

Annual Drinking Water Quality Report

Monitoring Performed January – December 2021

City of LaFayette

2336 County Road 48
LaFayette, AL 36862
334-864-9363

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report). The purpose of this report is to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We want you to understand the efforts made to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Customers:	The LaFayette Water Treatment Plant provides water supply to approximately 4600 people
Water Sources:	Our water source is the City Lake (surface water). The City Lake Reservoir contains approximately 100 acres of surface area. The City Lake is located west of town on County Road 48.
Water Treatment:	The treatment process consists of Coagulation, Sedimentation, Filtration, & Disinfection.

Source Water Assessment

The City of LaFayette routinely completes a water storage facility inspection plan and utilizes a bacteriological monitoring plan. Also, in compliance with the Alabama Department of Environmental Management (ADEM), a Source Water Assessment plan has also been developed that will assist in protecting our water sources. This plan provides additional information such as potential sources of contamination. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible (low) to contaminating the water source. For a nominal reproduction fee, you can obtain a copy from City Hall.

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 help us make this effort worthwhile by protecting our source water. You can help protect your community's drinking water source in several ways:

- Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints, and waste oil.
- 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 your system 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 the EPA's (Environmental Protection Agency) Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. 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?

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected as rate structure adjustments. Thank you for understanding.

If you have any questions about this report or concerning your water utility, please contact Ann Gleaton at 334-864-9363.

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second and fourth Monday of each month at City Hall, in the Council Chambers at 6:00 p.m. CST.

The members of the Governing Body are:

Kenneth Vines, Mayor	Michael C. Ellis	Shannon Hunter
Tammie B. Williams	Terry Mangram	Toney B. Thomas

Abbreviations & Definitions

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

Lowest Running Annual Average (LRAA): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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 Detected (MD)

Maximum Residual Disinfectant Level (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.

Maximum Residual Disinfection Level Goal (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.

Not Applicable (NA)

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Not Detected (ND): Laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.

pCi/L (picocuries per liter): a measure of Radioactivity

ppb (parts per billion): micrograms per liter ($\mu\text{g/L}$)

ppm (parts per million): milligrams per liter (mg/L)

Threshold Odor Number (T.O.N.): The greatest dilution of a sample with odor-free water that still yields a just detectable odor.

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

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

General Information Regarding Drinking Water Contaminants

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels.

To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. 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 be naturally-occurring or result from urban storm water run-off, 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, storm water run-off, 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 that tap water is safe to drink, 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. 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.

Water systems also tests your source water for pathogens, such as Cryptosporidium and Giardia. These pathogens can enter the water from animal or human waste. All test results were well within state and federal standards. For people who may be immuno-compromised, a guidance document developed jointly by the Environmental Protection Agency and the Center for Disease Control is available online at www.epa.gov/safewater or from the Safe Drinking Water Hotline at 800-426-4791. This language does not indicate the presence of cryptosporidium in our drinking water. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Monitoring Schedule

We routinely monitor for contaminants in your drinking water according to Federal and State laws. ADEM allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. The table below shows the most recent year of monitoring for these contaminant groups - (Date Monitored / Next Monitoring)

Constituent Monitored	Date Monitored / Next Monitoring
Inorganic Contaminants	2021 / 2022
Lead/Copper	2019 / 2022
Microbiological Contaminants	Monthly
Nitrates	2021 / 2022
Radioactive Contaminants	2016 / 2025
Synthetic Organic Contaminants (including pesticides and herbicides)	2019 / 2022
Volatile Organic Contaminants	2019 / 2022
Disinfection By-products	Quarterly

Variances and Exemptions

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 were not required

Lead & Copper Monitoring

The City of LaFayette completed monitoring requirements for lead and copper in 2019. Twenty sites were sampled without exceeding the Action Level limits for lead or copper. The system will continue to monitor for lead and copper every three years. The next monitoring period for the system will be the period of June - September 2022. Our monitoring results in 2019 were as follows:

2019 Results	MCL	90th Percentile Sample	Range of Levels
Lead	AL = 15	0.91 ppb	ND - 1.7
Copper	AL = 1.3	0.515 ppm	ND - 0.57

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of LaFayette is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. These recommended actions are very important to the health of your family:

- Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead.
- 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.

Lead levels in your drinking water are likely to be higher if:

- Your home or water system has lead pipes, or
- Your home has faucets or fittings made of brass which contains some lead, or
- Your home has copper pipes with lead solder and you have naturally soft water, and
- Water often sits in the pipes 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 Water hotline or at www.epa.gov/safewater/lead

Our Results

The table below contains results from the most recent monitoring of primary, secondary, and unregulated contaminants. The monitoring was performed in accordance with the sampling requirements established by the Environmental Protection Agency (EPA) and ADEM. Although many more contaminants were tested, the table shows only those contaminants that were detected during the calendar year of this report - unless otherwise noted.

