CITY OF NORTH AUGUSTA
2015 Drinking Water Quality Report

The City of North Augusta is pleased to present its 2015 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. Our goal is to provide a safe and dependable supply of drinking water. We are committed to ensuring quality water and want to inform you of the efforts we make to continually improve water treatment processes.

The Savannah River is the source of North Augusta's drinking water. Raw water is pumped to the treatment plant where conventional treatment processes are used to produce high quality drinking water. 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.**

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the water poses a health risk. More information about contaminants, potential health effects and lessening risk of infection by microbiological contaminants can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

The following tables show the laboratory results for samples collected during the 2015 calendar year. **Only those contaminants that were detected are shown.** A complete list of contaminants we test for is available upon request.

In the tables you will find many terms and abbreviations with which you may not be familiar. The following definitions may help you better understand these terms:

- **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 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.
- **Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Maximum Contaminant Level (MCL)** - 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 (MCLG)** - The MCL "Goal" 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. MCLs 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.
- **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 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.
- **ND** – Non-detect.
- **Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

REGULATED DETECTIONS

Organic Contaminant	Unit of Measure	MCL	MCLG	Level Detected	Likely Source of Contamination
Fluoride	PPM	4	2	0.69	Erosion of natural deposits, water additive promotes stronger teeth
Nitrate	PPM	10	10	0.19	Runoff from fertilizer use

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Bacteriological Analysis

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Samples are collected from 44 representative sites throughout the water distribution system monthly and analyzed for total coliform bacteria. The EPA requires that at least **95%** of the samples test negative. North Augusta achieved **100%** compliance because no coliform bacteria were detected in any of the samples analyzed during 2015.

Lead & Copper

Contaminant	Highest Level Allowed (MCL)	Detected Level	Range of Detection	Goal (MCLG)	Violation Y/N	Year	Possible Source
Copper	AL= 1.3 PPM	90th % = 0.138 0 > AL	1.3 PPM	1.3	N	2014	Corrosion of household plumbing systems
Lead	AL= 15 PPB	90th % = 2.0 1 > AL	0 PPB	0	N	2014	Corrosion of household plumbing systems

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 2 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 at 800-426-4791 or www.epa.gov/safewater/lead.

Turbidity Measurements

Turbidity is the measure of the cloudiness of water. It is measured because it is a good indicator of both water quality and the effectiveness of our filtration system. Water treatment plant personnel analyzed more than 7,000 post-filtration samples for turbidity level in 2014. **100%** compliance was achieved because none of the samples exceeded the MCL of 0.30 NTU.

Contaminant	Unit of Measure	MCL	MCLG	Highest Detected Level Found	Sample Date	Violation Y/N	*Possible Source*
Turbidity	NTU	TT=1 NTU max	0	0.08	01/14/15	No	Soil runoff
(Sampled 2015)	NTU	TT <0.30 NTU 95% of the time	0	< 0.30 100% of the time	—	No	Soil runoff

DISINFECTION BYPRODUCTS

Total Trihalomethanes (TTHM), Haloacetic Acids (HAA_5), Total Organic Carbon (TOC), & Free Chlorine

Trihalomethanes and haloacetic acids are compounds formed when chlorine reacts with naturally-occurring organic materials present in the source water. The MCLs established by the EPA are 80 ppb for TTHM and 60 ppb for **HAA_5** as a running annual average for each sample location (LRAA). Samples are collected quarterly from 4 representative sites within the water distribution system.

