



**PHENIX CITY
DEPARTMENT OF PUBLIC UTILITIES**
1119 Broad Street
Phenix City, Alabama 36867



2016 Annual Water Quality Report

(Testing Performed January - December 2015)

PHENIX CITY DEPARTMENT OF PUBLIC UTILITIES
1119 Broad Street
Phenix City, Alabama 36867
Phone 334-448-2880 • Fax 334-291-4742



2016 Annual Drinking Water Quality Report



We are pleased to present to you our Annual Water Quality Report. Last year, as in years past, your tap water met or exceeded all U.S. Environmental Protection Agency (EPA) and Alabama Department of Environmental Management (ADEM) drinking water health standards. We are committed to ensuring the quality of your water.

WATER SOURCE:

Our water source is surface water from the Chattahoochee River. Water is pumped almost continuously to the Water Filtration Plant for treatment and subsequent delivery to our approximately 14,400 taps.

WATER TREATMENT:

Coagulation/flocculation, sedimentation, chlorination, filtration, fluoridation and corrosion control. Please refer to the Water Treatment Diagram inside this report, adjacent to the Water Filtration Plant Excellence Awards, for more detail.

GET INVOLVED:

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides.
- Properly maintain septic systems
- Dispose of household chemicals properly (motor oil, household chemicals, paint).
- Report chemical spills or other polluting activities to the authorities
- Remember that storm water drains dump directly into your local water body.

We want our valued customers to be informed about their water utility. If you want to learn more, please attend one of our regularly scheduled City Council meetings. They are held at 9 a.m. on the 1st Tuesday and 6 p.m. on the 3rd Tuesday of each month in the Council Chambers of the Public Safety Building at 1111 Broad Street, Phenix City, Alabama.

QUESTIONS:

If you have any questions or concerns regarding your water or this report, please contact Roger Conner, Utilities Director, at the water office at 334-448-2880.

WATER QUALITY PROTECTION

Protecting the water supply at its source is the first step in achieving our goal of providing safe drinking water to its customers. In compliance with the Alabama Department of Environmental Management (ADEM), we have 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 the utilities office for review during regular business hours.

We continuously monitor our facilities that deliver safe drinking water to you. We utilize a Bacteriological Monitoring Plan to ensure we sample for potential contamination from locations throughout our distribution system. Chlorine residual is routinely tested by our technicians and bacteriological tests are run to ensure adequate disinfection is available to protect your drinking water. We have also established a Cross-Connection Policy to insure safe drinking water for our customers.

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. 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). 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. 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.

We also monitor our source water for pathogens, such as *Cryptosporidium* and *Giardia*. These pathogens can enter the water from animal or human waste. 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/crypto.html or from the Safe Drinking Water Hotline at 800-426-4791.

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 likely to contain higher levels of lead. 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.

Information on steps you can take to minimize lead exposure is available from the Safe Drinking Water hotline or from www.epa.gov/safewater/lead.

MONITORING RESULTS

Our water system monitors for contaminants according to a schedule assigned to us by the Alabama Department of Environmental Management (ADEM), using EPA approved methods and a State certified laboratory. This report contains results from the most recent monitoring which was performed in accordance with the State and Federal regulatory schedule. Note: ADEM allows us to monitor for some contaminants *less than once per year* because the concentrations of these contaminants do not change frequently.

Contaminants Monitored	Year
Inorganic Contaminants	2015
Lead/Copper	2013
Microbiological Contaminants	Monthly
Nitrates	2015
Radioactive Contaminants	2014
Synthetic Organic Contaminants (including herbicides & pesticides)	2015
Volatile Organic Contaminants	2015
Disinfection Byproducts	2015
Cryptosporidium	2015
Unregulated Contaminant Monitoring Rule 3 (UCMR3) Contaminants	2015

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.

As you can see by the *Water Quality Data Table* below, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected; however, Maximum Contaminant Levels (MCLs) are set at very stringent levels. The detection levels of contaminants listed below meet or exceed State and Federal regulations for drinking water.

