2019 Consumer Confidence Report (CCR) for Public Water System NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE TX2200332 This is your water quality report for January 1 to December 31, 2019.

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Definitions and Abbreviations

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

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 EPAs 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. 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 (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 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 source of drinking water used by NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE is Purchased Surface Water. Fort Worth uses surface water from Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook and the Clear Fork Trinity River. Fort Worth owns Lake Worth. The U.S. Army Corps of Engineers is the responsible for Benbrook Lake. The other four lakes are owned and operated by the Tarrant Regional Water District.

Inorganic Contaminants

Year or Range	Contaminant	Maximum Level	Range of Levels	MCLG	MCL	Unit of Measure	Violation	Source of Contamination
2019	Fluoride	0.54	0.15 – 0.54	4	4	ppm	N	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
2019	Cyanide	126	74.8 to 126	200	200	ppm	N	Discharge form plastic and fertilizer factories; discharge from steel and metal factories
2019	Nitrate	0.93	0.22 – 0.93	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2019	Nitrite	0.4	0 to 0.4	1	1	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2019	Bromate	4.35	0 – 14.8	0	10	ppb	N	Byproduct of drinking water disinfection
2017	Gross Beta Emitters [1]	5.6	4.4 to 5.6	0	50	pCi/L	N	Decay of natural and man-made deposits
2017	Combined Radium [1] (-226 & -5203, 1228)	2.5	N/A	0	5	pCi/L	N	Erosion of natural deposits
2019	Arsenic	1.50	0 to 1.5	0	10	ppb	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2019	Atrazine	0.1	0.0 to 0.1	3	3	ppb	N	
2019	Barium	0.06	0.05 – 0.06	2	2	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
2019	Uranium	1.1	0 to 1.1	0	30	ppb	N	Erosionn of natural deposits

[1]Due to historically low levels of radionuclides, TCEQ requires the City of Fort Worth to test them every 6 years. Results above are from 2017. Next sampling will be in 2023.

Maximum Residual Disinfectant Level

Year	Disinfectant	Actual Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2019	Chloramine Residual	2.17	0.83	3.31	4	4	ppm	Water additive used to control microbes

Disinfectant Byproducts

Year	Disinfectant Byproducts	Highest Level [2]	Range of Levels	MCL	MCLG	Units	Violation	Likely Source of Disinfectant
2019	Haloacetic Acids (HAA5)	9	5.4 – 11.2	60	N/A	ppb	N	Byproduct of drinking water disinfection.
2019	Total Trihalomethanes (TTHM)	9	3.19 – 13.3	80	N/A	ppb	N	Byproduct of drinking water disinfection.

[2]The value in the Highest Level column is the highest average of all HAA5 and/or TTHM samples results collected at a location over a year.

Turbidity

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2019	Turbidity	TT=1 TT=Lowest monthly % of samples <or-0.3 NTU	99.9	0.5	NTU	Soil runoff (Turbidity is measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.)

Coliform Bacteria

Maximum Contaminant level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	1		0	N	Naturally present in the environment

Total Organic Carbon

Year	Contaminant	High Measurement	Low Measurement	Average Measurement	MCL	MCLG	Common Sources of Substance
2019	Total Organic Carbon[3]	1	1	1	TT=% removal	N/A	Naturally occurring

[3] Total Organic Carbon is used to determine disinfection byproduct precursors. Fort Worth is in compliance with all monitoring and treatment technique requirements for disinfection byproduct precursors.

Secondary and Other Constituents Not Regulated

(These items do not relate to public health but rather to the aesthetic effects. These items are often important to industry.)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2019	Bicarbonate	138.5	128	149	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2019	Calcium	51.55	42.4	60.7	N/A	ppm	Abundant naturally occurring element
2019	Chloride	27.3	19.5	35.1	300	ppm	Abundant naturally occurring element; used in water purifications; byproduct of oil field activity
2019	Conductivity	442.5	403	482	N/A	umhos/cm	Measure of conductivity in water activity
2019	pH	8.25	8.1	8.4	>7.0	units	Measure of corrosivity of water
2019	Magnesium	6.47	4.64	8.3	N/A	ppm	Abundant naturally occurring element
2019	Sodium	20.95	15.1	26.8	N/A	ppm	Erosion of natural deposits; byproduct of oil field activity

2019	Sulfate	33.85	23.4	44.3	N/A	ppm	Naturally occurring element; common industrial byproduct; byproduct of oil field activity
2019	Total Alkalinity as $CaCO_3$	139	128	150	N/A	ppm	Naturally occurring soluble mineral salts
2019	Total Dissolved Solids	229	192	266	N/A	ppm	Total dissolved mineral constituents in water
2019	Total Hardness as $CaCO_3$	158	138	178	N/A	ppm	Naturally occurring calcium
2019	Total Hardness in Grains	9	8	10	N/A	grains/gallon	Naturally occurring elements

Unregulated Contaminants

Unregulated contaminants are those for which the 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.

