

2011 *water quality report*

GSWSA – Bull Creek Regional Water System Exceeds All Water Quality U.S. Standards

In order to ensure tap water is safe to drink, the United States Environmental Protection Agency (EPA) and South Carolina Department of Health and Environmental Control (DHEC) prescribes strict 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. The amounts of these contaminants are measured by DHEC and are reported in the table on the back of this page. The few contaminants that were detected in our water are present at very low concentrations and in all cases are much less than the amounts considered unsafe by the EPA.

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, in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or from human activity. 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as individuals with cancer undergoing chemotherapy, those 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 individuals 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 at (800) 426-4791.

We Test Your Water Every Day

Water leaving the treatment plant is tested every day for the presence of coliform bacteria. Each month, approximately 120 samples from the distribution system are also tested. During 2011, the coliform bacteria samples were found to be less than the maximum contaminant level as per SC DHEC regulations.

Contaminants that may be present in source water:

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 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.

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 stormwater runoff, and septic systems.

Radioactive contaminants which can be naturally-occurring or can be the result of oil and gas production or mining activities.

Drinking water is tested every day for the presence of undissolved particles. Tiny particles may provide hiding places for bacteria or other micro-organisms. These particles might make the water appear cloudy or muddy. The amount of particles in a water sample is expressed as turbidity. Turbidity of less than 0.3 Turbidity Units (NTU) in 95% of the samples tested is considered acceptable by the EPA. In 2011, we measured turbidity of less than 0.3 NTU in 100% of the samples tested.

Our goal is to remove or destroy any organism that is considered harmful to human health. We do this using disinfectants called chloramine and chlorine as well as a highly efficient filtration system. The system is monitored 24 hours per day for turbidity and particle counts using modern electronic laser detection equipment. Filters are taken offline and washed to restore efficiency whenever turbidity or particle counts reach predetermined levels.



EPA's Safe Drinking Water Hotline
1-800-426-4791

GRAND STRAND
WATER & SEWER AUTHORITY

The Source of Your Water

The Great Pee Dee watershed is the source of our fresh surface water. Originating in North Carolina, it includes waters from Lake Tillery, Blewett Falls Lake, Lumber River, Little Pee Dee River, Great Pee Dee River, Lake Robinson, Black Creek, and Lynches River. Fresh surface water is pumped from Bull Creek, a branch of the Pee Dee River. Bull Creek lies a few miles north of the intersection with the Waccamaw and Pee Dee Rivers. All the rivers combine to flow through Winyah Bay into the Atlantic Ocean.



Lead Information

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 on the Internet at <http://www.epa.gov/safewater/lead>.

We Welcome Your Suggestions

Are you interested in learning more about the water treatment process, water quality or participating in the decision making process?

For general questions please contact our Customer Service Department at (843) 443-8202. For general water quality information, call (843) 443-8290. For detailed water quality data and technical questions, please call GSWSA at (843) 443-8204.

The public is invited to attend any of the monthly Board of Directors meetings scheduled for the 4th Monday of each month at 6:00 pm at our Administrative Office Building off Jackson Bluff Road.

Please visit our website for additional information at www.gswsa.com.

Customer Service Department
(843) 443-8202

General Water Quality Info
(843) 443-8290

Bull Creek Water Quality Lab
(843) 443-8204

Water Quality Table for Grand Strand Water & Sewer Authority

Analysis for 2011

Substance	Date Sampled	MCL	Detected Levels (Range or Single Analysis)	MCLG	Most Likely Source of Contaminant
REGULATED AT THE TREATMENT PLANT					
Turbidity	2011	<0.3 NTU for 95% of samples	Maximum: 0.12 NTU 100% <0.3 NTU	TT	Natural river sediment, by-product of water treatment
Fluoride	2011	4 ppm	0.42 ppm	4 ppm	Additive which promotes strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
Nitrate	2011	10 ppm	0.58 ppm	10 ppm	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Total Organic Carbon	2011	Min. Removal = 50%	Avg. Removal = 64.6% Range: 54.5 - 68.4%	TT	Leaching from vegetation
REGULATED AT THE CUSTOMERS' TAP					
Lead	2011	15 ppb (AL)	90th Percentile: 0 Range: N.D. - 13 ppb	0	Corrosion of household plumbing, erosion of natural deposits
Copper	2011	1.3 ppm (AL)	90th Percentile: 0.13 ppm Range: N.D. - 0.27 ppm	1.3 ppm	Corrosion of household plumbing, erosion of natural deposits
REGULATED AT THE DISTRIBUTION SYSTEM					
Total Trihalomethanes	2011	80 ppb	N.D. - 33.8 ppb RAA: 28.6 ppb	0	By-product of drinking water disinfection
Total Haloacetic Acids	2011	60 ppb	N.D. - 24 ppb RAA: 20.4 ppb	0	By-product of drinking water disinfection
Chloramines	2011	MRDL=4 ppm	2.97 - 3.43 ppm 3.16 ppm	MRDLG=4 ppm	By-product of drinking water disinfection
Coliform Bacteria	2011	5% of monthly samples are positive	0.8%	5% of monthly samples are positive	Naturally present in the environment
SECONDARY CHEMICAL PARAMETERS					
Sulfate	2011	250 ppm	26.0 - 38.3 ppm	NGE	By-product of water treatment
Iron	2011	300 ppb	3 - 42 ppb	NGE	Erosion of natural deposits, corrosion of water pipes
Manganese	2011	50 ppb	22 - 83 ppb	NGE	Erosion of natural deposits
Sodium	2011	NA	13.3 - 21.4 ppm	NGE	By-product of water treatment, erosion of natural deposits, saltwater intrusion
Chloride	2011	250 ppm	11.2 - 16.6 ppm	NGE	Erosion of natural deposits, saltwater intrusion

The data presented in this table contains abbreviations and terms that may seem complicated. The following definitions are important for understanding this data:

Maximum Contaminant Level (MCL) – The 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.

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.

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Action Levels (AL) – Regulations set Action Levels for some contaminants, for example lead and copper. An Action Level is the concentration of a contaminant which triggers treatment or other requirements which a water system must follow.

Parts Per Million (ppm) – The equivalent of one penny in \$10,000.

Parts Per Billion (ppb) – The equivalent of one penny in \$10,000,000.

Picocuries per liter (pCi/L) – A measure of radioactivity in water.

< – Less than.

NGE – No goal established.

NTU – Nephelometric turbidity unit—measure of clarity—turbidity in excess of 5 NTU is just noticeable to the average person.

90th Percentile – Statistical measurement of probability of 90% of samples meeting a certain criteria.

N.D. – Not Detected—lab analysis indicates constituent is not present.

MRDL – Maximum Residual Disinfectant Level is the highest level of a disinfectant that is allowed in finished drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG – Maximum Residual Disinfectant Level Goal—Level of disinfectant in drinking water below which there is no known or expected health effect. MRDLG does not reflect the benefits of using disinfectants to control microbial disinfectants.

RAA – Running Annual Average.

HQA – Highest Quarterly Average.

SOURCE WATER ASSESSMENT SC DHEC has completed a source water assessment for this system. A copy of this assessment for System Number 2620004 can be obtained on the web at www.scdhec.gov/water or by calling the Bureau of Water at (803) 898-4300.

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.