

2022 Annual Water Quality Report
(Monitoring Performed January through December 2021)

**MONTEVALLO WATER WORKS
AND SEWER BOARD**

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Office hours: Monday – Friday, 8:00 am to 4:00 pm

We are pleased to present to you this year's Annual Water Quality Report. Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your water.

Water Sources	Two groundwater wells producing from the Cambrian-Ordovician aquifer	
	One spring producing from the Cambrian Brierfield dolomite aquifer	
	Purchased groundwater from Chilton County Water Authority	
Number of Customers	Approximately 3650	
Water Treatment	Chlorination for disinfection	
Storage Capacity	Five tanks with a total capacity of 4,700,000 gallons	
Additional Connections	Provide water to University of Montevallo	
	Interconnected with Alabaster Water, Calera Water, and Chilton County	
Board Members	Roger Wheeler, Chairman	Lelia Mitchell, Member
	Brad Davis, Member	Sonya Swords, Member
	Rob Miller, Member	
Board Meetings	Second Wednesday of each month at 9:00 a.m. at the Montevallo Water Office	

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), The Montevallo Water Works and Sewer Board has developed a Source Water Assessment plan that assists in protecting our water sources. This plan provides additional information such as potential sources of contamination. The report includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible (low) to contaminating the water source. A copy of the report is available in our office for review during normal business hours, or you may obtain a copy for a nominal fee.

Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil. Montevallo Water entered into a Consent Order with A.D.E.M. on October 27, 2021. Consent Order Number 22-005-CDW.

Information about Lead

Lead in drinking water is rarely found in source water but is primarily from materials and components associated with service lines and home plumbing. Your water system 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. Use *only* water from the cold-water tap for drinking, cooking, and *especially for making baby formula*. Hot water is more likely to cause leaching of lead from plumbing materials. 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. These recommended actions are very important to the health of your family.

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.

General Information

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 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 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 which 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immunocompromised such as cancer patients undergoing chemotherapy, organ transplant recipients, 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 health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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.

Questions?

If you have any questions about this report or concerning your water utility, please contact Michael Harmon, Manager. 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 Wednesday of each month at 9:00 a.m. at the Montevallo Water Works and Sewer Board office, 613 Valley Street. To report water outage or leaks after hours, on weekends, or holidays, please call Montevallo Water at 205-665-9045.

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

Monitoring Schedule and Results

Your water sources are routinely monitored for contaminants according to Federal and State regulations. The Alabama Department of Environmental Management (ADEM) allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets federal and state requirements.

Constituents Monitored	Montevallo	Chilton
Inorganic Contaminants	2019	2019
Lead/Copper	2019	2020
Microbiological Contaminants	current	current
Nitrates	2021	2021
Radioactive Contaminants	2019	2019
Synthetic Organic Contaminants (including herbicides and pesticides)	2021	2019
Volatile Organic Contaminants	2021	2020
Disinfection By-products	2021	2021
Unregulated Contaminant Rule 4 (UCMR4) Contaminants	Not Required	2019
PFAS Contaminants	2020	2014

DETECTED DRINKING WATER CONTAMINANTS							
Contaminants	Violation Y/N	Montevallo	Chilton Co.	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	3.4	1.8	PCi/l	0	15	Erosion of natural deposits
Radium 228	NO	ND	1.1	PCi/l	0	5 (combined radium)	Erosion of natural deposits
Barium	NO	ND-0.03	ND-0.13	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0190 * 0 > AL	0.092 * 0 > AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from preservatives
Lead	NO	0.005 ** 1 > AL	ND	ppm	0	AL=0.015	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	0.61-1.30	ND-0.65	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	17.0-18.0	23.1 (ND-39.0)	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	7.70-9.20	5.53 (ND-9.70)	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants							
Chloroform	NO	ND-4.20	ND	ppb	none	none	Naturally occurring; industrial discharge; agricultural runoff
Bromodichloromethane	NO	ND-4.10	ND	ppb	none	none	Naturally occurring; industrial discharge; agricultural runoff
Chlorodibromomethane	NO	ND-5.80	ND	ppb	none	none	Naturally occurring; industrial discharge; agricultural runoff
Secondary Contaminants							
Chloride	NO	3.93-7.50	3.35-9.08	ppm	none	250	Naturally occurring; agricultural runoff
Hardness	NO	232-288	53.4-144	ppm	none	none	Naturally occurring; treatment with water additives
pH	NO	7.10-8.36	7.88-8.16	S.U.	none	none	Naturally occurring; treatment with water additives
Sodium	NO	1.26-3.20	1.73-3.45	ppm	none	none	Naturally occurring in the environment
Sulfate	NO	4.38-54.7	5.10-11.8	ppm	none	250	Naturally occurring; industrial discharge; agricultural runoff
Total Dissolved Solids	NO	132-273	84.0-120	ppm	none	500	Naturally occurring; industrial discharge; agricultural runoff

* Figure shown is 90th percentile and # of sites > Action Level (1.3 ppm) = 0

** Figure shown is 90th percentile and # of sites > Action Level (0.015 ppm) = 1 (This site was resampled, and result was lower than the AL)

PFAS Contaminants - Montevallo

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 national primary drinking water regulations for PFAS substances. The lifetime health advisory level for PFOA and PFOS is a combined 70 parts per trillion (ppt), or 0.07 parts per billion (ppb).

