

# Annual Drinking Water Quality Report

## Monitoring Performed January – December 2024

### LaFayette Water Works - PWSID AL0000178

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.

<b>Customers:</b>	Approximately 1320	<b>Storage Capacity:</b>	5 tanks with a capacity of over 1 million gallons
<b>Water Treatment:</b>	The treatment process consists of Coagulation, Sedimentation, Filtration, & Disinfection.		
<b>Water Sources:</b>	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. <a href="#">Source Water Assessment</a>		

LaFayette Water Works 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. You can obtain a copy from City Hall for a nominal reproduction fee.

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, 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.

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 Sabrina Chatmon at 334-864-9363.  
[Questions?](#)

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.

Governing Body
Kenneth Vines, Mayor
David Ennis
Michael C. Ellis
Tammie B. Williams
Terry Mangram
Toney B. Thomas

#### Monitoring Schedule

Our water sources are routinely monitored for contaminants, according to system has individually assigned monitoring requirements. ADEM allows concentrations of these contaminants do not change frequently. The following requirement for the contaminant groups.

#### 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.

Constituent Monitored	Date Monitored / Next Monitoring
Inorganic Contaminants	Annually
Lead/Copper	2022 / 2025
Microbiological Contaminants	Monthly
Nitrates	Annually
Radioactive Contaminants	2022 / 2031
Synthetic Organic Contaminants (including pesticides and herbicides)	2024 / 2027
Volatile Organic Contaminants	2024 / 2027
Disinfection By-products	Quarterly

#### Important Definitions & Abbreviations

**Action Level (AL):** The concentration of a contaminant that triggers treatment or other requirements that a water system shall 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 contaminant level 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 disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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.

**Millirem per year (mrem/yr):** a measure of radiation absorbed by the body.

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

**Not Applicable (NA)**

**Not Detected (ND)**

**ppb (parts per billion):** micrograms per liter (µg/L)

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

**ppt (parts per trillion):** nanogram per liter (ng/L)

**pCi/L (picocuries per liter):** a measure of radioactivity in water.

**Threshold Odor Number (TON):** 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.

## Lead & Copper Monitoring

LaFayette Water Works completed monitoring requirements for lead and copper in 2022. 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 2025. Our monitoring results in 2022 were as follows:

LEAD & COPPER (TAP WATER)							
Contaminant & Unit of MSMT	AL (Action Level)	MCLG (What's the Goal?)	Date Sampled (mo/yr)	90th Percentile Result	Range Low - High (MD)	No. of Sampling Sites Exceeding the AL	Major Sources
Copper (ppm)	1.3	1.3	June 2022	0.243	0.058 - 0.398	0	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	15	0		0.47	ND - 1.7	0	

As required by ADEM, we conducted a Lead Service Line Inventory during 2024.

Our findings were:

SERVICE LINE INVENTORY SUMMARY			
TOTAL SERVICE LINES			1320
Lead	Galvanized	Non-Lead	Lead Status Unknown ***
0	230	1075	15

classification of 13 lines.

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Corrosion of pipes, plumbing fittings and fixtures may cause metals, including lead and copper, to enter drinking water. LaFayette Water Works treats water using Phosphate to control corrosion. To assess corrosion of lead and copper, LaFayette Water Works conducts tap sampling for lead and copper at selected sites every three years.

Also, LaFayette Water Works is required to sample for lead in schools and licensed child care facilities as requested by the facility. *Please contact your school or child care facility for further information about potential sampling results.*

The complete Lead sampling data, Service Line Inventory Report, and any information on replacement plans for Lead, Galvanized, or Unknown service lines are available for review in our office. [Important Health Information about Lead](#)

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Exposure to lead in drinking water can cause serious health effects in all age groups, especially for pregnant women and young children. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. LaFayette Water Works is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time.

