

**2022 Annual Water Quality Report**  
**(Testing performed January through December 2021)**

**Walnut Hill Water Authority**

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We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management (ADEM) drinking water health standards. Your local water officials vigilantly safeguard its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standards. We are committed to ensuring the quality of your water.

<b>Water Source</b>	Surface water from Alexander City Water Dept.
<b>Water Treatment</b>	Adams Filter Plant - combination of coagulation, sedimentation, filtration and disinfection
<b>Additional Connections</b>	Sell water to City of Camp Hill
<b>Storage Capacity</b>	Four tanks with a total capacity of 1,050,000 gallons
<b>Number of Customers</b>	Approximately 4010
<b>Board Members</b>	
	Ben Sands, Chairman
	Sandra Carlisle
	Thad Flurry

**Water Protection Measures**

The Walnut Hill Water Authority routinely completes a water storage facility inspection plan and utilizes a Bacteriological Monitoring Plan. We have adopted a Cross-Connection Control Program for the purpose of detecting and preventing a danger to public health from cross-connection contamination.

Alexander City has completed a Source Water Assessment Plan, which is available at their office for review. The plan provides additional information such as potential sources of contamination and will assist in protecting our water sources. It includes a susceptibility analysis classifying potential contaminants as high, moderate, or non-susceptible to contamination.

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.

**Information about Lead**

Elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. However, lead is rarely found in source water. Lead in drinking water 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. 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.

Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Lead in household water usually comes from the plumbing in your house, not from the local water supply, and hot water is more likely to cause lead to leach from plumbing materials. 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 online at <https://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water> or by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**Questions?**

If you have any questions about this report or concerning your water utility, please contact Robin East, Manager, at 256-825-9841. 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 at 5:30 p.m. on the 3rd Monday of each month at the Walnut Hill Water Authority office that is located at 7794 Hwy 50 in Dadeville.

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).

## 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the levels 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 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.

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).

The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Your source water is also monitored 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 immunocompromised, a guidance document developed by the Center for Disease Control (CDC) in conjunction with the Environmental Protection Agency (EPA) is available online at [nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=200024LD.txt](http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=200024LD.txt) or from the Safe Drinking Water Hotline at 1-800-426-4791. *Cryptosporidium* has not been detected in our finished drinking water.

## Monitoring Schedule and Results

We routinely monitor your drinking water for contaminants according to Federal and State laws. 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.

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.

Constituent Monitored	Walnut Hill	Alexander City
Inorganic Contaminants		2022
Lead/Copper	2019	2019
Microbiological Contaminants	current	current
Nitrates		2021
Radioactive Contaminants		2012
Synthetic Organic Contaminants (including pesticides and herbicides)		Partial 2019
Volatile Organic Contaminants		2022
Disinfection By-products	2021	2022
Cryptosporidium		2019
Distribution System Evaluation (DSE) disinfection byproducts	2019	2019
Unregulated Contaminant Monitoring Rule 4 (UCMR4)		2019

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 or exceeds federal and state requirements.

Detected Drinking Water Contaminants							
Contaminants	Violation Y/N	Walnut Hill	Alexander City	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon	NO		1.03-3.39	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Barium	NO	ND	0.01	ppm	2	2	Drilling wastes; metal refineries; erosion
Copper	NO	0.038 <sup>1</sup>	0.860 <sup>1</sup>	ppm	1.3	AL=1.3	Plumbing corrosion; erosion; preservative leaching
Fluoride	NO		0.43	ppm	4	4	Erosion; additive for teeth; factory discharge
Lead	NO		0.145 <sup>1</sup>	ppm	0	0.015	Plumbing corrosion; erosion
Nitrate (as Nitrogen)	NO		0.098	ppm	10	10	Fertilizer runoff; septic/sewage leaching; erosion
TTHM [Total trihalomethanes]	NO	LRAA Range 34.3-49.3	LRAA Range 19.9-60.4	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	LRAA Range 20.0-30.8	LRAA Range 12.8-27.2	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants							
Chloroform	NO		67.3	ppb	70	n/a	Naturally occurring or from discharge or runoff
Bromodichloromethane	NO		9.19	ppb	0	n/a	Naturally occurring or from discharge or runoff
Bromoform	NO		0.76	ppb	0	n/a	Naturally occurring or from discharge or runoff
Chlorodibromomethane	NO		5.47	ppb	60	n/a	Naturally occurring or from discharge or runoff
Secondary Contaminants							
Aluminum	NO		0.06	ppm	n/a	0.2	Erosion; treatment with water additives
Color	NO		12	units	n/a	15	Naturally occurring; treatment with water additives
Hardness, Total as CaCO <sub>3</sub>	NO		26.5	ppm	n/a	n/a	Naturally occurring or from water treatment
Iron	NO		0.036	ppm	n/a	0.30	Naturally occurring; erosion; leaching from pipes
Manganese	NO		0.002	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO		7.6	S.U.	n/a	n/a	Naturally occurring or from discharge or runoff
Sodium	NO		5.2	ppm	n/a	n/a	Naturally occurring in the environment
Specific Conductance	No		116	µs/cm	n/a	n/a	Indicates the presence of naturally occurring ions that conduct electricity.
Sulfate	NO		19.8	ppm	n/a	250	Naturally occurring or from discharge or runoff
Total dissolved solids	NO		97	ppm	n/a	500	Naturally occurring or from discharge or runoff

