Town of Sullivan's Island

Water & Sewer Department

Manager Greg Gress
843-883-5748
ggress@sullivansisland-sc.com

May 10, 2013

Dear Customer:

The Safe Drinking Water Act of 1996 requires that each community water system provide an annual Drinking Water Quality Report to all of its customers. The information contained herein is for the Town of Sullivan's Island (System #1010003) for the reporting period of January 1, 2012, through December 31, 2012.

The Town of Sullivan's Island purchases its water from the Charleston Water System (CWS) which is a surface water facility, treating water from the Edisto River and Bushy Park Reservoir.

Below is a link of Charleston Water System's (CWS) 2012 Drinking Water Quality Report for your review. The Water Quality Report from CWS is representative of the water delivered to Sullivan's Island residents. You may also view it directly on their web site Charleston Water System. On December 2, 2003, The Town received SCDHEC approval to begin a pilot study for adding Polyphosphate to the water supply. This was done to help minimize discolored (Red) water. We continue today to add Polyphosphate to the water supply. In addition we have replaced approximately 50,000 linear feet of water main and 18,000 feet of service lines. We still have approximately 30,000 feet of water mains that need to be replaced. Each year our staff replaces about 1,000 feet. This plan will continue until all the system has been replaced.

Attached, as Table One 2012, is the data specifically for the Town of Sullivan's Island distribution system and our monitoring program. In addition, our Consumer Confidence Report may be viewed on our web site http://www.sullivansisland-sc.com

The Town of Sullivan's Island had no monitoring violations during this reporting period. Additional information is available from the Safe Drinking Water Act Hotline (800) 426-4791 or visit EPA Ground Water and Drinking Water .

Our Water and Sewer Committee meets on the first Monday of every month at 6:00pm at Town Hall. Please feel free to participate in these meetings. If you require any additional information, please contact me at the Town of Sullivan's Island, PO Box 427, Sullivan's Island, SC. 29482.

Greg Gress
Water/Sewer Manager

Town of Sullivan's Island - Table One 2012

Constituent	Units	Sullivan's Island Highest Level Detected	Range or Other Comments	(MCL)	Date Sampled	MCLG	Possible Sources In Water
Biological Compounds and Physical Characteristics							
Total Coliform Bacteria	% Positive Samples	0	0	Presence of Coliform Bacteria In <5% Of Monthly Samples	2012	0%	Naturally Present In The Environment
Inorganic Compounds							
Copper	ppm	0.065	No Sample Exceeded The Action Level	AL=1.3	2012	1.3	Corrosion Of Household Plumbing Materials
Lead	ppm	0.000	No Sample Exceeded The Action Level	AL=15	2012	0	Corrosion Of Household Plumbing Materials
Disinfection Byproducts							
Total Trihalomethanes (THM's)	ppb	RAA: 19.4	11.4 to 28.7	Running Annual Average (RAA) must be less than 80 ppb	2012	NA	Byproduct of disinfection
Total Haloacetic Acids (HAA's)	ppb	RAA: 14.1	11.0 to 15.7	Running Annual Average (RAA) must be less than 60 ppb	2012	NA	Byproduct of disinfection

Abbreviations Of Units

ppm = Parts Per Million

ppb = Parts Per Billion

Table Of Definitions

MCL = Maximum Contaminant Level: The highest level of a contaminant allowed in drinking water.
MCL's are set as close to the MCLG's as feasible using best available treatment technology.
MCLG = Maximum Contaminant Level Goal: 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.
AL = Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
RAA = Running Annual Average

Lead: *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. Sullivans Island is responsible for providing high quality drinking water, but cannot control the varity 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. You may pick up a testing kit at our office located at: 2051 Gull Dr. 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.*

Charleston Water System

2012 Water Quality Report

Charleston Water System's drinking water met or exceeded all quality standards in 2012.

This annual report provides a summary water of quality test results for calendar year 2012, along with general information about your drinking water.

