

City of Barnwell's 2016 Water Quality Report System ID# 0610001 This Report covers 1/1/2016 through 12/31/2016

The source of drinking water used by the City of Barnwell, System #0610001 is ground water.

This report is intended to provide you with important information about your drinking water and the efforts made by the water department to provide safe drinking water. This report is updated and published annually to inform the citizens of Barnwell about their drinking water.

What is the Safe Drinking Water Act and what does it have to do with this report?

The safe drinking water act, among other things, requires all public water systems to issue an annual report to customers telling them what substances are in their water and in what amounts.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The EPA and S.C. DHEC require us to test and report on our water on a regular basis to ensure its safety. We have always met all of these requirements. We want you to know that we pay attention to all the rules.

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 - (1-800-426-4791).**

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.

Source of Drinking Water

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, and can pickup 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, urban storm water 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 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.

The Source Assessment Plan (SWAP) has been completed for the City of Barnwell water system. SWAP's, among other things, identify potential sources of contamination to drinking water supplies. A copy may be obtained from the water department. To help prevent the possibility of terrorist attacks on our water system, Vulnerability Assessments have been completed and submitted to the EPA.

Source Water Information

Source Water Name	Type of Water	Report Status	Location of Source Water
Well #6 (G06106) Clinton Street Well	Groundwater	Satisfactory	Clinton Street
Well #7 (G06107) Shop Well	Groundwater	Satisfactory	Washington Street
Well #9 (G06109) Hwy.#3 Well	Groundwater	Satisfactory	Marlboro Avenue
Well #10 (G06110) Shuron Well	Groundwater	Satisfactory	Clinton Street
Well #11 (G06111) Rose Street Well	Groundwater	Satisfactory	Rose Street

Drinking water for the City of Barnwell comes from four wells located throughout the city. These wells are tapped into an underground aquifer system and pumped into two elevated storage tanks. It is distributed throughout the city via a system of underground pipe. Well #6, #7 and Well #9 service the Main Street Water Tank servicing the East side of town. Well #10 and Well #11 service the Rose Street Water Tank servicing the West side of town. The two water tanks are connected with 12" and 16" main water lines.

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation. The following definitions will help you understand this report-

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 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.

Non-Detects (ND) - laboratory analysis indicates the constituent is not present.

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. MRDLGs 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.

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.

na: not applicable.

avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Regulated Contaminates

Disinfection and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2016	1.00000000	0E-9 – 1.0000000000	MRDLG = 4	MRDL = 4	PPM	No	Water additive used to control microbes.

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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2016	.053000000	0E-9 – 0.053000000	2	2	PPM	No	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Barium	2016	.053000000	0E-9 – 0.053000000	2	2	PPM	No	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Fluoride	2016	0.180000000	0E-9 – 0.180000000	4	4.0	PPM	No	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.
Fluoride	2016	0.180000000	0E-9 – 0.180000000	4	4.0	PPM	No	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as nitrogen)	2016	0.280000000	0E-9 – 0.280000000	10	10	PPM	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.
Nitrate (measured as nitrogen)	2016	0.280000000	0E-9 – 0.280000000	10	10	PPM	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.

Lead and Copper

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 Barnwell 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 drinking 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 <http://www.epa.gov/safewater/lead>.

Definitions:

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

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Lead and Copper Sampling Results

(Contaminant) Lead and Copper	Date Sampled	MCLG	Action Level (AL)	99th Percentile	# Of Sites Over AL	Unit of Measure	Violation	Likely Source of Contamination
Copper	9/30/2014	1.3	1.3	0.484000000	0	ppm	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Copper	9/30/2014	1.3	1.3	0.484000000	0	ppm	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

In addition to the sampling listed above, the City Of Barnwell routinely samples for Coliform bacteria throughout the distribution system. Each month we collect eight samples. We are pleased to report that we found no detection's for Coliform bacteria.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

To obtain a free copy of this report or if you have any water related questions the water department can be reached at 259-3266.

Or inquiries can be sent to: City of Barnwell, c/o CCR Report- P.O. Box 776 – Barnwell, S.C. 29812

For more information regarding this report contact: Philip Stanley - Phone# (803) 259-1476.

The City of Barnwell holds council meetings on the first Monday of each month at 6:30 p.m. in the city hall. Please feel free to participate in these meetings. City hall's phone number is (803) 259-3266.

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