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

You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk:

- Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly.
- Clean your aerator. Regularly clean your faucet's screen (also known as an aerator). Sediment, debris, and lead particles can collect in your aerator. If lead particles are caught in the aerator, lead can get into your water.
- Use only cold water for drinking, cooking, and making baby formula.
  - Boiling water does not remove lead from water.
- Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes.
  - You can do this by running your tap, taking a shower, doing laundry or a load of dishes.
  - If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period.

If you are concerned about lead in your water, you may wish to have your water tested, contact LaFayette Water Works at (334) 864-9363.

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](http://www.epa.gov/safewater/lead)

### Did you know?

- There is the same amount of water on Earth as there was when the Earth was formed. The water from your faucet could contain molecules that dinosaurs drank.
- Nearly 97% of the world's water is salty or otherwise undrinkable. Another 2% is locked in ice caps and glaciers. That leaves just 1% for all of humanity's needs — all its agricultural, residential, manufacturing, community, and personal needs.
- Water regulates the Earth's temperature. It also regulates the temperature of the human body, carries nutrients and oxygen to cells, cushions joints, protects organs and tissues, and removes wastes.
- 75% of the human brain is water and 75% of a living tree is water.
- Water is part of a deeply interconnected system. What we pour on the ground ends up in our water, and what we spew into the sky ends up in our water.
- Water expands by 9% when it freezes. Frozen water (ice) is lighter than water, which is why ice floats in water.

<https://www3.epa.gov/safewater/kids/waterfactsoflife.html>

During the past year, we have taken thousands of water samples in order to determine the presence of any primary, secondary, or unregulated contaminants. The water quality information presented in the tables below is from the most recent monitoring periods for each group. These tables only includes those contaminants that were detected in the water.

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.						
Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	MCLG (What's the Goal?)	Range Low - High	Maximum Detected	Violation	Major Sources
<b>INORGANIC CONTAMINANTS - 2024</b>						
Barium (ppm)	2	2	0.0216		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	0.86		No	Discharge from steel and pulp mills; Erosion of natural deposits
Copper - source water (ppm)	AL=1.3	1.3	0.0032		No	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride (ppm)	4	4	1.62		No	Water additive which promotes strong teeth; erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] NO <sub>3</sub> (ppm)	10	10	0.145		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>LEAD &amp; COPPER (TAP WATER) - 2022</b>						
Copper - action level at consumer taps (ppm)	AL=1.3	1.3	ND - 1.7	1.7	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	AL=15	0	0.058 - 0.398	0.398	No	Corrosion of household plumbing systems; Erosion of natural deposits
<b>ORGANIC CONTAMINANTS - 2024</b>						
Dalapon (ppb)	200	200	1.1		No	Runoff from herbicide used on rights of way
Total Organic Carbon (ppm)	TT	NA	1.22 - 2.41 <sup>δ</sup>	2.41	No	Naturally present in the environment
<b>DISINFECTANTS &amp; DISINFECTION BYPRODUCTS - QUARTERLY »</b>						
Total Haloacetic Acids HAA (ppb)	60	NA	LRAA Range 43.2 - 49.7	60	No	By-product of drinking water disinfection
Total Trihalomethanes TTHM (ppb)	80	NA	LRAA Range 63.5 - 70.4	107.1	Yes	By-product of drinking water disinfection

<sup>δ</sup> The percentage of **Total Organic Carbon (TOC)** removal was measured each month and the system met all TOC removal requirements set.

» There is convincing evidence that the addition of a **disinfectant** is necessary for the control of microbial contaminants.

