection.
HAA9	2019	27.8	14.8	42.7	N/A	N/A	ppb	Byproduct of drinking water disinfection.

UCMR 4: Unregulated Contaminants Monitoring Rule 4: The UCMR program was developed in coordination with the Containment Candidate List (CCL). The CCL is a list of contaminants that are not regulated by the National Primary Drinking Water Regulations, are known or anticipated to occur at public water systems and may warrant regulations under the Safe Drinking Water Act. Data collected through the UCMR are stored in the National Occurrence Data Base (NCOD) to support analysis and review of contaminant occurrence, to guide the CCL selection process and to support the Administrator's determination of whether to regulate a contaminant in the interest of protecting public health. For additional information visit: https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule

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; by-product of oil field activity.
Sulfate	2019	132	34.8 - 132	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2019	119	81 - 119	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2019	534	250 - 534	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2019	191	114 - 191	ppm	Naturally occurring calcium.
Zinc	2019	Levels lower than detect level	0 - 0	ppm	Moderately abundant naturally occurring element used in the metal industry.