

The Water Works Board of the City of Leeds

8651 Thornton Avenue; Leeds, Alabama 35094

PWSID #AL0000753

2023 Annual Drinking Water Quality Report (For the 2022 Drinking Water Period)

The U.S. Environmental Protection Agency (EPA) wants you to know:

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amounts of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All 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). 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 radioactive material, and it 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 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, 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.

Important Information About 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. The Water Works Board of the City of Leeds 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>.

Notes:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 from infections. These people should seek advice about drinking water from their health care providers. EPA/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 (1-800-426-4791).

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Based on a study conducted by ADEM with the approval of the EPA, a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

Contaminants Monitored	Date Monitored
Inorganic Compounds	2021-2022
Lead and Copper	2022
Microbiological Contaminants	Current
Nitrates	2022
Radioactive Contaminants	2017-2022
Synthetic Organic Contaminants (including herbicides and pesticides)	2020-2022
Volatile Organic Contaminants	2020-2022
Disinfection By-products (TTHM and HAA5)	2022

Table of Primary Drinking Water Contaminants					
CONTAMINANT	MCL	Amount Detected	CONTAMINANT	MCL	Amount Detected
Bacteriological			Endothall	100 ppb	ND
Total Coliform Bacteria	< 5%	ND	Endrin	2 ppb	ND
Turbidity	TT	3.7	Epichlorohydrin	TT	ND
Radiological			Glyphosate	700 ppb	ND
Beta/Photon emitters (mrem/yr)	4	ND	Heptachlor	400 ppt	ND
Alpha emitters (pCi/L)	15	3.8	Heptachlor epoxide	200 ppt	ND
Combined radium (pCi/L)	5	0.8	Hexachlorobenzene	1 ppb	ND
Inorganic			Lindane	200 ppt	ND
Antimony	6 ppb	ND	Methoxychlor	40 ppb	ND
Arsenic	10 ppb	ND	Oxamyl [Vydate]	200 ppb	ND
Barium	2 ppm	0.045	PCBs	500 ppt	ND
Beryllium	4 ppb	ND	Pentachlorophenol	1 ppb	ND
Cadmium	5 ppb	ND	Picloram	500 ppb	ND
Chromium	100 ppb	ND	Simazine	4 ppb	ND
Copper *	AL=1.3 ppm	0.26	Toxaphene	3 ppb	ND
Cyanide	200 ppb	ND	Benzene	5 ppb	ND
Fluoride	4 ppm	ND	Carbon Tetrachloride	5 ppb	ND
Lead *	AL=15 ppb	2.	Chlorobenzene	100 ppb	ND
Mercury	2 ppb	ND	Dibromochloropropane	200 ppt	ND
Nitrate	10 ppm	1.19	0-Dichlorobenzene	600 ppb	ND
Nitrite	1 ppm	ND	p-Dichlorobenzene	75 ppb	ND
Selenium	50 ppb	1.	1,2-Dichloroethane	5 ppb	ND
Thallium	2 ppb	ND	1,1-Dichloroethylene	7 ppb	ND
*90th percentile of the most recent sampling event.			Cis-1,2-Dichloroethylene	70 ppb	ND
Organic Chemicals			trans-1,2-Dichloroethylene	100 ppb	ND
2,4-D	70 ppb	ND	Dichloromethane	5 ppb	ND
2,4,5-TP (Silvex)	50 ppb	ND	1,2-Dichloropropane	5 ppb	ND
Acrylamide	TT	ND	Ethylbenzene	700 ppb	ND
Alachlor	2 ppb	ND	Ethylene dibromide	50 ppt	ND
Atrazine	3 ppb	ND	Styrene	100 ppb	ND
Benzo(a)pyrene[PAHs]	200 ppt	ND	Tetrachloroethylene	5 ppb	ND
Carbofuran	40 ppb	ND	1,2,4-Trichlorobenzene	70 ppb	ND
Chlordane	2 ppb	ND	1,1,1-Trichloroethane	200 ppb	ND
Dalapon	200 ppb	ND	1,1,2-Trichloroethane	5 ppb	ND
Di-(2-ethylhexyl)adipate	400 ppb	ND	Trichloroethylene	5 ppb	ND
Di-(2-ethylhexyl)phthalates	6 ppb	ND	TTHM	80 ppb	12.
Dinoseb	7 ppb	ND	Toluene	1 ppm	ND
Diquat	20 ppb	ND	Vinyl Chloride	2 ppb	ND
Chloramines	4 ppm	ND	Xylenes	10 ppm	ND
Chlorite	1 ppm	ND	TOC	TT	0.4
HAA5	60 ppb	ND	Chlorine	4 ppm	2.1

