

What You Should Know About Your

# drinking water

Your drinking water, treated and delivered by Beaufort-Jasper Water and Sewer Authority (BJWSA), consistently met or surpassed all the water quality standards and inspections from both the EPA and the South Carolina Department of Health and Environmental Control in 2008.



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## ¿habla español?

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

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# High Quality Water for Low-Country Living

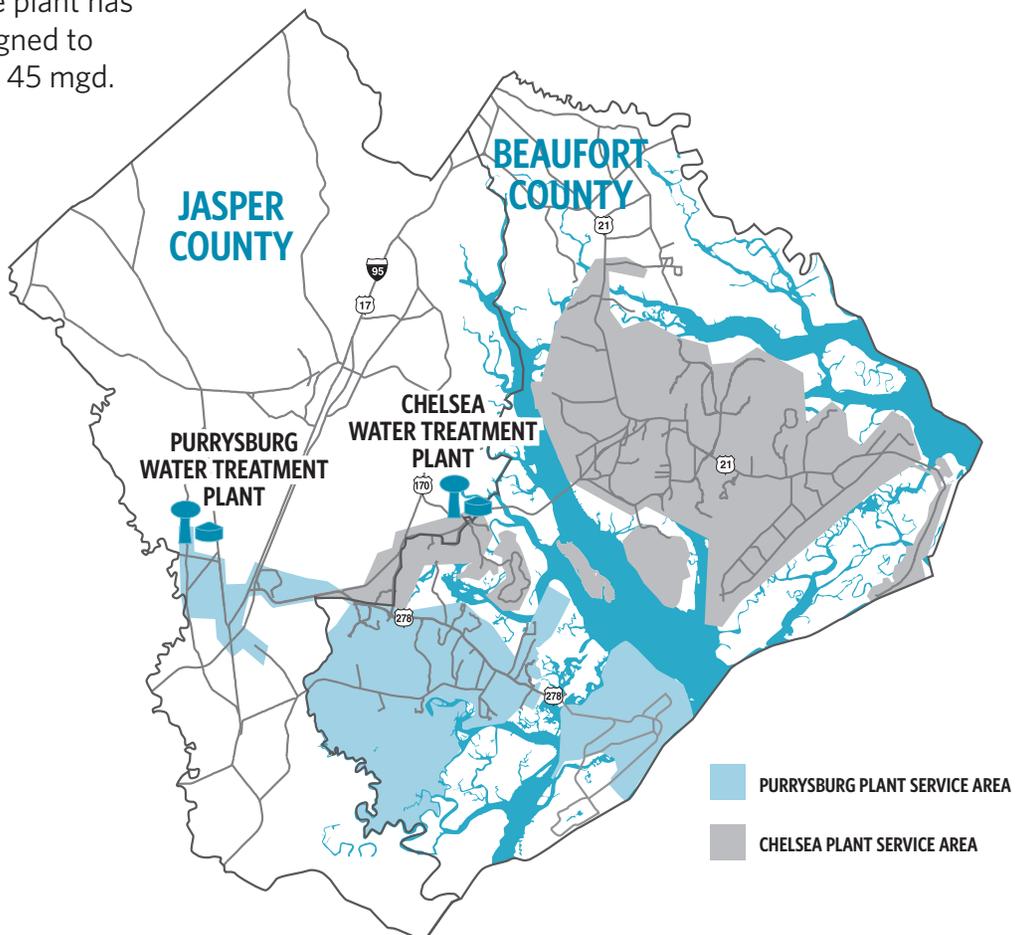
You turn on your tap, fill your glass, and enjoy a cool drink of water. Pretty easy, huh? Not as easy as you might think – your drinking water goes through a closely monitored, step-by-step process to make sure it is clean and safe before it reaches your faucet.

We check the quality of your drinking water carefully and consistently. BJWSA takes water samples from the Savannah River, throughout our water system, and at water taps in homes in our service area. Both an independent lab and the certified BJWSA lab perform extensive tests on these water samples. BJWSA regularly reports test results to DHEC. DHEC also performs surprise tests and checks water samples on a regular basis.

## Where Your Water Comes From

Drinking water sources include streams, lakes, rivers, reservoirs, and wells. The Savannah River is the water source for both of BJWSA's water treatment plants. The river water travels 18 miles via an open canal to the Chelsea Water Treatment Plant, providing up to 24 million gallons a day (mgd) of drinking water to residences and businesses in northern Beaufort County. The plant also supplements the Purrysburg Water Treatment Plant when necessary.

