

**2017 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, 2017.**

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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)

PCYT: 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 EPA's 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. A Source Water Susceptibility Assessment for your drinking water is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and normal conditions. The information contained in this assessment allows us to focus source water protection strategies. Some of this source water assessment information is available on the Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

Inorganic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contamination
2017	Fluoride	0.32	0.32	0.66	4	4	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
2017	Cyanide	57.0	0	57.0	200	200	ppb	Discharge from plastic and fertilizer factories; discharge from steel and metal factories
2017	Nitrate	0.66	<0.10	.66	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2017	Nitrite	0.238	0.006	0.238	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2017	Bromate	1.9	0	5.5	10	0	ppb	Byproduct of drinking water disinfection
2017	Gross Beta Emitters ¹	5.6	4.4	5.6	50	N/A	pCi/L	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
2017	Combined Radium (-226 & -5203, 1228)	2.5	0	5	5	0	pCi/L	
2017	Arsenic	2	0	2	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2017	Atrazine	0.1	0	0.1	3	0	ppb	
2017	Barium	0.08	0.06	0.08	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
2017	Chromium (Total)	1.6	0	1.6	100	100	ppb	Discharge from steel and pulp mills, erosion of natural deposits

Maximum Residual Disinfectant Level

Year	Disinfectant	Actual Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2017	Chloramine Residual	2.03	1.44	3.01	4	4	ppm	Water additive used to control microbes

Lead and Copper

Year	Constituent	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contaminant
2017	Copper	1.3	1.3	0.7824	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
2017	Lead	0	15	1.4	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectant Byproducts

Year	Disinfectant Byproducts	Highest Level	Range of Levels	MCL	MCLG	Units	Violation	Likely Source of Disinfectant
2017	Haloacetic Acids (HAA5)	10.3	2.2 - 10.3	60	N/A	ppb	No	Byproduct of drinking water disinfection.
2017	Total Trihalomethanes (TTHM)	13.2	1.49 - 13.2	80	N/A	ppb	No	Byproduct of drinking water disinfection.

Turbidity

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2017	Turbidity	TT=1 TT=Lowest monthly % of samples <or- 0.3 NTU	99.8	0.6	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.)

Coliforms

Contaminant	Measure	MCL	2017 level	Range	MCLG	Source of Contamination
Total Coliforms (including fecal coliform & E. coli)	% Positive samples	Presence in 5% or less of monthly samples	Presence in 0% of monthly samples	0%	0	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E. coli only comes from human and animal fecal waste.

Total Organic Carbon

Year	Contaminant	High Measurement	Low Measurement	Average Measurement	MCL	MCLG	Common Sources of Substance
2017	Total Organic Carbon ³	1	1	1	TT=% removal	N/A	Naturally occurring

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

Secondary and Other Constituents Not Regulated

(No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2017	Bicarbonate	126	108	144	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2017	Calcium	44	37.4	50.6	N/A	ppm	Abundant naturally occurring element

2017	Chloride	23.85	11.6	36.1	300	ppm	Abundant naturally occurring element; used in water purifications; byproduct of oil field activity
2017	Conductivity	377.5	299	456	N/A	umhos/cm	Measure of conductivity in water activity
2017	pH	8.2	7.8	8.6	>7.0	units	Measure of corrosivity of water
2017	Magnesium	3.89	2.69	7.78	N/A	ppm	Abundant naturally occurring element
2017	Sodium	17.74	9.57	25.9	N/A	ppm	Erosion of natural deposits; byproduct of oil field activity
2017	Sulfate	29.6	24.8	34.4	N/A	ppm	Naturally occurring element; common industrial byproduct; byproduct of oil field activity
2017	Total Alkalinity as CaCO ₃	126.5	108	145	N/A	ppm	Naturally occurring soluble mineral salts
2017	Total Dissolved Solids	185.5	116	255	N/A	ppm	Total dissolved mineral constituents in water
2017	Total Hardness as CaCO ₃	135	113	157	N/A	ppm	Naturally occurring calcium
2017	Total Hardness in Grains	8	7	9	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 or unregulated contaminants in drinking water and whether future regulation is warranted.

Year	Contaminant	Range of Defects	2017 Level	Unit of Measure	MCL	MCLG	Common Sources of Substance
2017	Chloral Hydrate	0.18-0.70	0.70	ppb	Not Regulated	None	Byproduct of drinking water disinfection
2017	Bromoform	<1	<1	ppb	Not Regulated	None	
	Bromodichloromethane	<1-4.48	4.48	ppb	Not Regulated	None	Byproducts of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
	Chloroform	1.85-4.75	4.75	ppb	Not Regulated	None	
	Dibromochloromethane	<1-3.09	3.09	ppb	Not Regulated	None	

2017	Monochloroacetic Acid	<1	<1	<1	ppb	Not Regulated	None
	Dichloroacetic Acid	2.20 – 6.80	6.80	6.80	ppb	Not Regulated	None
	Trichloroacetic Acid	<1 - 1.30	1.30	1.30	ppb	Not Regulated	Byproducts of drinking water disinfection; not regulated individually; included in Haloacetic Acids
	Monobromoacetic Acid	<1	<1	<1	ppb	Not Regulated	None
	Dibromoacetic Acid	<1 – 2.30	2.30	2.30	ppb	Not Regulated	None

Microorganism testing shows low detections in raw water for 2017

Tarrant Regional Water District monitors the raw water at all intake sites for Cryptosporidium, Giardia Lamblia, and viruses. The source is human and animal fecal waste in the watershed. The 2016 sampling showed low level detections of Cryptosporidium, Giardia Lamblia and viruses that are common in surface water. The table above indicates when detections were found in each raw water source. Cryptosporidium and Giardia Lamblia monitoring is done monthly. Virus monitoring is performed four times a year in January, March, July and September. Viruses are treated through disinfection processes. Cryptosporidium and Giardia Lamblia are removed through a combination of disinfection and/or filtration.

Intake Location	Cryptosporidium	Giardia Lamblia	Adenovirus	Enterovirus
Richland-Chambers Reservoir	Not detected	Not detected	Not detected	Not detected
Cedar Creek Lake	March	Not detected	Not detected	Not detected
Lake Benbrook	May	Not detected	Not detected	Not detected
Eagle Mountain Lake	January	Not detected	Not detected	Not detected
Lake Worth	January	Not detected	Not detected	Not detected
Clearfork of Trinity River	January, February, April, May, June	Not detected	Not detected	Not detected

EMERGENCY CONNECTION

From April 24 to April 25, 2017, Fort Worth used the emergency interconnection with the Trinity River Authority of Texas-Tarrant Water Supply Project to supply water to the Centreport portion of the Fort Worth distribution system while repairs were made. The volume of water was subsequently repaid to TRA-TCW/SP the day via the emergency connection.

To obtain the TRA-TCW/SP water quality data, please contact Mr. Robert Myer, Environmental Director at 817-782-6474.

Violations

Chlorine

Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Violation Type	Violation Begin	Violation End	Violation Explanation
Disinfectant Level Quarterly Operating Report (DLQOR).	01/01/2017	03/31/2017	We failed to report our daily chlorine test to the state of our drinking water for the contaminant and period indicated. Because of this failure, the state could not be sure of the quality of our drinking water during the period indicated.

