Definitions: Terms you may not be familiar with that are used in water testing

Parts Per Million (PPM) Milligrams per liter (mg/l) One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts Per Billion (PPB) Micrograms per liter (ug/l) One part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.

Nephelometric Turbidity Unit (NTU) This is a measurement of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ND Not detectable at testing levels.

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. MCLG is to allow for a margin of safety.

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

EPA Environmental Protection Agency.

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

90th Percentile 90% of samples are equal to or less than the number in the chart.

Picocuries Per Liter (PCi/L) measure of radioactivity

Maximum Residual Disinfectant Level (MRDL)

Maximum Residual Disinfectant Level Goal (MRDLG)

Center for Disease Control (CDC)

Alabama Department of Environmental Management (ADEM)

Not regulated (NR)

Variance and Exemption State permission not to meet an MCL or perform a treatment technique under certain circumstances. 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, is more than one year old.

Turbidity 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.

Unregulated Contaminant Monitoring Rule Contaminants (UCRM) Contaminants which the EPA has not established drinking water standards.

The City of Fairhope routinely monitors for contaminants in your drinking water according to Federal and State laws. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminant	Violation (Y/N)	Average Detected	Range Detected	Likely Source of Contamination	MCL
Nitrate-N (mg/L)	N	2.44	0.21 to 6.0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	10 mg/L
Lead (mg/L)	N	90% tile) below action level	0 of 30 samples above AL	Corrosion of household plumbing systems; erosion of natural deposits	AL = 15ug/L at 90th percentile
Copper (mg/L)	N	90% tile) below action level	0 of 30 samples above AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	AL = 1.3 mg/L
UNREGULATED					
Calcium (mg/L)	N	8.7	4.7 to 10.6	Erosion of natural deposits, TT from adding lime to the drinking water	N/A
Turbidity (NTU)	N	0.4	0.2 to 0.75	Soil run off	N/A
Phosphate (mg/L)	N	2.21	1.43 to 2.99	Water additive to control the corrosion rate	TT
Magnesium (mg/L)	N	2.78	0.94 to 9.2	Erosion of natural deposits	N/A
Zinc (mg/L)	N	0.015	0 to 0.09	Erosion of natural deposit	5 mg/L
Specific conductance	N	91.2	58.5 to 150	Substance that forms ions when in water	N/A
INORGANICS					
Barium (mg/L)	N	0.043	0.016 to 0.099	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits	2 mg/L
Aluminum (mg/L)	N	0.028	0 to 0.09	Erosion of natural deposits	0.2 mg/L
SECONDARY CONTAMINANTS					
Hardness	N	29.1	15.6 to 49.4	Leaching from natural deposits	N/A
Sodium (mg/L)	N	5.25	3.5 to 8.7	Erosion of natural deposits	N/A
Chlorine (mg/L)	N	1.735	1.17 to 2.30	Water Additive used to control microbes.	MRDL = 4 mg/L
pH	N	7.76	6.27 to 9.25	The pH value is defined as the negative logarithm of the concentration of hydrogen ions measured in moles per liter.	N/A
Total Alkalinity (mg/L)	N	21.35	11.2 to 29.0	A measure of water's capacity to neutralize acids. Also the buffer capacity of the water.	N/A
Iron (mg/L)	N	0.13	0.0 to 0.852	Corrosion of household plumbing; Erosion of natural deposits	0.3 mg/L
Fluoride (mg/L)	N	0.5	0 to 1.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer.	4 mg/L
Manganese (mg/L)	N[1]	0.047	0.026 to 0.068	Erosion of natural deposits	0.05 mg/L
Carbon dioxide, free	N			Naturally occurring in water	N/A
Sulfate (mg/L)	N	3.64	0.6 to 7.8	Erosion of natural deposits	500 mg/L
Total Dissolved Solids (mg/L)	N	71.14	53 to 98	Constituents in the water	500 mg/L
Chloride (mg/L)	N	7.9	0 to 18.1	Erosion of natural deposits	250 mg/L
RADIONUCLIDES					
Gross Alpha	N	-0.315 ± 0.499	-0.315 ± 0.499	Erosion of natural deposits	15 pCi/L
Gross Beta	N	1.86 ± 0.874	1.86 ± 0.874	Erosion of natural deposits	15 pCi/L
Radium - 226	N	0.0846 ± 0.323	0.0846 ± 0.323	Erosion of natural deposits	5 pCi/L
Radium - 228	N	3.19 ± 0.486	3.19 ± 0.486	Erosion of natural deposits	5 pCi/L
DISINFECTION BYPRODUCTS					
Bromodichloromethane (mg/L)	N	0.0007	0.0 to 0.0014	By-product of drinking water disinfection	0.060 mg/L
TTHM [Total trihalomethanes] (mg/L)	N	0.00125	0.0 to 0.0025	By-product of drinking water disinfection	0.080 mg/L
Dibromochloromethane (mg/L)	N	0.00055	0.0 to 0.0011	By-product of drinking water disinfection	0.60 mg/L

1) It was noted that Manganese was above the MCL. This sample was at an isolated well site and not indicative of a system wide issue. Manganese is a secondary contaminant as defined by ADEM, therefore no formal violation was issued. The City of Fairhope takes any tests outside the MCL very seriously. Therefore ADEM was notified immediately and additional Manganese testing is being performed at the location to ensure it stays below the MCL. The City of Fairhope will implement additional treatment as necessary.

