

# Drinking Water Consumer Confidence Report



## Sheppard Air Force Base

1 JANUARY 2020 – 31 DECEMBER 2020

## Public Participation Opportunities

To learn about future public meetings concerning your drinking water, or to request to schedule one, please call us.

### **Bioenvironmental Engineering**

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Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 940-676-3080.

## Drinking Water Information

### **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 human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic chemicals, pesticides, herbicides, radioactive isotopes, and organic chemical contaminants.

### **It is possible that 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 (1-800-426-4791).

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.

## **Our Drinking Water Meets or Is Better Than 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 test and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

### **Special Notice Required language for ALL community public water supplies:**

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?**

Our drinking water comes from the following surface water sources: Lake Kickapoo, Wichita Falls secondary terminal reservoir, and Lake Arrowhead. Sheppard AFB purchases water from the City of Wichita Falls and is therefore considered a consecutive water system. Wichita Falls provides most monitoring and treatment. Bioenvironmental Engineering monitors for

contaminants and hazards specific to our distribution system. For more information on source water assessments and protection efforts, please contact us.

### **Secondary Constituents**

Many un-harmful constituents often found in drinking water (such as calcium, sodium, or iron) can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas and monitored by the EPA. These constituents, though not required to be reported in this document, may greatly affect the appearance and taste of your water.

### **About the Following Pages:**

The U.S. EPA requires water systems to test for up to 97 contaminants. The pages that follow list all the federally regulated or monitored contaminants which have been found in your drinking water.

TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact the Bioenvironmental Engineering office at 676-3080.

<b>Definitions and Abbreviations</b>	
Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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
ppm	milligrams per liter or parts per million
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.

We monitor the following contaminants at points throughout the distribution system:

### Inorganic Contaminants

Contaminants	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely source of contamination
Nitrate (measured as Nitrogen);ppm	2020	0.146	0.146-0.146	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium; ppm	2020	0.032	0.03 - 0.032	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium; ppb	2020	1.4	1.1 - 1.4	100	100	No	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride; ppm	2020	0.8	0.614 - 0.768	4	4.0	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

### Maximum Residual Disinfectant Level

Systems must complete and submit disinfection data on the Disinfection Level Quarterly Operating Report (DLQOR). On the CCR report, the system must provide disinfectant type, minimum, maximum, and average levels. Compliance with the MRDL is determined based on the average monthly disinfectant level.

Disinfectant Residual	Year	Annual Average	Minimum Sample Level	Maximum Sample Level	MRDL	MRDLG	Likely source of contamination
Chlorine ppm	2020	3.39	0.0	4.3	4.0	<4.0	Water additive used to control microbes

## Disinfectant Byproducts

Contaminants	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely source of contamination
*Haloacetic Acids (HAA5) ppb	2020	28	13.0 - 23.9	No goal for the total	60	No	By-product of drinking water disinfection.
**Total Trihalomethanes (THM) ppb	2020	30	16.1 - 25.6	No goal for the total	80	No	By-product of drinking water disinfection.
Chlorite ppm	2020	0.57	0.0 - 0.57	0.8	1	No	By-product of drinking water disinfection.

\*The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year

\*\*The value in the Highest Level or Average Detected column is the highest average of all THM sample results collected at a location over a year

## Turbidity

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 system and disinfectants.

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.

	Level Detected	Limit (Treatment Technique)	Violation	Likely source of Contamination
Highest single measurement	0.31 NTU	1.0 NTU	No	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	No	Soil runoff.

## Coliform Bacteria

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

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive Samples	Fecal Coliform or E. Coli Maximum	Total Number of Fecal Coliform or E. Coli Samples	Violation	Likely source of contamination
0	0	0	0	0	0	Naturally present

## Lead and Copper

Contaminants	Date	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites over AL	Violation	Likely source of contamination
Copper ppm	2018	1.3	1.3	0.21	0	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead ppb	2018	0	15	4	1	No	Corrosion of household plumbing systems; Erosion of natural deposits.

### Required 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. 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>”.

## Radioactive Contaminants

Contaminants	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely source of contamination
Beta/positron emitters; pCi/L*	2017	8.4	8.4 - 8.4	0	50*	No	Decay of natural and man-made deposits.
Combined Radium 226/228 ; pCi/L	2011	1.0	1-1	0	5	No	Erosion of natural deposits
Uranium; ug/l	2015	1.3	0-1.3	0	30	No	Erosion of natural deposits

\*EPA considers 50 pCi/L to be the level of concern for beta particles.

### Perfluorooctanesulfonic Acid (PFOS)/Perfluorooctanoic acid (PFOA)

Per- and polyfluoroalkyl substances (PFAS) are a group of manmade chemicals that includes PFOA, PFOS, GenX, and many other chemicals. Many industries have used PFAS since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning they do not break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. PFAS has been found in drinking water in areas where it was manufactured, applied or disposed of (e.g., manufacturer, landfill, wastewater treatment plant, fire fighter training facility).