Secondary Standards - Non Mandatory standards established as a guideline to assure good aesthetic qualities such as taste, color, and odor. All results in this table are from 2024			
Contaminant & Unit of MSMT	MCL	Maximum Detected	Major Sources
Chloride (ppm)	250	7.2	Naturally occurring in the environment or as a result of agricultural runoff
Iron (ppm)	0.3	0.0254	Naturally occurring in the environment; erosion of natural deposits; leaching from pipes
Manganese (ppm)	0.05	0.0422	Erosion of natural deposits; leaching from pipes
pH (std units)	6.5 - 8.5	7.2	Naturally occurring in the environment or as a result of treatment with water additives
Sulfate (ppm)	250	16.2	Naturally occurring in the environment or as a result of industrial discharge or as a result of agricultural runoff
Total Dissolved Solids (ppm)	500	57	Naturally occurring in the environment or as a result of industrial discharge or as a result of agricultural runoff
Zinc (ppm)	5	0.0519	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills
Calcium, as Ca (ppm)	NA	10.2	Erosion of natural deposits
Conductivity (umhos)	NA	100	Naturally occurring in the environment or as a result of treatment with water additives
Hardness (ppm)	NA	30	Naturally occurring in the environment or as a result of treatment with water additives
Magnesium (ppm)	NA	1.9	Erosion of natural deposits
Nickel (ppm)	NA	0.00095	Leaching from metals that are in contact with drinking water, such as pipes and fittings
Sodium (ppm)	NA	4.86	Naturally occurring in the environment

Unregulated Contaminants - 2024			
Contaminant & Unit of MSMT	Average Detected	Range of Detected	Major Sources
Bromodichloromethane (ppb)	8.23	ND - 14.7	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by product of chlorination
Chloroform (ppb)	59.9	26.8 - 105.7	
Dibromochloromethane (ppb)	0.79	ND - 5.2	

Daily Testing - 2024	Range of Detected
<b>BACTERIOLOGICAL CONTAMINANTS</b>	
Turbidity (NTU) £	0.02 - 0.24
<b>INORGANIC CONTAMINANTS</b>	
Fluoride (ppm)	0.10 - 1.6
<b>DISINFECTANTS &amp; DISINFECTION BYPRODUCTS</b>	
Chlorine (ppm)	1.2 - 2.5
<b>SECONDARY &amp; ADDITIONAL CONTAMINANTS</b>	
Alkalinity	14 - 28
Iron	ND - 0.11
Manganese	ND - 0.05
pH	6.5 - 7.8
<b>UNREGULATED CONTAMINANTS</b>	
Corrosion Inhibitor Phosphate	0.10 - 1.60



**1 drop in 13.2 gallons of water = 1 ppm**  
 OR, in terms of time, ppm can be thought of as  
 one second in 11.5 days

**1 drop in a tanker truck = 1 ppb**  
 OR, in terms of time, ppm can be thought of as  
 one second in 32 years

£ **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.

At high levels, some primary contaminants are known to pose health risks to humans. The tables below list Primary Drinking Water Contaminants for which water systems routinely monitor; however, not all were detected in your drinking water. The contaminants that had some level of detection are listed in the *Table of Detected Drinking Water Contaminants* located on pages 2 - 4.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS

BACTERIOLOGICAL CONTAMINANTS

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Total Coliform Bacteria	< 5% present/absent	Absent
Fecal Coliform & E. coli	present/absent	Absent
Turbidity (NTU)	TT	ND

RADIOLOGICAL CONTAMINANTS

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Beta/Photon emitters (mrem/yr)	4	ND
Alpha emitters (pCi/L)	15	ND
Combined radium (pCi/L)	5	ND

DISINFECTANTS & DISINFECTION BYPRODUCTS

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Bromate (ppb)	10	ND
Chloramines (ppm)	4	ND
Chlorine (ppm)	4	ND
Chlorine Dioxide (ppb)	800	ND
Chlorite (ppm)	1	ND
Total Haloacetic Acids HAA (ppb)	60	60
Total Trihalomethanes THM (ppb)	80	107.1