2) The City tested for PFAS at all our water sources. One well had a detection of 0.000014 mg/L. The recently issued MCL for PFAS is 0.000004 mg/L with five years to comply. The City is evaluating treatment options and additional water sources.

3) During the 2022 year, The City of Fairhope was required to perform two rounds of SOC sampling. The first round was performed, but due to some staffing changes, the second round of testing was not completed within the time frame required by ADEM. As soon as the City was notified regarding this oversight, the second round of sampling was performed and all samples were in compliance for SOC limit. During January 2020 – December 2022 monitoring period, the City did not monitor for synthetic organic chemicals, and therefore, cannot be sure of the quality of your drinking water during that time. A letter was sent out by the City on December 22, 2023 to notify all residents.

The U.S. Environmental Protection Agency (EPA) wants you to know: 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 at the EPA's Safe Drinking Water Hotline (1-800-426-4791).

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

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 regulations establish limits for contaminants in bottled water that 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; 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).

Radon is a naturally occurring radio-active gas that may cause cancer, and may be found in drinking water and indoor air. Some people who are exposed to radon in drinking water may have increased risk of getting cancer over the course of their lifetime, especially lung cancer. Radon in soil under homes is the biggest source of radon in indoor air, and presents a greater risk of lung cancer than radon in drinking water.

Cryptosporidium is a parasite commonly found in lakes and rivers, especially when the water is contaminated with sewage and animal wastes. **Cryptosporidium** is very resistant to disinfection, and even a well-operated water treatment system cannot ensure that drinking water will be completely free of this parasite.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause Blue Baby Syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Lead, if present in elevated levels, 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 Fairhope Water Department 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 www.epa.gov/safewater/lead.

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that were used in the manufacture of nonstick cookware, stain-resistant carpet and textiles, firefighting foams, food wrappers, and other industrial and consumer applications. The U.S. Environmental Protection Agency (EPA) has not established primary drinking water MCLs for PFAS substances. For more information on PFA's contaminants, please consult www.epa.gov/pfa

UCMR4 CONTAMINANTS

CHEMICAL CONTAMINANTS (ENTRY POINT)		CYANOTOXINS (ENTRY POINT)	DISTRIBUTION SAMPLES
Germanium	Total permethrin (cis- & trans-)	Anatoxin-A	HAA5
Manganese	Tribufos	Cylindrospermopsin	HAA6Br
Alpha-hexachlorocyclohexane	1-butanol	Microcystin-LA	HAA9
Chlorpyrifos	2-methoxyethanol	Microcystin-LF	Total Organic Carbon (TOC)
Dimethipin	O-toluidine	Microcystin-LR	Bromide
Profenofox	Quinoline	Microcystin-LY	
Tebuconazole		Microcystin-RR	
		Microcystin-YR	
		Nodularin	

Source Water Assessment

In compliance with the Alabama Department of Environmental Management, the City of Fairhope has completed a Source Water Assessment plan 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 to contaminating the water sources.

A copy of the report is available in our office for review during normal business hours. For further information regarding the Source Water Assessment, please call at 251-928-8003 or visit our office at 161 N. Section Street.

Where our Water Comes From

In 2023, the Fairhope Water Department pumped 2,336,109,000 gallons of water to you, our customers, for an average of 6,482,490 gallons per day. The City of Fairhope pumps water from ten well sources, all which are groundwater systems.

These wells have a capacity range 600 – 1,000 gpm.

How We Treat Our Water

The Fairhope Water Department treats your water first by pre-aeration before pumping it into a containment basin, which reduces the CO_2. This also is important in the removal of two minerals, iron and manganese. The rest of the treatment process continues in the containment basin. First, we add chlorine for the disinfecting process to remove and or reduce harmful contaminants that comes from the water source; second, we add a solution of hydrated lime to raise the pH level to a stable point; third, we add fluoride to help reduce tooth decay; fourth, we add phosphate to reduce the corrosion rate of the water; and finally, we add a liquid polyphosphate to control deposition of iron and manganese.

Water Trivia. Did you know ... ?