*LRAA is the locational running annual average

The OEL is the Operational Evaluation Level. It is determined at each monitoring location by calculating the sum of the two previous quarters' results plus twice the current quarter's result, then dividing by 4 to determine an average. A water system exceeds the OEL when the monitoring location exceeds 0.080 mg/L for TTHMs or 0.060 mg/L for **HAA_5

Contaminant	Level Found	Detection Range	MCL	MCLG		Sample Year	Violation? Y/N	Possible Source
THM	RAA 54	42.5-65.6	80 ppb	0		2015	N	By-product of drinking water disinfection
HAA5	RAA 40	16.4-39.2	60 ppb	0		2015	N	By-product of drinking water disinfection

**THM: EPA states that some people who drink water containing trihalomethanes in excess of the MCL for many years may experience problems with their liver, kidneys or central nervous system and may have an increased risk of getting cancer.*

***HAA_5: EPA states that some people who drink water containing HAA5 levels in excess of the MCL over many years may have an increased cancer risk.*

Contaminant	Level Found	MCL	MCLG	Sample Date	Range of Detection	Violation	*Possible Source*
TOC* *(Sampled 2015)*	48.2% Removal (35%required)	TT	N/A	Sampled monthly	32.6% - 63.5%	No	Naturally present in the environment

**TOC: Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by-products.*

Contaminant	Unit of Measure	MRDL	MRDLG	Level Found	Detection Range	*Possible Source*
Free Chlorine *(Sampled 2015)*	ppm	4.0	2.0	0.66 (Annual Average)	0.34 – 1.04	Addition of free chlorine to control microbial contaminants.
Chlorine Dioxide *(Sampled 2014)*	ppb	800	800	66 (Annual Average)	ND -260	Addition of chlorine dioxide to control microbial contaminants
Contaminant	**Unit of Measure**	**MCL**	**MCLG**	**Level Found**	**Detection Range**	***Possible Source***
Chlorite* *(Sampled 2014)*	ppm	1.0	0.80	0.316 (Annual Average)	ND – 0.632	By-product of drinking water chlorination

Unregulated Contaminants

Unregulated contaminants are those that don't have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminant should have a standard.

Last year, as part of this effort, the EPA required water systems to test for 30 contaminants that are not currently regulated. Below are the monitoring results for the unregulated contaminants that were detected in our water. For more information please contact Mary Ann Fuller, SCDHEC at (803) 898-2382 or fullerma@dhec.sc.gov.

Contaminant	Unit of Measure	MRL	Level Found	Detection Range
Hexavalent Chromium (Dissolved)	**ppb**	**0.03**	**0.188 (annual average)**	**0.20-0.26**
Chromium	**ppb**	**0.2**	**0.31**	**0.25-0.33**
Chlorate	**ppb**	**20**	**230**	**ND-230**

Strontium	**ppb**	**0.3**	**31.5 (annual average)**	**ND-33**
Vanadium	**ppb**	**0.2**	**0.30 (annual average)**	**ND-0.39**

Source Water Assessment

The 1996 Amendments to the Safe Drinking Water Act require that each state develop a Source Water Assessment and Protection Program. The program's goal is to provide added protection of both groundwater and surface water drinking water sources by conducting source water assessments and implementing protection measures. The South Carolina Department of Health and Environmental Control has completed the source water assessment plan for the City of North Augusta System No. 0210003 that includes surface water intake S02103.

Of the 151 potential contaminant sources (PCS) in this initial inventory, 76 had more than one category of contaminants. The inventory includes 61 PCS with volatile organic chemicals (VOCs), 104 PCS with petroleum products, 50 PCS with metals, 21 PCS with nitrates, 25 PCS with pesticides/herbicides, 17 PCS with pathogens, no PCS with radionuclides, and no PCS with undetermined contaminants. The susceptibility analysis determined 37 PCS with a high susceptibility ranking, 72 PCS with a moderate susceptibility ranking, and 42 PCS with low susceptibility ranking. Additional information regarding the source water assessment may be obtained by contacting the DHEC Bureau of Water in Columbia, South Carolina at (803) 898-4300 or on the web at www.scdhec.net/water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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. These people should seek advice about drinking water from their health care providers. More information about contaminants, potential health effects, and lessening risk of infection by microbiological contaminants can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

If you have any questions about this report or your water utility, please contact the **Superintendent of Water Production at 803-441-4325**. Regularly scheduled City Council meetings are held at 7:00 p.m. the first and third Monday of each month on the third floor of the North Augusta Municipal Center, 100 Georgia Avenue.