

# ANNUAL DRINKING WATER QUALITY REPORT 2016

Inman-Campobello Water District  
System Number: SC4220002

June, 2017

5 Prospect St., Inman, SC 29349

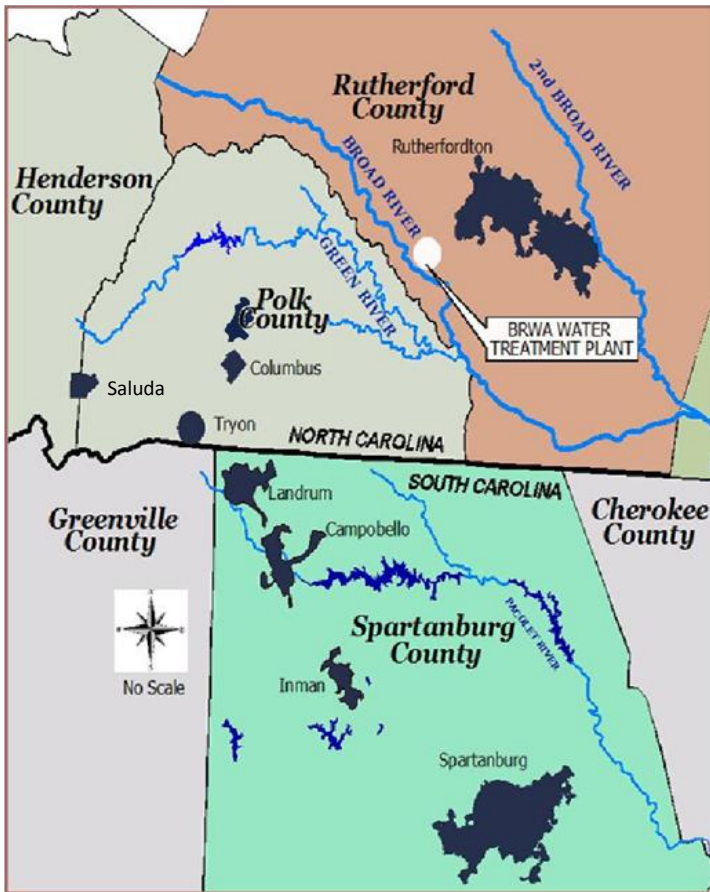
Este informe contiene informacion muy importante sobre el agua que usted bebe. Traduscalo o hable con alguien que lo entienda bien.

## CONSUMER CONFIDENCE REPORT

On August 6, 1998, the Environment Protection Agency promulgated the Consumer Confidence Report regulation. This rule requires public water systems to publish an annual report for distribution to their customers and other water consumers which gives detailed information about water sources, water treatment, water quality and regulatory compliance. The eighteenth (18th) of these annual reports, covering the calendar year 2016, must be prepared and distributed by July 1, 2017.

## SOURCE WATER INFORMATION

The Inman-Campobello Water District purchases water from the Broad River Water Authority (BRWA) for distribution to residential, commercial and industrial customers. The water that is used by this system is surface water from the Broad River. The Broad River originates in the Hickory Nut Gorge area, above Lake Lure, N.C., and flows southeast through Rutherford County. The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose for the assessment was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCS). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.



The relative susceptibility rating of the source for the Broad River Water Authority was determined by combining the contaminant rating (number and location of PCS within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCS)	
Source Name	Susceptibility Rating
Broad River	Moderate

The complete SWAP Assessment report for the Broad River Water Authority may be viewed on the internet at [http://swap.ncwater.org.swap\\_app/pdfreports.0181035\\_7\\_8\\_2015\\_85\\_11.PDF](http://swap.ncwater.org.swap_app/pdfreports.0181035_7_8_2015_85_11.PDF). To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program - Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email your request to [swap@ncmail.net](mailto:swap@ncmail.net). Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment Program staff by phone at 919-715-2633.

The sources of drinking water (both tap 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: 1) Microbial contaminants, such

as plants, septic systems, agricultural livestock operations, and wildlife. 2) 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.

3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. 4) 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. 5) Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities. 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. More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Hotline at (800) 426-4791**. In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people 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 microbial contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**. 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. We 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 or online at [or online at http://www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### TREATMENT PROCESS

Conventional water treatment is used at the BRWA treatment plant. "Raw" water from the Broad River is first passed through a screen to remove large objects, and then treated with chlorine. The chlorine aids in removal of iron and manganese, two natural substances in the water which would stain clothing and plumbing fixtures if not removed. The chlorine also acts as a disinfectant, destroying bacteria, viruses, algae, and other organisms, some of which could cause illness. Polyaluminum chloride, lime, and polymer are then added. In a process called coagulation, these substances combine with each other and with fine particles in the water to form a substance called "floc" which is heavier than water. Powdered activated carbon is added at this stage as needed to help remove unpleasant tastes or odors. The water then passes through large basins where the floc settles to the bottom and is removed, taking unwanted substances with it. Clear "settled" water is skimmed from the top of the basins and filtered to remove still more unwanted material. Additional chlorine disinfectant and lime are added as needed to meet state requirements. A corrosion inhibitor containing zinc and phosphate is added to preserve distribution piping and prevent lead and copper contamination. Finally, flouride is added to prevent tooth decay.

