

# 2016 ANNUAL Water Quality Report

*City of North Augusta*

*PWS ID: SC0210003*





The City of North Augusta is pleased to present its 2016 Drinking Water Quality Report. This report is an annual requirement of the Environmental Protection Agency (EPA) and is designed to inform you about the quality of the water delivered to you every day. As always, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.

As required by Federal and State laws, the City of North Augusta routinely monitors for more than 80 contaminants in your drinking water. Based on these test results, we are pleased to report that **North Augusta's drinking water is safe.**

## About the City of North Augusta Water System

The Savannah River is the source of North Augusta's drinking water. Water is pumped from the river to the treatment plant where conventional treatment processes are used to produce high quality drinking water. The City of North Augusta's water system is made up of over 200 miles of water mains serving approximately 30,000 people. More information can be found by visiting [www.northaugusta.net](http://www.northaugusta.net).



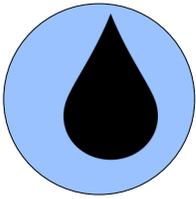


## What is a Consumer Confidence Report (CCR)?

The Consumer Confidence Report (CCR) is an annual water quality report containing data that the City of North Augusta and the South Carolina Department of Health and Environmental Control collected during the past year. CCRs let consumers know what contaminants, if any, are in their drinking water as well as any related health effects.

In 2016, numerous water samples at various sampling points were collected in our water system. The water quality data presented is a combination of data compiled from our state certified water quality laboratory and other commercial laboratories; all certified in drinking water testing by the state of South Carolina. If you have any questions about this report or your drinking water, please contact the Superintendent of Water Production at (803) 441-4325.





## **Notice of Source Water Assessment (SWA)**

An assessment of the drinking water source for the City of North Augusta water system has been completed. This assessment is an evaluation of drinking water sources to determine the “possible contaminating activities” (PCAs) to which a source is most vulnerable. PCAs are current or historic human activities that are actual or potential origins of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies.

Of the 151 PCAs in the initial inventory, 76 had more than one category of contaminants. The inventory includes 61 PCAs with volatile organic compounds (VOCs), 104 PCAs with petroleum products, 50 PCAs with metals, 21 PCAs with nitrates, 25 PCAs with pesticides/herbicides, 17 PCAs with pathogens, no PCAs with radionuclides, and PCAs with undetermined contaminants. Additional information regarding the source water assessment may be obtained by contacting SCDHEC Bureau of Water in Columbia, South Carolina at (803) 898-4300 or on the web at [www.scdhec.net/water](http://www.scdhec.net/water).

A copy of the completed assessment may be viewed at the North Augusta Drinking Water Treatment Plant, 130 Hammonds Ferry Road, North Augusta, SC. You may request a summary of the assessment be sent to you by contacting the Superintendent of Water Production, at (803) 441-4325.





## What are the Sources of Contaminants?

### **Organic Chemical Contaminants**

including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

### **Inorganic Contaminants,**

such as salts and metals, which can be naturally occurring or may result from urban stormwater 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, urban stormwater runoff, and residential uses.

**Microbial Contaminants,** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Radioactive Contaminants,** which can be naturally occurring or may be the result of oil and gas production and mining activities.

## Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of North Augusta 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 two minutes before using water for drinking or cooking. 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/lead](http://www.epa.gov/lead).



# CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water throughout the US. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Monitoring does not indicate the presence of these organisms in either the source or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal

cramps. Most healthy individuals overcome the disease within a few weeks. However, immune compromised people are at greater risk of developing life threatening illness. We encourage immune-compromised individuals to consult their health care provider regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.



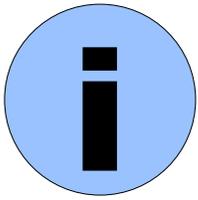
# UNREGULATED CONTAMINATED MONITORING RULE (UCMR)

The USEPA created the Unregulated Contaminants Monitoring Rule (UCMR) to assist them in determining the occurrence of unregulated contaminants in drinking water and whether new regulations are warranted. The first Unregulated Contaminants Monitoring Rule (UCMR1) testing was completed in 2003

for a list of contaminants specified by the USEPA. Unregulated contaminants are those for which the USEPA has not established drinking water standards. The second testing cycle (UCMR2) was conducted between November 2008 and August 2009. The third cycle (UCMR3) began in January 2013 and was in various stages

of implementation through December 2015. The results from the UCMR monitoring are reported directly to the USEPA and mostly not detected. The results of this monitoring are incorporated in the data tables in this report as appropriate. For more information, contact the Superintendent of Water Production at (803) 441-4325.





## Special Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk for infections. These people should seek advice about drinking water from their health care providers.





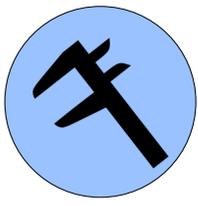
## How to Read The Water Quality Report Tables

The City of North Augusta conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2016, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables, see the “Definition of Terms” section.

- 1) Starting with a **Substance**, read across.
- 2) **Year Sampled** is usually in 2016 or year prior.
- 3) **MCL** shows the highest level of substance (contaminant) allowed.
- 4) **MCLG** is the goal level for that substance (this may be lower than what is allowed).
- 5) **Average Amount Detected** represents the measured amount.
- 6) **Range** tells the highest and lowest amounts measured. If only one value was obtained, the high and low values will be the same.
- 7) A **No** under **Violation** indicates government requirements were met.
- 8) **Major Sources in Drinking Water** tells where the substance usually originates.

Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.