The Purrysburg Water Treatment Plant, which sits near the Savannah River, supplies southern Beaufort and Jasper counties with up to 15 mgd of drinking water. The plant has been designed to expand to 45 mgd.



## Did **YOU** KNOW?

**Even though about 70 percent of the Earth's surface is covered by water, only about 1 percent is available for human use.**

Efficient water use can help to improve water quality, maintain aquatic ecosystems, and protect drinking water resources. Each American uses an average of 100 gallons of water a day at home – enough to fill 1,600 drinking glasses! By being a wise water user, you can reduce this amount significantly. Make sure you have water-efficient fixtures and appliances, and check for leaks. Studies have shown homes can waste more than 10% of water usage due to leaks.

Here at BJWSA, we use water-efficient equipment in operations and perform monthly monitoring to reduce unaccounted-for water loss. As a partner with Clemson Extension, BJWSA is promoting water-efficient landscape practices for homeowners and businesses. BJWSA is also a member WaterSense, a partnership program sponsored by EPA that seeks to protect the future of our nation's water supply through water efficiency.

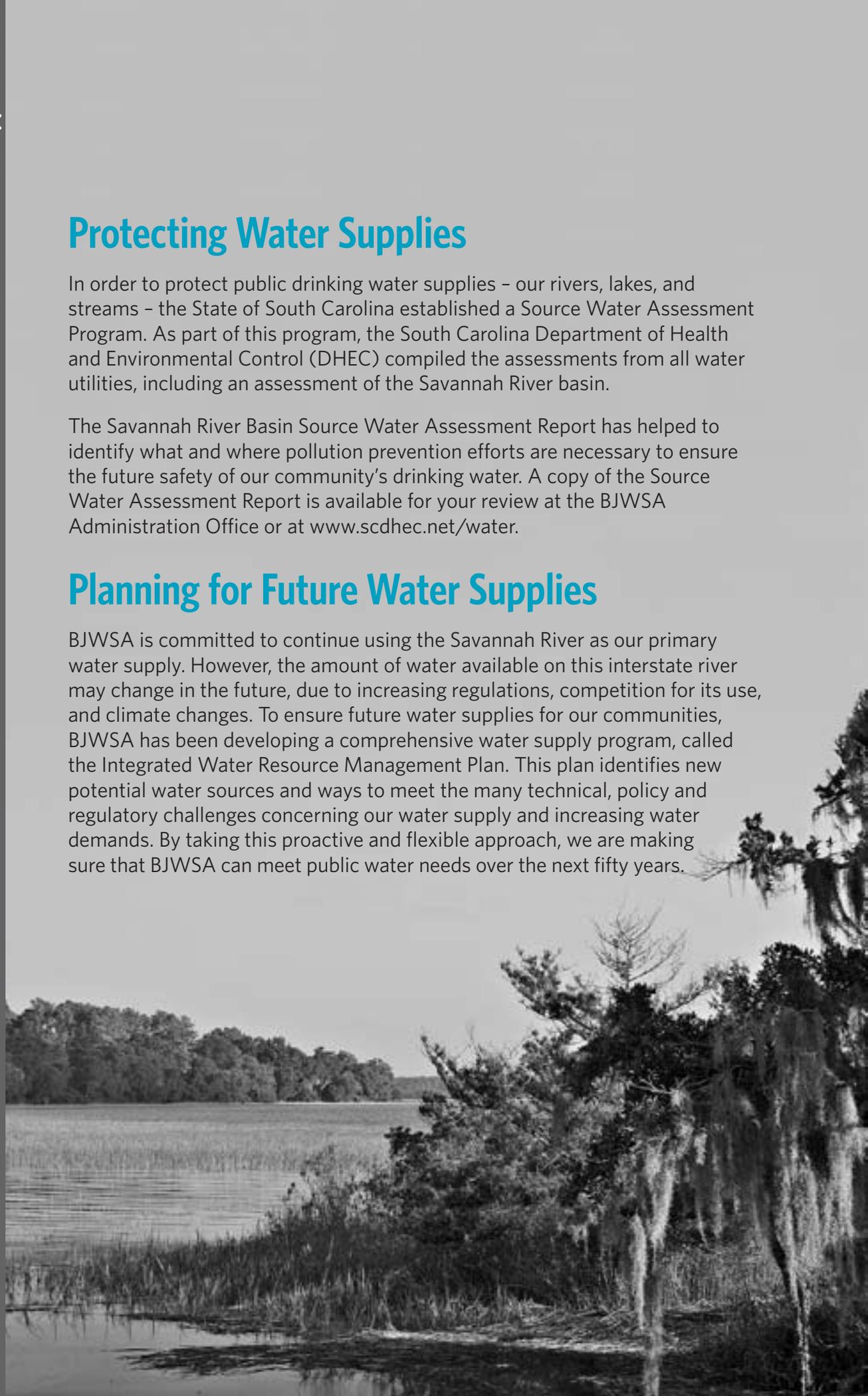
## Protecting Water Supplies

In order to protect public drinking water supplies – our rivers, lakes, and streams – the State of South Carolina established a Source Water Assessment Program. As part of this program, the South Carolina Department of Health and Environmental Control (DHEC) compiled the assessments from all water utilities, including an assessment of the Savannah River basin.

The Savannah River Basin Source Water Assessment Report has helped to identify what and where pollution prevention efforts are necessary to ensure the future safety of our community's drinking water. A copy of the Source Water Assessment Report is available for your review at the BJWSA Administration Office or at [www.scdhec.net/water](http://www.scdhec.net/water).

## Planning for Future Water Supplies

BJWSA is committed to continue using the Savannah River as our primary water supply. However, the amount of water available on this interstate river may change in the future, due to increasing regulations, competition for its use, and climate changes. To ensure future water supplies for our communities, BJWSA has been developing a comprehensive water supply program, called the Integrated Water Resource Management Plan. This plan identifies new potential water sources and ways to meet the many technical, policy and regulatory challenges concerning our water supply and increasing water demands. By taking this proactive and flexible approach, we are making sure that BJWSA can meet public water needs over the next fifty years.



## Why Are Contaminants in Drinking Water?

Drinking water sources include streams, lakes, rivers, reservoirs, and wells, which are subject to potential “contamination” by a wide variety of substances that occur naturally or are man-made. As water travels over the surface of the land or through the ground, it dissolves natural minerals, and, in some cases radioactive material, and can pick up substances resulting from human activity or the presence of animals.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water.