For questions, or to request a free hard copy, call our Customer Service Department at (843) 727-6800 or send us an email (mailto:customerservice@charlestoncpw.com).

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

About Us

Charleston Water System is a publicly owned water and wastewater utility. We provide clean drinking water to more than 400,000 people in the Greater Charleston area, including direct retail service to 110,000 accounts and wholesale water service to neighboring utilities and municipalities.

Our legal name is the *Commissioners of Public Works of the City of Charleston*, but we do business using the name *Charleston Water System*. Our public water system identification number is 1010001.

Our Mission is to protect public health and the environment of our service community by providing clean water services of exceptional quality and value.

Our Vision is to become by the year 2017, our 100th anniversary, an organization worthy of the Malcolm Baldrige National Quality Award for our customers, our community, our future.

2012 Water Quality Report | Home (../index.htm)

Where Your Water Comes From

Charleston Water System's drinking water comes from two surface water sources: The Bushy Park Reservoir in Berkeley County (our primary source) and the Edisto River in Dorchester County.

Deep tunnels carry water from these sources to our Hanahan Water Treatment Plant. Together, these sources provide a plentiful supply of water, even during a severe drought.

The Treatment Process

At the treatment plant, the water goes through several processes to make it clean and safe to drink.

First, food-grade alum is mixed into the water. This causes tiny suspended particles to clump together and form heavier particles called floc. When the water flows into sedimentation basins, the floc sinks to the bottom and is removed.

Next, the water flows through filters, which remove microscopic contaminants such as bacteria and microorganisms. Finally, the water is disinfected to protect against disease-causing organisms, and the fluoride level is adjusted to protect dental health.

Water Distribution

After treatment, the clean water is pumped into the water distribution system, a network of nearly 2,000 miles of underground pipes ranging in size from one inch to four feet in diameter.

The distribution system includes dozens of pumps, four storages tanks, and some 8,700 fire hydrants. All of this must be monitored and maintained to provide high quality water at the right pressure to the 110,000 homes and businesses served by Charleston Water System.

Established in 1903, the Hanahan Water Treatment Plant has undergone numerous expansions and upgrades, including a new filter building completed in 2011.

See the treatment process in action! (5:25)

Possible Contaminants in Source Water

The sources of drinking water—for both tap water and bottled water—include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

As water travels over the surface of land and into waterways, it dissolves naturally occurring minerals and can pick up substances from the presence of animals or human activity. Contaminants that may be present in source water include:

- Biological compounds, such as viruses and bacteria, which may come from septic systems, agricultural livestock operations, and wildlife.

anic compounds, such as salts and metals, which can be naturally occurring or the result of stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, ng, or farming

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, runoff, and residential uses.
- Organic compounds, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, can also come from gas stations, runoff, and septic systems.
- Radioactive compounds, which can be naturally occurring or be the result of oil and gas production and mining activities.

To protect public health, water treatment plants remove these contaminants to safe levels established by regulations.

Source Water Protection

To raise awareness about the importance of preventing water pollution, SCDHEC has identified the potential sources of contamination for each drinking water source in the state. You can view the source water assessment report for Charleston Water System on SCDHEC's web site (www.scdhec.gov/environment/water/srcewtr.htm).

How You Can Help

Stormwater runoff is a major source of pollution in our waterways.

- **Pick up the poop!** Pet waste pollutes waterways with bacteria and excess nutrients, which contribute to algae growth that can choke out plants and wildlife.
- **Don't over-fertilize your lawn.** Excess fertilizers and pesticides wash into storm drains and pollute streams.
- **No dumping in storm drains.** Storm drains collect rain water and empty directly into a waterway. Never pour anything into a storm drain.

Tap Water Regulations

Charleston Water System meets or surpasses all drinking water standards and regulations established by the US Environmental Protection Agency (USEPA) (http://water.epa.gov/drink/) and the SC Department of Health and Environmental Control (SCDHEC) (http://www.scdhec.gov/environment/water/dwater.htm).

