



# Water Quality Report

## Annual Consumer Confidence Report

1 Jan — 31 Dec 2023

(Correction on page 6)

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



[www.sheppard.af.mil](http://www.sheppard.af.mil)  
Office: 940-676-3080  
Public Water System: TX2430007



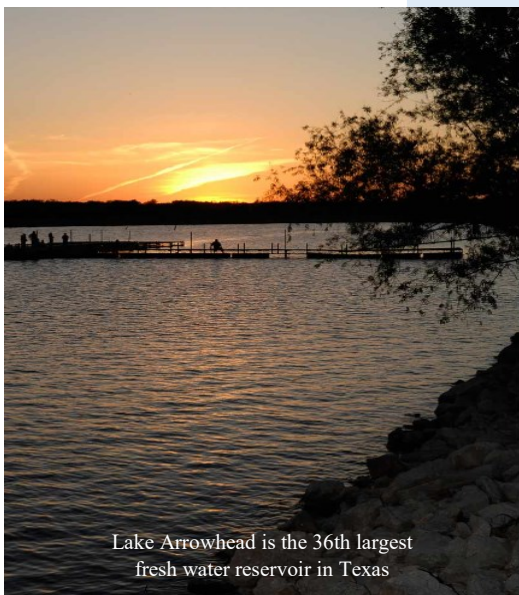
The 82d Bioenvironmental Engineering office is please to present this year's Annual Water Quality Report (or Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what is contains, and how it compares 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 and December 31, 2023 In order to conserve natural recourses and make it more efficient to distribute, an electronic copy can be downloaded at [www.sheppard.af.mil](http://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. The presence of contaminants does not necessarily indicate that water poses a health risk

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 ( $\text{mg/L}$ );

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



# Drinking Water Monitoring Results

## Wichita Falls Monitoring Results

Contaminant (units)	Analysis Year	90th Percentile	# Sites Over AL	Action Level	MCLG	Violation	Typical Source
<b>Source Water</b>							
Copper (ppm)	2023	0.0521	0	1.3	1.3	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (ppb)*	2023	2.35	0	15	0	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>.*

Contaminant (units)	Analysis Year	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Violation	Typical Source
<b>Disinfection By-Products</b>							
Chlorite (ppm)	2023	0.67	0.53 - 0.67	0.8	1	No	By-product of water disinfection
Haloacetic Acid (ppb)*	2023	18	1 - 25.3	N/A	60	No	By-product of water disinfection
Total Trihalomethanes (ppb)*	2023	31	9.76 - 42.3	N/A	80	No	By-product of water disinfection

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

Contaminant (units)	Analysis Year	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Violation	Typical Source
<b>Inorganic Contaminates</b>							
Arsenic (ppb)	2023	1	0.0 - 1.2	0	10	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2023	0.04	0.036 - 0.04	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cyanide (ppb)	2023	46	0 - 46	200	200	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories
Fluoride (ppm)	2023	0.6	0.546 - 0.638	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer and aluminum factories discharge
Nitrate (ppm)	2023	0.158	0.0791 - 0.158	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2022	0.14	0.14 - 0.14	1	1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Radioactive Contaminants</b>							
Gross Beta Emitters (pCi/L)*	2023	12.3	12.3 - 12.3	0	50	No	Decay of natural and man-made deposits
Combined radium (pCi/L)	2023	1.5	1.5 - 1.5	0	5	No	Erosion of natural deposits

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

Contaminant (units)	Analysis Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Violation	Typical Source
Disinfectant Residual							
Chlorine, Total (ppm)	2023	3.20	2.88-3.59	4	4.0	No	Water additive used to control microbes
Contaminant (units)	Analysis Year	Level Detected		Limit (Treatment Technique)		Violation	Typical Source
Turbidity							
Total Organic Carbon (ppm)	2023	percent measured monthly; all removal requirements met		TT		No	Naturally present in the environment
Turbidity (NTU) - Highest Single Measurement	2023	0.29		1 NTU		No	Soil runoff
Turbidity (NTU) - Lowest Monthly % Meeting Limit	2023	100%		0.3 NTU		No	Soil runoff