Table of Unregulated Drinking Water Contaminants					
CONTAMINANT	Low Result, PPM	High Result, PPM	CONTAMINANT, PPM	Low Result, PPM	High Result, PPM
1,1 - Dichloropropene	ND	ND	Chloroform	ND	0.0013
1,1,1,2-Tetrachloroethane	ND	ND	Chloromethane	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	Dibromochloromethane	ND	0.0015
1,1-Dichloroethane	ND	ND	Dibromomethane	ND	ND
1,2,3 - Trichlorobenzene	ND	ND	Dicamba	ND	ND
1,2,3 - Trichloropropane	ND	ND	Dichlorodifluoromethane	ND	ND
1,2,4 - Trimethylbenzene	ND	ND	Dieldrin	ND	ND
1,3 - Dichloropropane	ND	ND	Hexachlorobutadiene	ND	ND
1,3 - Dichloropropene	ND	ND	p-Isopropylbenzene	ND	ND
1,3,5 - Trimethylbenzene	ND	ND	M-Dichlorobenzene	ND	ND
2,2 - Dichloropropane	ND	ND	Methomyl	ND	ND
3-Hydroxycarbofuran	ND	ND	MTBE	ND	ND
Aldicarb	ND	ND	Metolachlor	ND	ND
Aldicarb Sulfone	ND	ND	Metribuzin	ND	ND
Aldicarb Sulfoxide	ND	ND	N - Butylbenzene	ND	ND
Aldrin	ND	ND	Naphthalene	ND	ND
Bromobenzene	ND	ND	N-Propylbenzene	ND	ND
Bromochloromethane	ND	ND	O-Chlorotoluene	ND	ND
Bromodichloromethane	ND	0.0019	P-Chlorotoluene	ND	ND
Bromoform	ND	ND	P-Isopropyltoluene	ND	ND
Bromomethane	ND	ND	Propachlor	ND	ND
Butachlor	ND	ND	Sec - Butylbenzene	ND	ND
Carbaryl	ND	ND	Tert - Butylbenzene	ND	ND
Chloroethane	ND	ND	Trichlorofluoromethane	ND	ND

Table of Secondary Drinking Water Contaminants

Parameters	MCLG	MCL	Low Result	High Result	Parameters	MCLG	MCL	Low Result	High Result
pH	7	Monitored	6.48	8.2	Aluminum	0	0.2	ND	0.057
Color, APHA (units)	N/A	15	ND	ND	Copper	N/A	1	ND	0.021
Odor	N/A	3	ND	ND	Iron	0	0.3	ND	ND
Foaming Agents	N/A	0.5	ND	ND	Manganese	0	0.05	ND	ND
TDS	0	500	144	260	Silver	0	0.1	ND	ND
Fluoride	N/A	2.0	ND	ND	Zinc	0	5	ND	ND
Sulfate	0	250	2.75	19.7	Total Hardness	0	Monitored	89	176
Chloride	N/A	250	3.56	8.07	Corrosivity	N/A	N/A	Non Corrosive	Non Corrosive