These regulations protect public health by setting legal limits on levels of potentially harmful contaminants (http://water.epa.gov/drink/contaminants/index.cfm) in drinking water.

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 USEPA's Safe Drinking Water Hotline (http://water.epa.gov/drink/hotline/) at 1–800–426–4791. Descriptions of the compounds detected in Charleston's water and the EPA limits for each compound are listed in the 2012 Water Quality Results Table below.

Charleston Water System is a member of the USEPA Partnership for Safe Water (http://water.epa.gov/aboutow/awards/psw/), a voluntary program for utilities that are committed to treating drinking water beyond what is required by law.

2012 Water Quality Results

Charleston Water System met or surpassed all water quality requirements in 2012

Charleston Water System's drinking water was tested more than 20,000 times for 150 substances and parameters in 2012. Of these, only those listed in the table below under the heading *Detected in Our Water* were found in our water, and all were detected at levels below the regulatory limit.

In addition to the detected substances, we are required to report the results for certain contaminants, such as *Cryptosporidium* and *Giardia*, even when none are detected.

Constituent	Maximum Contaminant Level (MCL) set by EPA	Maximum Contaminant Level Goal (MCLG)	Actual Level in Charleston's Water for 2012	Possible Sources in Water
Required Reporting				
Turbidity	Requires a specific treatment technique (TT); 95% of monthly samples must be less than 0.3 NTU	None	0.15 NTU highest level detected 100% of monthly samples met the limit	Soil runoff

Constituent	Maximum Contaminant Level (MCL) set by EPA	Maximum Contaminant Level Goal (MCLG)	Actual Level in Charleston's Water for 2012	Possible Sources in Water
Cryptosporidium	No MCL; EPA requires specific treatment techniques (TT)	None	Zero Cryptosporidium oocysts per 1 liter of water	Human and animal sources
Giardia	No MCL; EPA requires specific treatment techniques (TT)	None	Zero Giardia cysts per 1 liter of water	Human and animal sources
Detected in Our Water				
Copper	90th percentile of all samples collected must be less than the 1.3 ppm action level (AL)	1.3 ppm	0.11 ppm (no samples exceeded the action level) Range: 0 to 0.11 ppm	Corrosion of household plumbing materials
Lead	90th percentile of all samples collected must be less than the 15ppb action level (AL)	0 ppb	90th percentile = 2.3 ppb (one sample exceeded the action level) Range: 0 to 17 ppb	Corrosion of household plumbing materials
Nitrate/Nitrogen	10 ppm	10 ppm	0.52 ppm	Runoff from fertilizers
Fluoride	4 ppm	4 ppm	0.19 ppm in source water 0.69 ppm in finished water*	Naturally occurring in source water and adjusted during treatment to prevent tooth decay
Chlorine Dioxide	800 ppb	800 ppb	210 ppb Range: 0 to 210 ppb	Added for disinfection
Chloramine Residual	4 ppm MRDL	4 ppm MRDL	3.08 ppm running annual average (RAA) Range: 3.0 – 3.3 ppm	Added for disinfection
Total Trihalomethanes (TTHMs)	80 ppb	N/A	22 ppb running annual average (RAA)** Range: 17.5 – 19.5 ppb***	Byproduct of disinfection
Total Trihalomethanes (Stage 2)	80 ppb	N/A	Range: 5.8 – 31.8 ppb****	Byproduct of disinfection
Total Haloacetic acids (HAAs)	60 ppb	N/A	17 ppb running annual average (RAA)** Range: 10 – 11 ppb***	Byproduct of disinfection
Total Haloacetic acids (Stage 2)	60 ppb	N/A	Range: 0 to 18.83 ppb****	Byproduct of disinfection
Chlorite	1 ppm	0.8 ppm	0.79 ppm Range: 0.01 – 0.79 ppm	Byproduct of disinfection
Total Organic Carbon (TOC)	No MCL; EPA requires specific treatment techniques (TT) % removal requirement varies from 35% - 55% TOC removal, depending on source water quality	N/A	Range: 45% to 70% removal, 45% is required Removal ratio RAA = 1.27 TOC values: 1.7 – 4.2 ppm TOC sampled daily	Naturally present in the environment
Total Coliform Bacteria	Presence of coliform bacteria in no more than 5% of monthly samples	0%	1.9% highest % of positive monthly samples Range: 0 – 1.9% All repeat samples were satisfactory	Naturally present in the environment