Each step of the treatment process represents a barrier which prevents chemical contaminants and disease organisms from passing through the treatment plant and into the drinking water. EPA has established standards for the performance of each of these barriers.

The effectiveness of coagulation, sedimentation and filtration in removing particles from the water is determined by measuring the turbidity of the water as it leaves the filters. Turbidity is a measure of the quantity of finely divided particles suspended in the water, and is reported in units called NTU. The EPA standard for the turbidity of filtered water states that turbidity may not exceed 0.3 NTU in more than 5% of all the measurements taken and must never exceed 1 NTU. 1 NTU turbidity cannot be seen by the human eye. Turbidity measurement is required every 4 hours. BRWA was in full compliance with this requirement in 2016. Regulations also require maintenance of a minimum level of disinfection throughout the distribution system. BRWA used chlorine as its only disinfectant during 2016. The MRDL for chlorine is 4 parts per million (ppm). The MRDLG for chlorine is also 4 ppm. Chlorine residual data included comes from distribution system monitoring. The highest running annual average and the range of quarterly averages for the year are to be reported. Public water systems performing water treatment are required to monitor Total Organic Carbon (TOC) levels in their source and finished water. TOC provides a measure of available organic precursors, the natural raw material that reacts with chlorine to form disinfection byproducts. By limiting the amount of this raw material available, as well as the level of disinfectant used, the potential for forming disinfection byproducts can be limited. A minimum percent removal of TOC through the treatment process is required. What is reported is the ratio of the actual removal percentage achieved and the minimum requirement. A running annual average (average of four consecutive quarterly averages) ratio of 1.0 or higher indicates compliance with the requirements. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### Water Quality Test Results

**Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

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

**Maximum Residual Disinfectant Level or MRDL:** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Avg:** Regulatory compliance with some MCL's are based on running annual average of monthly samples.

**ppm:** milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

**ppb:** micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

**N/A:** not applicable.

**Definitions:** The following tables contain scientific terms and measures, some of which may require explanation.

**Treatment Technique or TT:** A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Inman-Campobello Water District, Broad River Water Authority, the South Carolina Department of Health & Environmental Control and the North Carolina Department of Environment and Natural Resources routinely monitor for at least 81 contaminants in your drinking water according to federal and state laws. The tables below show the results of monitoring for contaminants which have been detected during the period of January 1st to December 31st, 2016. **No MCL's were exceeded for the contaminants listed below.**

### INMAN-CAMPOBELLO WATER DISTRICT MONITORING OF LEAD & COPPER

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over (AL)	Units	Violation	Likely Source of Contamination
Copper	07/18/16	1.3	1.3	0.092	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	07/18/16	0	15	1.4	1	ppb	N	

Definitions: **Action Level Goal (ALG)** : The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety. **Action Level** : The concentration which, if exceeded, triggers treatment or other requirements which a water system must follow. **Next lead and copper sampling due 2019.**

### MICROBIOLOGICAL CONTAMINANTS-MONITORED BY THE ICWD

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	0	0	1 positive sample per month	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	N	0	0	Note: If either an original routine sample and/or its repeat sample(s) are fecal coliform or E. coli positive, a Tier 1 violation exists.	Human & animal fecal waste

### ICWD MONITORING OF REGULATED CONTAMINANTS

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2016	1	1 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes
Haloacetic Acids (HAA5)	2016	37.0	18.5-44.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes	2016	45.0	13.1-87.5	No goal for the total	80	ppb	N	By-product of drinking water disinfection

For TTHM: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

For HAA5: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

### BROAD RIVER WATER AUTHORITY MONITORING

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Flouride	February 2016	N	0.60 ppm	0.25 0.79	4.0 ppm	4.0 ppm	Erosion of natural deposit. Water additive which promotes strong teeth. Added to prevent tooth decay.

Note: The Flouride level is controlled at approximately 0.70 ppm with the annual average being 0.69 ppm.

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU)	N	Avg. 0.06 Max 0.12	N/A	TT= 1 NTU	Soil runoff
		100%	N/A	TT = % of samples < 0.3 NTU	

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be below 0.3 NTU.

