



Water Quality Report

Annual Consumer
Confidence Report

1 Jan — 31 Dec 2022

We are proud to report that the water provided on Sheppard AFB meets or exceeds established water quality standards



www.sheppard.af.mil
Office: 940-676-3080
Public Water System: TX2430007

Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

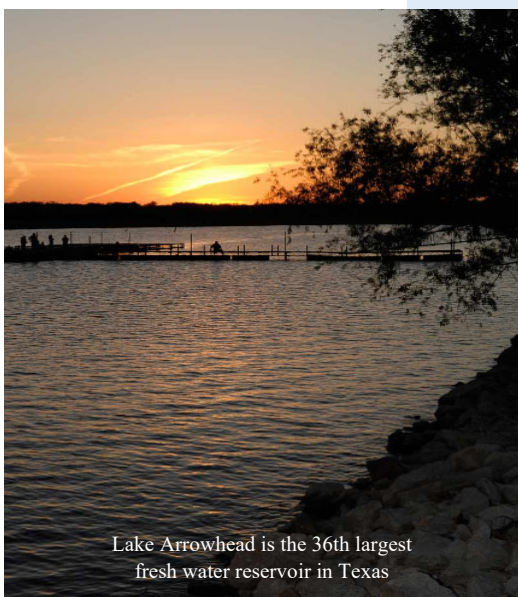
The 82d Bioenvironmental Engineering office is please to present this year's Annual Water Quality Report (or Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what is contains, and how it compares to the standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

This Consumer Confidence Report summarizes drinking water quality for the period between January 1, 2022 and December 31, 2022. In order to conserve natural recourses and make it more efficient to distribute, an electronic copy can be downloaded at www.sheppard.af.mil. Hardcopies are also available upon request by contacting the 82d Bioenvironmental Engineering office at 940-676-3080.



Water Sources & Treatment

Sheppard AFB purchases water from the City of Wichita Falls and is therefore considered a consecutive water system. The City of Wichita Falls has previously only utilized two of its surface water reservoirs: Lake Arrowhead and Lake Kickapoo. While these two lakes have provided a reliable source of drinking water for the last 60 years, the addition of Lake Kemp became possible in 2008 with new, advanced treatment technologies. Then in 2018, the addition of the indirect potable reuse project further bolstered the City's water supply.



Lake Arrowhead is the 36th largest fresh water reservoir in Texas

Lake Kickapoo is the first lake in the Little Wichita River watershed and has a drainage area of 275 square miles. Kickapoo was constructed in 1945, 18 miles southwest of Wichita Falls in Archer County. At its maximum capacity, Lake Kickapoo contains 35 billion gallons of water, making it the 56th largest fresh water reservoir in the State of Texas. It was named for the Kickapoo Indians and for Kickapoo Creek, which empties into the reservoir.

Lake Arrowhead is the last lake in the Little Wichita River watershed and has a drainage area of 832 square miles. Construction on Lake Arrowhead began in 1965, 15 miles southeast of Wichita Falls, primarily in Clay County. At its maximum capacity, Lake Arrowhead contains 74 billion gallons of water, making it the 36th largest fresh water reservoir in the State of Texas.

Lake Kemp is the largest lake in the Big Wichita River watershed and has a drainage area of 2,086 square miles. Construction of Lake Kemp was completed in 1924, 37 miles west of Wichita Falls. At its maximum capacity, Lake Kemp contains 80 billion gallons of water, making it the 35th largest fresh water reservoir in the State of Texas. It was named for Joseph A. Kemp, who sought its construction to alleviate flooding issues within Wichita Falls.

The City of Wichita Falls provides most drinking water 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 on our system, please contact us.

A Source Water Susceptibility Assessment for your drinking water sources 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 natural conditions. The information contained in the assessment allows us to focus source water protection strategies. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at <https://www.tceq.texas.gov/gis/swaview>

Water Sources & Treatment

The sources of drinking water (both tap and bottled) include rivers, lakes, ponds, reservoirs, springs and wells. As water travels over the surface of the land or underground, it can dissolve naturally occurring minerals. In some cases, water can pick up radioactive material, or substances resulting from the presence of animals or human activity. Although our water supply may contain some of these contaminants, it is important to know that these substances are either removed completely or reduced to a safe level before it arrives at your tap.

Contaminates that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that 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 discharge, oil and gas production, mining, or farming.
- Pesticides and herbicide, 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 tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration 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 82d Bioenvironmental Engineering Office at 940-676-3080

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Do I need to take special precautions?

Some people 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).

Terms and Abbreviations Used:

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 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 (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.

Maximum Residual Disinfection 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 Disinfection Level Goal (MRDLG): The level of 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.

Million fibers per liter (MFL): used to measure asbestos concentrations

Not Applicable (NA): No applicable maximum contaminant level goals or maximum residual disinfection level goal.

Not Detected (ND): The contaminant is below the detectable limits of the testing method.

Nephelometric Turbidity Unit (NTU):

A measure of water clarity

Parts per billion (ppb): equal to microgram per liter ($\mu\text{g/L}$);

Parts per million (ppm): equal to milligram per liter (mg/L);

Treatment technique (TT): The required process intended to reduce the level of a contaminant in drinking water.

Drinking Water Monitoring Results

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 the 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.

