2018 Annual Water Quality Report
(Testing Performed January - December 2017)

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Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and Alabama Department of Environmental Management (ADEM) drinking water health standards. We diligently safeguard your water supplies, and once again we are proud to report that our system has not violated any water quality standard. We are pleased to present to you this year's Annual Water Quality Report.

Water Source	Two groundwater wells producing from the Fort Payne Chert and the Knox Formation
	(Purchased water from City of Tuscaloosa serves the Keenes Mill area)
Water Treatment	Chlorination for disinfection and poly-orthophosphate for corrosion control
Storage Capacity	Six storage tanks with a total capacity of 1,850,000 gallons
Number of Customers	Approximately 3400
Water Board	Bob Russo, President
	Jeff Huguley, Vice President
	Kenny Herring, Director
	Steve McPherson, Director
	Jana Gennery, Director
General Manager	Toby Kizziah

Water Quality Protection

In compliance with the Alabama Department of Environmental Management (ADEM), **Citizens' Water Service, Inc.** has developed a Source Water Assessment plan that will assist in protecting our water sources. 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 regular business hours, or you may purchase a copy upon request for a nominal reproduction fee.

Citizens' Water Service, Inc. routinely completes a water storage facility inspection plan and utilizes a Bacteriological Monitoring Plan. The required chlorine residual is maintained throughout our distribution system to protect your drinking water from possible outside contaminants. We have also established a Cross-Connection Policy to insure safe drinking water for our customers.

Please help us make these efforts 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. We ask that all our customers help us protect our valuable water sources, which are the heart of our community, our way of life, and our children's futures.

Questions?

If you have any questions about this report or concerning your water utility, please contact Toby Kizziah, Manager, at 205-556-2224**.** 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 first Thursday of each month at 6:00 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).

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 amount 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 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.

Water Conservation

Due to recent increased precipitation and your cooperative efforts, we have been able to successfully avoid a critical water supply shortage; however, our long term precipitation deficit continues and calls for ongoing vigilance in the protection of our water resources. We encourage you to continue to use water wisely and conscientiously in the common interest of all our citizens.

Monitoring Schedule

Citizens' Water Service, Inc. routinely monitors for contaminants in your drinking water according to Federal and State laws, using EPA approved methods and a State certified laboratory. 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.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2016
Lead/Copper	2016
Microbiological Contaminants	current
Nitrates	2017
Radioactive Contaminants	2011
Synthetic Organic Contaminants (including pesticides and herbicides)	2017
Volatile Organic Contaminants	2017
Disinfection By-products	2017
Distribution System Evaluation (DSE) Contaminants	2017

Detected Contaminants

As you can see by the table below, 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	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	NO	0.7 ± 0.5	PCi/l	0	15	Erosion of natural deposits
Copper	NO	0.115 * 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	0.50-0.58	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	LRAA 34.0-38.6	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	LRAA 23.6-25.8	ppb	0	60	By-product of drinking water chlorination
Secondary Contaminants						
Chloride	NO	2.99	ppm	none	250	Naturally occurring in the environment or from runoff
Hardness	NO	136	ppm	none	none	Naturally occurring in the environment or as a result of treatment with water additives
pH	NO	8.05	S.U.	none	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	1.22	ppm	none	none	Naturally occurring in the environment
Sulfate	NO	3.94	ppm	none	250	Naturally occurring in the environment or from runoff
Total Dissolved Solids	NO	144	ppm	none	500	Naturally occurring in the environment or from runoff

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

Distribution System Evaluation (DSE) Contaminants

Contaminants	Level Detected	Unit Msmt	Likely Source
TTHM [Total trihalomethanes]	ND-7.11	ppb	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	ND-1.67	ppb	By-product of drinking water chlorination

Tips on Becoming Water-Wise

- Verify that your home is leak free. Read your water meter before and after a two hour period when no water is being used. If the meter does not read exactly the same, there is a leak.
- Repair dripping faucets by replacing washers. A drip at the rate of one drop per second could waste 2,700 gallons per year.
- Check for toilet leaks by adding food coloring to the tank. If there is a leak, color will appear in the bowl within 30 minutes. Replace worn out, corroded, or bent parts.
- Replace the toilet handle if it frequently sticks in the flush position.
- Operate dishwashers and clothes washers only when they are fully loaded and set the water level appropriate to the size of the load.
- Store drinking water in the refrigerator instead of running the water until it is cool.
- Don't allow water to run needlessly while you are shaving or brushing your teeth.
- Adjust sprinklers so that you are not watering sidewalks and driveways as well as your lawn.
- Only water your lawn during the cool part of the day to minimize evaporation.

Definitions

Action Level (AL)- 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 used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.
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 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 Goa (MCLG)- The 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
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-Detects (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 (µg/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.
RAA–Running annual average
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.

At the end of this report a list of *Primary Drinking Water Contaminants* and a list of *Unregulated 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**
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calculated organisms/liter	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 (PCBs)	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