Contaminants that could be present in source water before it is treated:

- **Microbial contaminants**, such as viruses and bacteria that 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 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 septic systems
- **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 be the result of oil and gas production or defense activities

## Tritium in Drinking Water

Tritium is present in our water source, the Savannah River, as a result of natural processes in the atmosphere, fallout from past atmospheric nuclear weapons tests, and the operation of the Savannah River Site (SRS). The EPA regulates tritium by setting a maximum contamination level of 20,000 picocuries per liter (pCi/L) of water. **In 2008, testing showed tritium 552 pCi/L - less than 3% of this maximum level.**

The SRS stopped making nuclear materials and is now only stabilizing nuclear waste. Consequently, tritium levels in the River have been declining. We will continue monitoring extensively for tritium, reporting our findings in future issues of this Water Quality Report.

## What About Lead in Drinking Water?

Testing shows that the amount of lead in our drinking water is well below the EPA's allowed levels (see Water Test Results). It is important to know that lead in drinking water is primarily from materials and components associated with water service lines and home plumbing. Lead in elevated levels can cause serious health problems, especially for pregnant women and young children. BJWSA is responsible for providing high quality drinking water, but cannot control the variety of materials used in residential plumbing.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds up 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 at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Important Information from the EPA



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 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 (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Guidelines from the Environmental Protection Agency and the Centers for Disease Control and Prevention on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).



# Water Test Results

BJWSA is responsible for making certain that the water you drink does not contain contaminants at levels higher than the amounts mandated as safe by federal and state regulations. The following charts show the findings of our water testing throughout 2008 and how it compares to national standards.

## Chelsea Water Treatment Plant

The Chelsea Water Treatment Plant provides drinking water for customers north of the Broad River. Samples were taken at the plant for testing of the substances below.

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Highest Detected Level (what we found in 2008)
✓	Turbidity	Soil runoff	0	TT = 1 NTU	0.14 NTU
				TT = 100% of samples < 0.3 NTU	100%

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Range of Removal	Annual Average Removal
✓	Total Organic Carbons	Naturally present in the environment	N/A	TT (> 35% removal is required)	40.6-54.3%	47.8%

## Purrysburg Water Treatment Plant

The Purrysburg Water Treatment Plant provides drinking water for customers in the southern portion of Beaufort and Jasper counties. Samples were taken at the plant for testing of the substances below.