## Measurements

Water is sampled and tested consistently throughout the year to ensure the best possible quality. Contaminants are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L)
- Parts per billion (ppb) or micrograms per liter ( $\mu\text{g/L}$ )
- Parts per trillion (ppt) or nanograms per liter (ng/L)
- Grains per gallon (grains/gal) - A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L hardness.
- MicroSiemens per centimeter ( $\mu\text{S/cm}$ ) - A measurement of a solution's ability to conduct electricity.
- Nephelometric Turbidity Units (NTU) - A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- PicoCuries per liter (pCi/L) - A measurement of radioactivity in water.

### PARTS PER MILLION

1 second  
In 12 days

### PARTS PER BILLION

1 second  
In 32 years

### PARTS PER TRILLION

1 second  
In 32,000 years



# Water Quality Results: City of North Augusta Water Treatment Plant

Substances (units)	Year Sampled	MCL	PHG (MCLG)	Average Amount	Range of Detections		Violation	Typical Source
					Low	High		
Fluoride (ppm)	2016	4.0	2.0	0.77	0.77	0.77	No	Erosion of natural deposits. Water additive, which promotes stronger
Nitrate as N (ppm)	2016	10	10	0.19	0.19	0.19	No	Erosion of natural deposits. Runoff from fertilizer use.

## Turbidity - A Measure of the Clarity of the Water

Substance	Year	TT	PHG	Highest Single	Violation	Typical Source
Turbidity (NTU)	2016	1 NTU	N/A	0.090	No	Soil Runoff
		At least 95 % of all sample must be less than 0.3 NTU		Lowest % of measurements less		
				100 %		

## Disinfection By-products, Disinfectant Residuals, and Disinfection By-product Precursors (Measured on the Water within the Distribution System)

Substance (units)	Year Sampled	MCL (MRDL)	MCLG	Average Amount Detected	Range of Detections		Violation	Typical Source
					Low	High		
Total Trihalomethanes (TTHM) (ppb)	2016	80	N/A	RAA = 56	28.8	81.6	No	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	2016	60	N/A	RAA = 34	21.5	58.3	No	By-product of drinking water chlorination.
Chlorine (ppm)	2016	(4.0) (as Cl <sub>2</sub> )	(4.0) (as Cl <sub>2</sub> )	1.00	1.00	1.00	No	Drinking water disinfectant added for treatment
Total Organic Carbon (TOC) (% Removal)	2016	N/A	35 % Removal Required	48..2 %	32.6 %	63.5 %	No	Naturally present in the environment

## Tap Water Samples: Lead and Copper Results (Measured on Water within the Distribution System)

Substance (units)	Year Sampled	Action Level	PHG	Number of Samples	90 <sup>th</sup> Percentile	Number of Samples Above Action	Violation	Typical Source
Copper (ppm)	2014	1.3	0.3	30	0.138	0	No	Internal corrosion of household plumbing system, Erosion of natural deposits.
Lead (ppb)	2014	15	2	30	2.0	1	No	Internal corrosion of household plumbing system, Erosion of natural deposits.

## Bacteriological Results (Measured on the Water within the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Highest Percentage Detected	Violation	Typical Source
Total Coliform Bacteria	2016	5% of monthly samples are positive	(0)	4.5%	No	Naturally present in the environment.



## Definitions of Terms Used in This Report

**Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, that a water system must follow.

**DWP:** Division of Water Production

**LRAA:** Locational Running Annual Average

**Maximum Contaminant Level (MCL):** 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. Secondary MCLs (SMCL) are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** 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 disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Micromhos per centimeter ( $\mu\text{mhos/cm}$ ):** A measure of electrical conductance.

**N/A:** Not applicable

**ND:** Not detected

**Nephelometric Turbidity Units (NTU):** Measurement of the clarity, or turbidity, of the water.

**Notification Level (NL):** The concentration of a contaminant, which, if exceeded, requires notification to SCDHEC and the customer. Not an enforcement standard.

**pH:** A measurement of acidity, 7.0 being neutral

**Picocuries per liter (pCi/L):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**Parts per billion (ppb):** One part substance per billion parts water, or micrograms per liter.

**Parts per million (ppm):** One part substance per million parts water, or milligrams per liter.

**Parts per trillion (ppt):** One part substance per trillion parts water, or nanograms per liter.

**Primary Drinking Water Standard (PDWS):** MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the USEPA.

**RAA:** Running Annual Average

**Secondary Maximum Contaminant Level (SMCL):** Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**SCDHEC:** South Carolina Department of Health and Environmental Control

**Total Dissolved Solids (TDS):** An overall indicator of the amount of minerals in the water.

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

**USEPA:** United States Environmental Protection Agency

**Variations and Exemptions:** State or USEPA permission not to meet an MCL or utilize a treatment technique under certain conditions.

**%:** Percent



## How to Contact Us

If you have any questions about this report, your drinking water, or service, please call the Superintendent of Water Production at (803) 441-4325.

## Water Information Sources

**City of North Augusta**  
[www.northaugusta.net](http://www.northaugusta.net)

**South Carolina Department of Health and Environmental Control (SCDHEC)**  
[www.scdhec.gov/HomeAndEnvironment/Water/](http://www.scdhec.gov/HomeAndEnvironment/Water/)

**United States Environmental Protection Agency (USEPA)**  
[www.epa.gov/safe water](http://www.epa.gov/safe-water)

**Safe Drinking Water Hotline**  
(800) 426-4791

**Centers for Disease Control and Prevention**  
[www.cdc.gov](http://www.cdc.gov)

