2023 Consumer Confidence Report on Water Quality for 2022

Annual Water Quality Report

Bolivar - PWS MO5010085

Liberty

Message from the Vice-President

Providing customers with safe, quality drinking water is a top priority for Liberty, and we are proud to present this Water Quality Report (Consumer Confidence Report) that shares detailed information regarding local water service and our compliance with state and federal quality standards during the 2022 calendar year.

Liberty works to ensure the water we deliver to our customers meets all Safe Drinking Water Act (SDWA) standards established by the United States Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR). Additionally, we have a top-notch water quality program that ensures the water delivered to your home or business is thoroughly tested by independent laboratories and the data is provided to the state to verify compliance with all applicable SDWA and MDNR water regulations.

We know our customers rely on us to make sure the water at their tap is safe to drink, and we take that responsibility seriously. Our employees live in the local community and take great pride in providing quality water and reliable service to you and your neighbors.
If you have any questions about the information within this report, please don't hesitate to contact us at 1-800-206-2300. We encourage you to visit www.libertyenergyandwater.com to stay informed and find tips about water conservation and more.

On behalf of the entire Liberty family, thank you for being a valued customer and neighbor. We are proud to be your water provider.

Sincerely,
Tony Penna
Vice President, Liberty

To request a printed copy of this report, please call us at 1-800-206-2300. This report can also be found on the internet at www.dnr.mo.gov/ccr/MO5010085.pdf.

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

Attencion: Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Where Does My Water Come From?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

The water for the Liberty – Bolivar system is obtained from five groundwater wells. A small amount of chlorine is added at the well sites to protect the integrity of the water quality throughout the water system piping.

Source Water Assessment

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water area delineations for each well or surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at https://drinkingwater.missouri.edu/. The Source Water Protection and Assessment maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

What are Drinking Water Standards?

Drinking water standards are the regulations set by the USEPA to control the level of contamination in the nation's drinking water. The USEPA and the Missouri Department of Natural Resources are the agencies responsible for establishing drinking water quality standards in Missouri. This approach includes assessing and protecting drinking water sources; protecting wells and surface water; making sure water is treated by qualified operators; ensuring the integrity of the distribution system; and making information about water quality available to the public. The water delivered to your home meets the standards required by the USEPA and the Missouri Department of Natural Resources, except as noted later in this report.

Liberty is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples analyzed every year by Liberty's contract certified laboratory assures that all primary (health-related) drinking water standards are being met. Sample results are available on the Table that is part of this report.

This report is intended to provide information for all water users. If received by an absentee landlord, a business, or a school, please share the information with tenants, employees or students. We are happy to make additional copies of this report available. You may also access this report on the Liberty web page at www.libertyenergyandwater.com.

Substances That Could be in 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 Environmental Protection Agency's Safe Drinking Water Hotline (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 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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 that tap water is safe to drink, the USEPA and the Missouri Department of Natural Resources prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (USFDA) also establishes limits for contaminants in bottled water that 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 indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or visiting their website at https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations. For information on bottled water visit the USFDA website at www.fda.gov.

Do I Need to Take Special Precautions?

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. The USEPA and Centers for Disease Control (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 1-800-426-4791.

Important Health Information

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. Liberty – Bolivar 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 the 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 (800-426-4791) or at http://water.epa.gov/drink/info/lead/index.cfm.

All contaminant sample results from past and present compliance monitoring are available online at the Missouri DNR Drinking Water Watch website at www.dnr.mo.gov/DWW/. To see the Lead and Copper results, enter your water system's name in

the box titled Water System Name, then select Find Water Systems at the bottom of the page. On the next screen, click on the Water System Number. At the top of the next page, under the Help column, click on Other Chemical Results by Analyte. Scroll down to Lead and click the blue Analyte Code (1030). A Sample Collection Date range may need to be entered. The Lead and Copper locations will be displayed under the heading Sample Comments. Scroll to find your location and click on the Sample No. for results. If you assisted the water system in taking a Lead and Copper sample but cannot find your location on the list, please contact Liberty – Bolivar for your results.

Gross Alpha Particle Activity

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Is Our Water System Meeting Other Rules That Govern Our Operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO5010085 for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How Might I Become Actively Involved?

If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at **417-326-2489** to inquire about scheduled meetings or contact persons.

Testing Results

During the year, Liberty- Bolivar takes regular samples to determine the presence of contaminants. All the substances listed here tested under the Maximum Contaminant Level (MCL). Liberty believes it is important you know what was detected and how much of the substance was present.

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative. No data older than 5 years need be included. If more than one sample is collected during the monitoring period, the Range of Sampled Results will show the lowest and highest tested results. The Highest Test Result, Highest LRAA, or Highest Value must be below the MCL or the contaminant has exceeded the level of health-based standards and a violation is issued to the water system.

