

2019 Annual Water Quality Report (Testing Performed January through December 2018)

CALHOUN COUNTY 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. We are committed to ensuring the quality of your water.

Water Sources	Three springs: Reads Mill, Websters Chapel, and Seven Springs - Fort Payne Chert & Knox Group		
	Three groundwater wells: Choccolocco, Possum Trot, and Ohatchee		
	Purchase from Oxford Water Works - Knox Group		
	Purchase from Anniston Water and Sewer Board		
Additional Connections	Sell water to City of Ohatchee (served by Reads Mill Spring and Seven Springs)		
	Emergency connection with Cherokee County Water		
Water Treatment	Chlorination, flocculation, and filtration		
Storage Capacity	Nineteen tanks with a total capacity of 3,255,000 gallons		
Number of Customers	Approximately 10,300		
Board of Directors	Echols Bryant, Chairman	Water Authority Contacts:	Greg Warren, Superintendent
	Mike Almaroad, Director		Anita Trantham, Office Manager
	Lexter Douthard, Director		Randy Smith, Filtration Plant Manager
	Joel Prickett, Director		
	Wilkes Scarbrough, Director		

New Groundwater Source

At **Calhoun County Water Authority**, we are committed to delivering a reliable supply of high-quality water to you, our customers. We are pleased to announce the recent construction of a new groundwater source, the Ohatchee Well. This new water source was approved by the Alabama Department of Environmental Management (ADEM) and was put into service in November 2016. The addition of another dependable water source further ensures that we can provide a quality supply of drinking water for you and your family for generations to come.

Source Water Assessment

Calhoun County Water Authority has developed 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 (low) to contaminating the water source. All the potential contaminants sited in our study area were ranked as low. Upon approval from ADEM, a copy of the report will be available in our office for review during normal business hours, or you may purchase a copy upon request for a nominal reproduction 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.

Questions?

If you have any questions about this report or concerning your water utility, please call one of the above listed contact persons at the water office. 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 third Tuesday of each month at 9:30 a.m. at the water office, 2256 Alexandria-Wellington Road, Alexandria, Alabama.**

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.

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 immuno-compromised 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.

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.

Monitoring Schedule

Constituent Monitored	Calhoun Co.	Oxford	Anniston
Inorganic Contaminants	2017	2018	2018
Lead/Copper	2017	2016	2017
Microbiological Contaminants	current	current	current
Nitrates	2018	2018	2018
Radioactive Contaminants	2017	2014	2016
Synthetic Organic Contaminants (including pesticides and herbicides)	2018	2018	2018
Volatile Organic Contaminants	2018	2018	2018
Disinfection By-products	2018	2018	2018
Unregulated Contaminant Monitoring Rule 3 (UCMR3) contaminants	2015	2015	2015

We are pleased to report that our drinking water meets federal (EPA) and state (ADEM) requirements. We have learned through our monitoring and testing that some constituents have been detected. This report contains results from the most recent water quality monitoring.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS - Calhoun County Water Authority						
Contaminants	Violation Y/N	Calhoun County	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	3.8	PCI/l	0	15	Erosion of natural deposits
Copper	NO	0.100* 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing; erosion of natural deposits; leaching from preservatives
Nitrate (as Nitrogen)	NO	0.51-0.59	ppm	10	10	Runoff from fertilizers; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	LRAA 2.70 (ND-4.90)	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	LRAA 0.68 (ND-1.70)	ppb	0	60	By-product of drinking water chlorination
Secondary Contaminants						
Chloroform	NO	ND-0.67	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Secondary Contaminants						
Chloride	NO	2.84	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Hardness	NO	106	ppm	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
pH	NO	6.76	S.U.	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Sodium	NO	0.75	ppm	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Sulfate	NO	1.42	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Total Dissolved Solids	NO	108	ppm	n/a	500	Naturally occurring in the environment; from discharge or runoff

* Figure shown is 90th percentile and number of sites above the Action Level (AL) = 0

UCMR3 Contaminants - Calhoun County Water Authority 2014-2015			
Contaminants	Detected Range	Unit Msmt.	Likely Source of Contamination
Chromium	ND-0.30	ppb	Naturally occurring in the environment or as a result of industrial discharge
Strontium	ND-48.0	ppb	Naturally occurring in the environment or as a result of discharge
Vanadium	ND-0.50	ppb	Naturally occurring in the environment or as a result of runoff from mining or industrial discharge
Chromium, Hexavalent	ND-0.29	ppb	Naturally occurring in the environment or as a result of industrial discharge
Chlorate	ND-28.0	ppb	Naturally occurring in the environment or from water treatment techniques

TABLE OF DETECTED DRINKING WATER CONTAMINANTS - Oxford Water Works Board						
Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Chlorine	NO	1.00-1.70	ppm	MRDLG =4	MRDL= 4	Water additive used to control microbes
Total Organic Carbon	NO	1.04-1.67	ppm	n/a	TT	Soil runoff
Turbidity	NO	Highest 0.22 100%<0.5	NTU	n/a	TT	Soil runoff
Alpha emitters	NO	2.5 ± 0.9	PCi/l	0	15	Erosion of natural deposits
Copper (customer tap)	NO	0.140 * 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen)	NO	0.28-1.00	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Trichloroethylene	NO	Avg. 1.99 Range ND-6.56	ppb	0	5	Discharge from metal degreasing sites and other factories
Unregulated Contaminants						
Chloroform	NO	ND-4.86	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Bromodichloromethane	NO	ND-3.42	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Chlorodibromomethane	NO	ND-1.40	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Secondary Contaminants						
Chloride	NO	6.87	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Hardness	NO	131	ppm	n/a	n/a	Naturally occurring in the environment or from treatment with water additives
pH	NO	8.14	S.U.	n/a	n/a	Naturally occurring in the environment or from treatment with water additives
Sodium	NO	3.70	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	2.13	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Total Dissolved Solids	NO	140	ppm	n/a	500	Naturally occurring in the environment; from discharge or runoff