Table of Detected Primary Drinking Water Contaminants

CONTAMINANT	MCLG	MCL	Range Detected			Likely Source of Contamination and Health Affects
Turbidity	N/A	TT	0.03	-	3.7	Soil Runoff.
Alpha Emitters	0	15 pCi/l	ND	-	3.8	Erosion of natural deposits
Combined Radium	0	5 pCi/l	ND	-	0.8	Erosion of natural deposits
Barium	2	2 ppm	0.022	-	0.045	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	1.3	AL= 1.3 ppm	ND	-	0.26	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	0	AL= 15 ppb	ND	-	2.	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate	10	10 ppm	0.1	-	1.19	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50 ppb	50 ppb	ND	-	1.	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
TTHM	N/A	80 ppb	4.4	-	12.	By-product of drinking water chlorination
TOC	N/A	TT	0.2	-	0.4	Naturally present in the environment
Chlorine	MRDLG=4	MRDL= 4 ppm	0.2	-	2.2	Water additive used to control microbes

Definitions

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 for a margin of safety.

Maximum Residual Disinfectant Level Goal or MRDLG: 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.

Maximum Residual Disinfectant Level or MRDL: 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.

Variations and Exemptions: ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (or AL): The concentration of a contaminant that triggers treatment or other requirement, a water system shall follow.

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

Nephelometric Turbidity Units (NTU): A measure of clarity.

Non-Detect (ND): Not detectable at testing limits.

Parts per Million (PPM): milligrams per liter (mg/l). One part per million corresponds to a single penny in \$10,000.

Parts per Billion (PPB): micrograms per liter (ug/l). One part per billion corresponds to a single penny in \$10,000,000.

Parts per Trillion (PPT): nanograms per liter (nanograms/l). One part per trillion corresponds to a single penny in \$10,000,000,000.

Picocuries per Liter (pCi/L): A measure of radioactivity.

Millirems per Year (mrem/yr): Measure of radiation absorbed by the body.

Standard Units (S.U.): pH of water measures the water's balances of acids and bases. Water with less than 6.5 could be acidic, soft and corrosive. A pH greater than 8.5 could indicate that the water is hard.

N/A: Not applicable

FDA: Food and Drug Administration.

CDC: Centers for Disease Control.

EPA: Environmental Protection Agency.

ADEM: Alabama Department of Environmental Management.

Water Systems are selected by The Environmental Protection Agency (EPA) to participate in the Unregulated Contaminant Monitoring (UCMR) program to collect nationally representative data for contaminants suspected to be present in drinking water. These contaminants do not have regulatory standards. The monitoring period is between 2018 – 2020. This monitoring is used by the EPA to understand the frequency and level of occurrence of unregulated contaminants in the nation’s public water systems. Every five years the EPA develops a new list of UCMR contaminants, largely based on the Contaminant Candidate List (CCL). The detection of a UCMR contaminant does not represent cause for concern, in and of itself.

The Water Works Board of the City of Leeds continues to monitor PFAS compounds on a quarterly basis as required by Alabama Department of Environmental Management. Those results are included in this table.

Table of Detected UCMR 4 Contaminants						
Contaminant	Minimum Reporting Level (MRL/ug/L)	Reference Concentration (ug/L)	Range Detected			Additional Information
Bromide	NA	NA	ND	-	77.3	An indicator of HAA5, HAA9, HAA6Br
Manganese	0.4 ug/L	NA	ND	-	1.9	Naturally occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries, and fireworks; drinking water and wastewater treatment chemical; essential nutrient
HAA5, HAA6Br, HAA9	NA	NA	ND	-	5	By-products of drinking water disinfection
Bromochloroacetic Acid	NA	NA	0.60	-	1.2	By-products of drinking water disinfection
Bromodichloroacetic Acid	NA	NA	ND	-	0.69	By-products of drinking water disinfection
Dichloroacetic Acid	NA	NA	0.41	-	1.2	By-products of drinking water disinfection
Trichloroacetic Acid	NA	NA	ND	-	1.0	By-products of drinking water disinfection
Perfluorooctane Sulfonic Acid (PFOS)	NA	NA	ND	-	0.0088	Interim Health Advisory Limit for PFOS is 0.00002 ug/L
Perfluorooctanoic Acid (PFOA)	NA	NA	ND	-	0.0016	Interim Health Advisory Limit for PFOA is 0.000004 ug/L
Perfluorohexane Sulfonic Acid	NA	NA	ND	-	0.0011	No Health Advisory Limit established
Perfluorobutane Sulfonic Acid	NA	NA	ND	-	0.0019	Final Health Advisory Limit for PFBS is 2.0 ug/L