The *Water Quality Data Table* includes only those contaminants that had some level of detection. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

WATER QUALITY DATA TABLE

Regulated Contaminants	Violation	Level	Unit			Likely Source
			Y/N	Detected	Msmt	
Cryptosporidium and Giardia	NO	1 sample ¹	Number of organisms	0	0	Fecal waste from infected animals
Total Organic Carbon	NO	Avg 36.4%	Percent removal	NA	TT >	Soil runoff
Turbidity (filtered)	NO	Highest 0.08	NTU	NA	0.3	Soil runoff
Chlorine	NO	Avg. 1.33 0.21-2.05				
Copper	NO	0.103 ²	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	0.65	ppm	4	4	Erosion of natural deposits; water additive; discharge from factories
Lead	NO	<0.005 ³	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	NO	0.94	ppm	10	10	Fertilizer runoff; leaching from septic tanks, erosion of natural deposits
TTHM [Total trihalomethanes]	NO	28.2	ppb	0	80	By-product of drinking water chlorination
HAAS [Total haloacetic acids]	NO	15.3	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	NO	2.45	ppb	none	none	By-product of drinking water chlorination
Bromodichloromethane	NO	4.26	ppb	none	none	By-product of drinking water chlorination
Chlorodibromomethane	NO	4.72	ppb	none	none	By-product of drinking water chlorination
Bromoform	NO	0.88	ppb	none	none	By-product of drinking water chlorination
Secondary Contaminants						
Alkalinity, Total as CaCO ₃	NO	35.4	ppm	none	none	Caused by carbonates, bicarbonates and hydroxides.
Calcium, as Ca	NO	6.75	ppm	none	none	Naturally occurring in the environment; dissolved minerals
Chloride	NO	12.4	ppm	none	250	Naturally occurring in the environment or from discharge or runoff
Hardness	NO	24.5	ppm	none	none	Naturally occurring in the environment or from discharge or runoff
Magnesium	NO	1.85	ppm	none	none	Naturally occurring in the environment; dissolved minerals
Manganese	NO	0.017	ppm	none	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	6.6	S.U.	none	none	Naturally occurring in the environment or from discharge or runoff
Sodium	NO	17.9	ppm	none	none	Naturally occurring in the environment
Sulfate	NO	23.1	ppm	none	250	Naturally occurring in the environment or from discharge or runoff
Total Dissolved Solids	NO	120	ppm	none	500	Naturally occurring in the environment or from discharge or runoff
UCMR3 Contaminants						
Chlorate	Not regulated	610	ppb	none	none	Naturally occurring in the environment or as a result of industrial discharge
Chromium-6	Not regulated	0.06	ppb	none	none	Naturally occurring in the environment or from water treatment techniques
Strontium	Not regulated	29.0	ppb	none	none	Naturally occurring in the environment or as a result of discharge

¹ Cryptosporidium and Giardia were detected in one source water sample in November 2015. Cryptosporidium and Giardia were not detected in any other samples.

² Figure shown is 90th percentile; number of sites greater than the Action Level (AL) of 1.3 ppm = 0

³ Figure shown is 90th percentile; number of sites greater than the Action Level (AL) of 15 ppb = 2

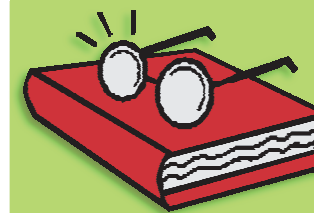
More information about drinking water contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily small changes can make a big difference—try one today.

- Take short showers- a 5-minute shower uses four to five gallons of water compared to 50 gallons for a bath.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered, not sidewalks or driveways. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation uses water wisely. Make a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

DEFINITIONS



AL (Action Level): The concentration that, if exceeded, triggers treatment or other requirements.

DBP (Disinfection Byproducts): Formed when disinfectants used in water treatment reacts with bromide and/or natural organic matter.

LRAA (Locational Running Annual Average): Yearly average of all the DPB results at each specific site

MCL (Maximum Contaminant Level): Highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): Highest level of a disinfectant allowed in drinking water

mrem/yr (Millirems per year): Measure of radiation absorbed by the body.

n/a (not applicable)

ND (Non-Detect): Laboratory analysis indicates 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 secondary standards to water systems but does not require systems to comply.

NTU (Nephelometric Turbidity Unit): Measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

picograms/l (Picograms per liter): Corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000.

ppb (parts per billion) or **µg/l** (micrograms per liter): Corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

ppm (parts per million) or **mg/l** (milligrams per liter): Corresponds to one minute in two years or a single penny in \$10,000.

ppt (parts per trillion) or **nanograms/l** (nanograms per liter): Corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