Regulated Contaminants – Your Water Quality Meets or Exceeds All Regulations

Bolivar (PWS# MO5010085) 2022 Annual Water Quality Report

PRIMARY STANDARDS – Health Based

DISTRIBUTION SYSTEM

Disinfection By-Products	Violation? (Yes/No)	Primary MCL	MCLG	Range of Detection	Highest LRAA	Most Recent Sampling Date	Typical Source of Constituent
TTHMs [Total of Four Trihalomethanes] (ppb)	No	80	0	0.64 - 5.23	5	2022	Byproduct of drinking water disinfection

Lead and Copper (Residential Internal Plumbing)	Violation? (Yes/No)	Action Level	MCLG	Sample Data	Range of Detection	90th Percentile Level	Most Recent Sampling Date	Typical Source of Constituent
Copper (ppm)	No	1.3	0.3	None of the samples collected exceeded the action level.	0.011 - 0.505	0.074	2019 - 2021	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	No	15	0.2	None of the samples collected exceeded the action level.	ND-1.28	ND	2019 - 2021	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SOURCE WATER

Inorganic Constituents	Violation? (Yes/No)	Primary MCL	MCLG	Range of Detection	Highest Test Result	Most Recent Sampling Date	Typical Source of Constituent
Barium (ppm)	No	2	2	0.067 - 0.294	0.294	2022	Erosion of natural deposits, discharge from metal refineries
Nitrate + Nitrite (as N) (ppm)	No	10	10	ND - 0.3	0.3	2022	Erosion from natural deposits, runoff from fertilizer use, leaching deposits

Organic Constituents (Volatile Organic Compounds)	Violation? (Yes/No)	Primary MCL	MCLG	Range of Detection	Highest Test Result	Most Recent Sampling Date	Typical Source of Constituent
Xylenes, Total (ppm)	No	10	10	ND - 0.0007	0.0007	2022	Discharge from petroleum factories, discharge from chemical factories

Radiological Constituents	Violation? (Yes/No)	Primary MCL	MCLG	Range of Detection	Highest Test Result	Most Recent Sampling Date	Typical Source of Constituent
Alpha Emitter (pC/L)	No	15	0	ND - 3.1	3.1	2021	Erosion from natural deposits
Combined Radium 226&228 (pC/L)	No	5	0	1 - 3.9	3.9	2021	Erosion from natural deposits
Radium 226 (pCi/l)	No	5	0	1 - 1.7	1.7	2021	Erosion from natural deposits
Radium 228 (pCi/L)	No	5	0	ND - 2.2	2.2	2021	Erosion from natural deposits

Violations Information

No violations occurred during the 2022 calendar year.

Optional Monitoring (not required by EPA)

SOURCE WATER							
Secondary Constituents	**Violation? (Yes/No)**	**Secondary MCL**	**MCLG**	**Range of Detection**	**Highest Test Result**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Alkalinity (CaCO3 Stability) (ppm)	N/A	N/A	N/A	227 - 261	261	2022	
Aluminum (ppb)	N/A	200	N/A	ND - 61	61	2022	
Calcium (ppm)	N/A	N/A	N/A	42.8 - 47.5	47.5	2022	
Hardness (as CaCO3)] (ppm)	N/A	N/A	N/A	204 - 229	229	2022	The sum of polyvalent cations present in the water, generally magnesium and calcium; the cations are usually naturally occurring
Iron (ppb)	N/A	300	N/A	ND - 54.2	54.2	2022	
Magnesium (ppm)	N/A	N/A	N/A	23.5 - 27.3	27.3	2022	
Manganese (ppb)	N/A	50	N/A	ND - 5.25	5.25	2022	Leaching from natural deposits
Nickel (ppm)	N/A	100	N/A	1.3 - 1.5	1.5	2022	
pH (units)	N/A	8.5	N/A	7.51 - 7.81	7.81	2022	
Potassium (ppm)	N/A	N/A	N/A	ND - 1.2	1.2	2022	
Sodium (ppm)	N/A	N/A	N/A	2.28 - 3.16	3.16	2022	Refers to the salt present in the water and is generally naturally occurring
Sulfate (ppm)	N/A	250	N/A	ND - 11.3	11.3	2022	
Total Dissolved Solids (TDS) (ppm)	N/A	500	N/A	183 - 208	208	2022	
Zinc (ppm)	N/A	5	N/A	0.003 - 0.004	0.004	2022	

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.

Definitions, Terms and Abbreviations

Population: 11,000. This is the equivalent residential population served including non-bill paying customers.

90th percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.

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

HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di- bromoacetic acid) as a group.

LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.

MCLG: Maximum Contaminant Level Goal, or 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.

MCL: Maximum Contaminant Level, or 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.

MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal, or 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 detectable at testing limits.

NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

pCi/L: picocuries per liter, a measure of radioactivity

ppb: parts per billion or micrograms per liter.

ppm: parts per million or milligrams per liter.

ppt: parts per trillion or nanograms per liter

RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.

Range of Results: Shows the lowest and highest levels found during a testing period, if only one sample was taken,

then this number equals the Highest Test Result or Highest Value.

SMCL: Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.