Year	Contaminant	Range of Detects	2019 Level	Unit of Measure	MCL	MCLG	Common Sources of Substance
2019	Total Trihalomethanes	3.19 – 13.3	13.3	ppb	Not Regulated	80	Byproduct of drinking water disinfection
2019	Bromoform	<1	<1	ppb	Not Regulated	None	
	Bromodichloromethane	1.17 – 4.97	4.97	ppb	Not Regulated	None	Byproducts of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
	Chloroform	2.0 – 5.84	5.84	ppb	Not Regulated	None	
	Dibromochloromethane	<1– 2.48	2.48	ppb	Not Regulated	None	
2019	Total Regulated HAA	5.4 – 11.2	11.2	ppb	Not Regulated	60	Byproduct of drinking water disinfection

2019	Monochloroacetic Acid	<1 –2.5	2.5	ppb	Not regulated	None	
	Dichloroacetic Acid	3.7 – 7.3	7.3	ppb	Not Regulated	None	
	Trichloroacetic Acid	<1	<1	ppb	Not Regulated	None	Byproducts of drinking water disinfection; not regulated individually; included in Haloacetic Acids
	Monobromoacetic Acid	<1	<1	ppb	Not Regulated	None	
	Dibromoacetic Acid	1.3 – 2.4	2.4	ppb	Not Regulated	None	
	Bromochloroacetic Acid	3.0 – 4.7	4.7	ppb	Not Regulated	None	

Microorganism testing shows low detections in raw water for 2019

Tarrant Regional Water District monitors the raw water at all intake sites for Crytosporidium, Giardia Lamblia, and viruses. The source is human and animal fecal waste in the watershed. The 2019 sampling showed low level detections of Cryptosporidium, Giardia Lamblia and viruses in some but not all of the water supply sources. Viruses are treated through disinfection processes. Cyrptosporidium and Giardia Lamblia are removed through a combination of disinfection and/or filtration.

TCEQ assesses raw water supplies for susceptibility

Fort Worth uses surface water from Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook and the Clear Fork Trinity River. Fort Worth owns Lake Worth. The U.S. Army Corps of Engineers is the responsible for Benbrook Lake. The other four lakes are owned and operated by the Tarrant Regional Water District. The Texas Commission on Environmental Quality completed an assessment of the Fort Worth's source waters. TCEQ classified the risk to our source waters as high for most contaminants. High susceptibility means there are activities near the source water a or watershed make it very likely that chemical constituents may come into contact with the source water. It does not mean that there are any health risks present. Tarrant Regional Water District, from which Fort Worth purchases its water, received the assessment reports. For more information on source water assessments and protection efforts at our system, contact Stacy Walters at 817-392-8203. Further details about the source-water assessments are available in the Texas Commission on Environmental Quality's Drinking Water Watch database at https://dww2.tceq.texas.gov/DWW/JSP/SWAP.jsp?tinwsys_is_number=5899&tinwsys_st_code=TX&wsnumber=TX2200012%20%20%20&DWWState=TX

For TRA Only and EMERGENCY INTERCONNECTION

In accordance with the requirements of 290.272. Content of the Report. (g0(6) 'Systems that use an interconnect or emergency source to augment the drinking water supply during the calendar year of the report must provide the source of the water, the length of time used, and explanation of why it was used and whom to call for the water quality information." The Trinity River Authority of Texas-Tarrant Water Supply Project supplied water to Fort Worth through an emergency interconnection. The water was supplied Jan.15 through Jan.18 and Feb. 26 through Feb. 28, as repayment for water supplied to TRA in a previous year for a pipeline rupture. Wholesale customers in the Centerport area of Fort Worth may have received some of this water.

Fort Worth's water quality report is available online at www.fortworthtexas.gov/tapwater. For additional TRA water quality data, please contact Mr. Phillip Lopez, Environmental Director at 817-782-6474.