Table of Detected Contaminants					
Primary Standards - Mandatory standards set by the Safe Drinking Water Act used to protect public health. These apply to all public water systems.					
Contaminants	MCL, TT, or MRDL (What's Allowed?)	MCLG (What's the Goal?)	Range Low - High (MD)	Violation	Major Sources
BACTERIOLOGICAL CONTAMINANTS					
Total Coliform	<5% present/absent	TT	1 positive sample †	No	Naturally present in the environment
Total Organic Carbon (ppm)	TT	NA	1.13 - 1.99	No	Naturally present in the environment
INORGANIC CONTAMINANTS					
Arsenic (ppb)	0.010	0	0.69 ‡	No	Erosion of natural deposits; Runoff from orchards, Runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.0207	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	0.55	No	Discharge from steel and pulp mills; Erosion of natural deposits
Copper - action level at consumer taps (ppm)	AL=1.3	1.3	ND - 0.57 (2019)	No	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride (ppm)	4	4	1.42	No	Water additive which promotes strong teeth; erosion of natural deposits; Discharge from fertilizer and aluminum factories
Lead - action level at consumer taps (ppb)	AL=15	0	ND - 1.7 (2019)	No	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate [measured as Nitrogen] NO3 (ppm)	10	10	0.225	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppm)	0.05	0.05	0.00092	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
DISINFECTANTS & DISINFECTION BYPRODUCTS »					
Total Haloacetic Acids (HAA5)	60	NA	LRAA Range 25.9 - 40.7	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	80	NA	LRAA Range 38.7 - 67.5	No	By-product of drinking water disinfection

† One positive **Total Coliform** sample occurred on October 13, 2021. All follow up testing was negative. The presence of coliform bacteria in the sample was not a compliance violation. These are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

‡ While your drinking water meets EPA's standard for **Arsenic**, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

» There is convincing evidence that additional of a **Disinfectant** is necessary for control of microbial contaminants

Secondary Standards - Non Mandatory standards established as a guideline to assure good aesthetic qualities such as taste, color, and odor.

Contaminant	MCL	Maximum Detected
Aluminum (ppm)	0.05 to 0.2	0.118
Copper (ppm)	1	0.0021
Magnesium (ppm)	NA	2.09
pH (std units)	6.5 - 8.5	6.4
Sulfate (ppm)	250	14.4
Total Dissolved Solids (ppm)	500	8.67
Zinc (ppm)	5	0.088

Contaminant	MCL	Maximum Detected
Calcium, as Ca (ppm)	NA	9.88
Carbon Dioxide (ppm)	NA	17.6
Conductivity (µmhos/cm)	NA	101
Hardness (ppm)	NA	28.6
Manganese (ppm)	0.05	0.0011
Nickel (ppm)	NA	0.00057
Sodium (ppm)	NA	6.84

Unregulated Contaminants	Range Low - High (MD)
Bromodichloromethane (ppb)	1.34 - 14.4
Chloroform (ppb)	18.4 - 87.4
Dibromochloromethane (ppb)	ND - 2.51

The City of LaFayette has chosen to provide our customers with a table of all contaminants (Primary, Secondary, and Unregulated) for which the EPA and the Georgia EPD require testing. **These contaminants were not detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants* on page 3 of this report.**

Table of Primary Contaminants

BACTERIOLOGICAL CONTAMINANTS	
MCL & Unit of MSMT	
Total Coliform Bacteria	< 5% present/absent
Fecal Coliform & E. coli	0 present/absent
Turbidity	TT NTU
Cryptosporidium	TT Calculated organisms/liter
Total Organic Carbon (TOC)	TT

RADIOLOGICAL CONTAMINANTS	
MCL & Unit of MSMT	
Beta/photon emitters	4 mrem/yr
Alpha emitters	15 pCi/l
Combined radium	5 pCi/l
Uranium	30 pCi/l

DISINFECTANTS & DISINFECTION BYPRODUCTS			
MCL & Unit of MSMT			
Bromate	10 ppb	Chlorine Dioxide	800 ppb
Chloramines	4 ppm	Chlorite	1 ppm
Chlorine	4 ppm	HAA5 [Total haloacetic acids]	60 ppb
		TTHM [Total trihalomethanes]	80 ppb

