

2021



# Water Quality Report

# PHENIX CITY provides EXCEPTIONAL water for you!

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 Charles Woody, Utilities Director, at the water office at 334-448-2880.



# 2021 Annual Water Quality Report

Testing Performed  
January - December 2020

## 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 Hot-line 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 runoff, 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 <https://www.epa.gov/ground-water-and-drinking-water> 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](http://www.epa.gov/safewater/lead).



# MONITORING RESULTS

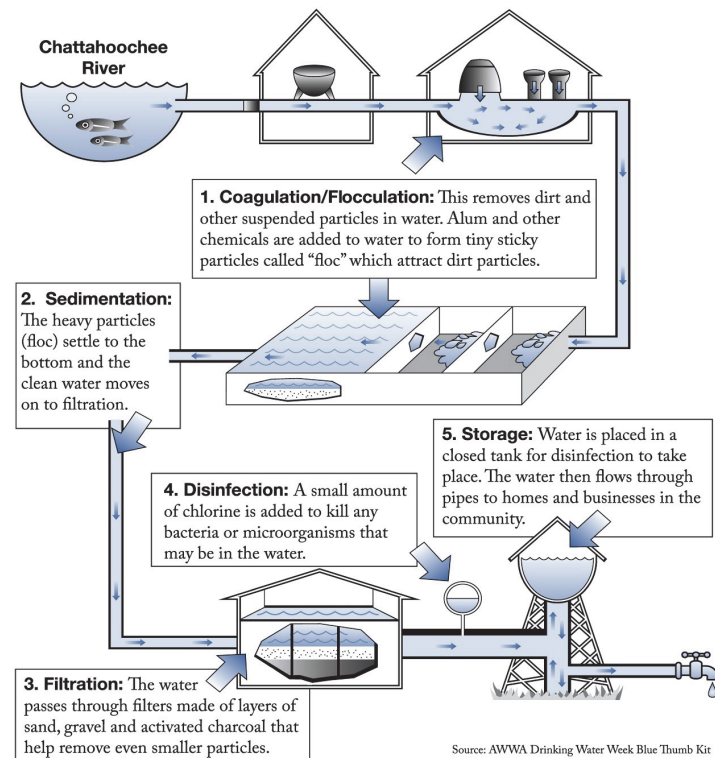
Our water system monitors for contaminants according to a schedule assigned to us by the Alabama Department of Environmental Management (ADEM), using EPA approved methods and a State certified laboratory. This report contains results from the most recent monitoring which was performed in accordance with 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.

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 on the next page, 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 to the right 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.

CONTAMINANTS MONITORED	YEAR
Inorganic Contaminants	2020
Lead/Copper	2019
Microbiological Contaminants	Monthly
Nitrates	2020
Radioactive Contaminants	2014
Synthetic Organic Contaminants (including herbicides & pesticides)	2020
Volatile Organic Contaminants	2019
Disinfection Byproducts	2020
Cryptosporidium	2017
Unregulated Contaminant Monitoring Rule UCMR 4 Contaminants	2019



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).

# TABLE 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.
- ppm** (parts per million) Corresponds to one minute in two years or a single penny in \$10,000.
- ppb** (parts per billion) Corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- ppt** (parts per trillion) Corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.
- picograms/L** (Picograms per liter): Corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.
- mg/L** (milligrams per liter): Corresponds to one minute in two years or a single penny in \$10,000.
- µg/L** (micrograms per liter): Corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- 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
- SU** (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.