#### DISINFECTION BY-PRODUCT PRECURSORS CONTAMINANTS

Contaminant (units)	Sample Date	MCL Violation	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Total Organic Carbon (ppm) (TOCs)-RAW	Monthly 2016	N	.99	<1.0	3.02	N/A	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOCs)-TREATED	Monthly 2016	N	ND	<1.0	ND	N/A	TT	Naturally present in the environment

Note: Depending on the TOC in our source water, the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. If we do not achieve that % removal there is an “alternative % removal”. If we fail to meet that, we are in violation of a Treatment Technique. Our water has a very low TOC content. Instead of using the % removal criteria we use an Alt 2 (alternative 2), treated water TOC <2.0 mg/l as the method to comply with d/DBP treatment technique requirements.

#### WATER CHARACTERISTICS CONTAMINANTS

Contaminant (units)	Sample Date	Your Water	Range	Secondary MCL
pH	Hourly	7.2	N/A	6.5 TO 8.5

Secondary Contaminants, required by DHEC, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic contaminants normally do not have any health effects and normally do not affect the safety of your water.

#### CRYPTOSPORIDIUM

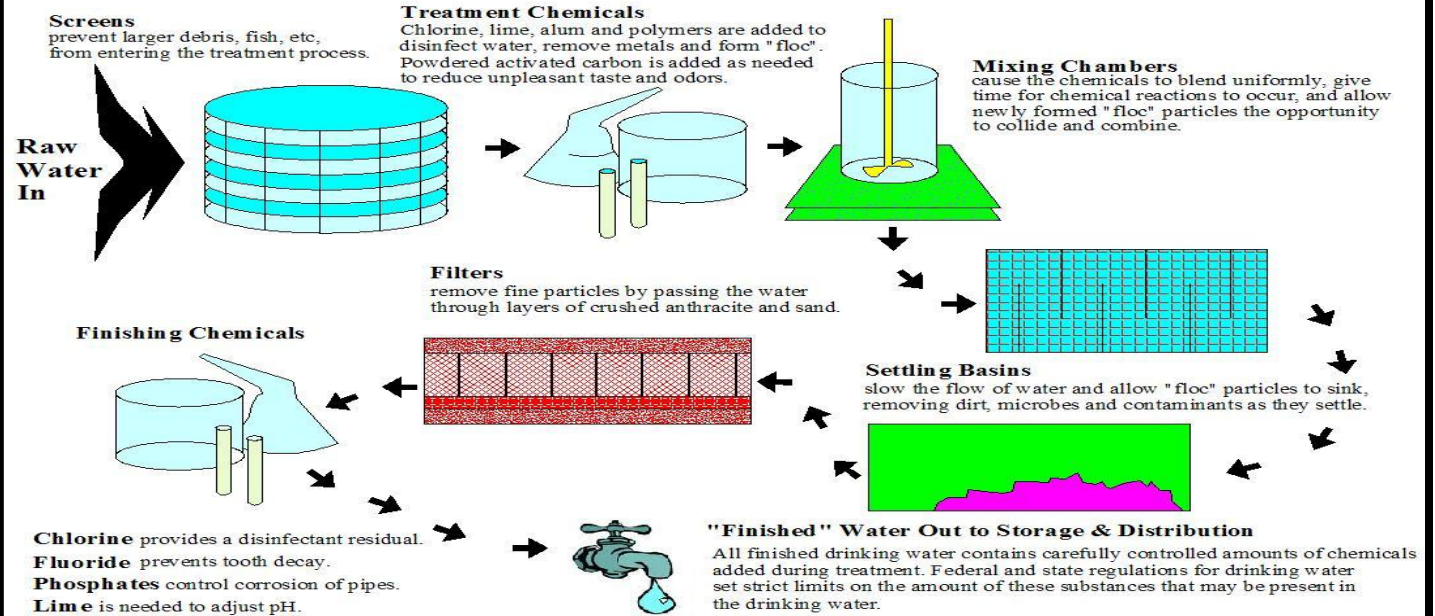
Contaminant (units)	Sample Date	Your Water	Range		Secondary MCL
			Low	High	
Cryptosporidium (Oocysts/L)	Monthly, Oct-Dec 2016	0.34	0.00	0.91	N/A

*Cryptosporidium* is a microbial parasite which is found in surface water throughout the U.S. Although *Cryptosporidium* can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of our source water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. *Cryptosporidium* must be ingested for it to cause disease, and it may be spread through means other than drinking water.

Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.



**Water Must Be Treated**  
to reduce harmful organisms and other substances to safe levels.



Annual Water Quality Report for the period of January 1 to December 31, 2016. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. The source of drinking water used by the Inman-Campobello Water District (4220002) is purchased surface water. For more information regarding this report contact Steve Poteat at (864) 472-2858. The ICWD is governed by a Board of Commissioners who generally meet at the ICWD Office on the third Tuesday of each month at 8:15 A.M.