<sup>1</sup> Figure shown is 90<sup>th</sup> percentile and number of sites exceeding the Action Level (AL) = 0

### UCMR4 Contaminants – Alexander City Water

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) required PWSs serving more than 10,000 people to monitor for 30 unregulated contaminants over a three-year span, with each PWS assigned a monitoring period. The following table shows the UCMR4 contaminants for which we tested and the results of our monitoring. For more information on the UCMR4, please consult <https://www.epa.gov/sites/production/files/2017-03/documents/ucmr4-fact-sheet-general.pdf>

UCMR 4 Contaminants								
Contaminant	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected	Cyanotoxins	Unit Msmt	Level Detected
<b>Entry Point Samples</b>								
Germanium	ppb	ND	Tribufos	ppb	ND	Anatoxin-A	ppb	ND
Manganese	ppb	1.3	1-butanol	ppb	ND	Cylindrospermopsin	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	2-methoxyethanol	ppb	ND	Microcystin-LA	ppb	ND
Chlorpyrifos	ppb	ND	2-propen-1-ol	ppb	ND	Microcystin-LF	ppb	ND
Dimethipin	ppb	ND	Butylated hydroxyanisole	ppb	ND	Microcystin-LR	ppb	ND
Ethoprop	ppb	ND	O-toluidine	ppb	ND	Microcystin-LY	ppb	ND
Oxyfluorfen	ppb	ND	Quinoline	ppb	ND	Microcystin-RR	ppb	ND
Profenofos	ppb	ND				Microcystin-YR	ppb	ND
Tebuconazole	ppb	ND				Nodularin	ppb	ND
Total permethrin (cis- & trans-)	ppb	ND				Total Microcystins	ppb	ND
<b>Distribution Samples</b>								
HAA5	ppb	26.5-28.9	Total organic carbon (TOC)	ppb	1770			
HAA6Br	ppb	4.38-4.77	Bromide	ppb	8.9			
HAA9	ppb	31.2-33.4						

## Definitions

**Action Level (AL)**- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements for a water system.

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

**Disinfection byproducts (DBPs)**- are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts.

**Distribution System Evaluation (IDSE)**-a four quarter study to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs).

**Locational Running Annual Average (LRAA)**-yearly average of all the DPB results at each specific sampling site in the distribution system. The highest distribution site LRAA is reported in the Table of Detected Contaminants.

**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 (MRDL)**-the highest level of a disinfectant allowed in drinking water

**Maximum Residual Disinfectant Level Goal (MRDLG)** - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**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.

**Non-Detect (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 ( $\mu\text{g/l}$ )-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 ( $\text{mg/l}$ )-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.

**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.

Following is a list of Primary Drinking Water Contaminants , Unregulated Contaminants, and Secondary Contaminants for which our water system routinely monitors. These contaminants were not detected in your drinking water unless they are listed in the Table of Detected Drinking Water Contaminants.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
<b>Bacteriological Contaminants</b>			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
<b>Radiological Contaminants</b>			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
<b>Inorganic Chemicals</b>			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
<b>Organic Contaminants</b>			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	<b>Disinfectants &amp; Disinfection Byproducts</b>		
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			
<b>LIST OF SECONDARY CONTAMINANTS</b>					
Alkalinity, Total (as CA, CO <sub>3</sub> )	Copper	Manganese	Specific Conductance		
Aluminum	Corrosivity	Odor	Sulfate		
Calcium, as Ca	Foaming agents (MBAS)	Nickel	Total Dissolved Solids		
Carbon Dioxide	Hardness	pH	Zinc		
Chloride	Iron	Silver			
Color	Magnesium	Sodium			
<b>LIST OF UNREGULATED CONTAMINANTS</b>					
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			