INORGANIC CONTAMINANTS							
MCL & Unit of MSMT							
Antimony	6 ppb	Beryllium	4 ppb	Cyanide	200 ppb	Nitrate	10 ppm
Arsenic	10 ppb	Cadmium	5 ppb	Fluoride	4 ppm	Nitrite	1 ppm
Asbestos	7 MFL	Chromium	100 ppb	Lead	AL=15 ppb	Selenium	0.05 ppm
Barium	2 ppm	Copper	AL=1.3 ppm	Mercury	2 ppb	Thallium	2 ppb

ORGANIC CONTAMINANTS							
MCL & Unit of MSMT							
1,1,1-Trichloroethane	200 ppb	Carbon tetrachloride	5 ppb	Endrin	2 ppb	p-Dichlorobenzene	75 ppb
1,1,2-Trichloroethane	5 ppb	Chlordane	2 ppb	Epichlorohydrin	TT TT	Pentachlorophenol	1 ppb
1,1-Dichloroethylene	7 ppb	Chlorobenzene	100 ppb	Ethylbenzene	700 ppb	Picloram	500 ppb
1,2,4-Trichlorobenzene	0.07 ppm	cis-1,2-Dichloroethylene	70 ppb	Ethylene dibromide	50 ppt	Polychlorinated biphenyls	0.5 ppb
1,2-Dichloroethane	5 ppb	Dalapon	200 ppb	Glyphosate	700 ppb	Simazine	4 ppb
1,2-Dichloropropane	5 ppb	Di (2-ethylhexyl)adipate	400 ppb	Heptachlor	400 ppt	Styrene	100 ppb
2,4,5-TP(Silvex)	50 ppb	Di (2-ethylhexyl)phthalate	6 ppb	Heptachlor epoxide	200 ppt	Tetrachloroethylene	5 ppb
2,4-D	70 ppb	Dibromochloropropane	200 ppt	Hexachlorobenzene	1 ppb	Toluene	1 ppm
Acrylamide	TT TT	Dichloromethane	5 ppb	Hexachlorocyclopentadiene	50 ppb	Toxaphene	3 ppb
Alachlor	2 ppb	Dinoseb	7 ppb	Lindane	200 ppt	trans-1,2-Dichloroethylene	100 ppb
Benzene	5 ppb	Dioxin [2,3,7,8-TCDD]	30 ppq	Methoxychlor	40 ppb	Trichloroethylene	5 ppb
Benzo(a)pyrene [PAHs]	200 ppt	Diquat	20 ppb	o-Dichlorobenzene	600 ppb	Vinyl Chloride	2 ppb
Carbofuran	40 ppb	Endothall	100 ppb	Oxamyl [Vydate]	200 ppb	Xylenes	10 ppm

Table of Secondary and Unregulated Contaminants

SECONDARY & ADDITIONAL CONTAMINANTS	
Aluminum (ppm)	Alkalinity, Total (as CA, Co3) (ppm)
Chloride (ppm)	Calcium, as Ca (ppm)
Color (color units)	Carbon Dioxide (ppm)
Copper (ppm)	Conductivity (µmhos/cm)
Corrosivity	Hardness (ppm)
Fluoride (ppm)	Manganese (ppm)
Foaming agents MBAS (ppm)	Nickel (ppm)
Iron (ppm)	Sodium (ppm)
Magnesium (ppm)	Temperature (°C)
Odor (threshold odor number)	
pH (std units)	
Silver (ppm)	
Sulfate (ppm)	
Total Dissolved Solids (ppm)	
Zinc (ppm)	

UNREGULATED CONTAMINANTS		
1,1 - Dichloropropene	Bromobenzene	Isopropylbenzene
1,1,1,2-Tetrachloroethane	Bromochloromethane	M-Dichlorobenzene
1,1,1,2,2-Tetrachloroethane	Bromodichloromethane	Methomyl
1,1-Dichloroethane	Bromoform	Metolachlor
1,2,3 - Trichlorobenzene	Bromomethane	Metribuzin
1,2,3 - Trichloropropane	Butachlor	MTBE
1,2,4 - Trimethylbenzene	Carbaryl	N - Butylbenzene
1,3 - Dichloropropane	Chloroethane	Naphthalene
1,3 - Dichloropropene	Chloroform	N-Propylbenzene
1,3,5 - Trimethylbenzene	Chloromethane	O-Chlorotoluene
2,2 - Dichloropropane	Dibromochloromethane	P-Chlorotoluene
3-Hydroxycarbofuran	Dibromomethane	P-Isopropyltoluene
Aldicarb	Dicamba	Propachlor
Aldicarb Sulfone	Dichlorodifluoromethane	Sec - Butylbenzene
Aldicarb Sulfoxide	Dieldrin	Tert - Butylbenzene
Aldrin	Hexachlorobutadiene	Trichlorofluoromethane