## Sheppard AFB Monitoring Results

Contaminant (units)	Analysis Year	90th Percentile	# Sites Over AL	Action Level	MCLG	Violation	Typical Source
<b>Source Water</b>							
Copper (ppm)	2021	0.14	0	1.3	1.3	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (ppb)	2021	4.8	0	15	0	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>.*

Contaminant (units)	Analysis Year	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Violation	Typical Source
<b>Disinfection By-Products</b>							
Haloacetic Acid (ppb)*	2023	13.8	<1 - 18.0	N/A	60	No	By-product of water disinfection
Total Trihalomethanes (ppb)*	2023	24.5	16.3 - 34.0	N/A	80	No	By-product of water disinfection

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

Contaminant (units)	Analysis Year	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Violation	Typical Source
<b>Inorganic Contaminates</b>							
Asbestos (MFL)	2021	0.179	0.179 - 0.179	7	7	No	Decay of asbestos-cement water mains; Erosion of natural deposits
Nitrate (ppm)	2023	0.218	0.218 - 0.218	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2015	0.0198	0.0198 - 0.0198	1	1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Contaminant (units)	Analysis Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Violation	Typical Source
<b>Disinfectant Residual</b>							
Chlorine, Total (ppm)	2023	3.15	2.62 - 3.69	4	4.0	No	Water additive used to control microbes

Contaminant (units)	Analysis Year	Highest No. of Positive	MCLG	MCL	Violation	Typical Source
<b>Disinfectant Residual</b>						
Total Coliform Bacteria	2023	1	0	1	No	Naturally present in the environment
E. coli Bacteria	2023	0	0	0	No	Human and animal fecal waste



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.

## Additional Drinking Water Test Results

### Fifth Unregulated Contaminant Monitoring Rule

The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issue a list of unregulated contaminants to be monitored by public water systems (PWSs). The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by the EPA and consensus organizations. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water.

UCMR 5 will provide new data that will improve the agency's understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems, and at what levels. The monitoring data on PFAS and lithium will help the EPA make determinations about future regulations and other actions to protect public health under SDWA.

#### Reporting UCMR 5 results to their customers

Community water systems are required to notify customers about the availability of all UCMR results no later than 12 months after they are known are required to report UCMR results in their annual Consumer Confidence Report (CCR) when unregulated contaminants are found (i.e., measured at or above minimum reporting levels [MRLs]).

Sheppard AFB conducted quarterly UCMR 5 sampling during 2023, only 3 unregulated contaminants are found (i.e., measured at or above minimum reporting levels [MRLs]) and are reported below. All UCMR 5 analytical results are publicly available through the UCMR 5 Data Finder (<https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule-data-finder>) which allows people to easily search for, summarize, and download the available UCMR 5 analytical results .

Contaminant	Reported Value (µg/L)	Range of Detection (µg/L)	Minium Reporting Level (µg/L)
Lithium	9.92	ND - 9.92	9
Perfluorobutanoic Acid (PFBA)	0.0127	0.0120 - 0.0132	0.005
Perfluoropentanoic Acid (PFPeA)	0.00505	0.00356 - 0.00597	0.003
Perfluorohexanoic Acid (PFHxA)	0.0034	0.0034 - 0.0034	0.003

## Important Information About Your Drinking Water: Violations and Exceedances

### Monitoring Requirements Not Met for Sheppard AFB (November 2023):

Our system failed to collect every required coliform sample. Although this incident was not an emergence, as our customers, you have the right to know what happened and what we did to correct this situation. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not drinking water meet health standards. During November 2023 we did not complete all monitoring or testing for coliform bacteria and therefore cannot be sure of the drinking water quality during that time.

#### What is being done?

Monitoring for coliform bacteria on Sheppard AFB is achieved through analysis of water samples. Regulators require the collection of 20 samples monthly for analysis for the drinking water system. However, in November 2023, one of the required samples was missed. This action was corrected by ensuring all 20 samples were collected and analyzed in December 2023, returning our water system to compliance at that time. Coliform bacteria can cause short-term health effects. Since the rest the November samples on Sheppard AFB were negative for coliform bacteria there is no concern for increased health risk to costumers at this time.

#### What should I do?

There is nothing you need to do at this time. You may continue to drink that water. If a situation arises where the water is no longer safe to drink, we are required to notify you within 24 hours.



## 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!