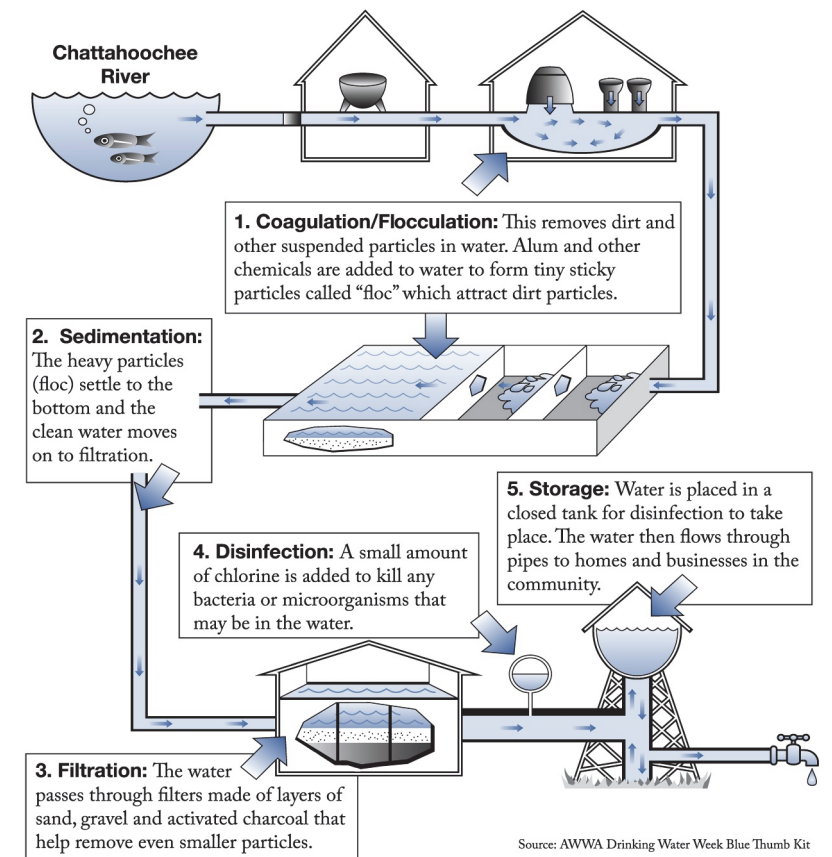
pCi/L (Picocuries per liter): Measure of radioactivity

RAA (running annual average): Average of DBP results in the water system

S.U. (Standard Units): pH of water measures the water's balances of acids and bases. 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.

TT (Treatment Technique): Required process intended to reduce the level of a contaminant in drinking water.

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



Source: AWWA Drinking Water Week Blue Thumb Kit

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
Fecal Indicators	0	present/absent	Di (2-ethylhexyl)adipate	400	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)phthalate	6	ppb
Cryptosporidium	TT	Calc. organisms/l	Dinoseb	7	ppb
Radiological Contaminants			Dioxin [2,3,7,8-TCDD]	30	ppq
Beta/photon emitters	4	mrem/yr	Diquat	20	ppb
Alpha emitters	15	pCi/l	Endothal	100	ppb
Combined radium	5	pCi/l	Endrin	2	ppb
Uranium	30	pCi/l	Epichlorohydrin	TT	TT
Inorganic Chemicals			Ethylbenzene	700	ppb
Antimony	6	ppb	Ethylene dibromide	50	ppt
Arsenic	10	ppb	Glyphosate	700	ppb
Asbestos	7	MFL	Heptachlor	400	ppt
Barium	2	ppm	Heptachlor epoxide	200	ppt
Beryllium	4	ppb	Hexachlorobenzene	1	ppb
Cadmium	5	ppb	Hexachlorocyclopentadiene	50	ppb
Chromium	100	ppb	Lindane	200	ppt
Copper	AL=1.3	ppm	Methoxychlor	40	ppb
Cyanide	200	ppb	Oxamyl [Vydate]	200	ppb
Fluoride	4	ppm	Polychlorinated biphenyls	0.5	ppb
Lead	AL=15	ppb	Pentachlorophenol	1	ppb
Mercury	2	ppb	Picloram	500	ppb
Nitrate	10	ppm	Simazine	4	ppb
Nitrite	1	ppm	Styrene	100	ppb
Selenium	.05	ppm	Tetrachloroethylene	5	ppb
Thallium	.002	ppm	Toluene	1	ppm
Organic Contaminants			Toxaphene	3	ppb
2,4-D	70	ppb	2,4,5-TP (Silvex)	50	ppb
Acrylamide	TT	TT	1,2,4-Trichlorobenzene	.07	ppm
Alachlor	2	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 Byproducts		
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	HAAS [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total trihalomethanes]	80	ppb
cis-1,2-Dichloroethylene	70	ppb			