* Figure shown is 90th percentile and # of sites above action level (1.3 ppm) = 0

TABLE OF DETECTED DRINKING WATER CONTAMINANTS - Anniston Water & Sewer Board						
Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Chlorine	NO	1.19-3.00	ppm	MRDLG =4	MRDL= 4	Water additive used to control microbes
Total Organic Carbon	NO	Highest 2.45	ppm	n/a	TT	Soil runoff
Turbidity	NO	Highest 0.09 100%<0.5	NTU	n/a	TT	Soil runoff
Alpha emitters	NO	2.5 ± 0.9	PCi/l	0	15	Erosion of natural deposits
Barium	NO	0.008-0.02	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	NO	0.52-0.59	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge
Nickel	NO	0.64-1.16	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Nitrate (as Nitrogen)	NO	ND-0.28	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	ND-24.3	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	0.4-20.7	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	NO	ND-27.1	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Bromodichloromethane	NO	ND-3.97	ppb	n/a	n/a	Naturally occurring in the environment; from discharge or runoff
Secondary Contaminants						
Aluminum	NO	ND-0.02	ppm	n/a	0.2	Erosion of natural deposits or as a result of treatment with water additives
Chloride	NO	3.17-4.24	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Hardness	NO	32.7-111	ppm	n/a	n/a	Naturally occurring in the environment or from treatment with water additives
pH	NO	5.8-6.9	S.U.	n/a	n/a	Naturally occurring in the environment or from treatment with water additives
Sodium	NO	1.26-2.06	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	2.14	ppm	n/a	250	Naturally occurring in the environment; from discharge or runoff
Total Dissolved Solids	NO	67.0-102	ppm	n/a	500	Naturally occurring in the environment; from discharge or runoff

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)- formed when disinfectants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Disinfection byproducts for which regulations have been established include trihalomethanes (TTHM), haloacetic acids (HAA5), bromate, and chlorite.

Distribution System Evaluation (DSE)- a one-time study conducted by water systems to identify distribution system locations with high concentrations of THMs and 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 (MCL)- 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- 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)- 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)- a 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.

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

Parts per billion (ppb) or Micrograms per liter (µg/l)- 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)- corresponds to one minute in two years or a single penny in \$10,000.

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

Picocuries per liter (pCi/L)- 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.

Unregulated Contaminant Monitoring Rule (UCMR) Contaminants - contaminants for which the EPA has not established drinking water standards.

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

Following is a Table of Primary Drinking Water Contaminants. These contaminants were *not* detected in your water unless they appear in the Table of Detected Contaminants.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
Bacteriological Contaminants			cis-1,2-Dichloroethylene	70	ppb
Total Coliform Bacteria	<5%	present/absent	trans-1,2-Dichloroethylene	100	ppb
Fecal Coliform and E. coli	0	present/absent	Dichloromethane	5	ppb
Fecal Indicators	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
Atrazine	3	ppb	1,1,1-Trichloroethane	200	ppb
Benzene	5	ppb	1,1,2-Trichloroethane	5	ppb
Benzo(a)pyrene [PAHs]	200	ppt	Trichloroethylene	5	ppb
Carbofuran	40	ppb	Vinyl Chloride	2	ppb
Carbon tetrachloride	5	ppb	Xylenes	10	ppm
Chlordane	2	ppb	Disinfectants & Disinfection		
Chlorobenzene	100	ppb	Chlorine	4	ppm
Dalapon	200	ppb	Chlorine Dioxide	800	ppb
Dibromochloropropane	200	ppt	Chloramines	4	ppm
o-Dichlorobenzene	600	ppb	Bromate	10	ppb
p-Dichlorobenzene	75	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
UNREGULATED CONTAMINANTS					
1,1 – Dichloropropene	Aldicarb Sulfone	Chloroform	N - Butylbenzene		
1,1,1,2-Tetrachloroethane	Aldicarb Sulfoxide	Chloromethane	Naphthalene		
1,1,2,2-Tetrachloroethane	Aldrin	Dibromomethane	N-Propylbenzene		
1,1-Dichloroethane	Atrazine	Dicamba	O-Chlorotoluene		
1,2,3 - Trichlorobenzene	Bromobenzene	Dichlorodifluoromethane	P-Chlorotoluene		
1,2,3 - Trichloropropane	Bromochloromethane	Dieldrin	P-Isopropyltoluene		
1,2,4 - Trimethylbenzene	Bromodichloromethane	Hexachlorobutadiene	Propachlor		
1,3 – Dichloropropane	Bromoform	Isopropylbenzene	Sec - Butylbenzene		
1,3 – Dichloropropene	Bromomethane	M-Dichlorobenzene	Tert - Butylbenzene		
1,3,5 - Trimethylbenzene	Butachlor	Methomyl	Trichlorofluoromethane		
2,2 – Dichloropropane	Carbaryl	MTBE			
3-Hydroxycarbofuran	Chlorodibromomethane	Metolachlor			
Aldicarb	Chloroethane	Metribuzin			