Below is a list of PFAS contaminants for which our water sources were monitored in 2020 as required. *PFAS was not detected in any of our water sources.*

PFAS Contaminants - Montevallo					
Contaminant	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
11CI-PF3OUdS (11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid)	ppb	ND	Perfluoroheptanoic acid	ppb	ND
9CI-PF3ONS (9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid)	ppb	ND	Perfluorohexanesulfonic acid	ppb	ND-0.008
ADONA (4,8-dioxa-3H-perfluorononanoic acid)	ppb	ND	Perfluorononanoic acid	ppb	ND
HFPO-DA (Hexafluoropropylene oxide dimer acid)	ppb	ND	Perfluorooctanesulfonic acid	ppb	ND-0.013
NEtFOSAA (N-ethylperfluorooctanesulfonamidoacetic acid)	ppb	ND	Perfluorooctanoic acid	ppb	ND
NMeFOSAA (N-methylperfluorooctanesulfonamidoacetic acid)	ppb	ND	Perfluorotetradecanoic acid	ppb	ND
Perfluorobutanesulfonic acid	ppb	ND	Perfluorotridecanoic acid	ppb	ND
Perfluorodecanoic acid	ppb	ND	Perfluoroundecanoic acid	ppb	ND
Perfluorohexanoic acid	ppb	ND	Total PFAS	ppb	ND-0.020
Perfluorododecanoic acid	ppb	ND			

For more information on PFAS contaminants, please consult www.epa.gov/pfas/pfas-fact-sheets-and-infographics

UCMR4 – Chilton County

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) requires some systems to monitor for 30 unregulated contaminants during January 2018 through December 2020 on an assigned schedule. The table below shows the results of our monitoring during 2019.

UCMR 4 Contaminants					
Contaminants (Entry Point)	Unit Msmt	Level Detected		Unit Msmt	Level Detected
Germanium	ppb	ND	Total permethrin (cis- & trans-)	ppb	ND
Manganese	ppb	ND-3.5	Tribufos	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	1-butanol	ppb	ND
Chlorpyrifos	ppb	ND	2-methoxyethanol	ppb	ND
Dimethipin	ppb	ND	2-propen-1-ol	ppb	ND
Ethoprop	ppb	ND	Butylated hydroxyanisole	ppb	ND
Oxyfluorfen	ppb	ND	O-toluidine	ppb	ND
Profenofos	ppb	ND	Quinoline	ppb	ND
Tebuconazole	ppb	ND			
Distribution Samples					
HAA9	ppb	ND-3.5	Total organic carbon (TOC)	ppb	ND
HAA6Br	ppb	ND	Bromide	ppb	ND
HAA5	ppb	ND-2.7			

DEFINITIONS

Action Level- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

Coliform Absent (ca)- Laboratory analysis indicates that the contaminant is not present.

Disinfection byproducts (DBPs)- are formed when disinfectants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types and amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes (THM), haloacetic acids (HAA5), bromate, and chlorite.

Initial Distribution System Evaluation (IDSE)-a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs).

Level 1 Assessment-a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment-a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level-(mandatory language) The Maximum Allowed (MCL) is 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-(mandatory language) The Goal (MCLG) is 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 (MRDL)-the highest level of a disinfectant allowed in drinking water

Micrograms per liter (ug/L) – Equivalent to parts per billion (ppb) since one liter of water is equal in weight to one billion micrograms.

Milligrams per liter (mg/L) – Equivalent to parts per million

Millirems per year (mrem/yr)-measure of radiation absorbed by the body.

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.

Not Reported (NR)-laboratory analysis, usually Secondary Contaminants, not reported by water system. EPA recommends secondary standards to water systems but does not require systems to comply.

Parts per billion (ppb) or 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.

Parts per million (ppm) or 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 quadrillion (ppq) or Picograms per liter (picograms/l)-one part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l)-one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Picocuries per liter (pCi/L)-picocuries per liter is a measure of the radioactivity in water.

Running Annual Average (RAA)-yearly average of all the DPB results at each specific sampling site in the distribution system. The RAA, along with a range, is reported in the Table of Detected Contaminants.

Standard Units (S.U.)-pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas.

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.

