

2022 WATER QUALITY REPORT



Your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards in 2021. The Texas Commission on Environmental Quality (TCEQ) has established public water supply system ratings, and Amarillo's water system received the highest achievable rating, Superior.

WHERE DOES MY WATER COME FROM?

Amarillo's water supply primarily comes from surface water and groundwater. The groundwater supply is from the Ogallala and Santa Rosa aquifers. Lake Meredith, our surface water supply, is located approximately 32 miles northeast of Amarillo. Amarillo receives groundwater from several different well fields in Carson, Potter, Randall and Deaf Smith counties. Amarillo also receives water from Lake Meredith and the Canadian River Municipal Water Authority's (CRMWA) well field in Roberts County. The City utilizes a conventional treatment process to supply drinking water—which is currently a blend of 64% surface water and 36% groundwater. The City presently has the capacity to treat and supply 121 million gallons of water per day.

Daily average water production on a year-round basis is between 40-50 million gallons!

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV / AIDS or other immune system disorders, some elderly and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers.

SOURCE WATER ASSESSMENT AND ITS AVAILABILITY

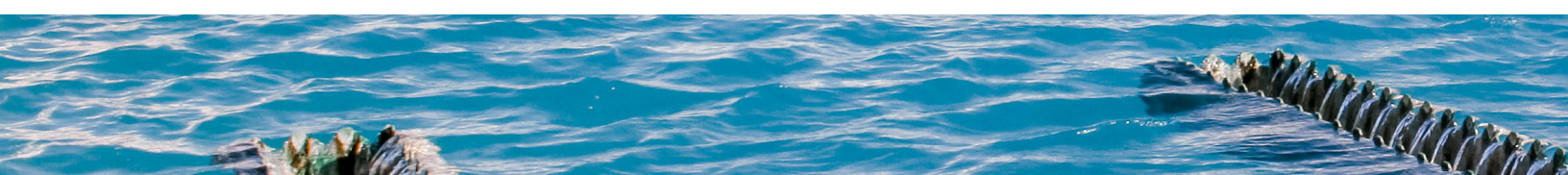
SURFACE WATER — The watershed of Lake Meredith consists primarily of farm and ranch lands; therefore, the susceptibility for surface water contamination is mainly from agricultural practices. Fertilizers, pesticides and other agricultural chemicals, as well as run-off from Confined Animal Feeding Operations (CAFOs) represent potential contamination sources.

GROUNDWATER — Amarillo's municipal water supply wells are located mostly in farming and ranching areas. Susceptibility for contamination is mainly from agricultural chemicals. Other potential sources of contamination are CAFOs, septic systems; oil field related activities and abandoned private water wells. The City has an ongoing Wellhead Protection Program, which is designed to apply TCEQ well standards and guidelines to protect against any pollution entering the underground water to help protect our drinking water source.



EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791).

ESPAÑOL (Spanish): Este reporte contiene información importante sobre el agua potable. Para obtener asistencia en español, por favor llame al (806) 378-3079.



2021 ESTIMATED WATER LOSS

In the water loss audit submitted to the Texas Water Development Board (TWDB) for the time period of January through December 2021, the system lost an estimated 1.04 billion gallons of water or approximately 6.60 percent. If you have any questions about the water loss audit, contact the Public Water System (PWS) (806) 378-6032 or the TWDB at (512) 239-4691 or email pwscrr@tceq.texas.gov. When you contact TCEQ please be sure to reference the Amarillo Municipal Water System, PSW ID: TX1880001.

HOW CAN I GET INVOLVED?

You may become involved in the decision-making process affecting our municipal water system by attending and voicing your opinions at meetings of the Amarillo City Council. The City Council meets on the second and fourth Tuesday of every month in the Council Chambers on the 3rd floor of City Hall, 601 S. Buchanan, 79101. You may also contact the City of Amarillo Water Utilities Department at (806) 378-6032, TDD (806) 378-4229 or P.O. Box 1971, Amarillo, TX 79105-1971.

Please share this information with all other people who drink this water, especially those who may not receive this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

WHY ARE THERE CONTAMINANTS IN MY DRINKING WATER?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. Water travels over the surface of the land or through the ground. The water can dissolve naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants** such as viruses, bacteria and protozoan that may be 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** that 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** that can be naturally-occurring or be the result of oil and gas production and mining activities.

The Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems in order to ensure that tap water is safe to drink. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide 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. Please contact our business office at the telephone number listed below for more information on taste, color and odor of drinking water.

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.

DEFINITIONS

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water at which there is no known or expected risk in health.

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 feasibly possible using the best available technology.

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

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

The table below lists drinking water contaminants that were detected by the State of Texas during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The data presented in these tables are from our most recent tests that were performed in 2021, unless otherwise noted. The state of Texas requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently; therefore, some of the data below reflect testing done in 2019.

WATER QUALITY DATA TABLE DESCRIPTION OF UNITS

CFU: Colony forming Units

ppm: Parts per million or milligrams per liter (mg/l). The equivalent of one ounce in 7,350 gallons of water.

pCi/L: Picocuries per liter (a measure of radioactivity). EPA considers 50pCi/L to be the level of concern for beta particles.

of monthly positive samples: Number of samples taken monthly that were found to be positive.

