

# ANNUAL WATER QUALITY REPORT

Reporting Year 2024



***Presented By***  
**City of Liberal**



## Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2024. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

## Where Does My Water Come From?

Our primary drinking water supply is from a groundwater source called the Ogallala, or High Plains, Aquifer. The rock type in the aquifer is unconsolidated sand and gravel. We have 17 wells placed throughout Liberal. Demand for good, safe drinking water is high; we provide our customers almost 2.5 million gallons of water a day.

Our groundwater supply is not exposed to air and is not subject to the direct pollution and contamination that rivers and open reservoirs receive. In fact, because groundwater is of the highest quality available to meet the public demand intended for human consumption, we are able to provide your water directly from the source. However, as a precaution against any bacteria that may be present, we chlorinate our water before sending it to sanitized underground water reservoirs and water towers and your home or business. Twenty samples are submitted each month to the Kansas State Department of Health and Environment's laboratory for microbiology analysis. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.

## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second and fourth Tuesday of each month at 5:30 p.m. at City Commission Chambers, Liberal Recreation Center, 950 South Grant Avenue.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 from infections. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or [epa.gov/safewater](http://epa.gov/safewater).



## Source Water Assessment

The Kansas State Department of Health and Environment performed the required U.S. EPA source water assessment. Our scores ranged from 24 to 64, which puts us in the low and moderate susceptibility ranges. Fortunately, none of our assessment areas were in the 80 and above (high) susceptibility range. Copies of the completed assessment are available at the City of Liberal Water Department, 1401 East Pine Street.

## Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit [bit.ly/3IeRyXy](http://bit.ly/3IeRyXy).

## Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Jose Rosales, Utilities Director, at (620) 626-0138.

## Substances That Could Be in 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. 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 occur naturally in the soil or groundwater or may result from urban stormwater 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 stormwater 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 stormwater runoff, and septic systems.

**Radioactive Contaminants**, which can occur naturally or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by contacting the U.S. EPA by calling the Safe Drinking Water Hotline at (800) 426-4791 or visiting [epa.gov/safewater](http://epa.gov/safewater).

## Lead in Home Plumbing

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. The City of Liberal is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead and wish to have your water tested, contact the City of Liberal Water Department and ServiTech at (800) 557-7509. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be viewed at [lead-service-line-inventory-1-liberalwater.hub.arcgis.com/](http://lead-service-line-inventory-1-liberalwater.hub.arcgis.com/). Please contact us if you would like more information about the inventory or any lead sampling that has been done.

## BY THE NUMBERS



**3.4**  
BILLION

The daily volume gallons of water recycled and reused in the U.S., reducing waste and conserving resources.



**28%**

The percent reduction in per capita water use in the U.S. since 1980, thanks to efficiency improvements.



**99.9%**

The percent effectiveness of modern water treatment plants in removing harmful bacteria and viruses from drinking water.



**1.2**  
MILLION

The length in miles of drinking water pipes in the U.S., delivering clean water to millions of homes and businesses daily.



**1.7**  
MILLION

The number of jobs supported by the U.S. water sector.



**2**

How often in minutes a water main breaks.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2023	10	0	1.7	NA	No	Erosion of natural deposits
Barium (ppm)	2023	2	2	0.045	NA	No	Discharge from metal refineries
Chloramines (ppm)	2024	[4]	[4]	0.6	NA	No	Water additive used to control microbes
Chlorine (ppm)	2024	[4]	[4]	0.6	NA	No	Water additive used to control microbes
Chromium (ppb)	2023	100	100	2.5	NA	No	Discharge from steel and pulp mills
Combined Uranium (ppb)	2021	30	0	11	ND–11	No	Erosion of natural deposits
Fluoride (ppm)	2023	4	4	0.3	NA	No	Natural deposits; Water additive that promotes strong teeth
Gross Alpha Particle Activity [excluding radon and uranium] (pCi/L)	2021	15	0	9.3	NA	No	Erosion of natural deposits
Nitrate (ppm)	2024	10	10	3.9	2–3.9	No	Runoff from fertilizer use
Selenium (ppb)	2023	50	50	11	NA	No	Erosion of natural deposits
Total Coliform Bacteria (positive samples)	8/2024	TT	0	1	NA	No	Naturally present in the environment
Total Haloacetic Acids [HAA5] (ppb)	2024	60	0	9	ND–9	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes] (ppb)	2024	80	0	3	2.7–3.2	No	By-product of drinking water chlorination

### Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.09	0.0075–0.13	0/30	No	Corrosion of household plumbing
Lead (ppb)	2022	15	0	ND	ND–3.5	0/30	No	Corrosion of household plumbing



## SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alkalinity, Total (ppm)	2023	300	NA	170	NA	No	Naturally occurring
Calcium (ppm)	2023	200	NA	51	NA	No	Leaching from natural deposits
Chloride (ppm)	2023	250	NA	25	NA	No	Runoff/leaching from natural deposits
Conductivity (µmho/cm)	2023	1,500	NA	520	NA	No	Substances that form ions when in water
Corrosivity (Units)	2020	Non-corrosive	NA	0.17	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water affected by temperature and other factors
Hardness, Total [as CaCO <sub>3</sub> ] (ppm)	2023	400	NA	220	NA	No	Naturally occurring
Magnesium (ppm)	2023	150	NA	22	NA	No	Naturally occurring
Nickel (ppb)	2023	100	NA	1.8	NA	No	Naturally occurring
pH (units)	2023	6.5-8.5	NA	7.9	NA	No	Naturally occurring
Phosphorus, Total (ppm)	2023	5	NA	0.022	NA	No	Naturally occurring; Component in cleaning products
Potassium (ppm)	2023	100	NA	4.1	NA	No	Naturally occurring; Found in water softeners
Silica (ppm)	2023	50	NA	23	NA	No	Naturally occurring as sand, quartz, sandstone, and granite
Sodium (ppm)	2023	100	NA	32	NA	No	Naturally occurring; Component of water softeners
Sulfate (ppm)	2023	250	NA	73	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2023	500	NA	380	NA	No	Runoff/leaching from natural deposits

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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

**µmho/cm (micromhos per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

