

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

PICKENS 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. Our goal is to provide you with a safe and dependable supply of drinking water.

Water Sources	Nine (9) groundwater wells producing from the Eutaw and Gordo aquifers Purchased groundwater from Aliceville Water and Reform Water
Interconnection to Sell	Buhl Elrod and Holman Water and Reform Water monthly
Other Interconnections	Sumter County Water, East Lowndes County Water (MS), and Gordo Water
Number of Customers	Approximately 4755
Water Treatment	Chlorination, aeration, and corrosion control
Storage Capacity	Twelve (12) tanks with a total capacity of 1,785,000 gallons
Board Members	Gene Burkhalter, Chairman
	Donny Sanders, Vice Chairman
	David Stokes, Secretary

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **Pickens 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 to contaminating the water source. The assessment has been performed, 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. 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.

Monitoring Schedule

Pickens County Water Authority routinely monitors for constituents 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.

Constituents Monitored	Pickens	Aliceville	Reform
Inorganic Contaminants	2018	2018	2016
Lead/Copper	2016	2017	2018
Microbiological Contaminants	current	current	current
Nitrates	2018	2018	2018
Radioactive Contaminants	2017	2013	2010
Synthetic Organic Contaminants (with herbicides and pesticides)	2018	Partial 2018	2016
Volatile Organic Contaminants	2018	2018	2018
Disinfection By-products	2018	2018	2018
UCMR3 (Unregulated Contaminant Monitoring Rule) Contaminants	2014	Not Required	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.

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

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.

Use *only* water from the cold-water tap for drinking, cooking, and especially for making baby formula. Most of the 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 from the Safe Drinking Water hotline or at www.epa.gov/safewater.

Questions?

If you have any questions about this report or concerning your water utility, please contact **Herbert House** at the water office at the phone number at the top of this page. You are welcome to attend our regularly scheduled meetings. They are held on the **second Thursday of each month at 1:15 p.m. at the water office.**

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).

As you can see by the Table of Detected Drinking Water Contaminants, our system had no violations. 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. This report shows our water quality and what it means.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS									
Contaminants	Violation Y/N	Pickens County	Aliceville	Reform	Unit Msmt	MCLG	MCL	Likely Source of Contamination	
Alpha emitters	NO	1.8±1.3	2.9 ± 1.0	<2.5 ± 1.4	PC/l	0	15	Erosion of natural deposits	
Barium	NO	ND-0.06	ND	ND	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Copper	NO	0.654 * 2 > AL	0.270 * 0 > AL	0.448 * 0 > AL	ppm	1.3	AL=1 3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Fluoride	NO	ND	0.76	ND	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
Nitrate (as Nitrogen)	NO	ND-2.18	ND	0.56-0.61	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
THM [Total trihalomethanes]	NO	2.40-6.80	1.80-5.80	ND	ppb	0	80	By-product of drinking water chlorination	
HAA5 [Total haloacetic acids]	NO	17.0	15.7-16.3	ND	ppb	0	60	By-product of drinking water chlorination	
Secondary Contaminants									
Aluminum	NO	ND-0.07	ND	ND	ppm	n/a	0.2	Erosion of natural deposits or as a result of treatment with water additives	
Chloride	NO	8.45-9.60	5.64	5.14-6.01	ppm	n/a	250	Naturally occurring in the environment or result of industrial discharge or agricultural runoff	
Hardness	NO	1.36-57.2	29.3	6.82-8.03	ppm	n/a		Naturally occurring in the environment or result of industrial discharge or agricultural runoff	
Iron	NO	ND-0.21	0.23	ND-0.08	ppm	n/a	0.30	Naturally occurring in the environment; erosion of natural deposits; leaching from pipes	
Manganese	NO	ND-0.04	0.08	ND-0.02	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes	
pH	NO	7.68-7.99	7.81	6.70-6.99	S.U.	n/a	n/a	Naturally occurring in the environment or result of industrial discharge or agricultural runoff	
Sodium	NO	1.46-42.2	22.7	3.73-7.47	ppm	n/a	n/a	Naturally occurring in the environment	
Sulfate	NO	ND-10.1	1.63	1.13-1.68	ppm	n/a	250	Naturally occurring in the environment or result of industrial discharge or agricultural runoff	
Total Dissolved Solids	NO	116-132	108	ND-36.0	ppm	n/a	500	Naturally occurring in the environment or result of industrial discharge or agricultural runoff	

* Figure shown is 90th percentile and # of sites above action level (1.3 ppm/15 ppb) = 2
The 2 sites over the Action Level were re-sampled correctly, and the results were well below the Action Level.

Unregulated Contaminant Monitoring Rule 3 (UCMR3) Contaminants			
Contaminants	Level Detected (Range)	Unit Msmt.	Likely Source of Contamination
Chromium	ND-2.90	ppb	Naturally occurring in the environment or as a result of industrial discharge
Cobalt	ND-16.0	ppb	Industrial or medical discharge; waste runoff
Strontium	6.30-390	ppb	Naturally occurring in the environment or as a result of discharge
Vanadium	ND-3.00	ppb	Naturally occurring in the environment or as a result of runoff from mining or industrial discharge
Chromium, Hexavalent	ND-0.24	ppb	Naturally occurring in the environment or as a result of industrial discharge
Chlorate	ND-38.0	ppb	Naturally occurring in the environment or from water treatment techniques

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.
 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-(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.
 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.
 Variances & 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			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	Endothal	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	Chloroethane	Metolachlor		
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloroform	Metribuzin		
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Chloromethane	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	Isopropylbenzene	Propachlor		
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene		
2,2 - Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene		
3-Hydroxycarbofuran	Chlorodibromomethane	MTBE	Trichlorofluoromethane		