2020 Annual Water Quality Report
(Testing Performed January through December 2019)

ALEXANDER CITY WATER DEPARTMENT
PWSID 1265

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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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Water Source	Tallapoosa River (Lake Martin)	
Customers	Approximately 10,070	
Storage Capacity	12,150,000 gallons	
Distribution System	Serving Greater Lake Martin Area: Alexander City, Dadeville, Jackson's Gap, Walnut Hill, New Site, Goodwater, Ray Community, Hackneyville, & Kellyton Water System	
Council Members	Thomas J. Spraggins, Mayor	Scott Hardy
	Tim Funderburk, President	Buffy Colvin
	Chris Brown	Bobby Tapley
	Eric Brown	

Alexander City council has regularly scheduled meetings on the first and third Mondays of each month at 5:30 p.m. in the Council Chambers at Alexander City Hall.

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **Alexander City Water Department** 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 source. Based on the results of the susceptibility analysis conducted for the potential contaminants identified in our assessment area, our source water has a low susceptibility to contamination. Public notification has been completed, and the plan has been approved by ADEM. A copy of the report is available in our office for review during normal business hours, or you may purchase a copy upon request for a nominal reproduction fee.

We at **Alexander City Water Department** work around the clock to provide top quality water to every tap. We ask that all our customers help protect our water sources, which are the heart of our community, our way of life, and our children's future.

Monitoring Schedule

Alexander City Water Department *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.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2019
Lead/Copper	2019
Microbiological Contaminants	current
Nitrates	2019
Radioactive Contaminants	2012
Synthetic Organic Contaminants (including pesticides and herbicides)	Partial 2019
Volatile Organic Contaminants	2019
Disinfection By-products	2019
Unregulated Contaminant Monitoring Rule 4 (UCMR4)	2019

Montoring and reporting of compliance data violations

Our water system is scheduled (per ADEM) to collect Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) on the second full week of the month. In February 2019, the samples were collected on February 7th. This was an error because it was the first full week of the month not the second. Although the sample was received at the laboratory on the 11th of February (within holding time), analyzed without issue and below the MCL we are uncertain whether or not there may be any adverse health risks associated with this violation. After this error, a new schedule with the testing laboratory was set and there have not been any further monitoring oversights.

Variances and Exemptions

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos was issued. Thus, monitoring for this contaminant was not required.

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. 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. People at risk should seek advice about drinking water from their health care providers.

This water system 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. 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.

Information about Lead

If present, elevated levels of lead 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. **Alexander City 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.

- 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.

These two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply. 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.

Questions?

We want our valued customers to be informed about their water utility. If you have any questions about this report specifically, please call the Adams Water Treatment Plant at 256-409-2035.

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).

Lake Martin has proven to be a quality water source. Please help us protect it!

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to assure that the nation's water supply systems serving the public meet minimum national standards for the protection of public health. The SDWA directed the U. S. Environmental Protection Agency (EPA) to establish national drinking water standards.

The 1996 Amendments to the SDWA created a need for Consumer Confidence Reports (Annual Water Quality Reports) to reveal to consumers the detected amounts of contaminants in their drinking water.

DRINKING WATER DEFINITIONS and UNIT DESCRIPTIONS	
Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Disinfection byproducts	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. Disinfection byproducts for which regulations have been established include trihalomethanes (TTHM), haloacetic acids (HAA5), bromate, and chlorite.
Location Running Annual Averages (LRAA)	Range used to report Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM)
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.
MD	Maximum Detected
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.
mg/L or ppm	Milligrams per liter, parts per million
NA	Not Applicable
ND	Not Detected
Nephelometric Turbidity Unit (NTU)	A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
NR	Monitoring not required, but recommended
pCi/L	picocuries per liter (a measure of radioactivity)
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.
ug/L or ppb	Micrograms per liter, parts per billion
Variances and Exemptions	ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

We are pleased to report that our drinking water meets or exceeds federal and state requirements. We have learned through our monitoring and testing that some constituents have been detected. The table below shows only those contaminants that were detected in the water.

Table of Detected Contaminants

Contaminant	Units	MCLG	MCL	Range		Violation	Major Sources
				Low	High (MD)		
Barium	ppm	2	2	ND	0.127	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper	ppm	1.3	AL=1.3	0.0172	0.253	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	ppb	0	AL= 15	ND	4.5	No	Corrosion of household plumbing systems; Erosion of natural deposits
Total Haloacetic Acids (HAA5)	ppb	NA	60	7.01	30.8	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	ppb	NA	80	9.42	81.10	No	By-product of drinking water disinfection
Total Organic Carbon	ppm	NA	TT	1.09	4.17	No	Soil runoff

Contaminant	Units	Min	Max	Average	Violation	Major Sources
Total Alkalinity as CaCO3	ppm	ND	30.5	25.3	No	Erosion of natural deposits

Contaminant	Units	MCL	Maximum Detected
Aluminum	ppm	0.2	0.11
Calcium	ppm	NA	11.9
Carbon Dioxide	ppm	NA	19.4
Chloride	ppm	250	5.00
Iron	ppm	0.3	0.0617
Magnesium	ppm	NA	1.84
Manganese	ppm	0.05	0.0134