# UCMR4

PARAMETERS	AVG
alpha-BHC	0.023U
Chlorpyrifos	0.0098U
Dimethipin	0.65U
Ethoprop	0.0098
Merphos-Oxone	0.022U
Oxyfluorfen	0.017U
Permethrin	0.013
Profenofos	0.098
Tebuconazole	0.065U
1,3-Dimethyl-2-nitrobenzene (S)	98%
Benzi(a)oyrene-d12 (S)	115%
Triphenylphosphate	115%
Butylated Hydroxyanisole	0.0096U
Quinoline	0.0064U
O-Toluidine	0.022U
Quinoline -d7 (S)	89%
O-Toluidine-d9 (S)	72%
n-Butanol	0.67U
2-Methoxyethanol	0.13U
2- Propen-1-ol	0.17U
n-Butanol-d 10 (s)	97%
Germanium	0.10U
Manganese	5.2
Bromide	26.65J
TOC	2620U
Bromochloroacetic Acid	5.1
Bromodichloroacetic Acid	1.75
Chlorodibromoacetic Acid	0.535
Dibromoacetic Acid	0.89
Dichloroacetic Acid	16.25
HAA9 Group	32.7
Total Brominated HAAs	8.7
Haloacetic Acids (Total)	25.3
Monobromoacetic Acid	0.8
Monochloroacetic Acid	2.2
Tribromoacetic Acid	0.67U
Trichloroacetic Acid	8.8
2,3-Dibromopropanoic Acid (S)	80.5%

CYANOTOXINS	
Anatoxin	0.010U
Cylindrospermopsin	0.030U
Total Microcystins	0.10U

U - microgram per liter ug/L  
 J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

**REPORTING VIOLATION**  
 In 2020 the Phenix City Microbiology Laboratory incurred a reporting violation for failing to report the results of a bacteriological test in March 2020. The test was conducted as required but due to administrative error was not submitted with the monthly report. Once notified of the error, the lab immediately reported the required data to ADEM. The file used to upload the data to ADEM has been corrected so as to prevent any further violations.

# WATER QUALITY TABLE CCR 2020

CONTAMINANT	RESULTS MG/L	DATE TESTED
Fluoride, as F	0.72	JULY 2020
Lead, as Pb	ND	JULY 2020
Nitrate as N	0.60	JULY 2020
Cyanide	ND	JULY 2020
Barium	0.015	JULY 2020
Aluminum	0.018	JULY 2020
Copper	0.0012	JULY 2020
Sulfate, as SO <sub>4</sub>	17.8	JULY 2020
Alkalinity, Total as CaCO <sub>3</sub>	34.3	JULY 2020
Chloride, as Cl	9.6	JULY 2020
Hardness, as CaCO <sub>3</sub>	22.3	JULY 2020
pH	7.1	JULY 2020
Sodium, as Na	19.5	JULY 2020
Total Dissolved Solids	59.0	JULY 2020
Chlorine, as Cl <sub>2</sub>	1.4 AVG	low 0.24 / high 2.06
Calcium, as Ca	5.3	JULY 2020
Carbon Dioxide	8.7	JULY 2020
Magnesium, as Mg	2.2	JULY 2020
Manganese, as Mn	ND	JULY 2020
Specific Conductance	146	JULY 2020
Zinc, as Zn	0.41	JULY 2020
TTHM	27.5	2020
HAA5	18.8	2020
Bromodichloromethane	0.0073	NOV 2020
Chloroform	0.011	NOV 2020
Dibromochloromethane	0.0032	NOV 2020
Bromomethane	ND	NOV 2020
Highest Filtered Turbidity	0.09	2020

CONTAMINANT	PERCENT REMOVAL			
	TT	AVG	Range	2020
Total Organic Carbon	15-35%	43.1%	33.3 – 52.0%	2020

SOURCE WATER	HI	LOW	AVG.
Cryptosporidium <sup>1</sup>	0.09	0	0.03
Giardia	0.09	0	0.03

Cryptosporidium was detected in 1 source water sample Jan. 2017.  
 Giardia was detected in 1 source water sample in Jan. 2017. Cryptosporidium and Giardia were not detected in any other samples.

CONTAMINANT	PERCENT REMOVAL				
	MCLG	AL	90 <sup>TH</sup> %	#SITES	VIOLATION
Copper <sup>2</sup>	0	1.3	436	0	NO 2019
Lead <sup>3</sup>	0	15	.002	0	NO 2019

<sup>1</sup> Cryptosporidium was detected in 1 source water sample May 2016. Giardia was detected in 3 source water samples; in January, February, and March of 2016. Cryptosporidium and Giardia were not detected in any other samples.

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

<sup>3</sup> Figure shown is 90th percentile; number of sites greater than the Action Level (AL) of 15 ppb = 0





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

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