Wichita Falls Monitoring Results

Regulated Compounds

These compounds either occur naturally within the watersheds or are products of human activities. You will notice that some data, though representative, are more than one year old. The State of Texas allows the City of Wichita Falls to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Contaminant (units)	Analysis Year	Reported Value	Range of Detection	MCL	MCLG	Violation	Typical Source
Inorganic Contaminants							
Aluminum (ppm)	2022	0.014	0.0 - 0.014	0.2	0.2	No	Natural Geology; Drilling Waste
Barium (ppm)	2022	0.043	0.033 - 0.043	2	2	No	Natural Geology; Drilling Waste
Chromium (ppb)	2022	1.6	1.3 - 1.6	100	100	No	Natural found in rocks, plants, soil
Cyanide (ppm)	2022	49.1	0 - 49.1	200	200	No	Steel Plants, Wastewater Facilities
Fluoride (ppm)	2022	0.705	0.702 - 0.705	4	4	No	Water Additive; Natural Geology
Nitrate (ppm)	2022	0.13	0.09 - 0.13	10	10	No	Fertilizer Runoff; Septic Tanks; Animal Waste
Nitrite (ppm)	2022	0.14	<0.0008 - 0.14	1	1	No	Fertilizer Runoff; Septic Tanks; Animal Waste
Microbiological Contaminants							
Total Organic Carbon (ppm)	2022	percent measured monthly; all removal requirements met		TT	NA	No	Naturally present in the environment
Turbidity (NTU) - Highest Single Measurement	2022	0.29		TT = 1.0	NA	No	Soil runoff
Turbidity (NTU) - Lowest Monthly % Meeting Limit	2022	100%		TT = 0.3	NA	No	Soil runoff
Radioactive Contaminants							
Gross Beta Emitters (pCi/L)	2021	9.5	8.4 - 9.5	50	0	No	Decay of natural and man-made deposits
Combined radium (pCi/L)	2011	1	1 - 1	5	0	No	Erosion of natural deposits

Regulated Disinfectants

The City of Wichita Falls utilizes Chloramines (Total Chlorine) and Chlorine Dioxide to inactivate disease causing viruses and bacteria in drinking water. Disinfectants are monitored to ensure that they are adequately applied to the drinking water.

Contaminant (units)	Analysis Year	Reported Value	Range of Detection	MRDL	MRDLG	Violation	Typical Source
Inorganic Contaminants							
Chlorine Dioxide (ppm)	2022	0.21	<0.10 - 0.21	0.8	0	No	Disinfectant
Chlorine, Total (ppm)	2022	3.6	2.9 - 3.6	4	<4.0	No	Disinfectant

Regulated Compounds

Sheppard AFB Monitoring Results

Lead and Copper are regulated at the consumer's tap under the Lead and Copper Rule of 1991. This monitoring is conducted every 3 years. Additionally, asbestos monitoring is conducted with in the distribution systems and is monitored every 9 years.

Contaminant (units)	Analysis Year	Reported Value	90th Percentile	MCL	MCLG	Violation	Typical Source
Inorganic Contaminants							
Asbestos (MFL)	2021	0.197		7	7	No	Decay of asbestos-cement water mains; Erosion of natural deposits
Lead (ppb)	2021		4.8	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2021		0.14	1.3	1.3	No	Corrosion of household plumbing systems; Erosion of natural deposits

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>.

Regulated within the Distribution System

There were 2 regulated disinfection by-products that were detected in your drinking water in 2022. Disinfectants are very active compounds that not only inactivate disease causing organisms, but also react with other naturally occurring compounds in the source waters to produce new compounds referred to as disinfection by-products , or DBPs.

Contaminant (units)	Analysis Year	Reported Value	Range of Detection	MCL	MCLG	Violation	Typical Source
Volatile Organic Contaminants							
Chlorite (ppm)	2022	0.68	0.0 - 0.68	1	0.8	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	2022	21	2.1 - 21.0	60	0	No	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	2022	30.3	14.9 - 30.3	80	0	No	By-product of drinking water disinfection

Regulated Microbiologicals

Coliform bacteria are naturally present in the environment.

Contaminant (units)	Analysis Year	Highest No. of Positive	MCL	MCLG	Violation	Typical Source
Microbiological Contaminants						
Total Coliform Bacteria	2022	1	1	0	No	Naturally present in the environment
E. coli Bacteria	2022	0	0	0	No	Human and animal fecal waste

Educational Information

Lead and Copper in Drinking Water

The EPA Safe Drinking Water Act requires public water systems to test water samples from its customers to determine lead and copper levels. If present, elevated levels of lead can cause serious health problems, especially in 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>



Water System Condition and Maintenance



During times of maintenance, the water may appear hazy or have a slight color at the consumer tap. Likewise, earthquakes, rapid changes in water velocity, and firefighting activities may also cause discolored water events. If this condition occurs, run several faucets until the water is clear. Additionally, maintenance activities may result in lower than normal pressure. This usually occurs during fire hydrant flow testing and water main flushing. Larger, more complex system maintenance, or repair activities may require the utility to lower all pressure within small areas of the water distribution network. As a result, utilities may issue a boil water notice to the affected area. These notices are usually issued out of an abundance of caution by the water supplier to ensure the public health is protected. It is important for the customer to read and follow the directions within the boil water notice. Contact Bioenvironmental Engineering office at 940-676-3080 for any questions.

Water Conservation Tips:

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - 5 minute shower uses 4-5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