Contaminant	Units	MCL	Maximum Detected
pH	Std. Units	NA	7.4
Sodium	ppm	NA	5.86
Specific Conductance	umhos/cm	NA	119
Sulfate	ppm	250	13.2
Total Dissolved Solids	ppm	500	98.0
Total Hardness as CaCO3	ppm	NA	75.2

Unregulated Contaminants

Contaminant	Units	MD
Bromodichloromethane	ppb	10
Chloroform	ppb	70.4
Dibromochloromethane	ppb	1.78

Total Trihalomethane (TTHM) Monitoring Results

Site	1st Quarter 2019	2nd Quarter 2019	3rd Quarter 2019	4th Quarter 2019
1	20.4	81.1	71	60.2
2	29.6	38.2	42.9	31.2
3	26.1	51.6	44.8	46.5
4	38.5	77.2	55.7	73.5
5	9.42	32	23.9	17.7
6	13.2	31.8	28.7	25.7
7	10.9	26.7	19.8	16.4
8	17.7	49.1	37.3	27.9
9	19.1	54.2	46.4	38.2
10	19.2	43	50	36

Unregulated Contaminant Monitoring Rule 4 (UCMR 4)

Under the directive of the 1996 Safe Drinking Water Act (SDWA), every five years the EPA issues a new list of unregulated contaminants to be monitored by some public water systems (PWSs). The monitoring results may provide a basis for future regulatory actions to protect public health. The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) required PWSs serving more than 10,000 people to monitor for 30 unregulated contaminants during January 2018 through December 2020, with each PWS assigned a monitoring period. Under UCMR 4, public water systems will conduct sampling for 10 cyanotoxins and 20 additional contaminants as listed below.

10 Cyanotoxins
Anatoxin-A
Cylindrospermopsin
Microcystin-LA
Microcystin-LF
Microcystin-LR
Microcystin-LY
Microcystin-RR
Microcystin-YR
Nodularin
Total Microcystins

20 Other Unregulated Contaminants	
Germanium	1-butanol
Manganese	2-methoxyethanol
Alpha-hexachlorocyclohexane	2-propen-1-ol
Chlorpyrifos	Butylated hydroxyanisole
Dimethipin	O-toluidine
Ethoprop	Quinoline
Oxyfluorfen	Total organic carbon (TOC)
Profenofos	Bromide
Tebuconazole	HAA5 [1]
Total permethrin (cis- & trans-)	HAA6 [2]
Tribufos	HAA9 [3]

[1] HAA5	[2] HAA6Br	[3] HAA9
dibromoacetic	bromochloroacetic	bromochloroacetic
dichloroacetic	bromodichloroacetic	bromodichloroacetic
monobromoacetic	dibromoacetic	chlorodibromoacetic
monochloroacetic	dibromochloroacetic	Dibromoacetic
trichloroacetic	monobromoacetic	Dichloroacetic
	tribromoacetic	monobromoacetic
		monochloroacetic
		Tribromoacetic
		Trichloroacetic

Assigned monitoring periods for Alexander City Water Department were August, September, October, and November 2020 for cyanotoxins and June 2018, September 2018, December 2018, and March 2019 for the additional contaminants. The following table shows the monitoring results on those UCMR4 contaminants for which there was some level of detection during our 2019 monitoring.

Detected Unregulated Contaminant Monitoring Rule 4 (UCMR4) Contaminants			
Contaminants	**Level Detected**	**Units**	**Likely Source**
Manganese	1.3	µg/L	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Bromide	8.9*	µg/L	Precursor to disinfection byproduct formation
Total organic carbon	1770	µg/L	Soil runoff
HAA5	26.5 - 28.9	µg/L	Disinfection byproduct
HAA6Br	4.38 - 4.77	µg/L	Disinfection byproduct
HAA9	31.2 - 33.4	µg/L	Disinfection byproduct
Bromochloroacetic acid	2.81 - 3.05	µg/L	Disinfection byproduct (HAA6Br, HAA9)
Bromodichloroacetic acid	1.17 - 1.34	µg/L	Disinfection byproduct (HAA6Br, HAA9)
Chlorodibromoacetic acid	0.4 - 0.45	µg/L	Disinfection byproduct (HAA9)
Dichloroacetic acid	18.9 - 22	µg/L	Disinfection byproduct (HAA5)
Trichloroacetic acid	6.93 - 8.02	µg/L	Disinfection byproduct (HAA5, HAA9)

* Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

The following table is a list of *Primary Drinking Water Contaminants*, *Unregulated Contaminants,* and *Secondary Contaminants* for which our water system routinely monitors according to our regulatory schedule. 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**
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
o-Dichlorobenzene	600	ppb	Chloramines	4	ppm
p-Dichlorobenzene	75	ppb	Bromate	10	ppb
1,2-Dichloroethane	5	ppb	Chlorite	1	ppm
1,1-Dichloroethylene	7	ppb	HAA5 [Total haloacetic acids]	60	ppb
cis-1,2-Dichloroethylene	70	ppb	TTHM [Total trihalomethanes]	80	ppb

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

SECONDARY CONTAMINANTS			
Alkalinity, Total (as CA, Co_3)	Copper	Magnesium	Silver
Aluminum	Corrosivity	Manganese	Sodium
Calcium, as Ca	Foaming agents (MBAS)	Odor	Sulfate
Chloride	Hardness	Nickel	Total Dissolved Solids
Color	Iron	pH	Zinc