NTU: Nephelometric Turbidity Units (a measure of turbidity). Turbidity measures water treatment plants' efficiency in removing suspended matter from the water.

ppb: Parts per billion or micrograms per liter (ug/l), the equivalent of one ounce in 7,350,000 gallons of water.

2022 CONSUMER CONFIDENCE REPORT

INORGANIC CONTAMINANTS

YEAR SAMPLED	CONTAMINANT	AVG LEVEL	MIN LEVEL	MAX LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Arsenic	2.15	2.0	2.3	10	0	ppb	Erosion of natural deposits; Runoff from orchards; Runoffs from glass and electronics production wastes.
2021	Barium	0.099	0.068	0.13	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2021	Chromium	4.3	4.0	4.6	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2021	Fluoride	0.593	0.522	0.689	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer use; and aluminum factories.
2021	Nitrate (measured as Nitrogen)	1.157	0.972	1.5	10	10	ppm	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.

RADIOACTIVE CONTAMINANTS

2021	Combined Radium 226 & 228	0	0	0	5	0	pCi/L*	Erosion of natural deposits.
2021	Gross Beta Emitters	6.9	6.9	6.9	50	0	pCi/L*	Decay of natural & man-made deposits.
2021	Gross Alpha (excl. Radon and Uranium)	3	3	3	15	0	pCi/L	Erosion of natural deposits.
2021	Uranium	4.5	4.5	4.5	30	0	ug/L	Erosion of natural deposits.

MAXIMUM RESIDUAL DISINFECTANT LEVEL

YEAR SAMPLED	DISINFECTANT USED	AVG LEVEL	MIN LEVEL	MAX LEVEL	MRDL	MRDLG	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Chlorine	1.80	1.22	2.48	4	4	ppm	Disinfectant used to control microbes.

DISINFECTION BYPRODUCTS

YEAR SAMPLED	DISINFECTANT USED	AVG LEVEL	MIN LEVEL	MAX LEVEL	MCL	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Bromate	2	0	2	10	ppb	Byproduct of drinking water disinfection.
2021	Halo-acetic Acids (HAA5)	6.0	1.9	20.3	60	ppb	Byproduct of drinking water disinfection.
2021	Total Trihalomethanes (TTHM)	23.91	2.7	106	80	ppb	Byproduct of drinking water disinfection.

UNREGULATED CONTAMINANTS

YEAR SAMPLED	CONTAMINANT	AVG LEVEL	MIN LEVEL	MAX LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Chloroform	6.92	<1	17.6	ppb	Byproduct of drinking water disinfection.
2021	Bromoform	11.43	<1	21.9	ppb	Byproduct of drinking water disinfection.
2021	Bromodichloromethane	11.73	<1	34.8	ppb	Byproduct of drinking water disinfection.
2021	Dibromochloromethane	16.26	<1	40.8	ppb	Byproduct of drinking water disinfection.

*Unregulated contaminants are those for which 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 regulation is warranted.

LEAD & COPPER

YEAR SAMPLED	CONTAMINANT	THE 90TH PERCENTILE	NUMBER OF SITES EXCEEDING ACTION LEVEL	ACTION LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2019	Lead	0.001	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2019	Copper	0.049	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Elevated levels of lead, if present, 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 varieties of materials used in plumbing components. You can minimize potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking when your water has been sitting for several hours. 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 Hotline or at <http://www.epa.gov/safewater/lead>.

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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.

	LEVEL DETECTED	LIMIT (TT)	SOURCE OF CONTAMINANTS
Highest single measurement	0.35 NTU	1 NTU	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	Soil runoff.

TOTAL ORGANIC CARBON

YEAR SAMPLED	MATERIAL SAMPLED	AVG LEVEL	MIN LEVEL	MAX LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Source water	0.70	0.53	1.13	ppm	Naturally present in the environment.
2021	Drinking water	0.87	0.59	1.32	ppm	Naturally present in the environment.

Total Organic Carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that the water does not have unacceptable levels of pathogens. Byproducts of disinfection can include trihalomethanes (THMs) and halo-acetic acids (HAAs) which are reported elsewhere in this report.

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CRYPTOSPORIDIUM MONITORING INFORMATION

The City is monitoring for Cryptosporidium, a microbial parasite that may be commonly found in surface water. Cryptosporidium may come from animal and human feces in the watershed. The results of our monitoring indicated the absence of Cryptosporidium in the raw water and/or treated water. The testing methods used cannot determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water.

TOTAL COLIFORM

YEAR SAMPLED	CONTAMINANT	HIGHEST MONTHLY % OF POSITIVE SAMPLES	MCL	UNIT OF MEASURE	SOURCE OF CONTAMINANTS
2021	Total Coliform Bacteria	0.8%	*	CFU Present	Naturally present in the environment. (There were 1 detection in a total of 1484 samples.)

*Presence of Coliform bacteria in 5% or more of the monthly results

CONSUMER CONFIDENCE RULE

The Consumer Confidence Rule requires community water systems to prepare and provide to their customers an annual consumer confidence report on the quality of the water delivered by the systems.

VIOLATION TYPE	VIOLATION BEGIN	VIOLATION END	VIOLATION EXPLANATION
CCR REPORT	07/01/2021	11/01/2021	The City failed to include all content requirements in the 2021 annual Consumer Confidence Report. The missing content included Arsenic and Uranium; those are now included.