Most people have been exposed to PFAS. Studies indicate that PFOS and PFOA can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. Both chemicals have caused tumors in animals. Many studies suggest that exposures to PFOS/PFOA may lead to increased Cholesterol levels. Some studies suggest potential correlations to:

- low infant birth weights,
- effects on the immune system,
- cancer (for PFOA), and
- Thyroid hormone disruption (for PFOS).

Drinking water can be a source of exposure in communities where these chemicals have contaminated water supplies. PFOS/PFOA contamination is typically localized.

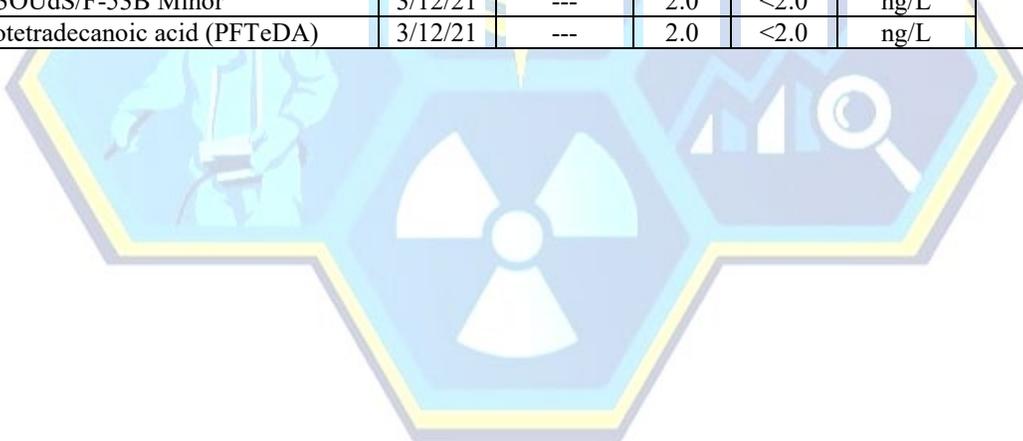
- Industrial facility where PFOA/PFAS has been produced or used to manufacture other products.
- Oil refinery, airfield or other location where PFAS was used for firefighting.

A number of drinking water systems have detected PFOA, PFOS, and GenX due to localized contamination. You can view more information about exposures to PFAS through drinking water

on <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>.

The Department of Defense requires all installations to monitor drinking water supplies for PFAS. The City of Wichita Falls has conducted monitoring for these chemicals and has provided Bioenvironmental Engineering with the results of these samples to provide to the base population. We did not detect any of the PFAS constituents in our water supply.

Contaminant	Date	Reg Limit	MRL	Result	Units	Sampling Point
Perfluorooctanoic acid (PFOA)	3/12/21	---	2.0	<2.0	ng/L	Cypress * Jasper Water Treatment Plants
Perfluorooctanesulfonic acid (PFOS)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorobutanesulfonic acid (PFBS)	3/12/21	---	2.0	<2.0	ng/L	
Perfluoroheptanoic acid (PFHpA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorohexanesulfonic acid (PFHxS)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorononanoic acid (PFNA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorodecanoic acid (PFDA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorohexanoic acid (PFHxA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorododecanoic acid (PFDoA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluorotridecanoic acid (PFTrDA)	3/12/21	---	2.0	<2.0	ng/L	
Perfluoroundecanoic acid (PFUnA)	3/12/21	---	2.0	<2.0	ng/L	
N-ethyl Perfluorooctanesulfonamidoacetic acid	3/12/21	---	2.0	<2.0	ng/L	
N-methyl Perfluorooctanesulfonamidoacetic acid	3/12/21	---	2.0	<2.0	ng/L	
HFPO-DA/GenX	3/12/21	---	2.0	<2.0	ng/L	
ADONA	3/12/21	---	2.0	<2.0	ng/L	
9Cl-PF3ONS/F-53B Major	3/12/21	---	2.0	<2.0	ng/L	
11Cl-PF3OUdS/F-53B Minor	3/12/21	---	2.0	<2.0	ng/L	
Perfluorotetradecanoic acid (PFTeDA)	3/12/21	---	2.0	<2.0	ng/L	



## Water Conservation Tips

Keep a pitcher of cold water in the refrigerator, rather than letting the faucet run until the water is cool.

Hand-washing dishes takes more time than using a dishwasher. Let your dishwasher do the work and you will save almost 10 days a year! You will also save money and water! If washing dishes by hand, use a basin of soapy water or plug the sink. Use the dishwasher efficiently. Only run it when you have a full load. Scrape dirty dishes and cookware, rather than rinsing them. Use the “light wash” feature when possible.

Showering accounts for nearly 17% of indoor water use. Reduce this by taking shorter showers. Get a shower timer for your kids and make it into a game.

Turn off the tap when shaving or brushing your teeth and save up to 2,400 gallons of water a year. This is an easy one for both kids and adults to try.

Washing only full loads of laundry can save an average household more than 3,400 gallons of water each year. As a bonus, you can also save energy by using cold water when possible.

Sweep driveways and sidewalks, as opposed to hosing them off.

If you have a pool, use a cover to reduce evaporation.

Wash your car with water from a bucket or use a commercial car wash that recycles water.

***Water is a natural resource not to be wasted.***