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Highest Detected Level (what we found in 2008)
✓	Turbidity	Soil runoff	0	TT = 1 NTU	0.08 NTU
				TT = 95% of samples < 0.3 NTU	100%

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Range of Removal	Annual Average Removal
✓	Total Organic Carbons	Naturally present in the environment	N/A	TT (> 35% removal is required)	39.4-57.8 %	47.2%

## Distribution System

The samples taken for testing of these substances came from various points in BJWSA's raw and treated water distribution systems.

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MCLG)	Highest EPA Allowed Level (MCL)	Highest Detected Level (what we found)
✓	Copper	Corrosion of household plumbing	1.3 ppm	AL=1.3 ppm	0.115 ppm (90th percentile) [last required sampling 2006]
✓	Lead	Corrosion of household plumbing; erosion of deposits	AL=15 ppb	0	0 of 30 sites over AL Actual Range ND-12.1 ppb [last required sampling 2006]
✓	Nitrate	Runoff from fertilizer use	10 ppm	10 ppm	0.29 ppm
✓	Total Trihalomethanes (TTHMS)	By-product of drinking water disinfection	0 ppb	80.0 ppb (annual average)	29.96 ppb (annual average) Actual Range 3.0-60.0 ppb
✓	Haloacetic acids (HAA)	By-product of drinking water disinfection	0	60 ppb (annual average)	19.43 ppb (annual average) Actual Range ND-52.0 ppb
✓	Total Coliform	Naturally present in the environment	0	Present in no more than 5% of samples taken	Present in 1% of samples taken
	Fecal coliform or E.coli bacteria	Human or animal fecal waste	0		
✓	Fluoride	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	4.0 ppm	4.0 ppm EPA 2.0 ppm SCDHEC	1.1 Actual Range 0.94-1.1 ppm

Better than EPA Standard	Substance	Typical Source	EPA Ideal Goal (MRDLG)	Highest EPA Allowed Level (MRDL)	Highest Detected Level (what we found)
✓	Chlorine	Water additive used to control microbes	4.0 ppm	4.0 ppm	1.40 ppm (highest quarterly running avg.) Actual Range 0.66-1.58 ppm

## Terms to Know in Reading the Water Test Results

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

**MCLG (Maximum Contaminant Level Goal)** 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.

**MCL (Maximum Contaminant Level)** 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.

**MRDL (Maximum Residual Disinfectant Level)** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal)** 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 contamination.

**ND (non-detected)** No measurable level of a substance or contaminant detected.

**ppm (parts per million)** The equivalent of eight ounces (1 cup) in 62,500 gallons of water.

**ppb (parts per billion)** The equivalent of eight ounces (1 cup) in 62.5 million gallons of water.

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

**Turbidity** A measure of the cloudiness of water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. NTU is a measurement of the clarity of the water.

## Want to Know More?

BJWSA's website, quarterly customer newsletter, water and wastewater treatment brochures, and a comprehensive customer service booklet offer a wide variety of up-to-date information on our operations, services, and current water issues.

If you have any questions about the quality of your water, call the BJWSA Customer Service Department (Beaufort - 843-987-9200, Hardeeville - 843-288-0006, Bluffton - 843-707-0017) or send your request through our website, [www.bjwsa.org](http://www.bjwsa.org).

Here are some additional sources of information:

[www.bjwsa.org](http://www.bjwsa.org)  
Beaufort Jasper Water  
& Sewer Authority

[www.epa.gov/safewater](http://www.epa.gov/safewater)  
Environmental Protection Agency's  
Safe Drinking Water

[www.scdhec.net](http://www.scdhec.net)  
The South Carolina Department of  
Health and Environmental Control

[www.epa.gov/safewater/kids/health.html](http://www.epa.gov/safewater/kids/health.html)  
A great site for kids and teachers

[sc.water.usgs.gov](http://sc.water.usgs.gov)  
USGS Water Resources of  
South Carolina

**800-426-4791**  
EPA Safe Drinking Water Hotline

[www.srs.gov](http://www.srs.gov)  
Savannah River Site

**BJWSA encourages public comment on decisions affecting drinking water.** BJWSA Board meetings are held the fourth Thursday of each month at our Chelsea administration offices on Highway 170, beginning at 9:00 a.m. You can preview board agenda(s) and review board meeting minutes at [www.bjwsa.org](http://www.bjwsa.org).