ORGANIC CONTAMINANTS

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
1,1,1-Trichloroethane (ppb)	200	ND
1,1,2-Trichloroethane (ppb)	5	ND
1,1-Dichloroethylene (ppb)	7	ND
1,2,4-Trichlorobenzene (ppb)	0.07	ND
1,2-Dichloroethane (ppb)	5	ND
1,2-Dichloropropane (ppb)	5	ND
2,4,5-TP (Silvex) (ppb)	50	ND
2,4-D (ppb)	70	ND
Acrylamide (ppb)	TT	ND
Alachlor (ppb)	2	ND
Atrazine (ppb)	3	ND
Benzene (ppb)	5	ND
Benzo(a)pyrene [PAHs] nanograms/L	200	ND
Carbofuran (ppb)	40	ND
Carbon Tetrachloride (ppb)	5	ND
Chlordane (ppb)	2	ND
Chlorobenzene (ppb)	100	ND
cis-1,2-Dichloroethylene (ppb)	70	ND
Dalapon (ppb)	200	1.1
Dibromochloropropane (ppt)	200	ND
Di (2-ethylhexyl)adipate (ppb)	400	ND
Di (2-ethylhexyl)phthalate (ppb)	6	ND

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Dinoseb (ppb)	7	ND
Dioxin [2,3,7,8-TCDD] (ppq)	30	NA
Diquat (ppb)	20	ND
Endothall (ppb)	100	ND
Endrin (ppb)	2	ND
Epichlorohydrin (ppb)	TT	ND
Ethylbenzene (ppb)	700	ND
Ethylene Dibromide (ppt)	50	ND
Glyphosate (ppb)	700	ND
Heptachlor (ppt)	400	ND
Heptachlor Epoxide (ppt)	200	ND
Hexachlorobenzene (ppb)	1	ND
Hexachlorocyclopentadiene (ppb)	50	ND
Lindane (ppt)	200	ND
Methoxychlor (ppb)	40	ND
o-Dichlorobenzene (ppb)	600	ND
Oxamyl [Vydate] (ppb)	200	ND
p-Dichlorobenzene (ppb)	75	ND
Pentachlorophenol (ppb)	1	ND
Picloram (ppb)	500	ND
Polychlorinated biphenyls (ppt)	0.5	ND
Simazine (ppb)	4	ND
Styrene (ppb)	100	ND
Tetrachloroethylene (ppb)	5	ND
Toluene (ppm)	1	ND
Total Organic Carbon (TOC)	TT	ND
Toxaphene (ppb)	3	ND
trans-1,2-Dichloroethylene (ppb)	100	ND
Trichloroethylene (ppb)	5	ND
Vinyl Chloride (ppb)	2	ND
Xylenes (ppm)	10	ND

INORGANIC CONTAMINANTS

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Antimony (ppb)	6	ND
Arsenic (ppb)	10	ND
Asbestos (MFL)	7	NA
Barium (ppm)	2	0.0216
Beryllium (ppb)	4	ND
Cadmium (ppb)	5	ND
Chromium (ppb)	100	0.86
Copper - source water (ppm)	1.0	0.0032

Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected
Cyanide (ppb)	200	ND
Fluoride (ppm)	4	1.62
Lead - source water (ppb)	AL=15	ND
Mercury (ppb)	2	ND
Nitrate [measured as Nitrogen] NO <sub>3</sub> (ppm)	10	0.145
Nitrite [measured as Nitrogen] NO <sub>2</sub> (ppm)	1	ND
Selenium (ppm)	0.05	ND
Thallium (ppb)	2	ND

LEAD & COPPER (TAP WATER) - 2022			
Contaminant & Unit of MSMT	MCL, TT, or MRDL (What's Allowed?)	Max Detected	90th Percentile Result
Copper - action level at consumer taps (ppm)	AL=1.3	0.058 - 0.398	0.243
Lead - action level at consumer taps (ppb)	AL=15	ND - 1.7	0.47

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800-426-4791.

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.

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 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, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides may come from a variety of sources such as agriculture, stormwater run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplants recipients, people with HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their healthcare providers. For people who may be immuno-compromised, a guidance document developed jointly by the Environmental Protection Agency and the Center for Disease Control (CDC) is available online [www.epa.gov/safewater](http://www.epa.gov/safewater) or by calling the Safe Drinking Water Hotline (800-426-4791).

Water systems also test your source water for pathogens, such as Cryptosporidium and Giardia. These pathogens can enter the water from animal or human waste. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants can also be obtained by calling the hotline or online [www.epa.gov/safewater](http://www.epa.gov/safewater).