Note: EPA has introduced interim health advisory limits for PFOA and PFOS. The interim health advisory limit for PFOS is 0.00002 ug/L. The interim health advisory limit for PFOA is 0.000004 ug/L. The new health advisory limits are lower than the amount which can be detected with current laboratory technology.

UCMR Definitions:

UCMR Minimum Reporting Level (MRL): The minimum concentration that may be reported by a laboratory as a quantified value for a method analyte following analysis. The MRLs were established based on the capability of the analytical method, not based on a level established as “significant” or “harmful”.

UCMR Reference Concentration: The reference concentrations are based on publicly-available health information found in the following EPA resources: 2018 Edition of the Drinking Water Standards and Health Advisories Tables [i.e., Health advisories (HA)] and the CCL 4 Contaminant Information Sheets [i.e., Health Reference Levels (HRLs)]. The primary sources of the health information used to derive the guideline values in the resources referenced above are peer-reviewed assessments from EPA or other governmental agencies. The reference concentrations are subject to change as new health assessments are completed. Reference Concentrations are not legally enforceable federal standards.

Health Reference Levels (HRL): The CCL process derives HRLs for screening purposes using available data and can be used in the Regulatory Determination process as risk-derived concentrations against which to evaluate the occurrence data to determine if contaminants may occur at levels of public health concern. HRLs are not final determinations about the level of a contaminant in drinking water that is necessary to protect any particular population and, in some cases, are derived prior to development of a complete exposure assessment using the best available data. HRLs are not legally enforceable federal standards.

Health Advisories (HA): Has provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA’s health advisories are non-enforceable and non-regulatory and provide technical information to State agencies and other public health officials on health effects, analytical methodologies, and treatment technologies to assist with risk management decisions.

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205-699-5151

What's the Quality of My Water?

The Water Works Board of the City of Leeds has been providing clean water to your community since 1943, helping to keep you and your family healthy. We take this mission very seriously. Our constant goal is to provide you with a safe and dependable supply of drinking water. This report covers January 1 through December 31, 2022. The Leeds Water Works drinking water supply surpassed the strict regulations of both the State of Alabama and the U.S. Environmental Protection Agency (EPA), which requires all water suppliers to prepare reports like this every year.

Our water source is groundwater pumped from six wells and two springs located throughout the city. We treat your water with Chlorine to remove or reduce harmful contaminants that may come from the source water.

At The Water Works Board of the City of Leeds, we work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please feel free to visit us during our working hours or call if you have questions regarding the contents of this report.

If you have any questions about this report or concerning your water quality or our monitoring, please contact Bill Morris at (205) 699-5151. We want our valued customers to be informed about their water quality. Please feel free to attend any of our regularly scheduled meetings held on the third Thursday of each month at 4:00 PM at The Water Works Board of the City of Leeds office at 8651 Thornton Ave, Leeds, AL.

LWWB, Board of Directors:

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McKinleigh Brockman, Customer Service Rep

Jesse Sanders, Operator

Adam Cromer, Chief Operator

Gage Towery, Crew Leader

Shane Rhodes, Crewman

Chris Dunfee, Crewman

Ken Harrell, AMR Specialist

Visit our website at: www.lwwb.com

The Water Works Board of the City of Leeds has completed a Source Water Assessment Plan (SWAP). The SWAP is designed to tell us certain information about our source water so that we as a water service and you as a water consumer can better preserve and protect our source water. For more information on the SWAP, please contact Bill Morris at 205-699-5151.