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

Variations & Exemptions (V&E)-State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing. These contaminants were not detected in your drinking water unless they are also listed in the Detected Drinking Water Contaminants table elsewhere in this report.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present/absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present/absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calc.organisms/l	Di (2-ethylhexyl)phthalate	6	ppb
Radiological Contaminants			Dinoseb	7	ppb
Beta/photon emitters	4	mrem/yr	Dioxin [2,3,7,8-TCDD]	30	ppq
Alpha emitters	15	pCi/l	Diquat	20	ppb
Combined radium	5	pCi/l	Endothall	100	ppb
Uranium	30	pCi/l	Endrin	2	ppb
Inorganic Chemicals			Epichlorohydrin	TT	TT
Antimony	6	ppb	Ethylbenzene	700	ppb
Arsenic	10	ppb	Ethylene dibromide	50	ppt
Asbestos	7	MFL	Glyphosate	700	ppb
Barium	2	ppm	Heptachlor	400	ppt
Beryllium	4	ppb	Heptachlor epoxide	200	ppt
Cadmium	5	ppb	Hexachlorobenzene	1	ppb
Chromium	100	ppb	Hexachlorocyclopentadiene	50	ppb
Copper	AL=1.3	ppm	Lindane	200	ppt
Cyanide	200	ppb	Methoxychlor	40	ppb
Fluoride	4	ppm	Oxamyl [Vydate]	200	ppb
Lead	AL=15	ppb	Polychlorinated biphenyls	0.5	ppb
Mercury	2	ppb	Pentachlorophenol	1	ppb
Nitrate	10	ppm	Picloram	500	ppb
Nitrite	1	ppm	Simazine	4	ppb
Selenium	.05	ppm	Styrene	100	ppb
Thallium	.002	ppm	Tetrachloroethylene	5	ppb
Organic Contaminants			Toluene	1	ppm
2,4-D	70	ppb	Toxaphene	3	ppb
Acrylamide	TT	TT	2,4,5-TP(Silvex)	50	ppb
Alachlor	2	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzene	5	ppb	1,1,1-Trichloroethane	200	ppb
Benzo(a)pyrene [PAHs]	200	ppt	1,1,2-Trichloroethane	5	ppb
Carbofuran	40	ppb	Trichloroethylene	5	ppb
Carbon tetrachloride	5	ppb	Vinyl Chloride	2	ppb
Chlordane	2	ppb	Xylenes	10	ppm
Chlorobenzene	100	ppb	Disinfectants & Disinfection Byproducts		
Dalapon	200	ppb	Chlorine	4	ppm
Dibromochloropropane	200	ppt	Chlorine Dioxide	800	ppb
1,2-Dichlorobenzene	1000	ppb	Chloramines	4	ppm
1,4-Dichlorobenzene (para)	75	ppb	Bromate	10	ppb
o-Dichlorobenzene	600	ppb	Chlorite	1	ppm
1,2-Dichloroethane	5	ppb	HAA5 [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total trihalomethanes]	80	ppb
cis-1,2-Dichloroethylene	70	ppb			
LIST OF SECONDARY CONTAMINANTS					
Alkalinity, Total (as CA, CO ₃)	Alkalinity, Total (as CA, CO ₃)	Alkalinity, Total (as CA, CO ₃)	Alkalinity, Total (as CA, CO ₃)	Alkalinity, Total (as CA, CO ₃)	Alkalinity, Total (as CA, CO ₃)
Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Calcium, as Ca	Calcium, as Ca	Calcium, as Ca	Calcium, as Ca	Calcium, as Ca	Calcium, as Ca
Chloride	Chloride	Chloride	Chloride	Chloride	Chloride
Color	Color	Color	Color	Color	Color
LIST OF UNREGULATED CONTAMINANTS					
Aldicarb	Chloroethane	Hexachlorobutadiene	Propachlor		
Aldicarb Sulfone	Chloroform	3-Hydroxycarbofuran	N-Propylbenzene		
Aldicarb Sulfoxide	Chloromethane	Isopropylbenzene	Propachlor		
Aldrin	O-Chlorotoluene	p-Isopropyltoluene	1,1,1,2-Tetrachloroethane		
Bromoacetic Acid	P-Chlorotoluene	M-Dichlorobenzene	1,1,2,2-Tetrachloroethane		
Bromobenzene	Dibromochloromethane	Methomyl	Tetrachloroethene		
Bromochloromethane	Dibromomethane	Methomyl	Trichloroacetic Acid		
Bromodichloromethane	1,1-Dichloroethane	Methylene chloride	1,2,3-Trichlorobenzene		
Bromoform	1,3-Dichloropropane	Methyl tert-butyl ether	Trichloroethene		
Bromomethane	2,2-Dichloropropane	Metolachlor	Trichlorofluoromethane		
Butachlor	1,1-Dichloropropene	Metribuzin	1,2,3-Trichloropropane		
N-Butylbenzene	1,3-Dichloropropene	MTBE	1,2,4-Trimethylbenzene		
Sec-Butylbenzene	Dicamba	Naphthalene	1,3,5-Trimethylbenzene		
Tert - Butylbenzene	Dichlorodifluoromethane	1-Naphthol			
Carbaryl	Dieldrin	Paraquat			