- 97% of the earth's water is in the ocean and 2% is frozen in ice caps and glaciers. That means only 1% of the earth's water suitable for drinking water.
- One gallon of water weighs 8.34 pounds.
- One cubic foot of water weighs 62.4 pounds.
- A dripping faucet can waste up to 3000 gallons of water a year and a leaky toilet can waste as much as 200 gallons of water a day.
- Washing clothes uses around 40 gallons of water, flushing the toilet uses 2 to 7 gallons of water, brushing teeth uses one to two gallons of water, and taking a shower uses 15 to 30 gallons of water.
- You can survive around a month without food but only about a week without water.
- For the price of a six pack of soda you can fill an 8 ounce glass of tap water 16,000 times.
- Between 1950 and 2000, the U.S. population grew by 89 percent; in that period our water use has grown by 200 percent.
- High-efficiency washing machines compared to the traditional models save 14 gallons of water or more per load.
- Easily corrected household water leaks account for 8 percent of the average water bill.

2023 Annual Water Quality Report

City of Fairhope Mayor and Council
Mayor Sherry Sullivan

Council Members
Kevin Boone • Jack Burrell
Jimmy Conyers • Corey Martin
Jay Robinson

We are pleased to bring you this year's Water Quality Report. This Report is designed to inform you about the water quality and services we deliver to you every day.

We strive to provide you with a safe and dependable supply of drinking water. We want you to understand the endless efforts we make to improve the quality of the water through the treatment process and in protecting all our water resources.

For more information about your drinking water and for an opportunity to get involved, please contact Daryl Morefield, Water & Wastewater Department Superintendent, or Bryan Adams, Chief Water Operator at 251-928-8003 or by writing to the City of Fairhope, P.O. Drawer 429 Fairhope, AL 36533. You are our valued customer, and we want you to be informed about the water that we serve you. Also, you are welcome and encouraged to attend the City of Fairhope Council meetings, which also serve as the utilities board meetings. The Council meets on the second and fourth Monday of the month at 6:00 p.m. at City Hall, located at 161 N Section Street in Fairhope.

CONTAMINANTS TESTED FOR BUT NOT DETECTED IN OUR SYSTEM		
	Bromochloromethane	Carbon Tetrachloride
Toxaphene	1,2,4-Trimethylbenzene	Chlorobenzene
Toluene	Isopropylbenzene	Tetrachloroethene
PCB's	1,3,5-Trimethylbenzene	Dichloroacetic acid
n-Proylbenzene	4-Chlorotoluene	Trichloroacetic acid
2,4-D	Bromobenzene	alpha-Chlorodane
1,2,4-Trichlorobenzene	Benzene	Methoxychlor
Dalapon	n-Butylbenzene	Alachlor
1,1,1-Trichloroethane	Bromomethane	Atrazine
Dicamba	sec-Butylbenzene	Benzo[a]pryne
1,1,2-Trichlorethane	tert-Butylbenzene	gamma-Chlorodane
Dinoseb	Chloroethane	bis(2-ethylhexyl)adipate
Trichloroethene	2-Chlorotoluene	Hexachlorobenzene
Pentachlorphenol	Chloromethane	Hexachlorocyclopentadiene
Trichlorofluoromethane	Dibromomethane	Metolachlor
Picloram	1,2-Dichlorobenzene	Metribuzin
1,2,3-Trichloropropane	1,3-Dichlorobenzene	Propachlor
2,4,5-TP (silvex)	1,4-Dichlorobenzene	Simazine
1,2,3-Trichlorobenzene	Dichlorodifluoromethane	Aldrin
Aldicarb	1,1-Dichloroethane	Dieldrin
Vinyl Chloride	1,2-Dichloroethane	Endrin
Aldicarb sulfone	1,1-Dichloroethene	gamma-BHC (Lindane)
	cis-1,2-Dichloroethene	Heptachlor
Aldicarb Sulfoxide	trans-1,2-Dichloroethene	Heptachlor epoxide
Xylene	1,2-Dichloropropane	Monobromoactic Acid
Glyphosate	cis-1,3-Dichloropropene	bis(2-ethylhexyl)phthalate
Carbaryl	trans-1,3-Dichloropropene	Dibromochloromethene
Oxamyl	Ethylbenzene	Antimony
Carbofuran	1,3-Dichloropropane	Arsenic
Endothall	2,2-Dichloropropane	Beryllium
3-Hydroxycarbofuran	1,1-Dichloropropene	Cadmium
Diquat	Methylene Chloride	Chromium
Methomyl	Methyl-tert-butyl ether	Mercury
Monochloroacetic Acid	Naphthalene	Nickel
Dibromoacetic Acid	Hexachloro-1,3-butadiene	Selenium
Coliform	Styrene	Silver
HAA5 [Total Haloaectic Acids (mg/L)	p-Isopropyltoluene	Thallium
Bromoform (mg/L)	1,1,2,2- Tetrachoroethane	1,2-Dibromo-3-chloropropane
Chloroform (mg/L)	Cyanide	1,2-Dibromoethane (EDB)
		Chlorodane