*Finished water fluoride was <0.10 ppm when SCDHEC sampled on 4-5-12.
**RAA calculated using results from April 2011 – March 2012.
***Range calculated using results from January – March 2012.
****Range calculated using results from April – Dec 2012.

Abbreviations:
ppm: Parts per million; **ppb:** Parts per billion (ug/L); **RAA:** Running annual average; **NTU:** NephelometricTurbidity Units

Constituent	Maximum Contaminant Level (MCL) set by EPA	Maximum Contaminant Level Goal (MCLG)	Actual Level in Charleston's Water for 2012	Possible Sources in Water

Definitions

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.

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

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

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 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.

Water Characteristics

The parameters in the table below affect the aesthetics of drinking water, such as taste, odor, hardness, etc. The USEPA has established secondary standards (http://water.epa.gov/drink/contaminants/secondarystandards.cfm) for some of these parameters, which are non-enforceable, recommended guidelines.

Parameter	CWS Water Average 2012	Highest Level Recommended by USEPA
Chloride	21 ppm	250 ppm
Color	3 PCU	15 PCU
Iron	‹0.10 ppm	0.3 ppm
Manganese	‹0.05 ppm	0.05 ppm
Total Dissolved Solids (TDS)	102 ppm	500 ppm
Sodium	18 ppm	No Standard
Alkalinity	28 ppm	No Standard
Conductivity	209 umhos/cm	No Standard
Hardness	54 ppm (3.16 gpg)	No Standard
Ortho-phosphate	1.2 ppm	No Standard
Silica	5.8 ppm	No Standard
Temperature	71.6˚F (22˚C)	No Standard

Abbreviations:
ppm: Parts per million; **gpg:** Grains per gallon; **PCU:** Platinum Cobalt Units; **umhos/cm:** Micromohs/cm

Lead and Drinking Water

Lead is a metal that can cause serious health problems at elevated levels of exposure, especially for pregnant women and young children.

Although the most common exposure is by swallowing or breathing in lead paint chips and dust, lead can also enter tap water by corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder, but even new plumbing materials may legally contain up to 8 percent lead.

To minimize this corrosion of lead into water, Charleston Water System adjusts the properties of our water to inhibit the chemical reaction that causes lead to leach into water from plumbing.

As an extra precaution, you can minimize the potential for lead exposure by flushing out water that has been sitting in your home's plumbing for several hours or more. Just let your water run for up to two minutes before using it for cooking or drinking.

A Message from the US Environmental Protection Agency

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons, such as persons with HIV/AIDS or other immune system disorders, persons with cancer undergoing chemotherapy, persons who

Charleston Water System offers free lead tests. You can pick up a testing kit at our office locations: 1 [illegible], Downtown, and 6296 Rivers Avenue, North Area. For more information about lead, call the Safe Drinking Water Hotline or visit www.epa.gov/safewater/lead (www.epa.gov/safewater/lead).

have undergone organ transplants, particularly at risk from infections.

These people should seek advice 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 (http://water.epa.gov/drink/hotline/) (1-800-426-4791).

Frequently Asked Questions

Is Charleston's water hard or soft?

Our water is moderately soft, with an average hardness level of 54 parts per million (ppm), or 3.16 grains per gallon (gpg). Some appliances specify the amount of detergent to use based on your water's hardness. Refer to an appliance's owner's manual for more information.

Why does the water sometimes taste earthy or musty?

Many things affect the taste and smell of water, including where it comes from, mineral content, temperature, weather changes, etc.

Natural changes in our source water in spring and fall can sometimes impart a harmless earthy-musty taste to the water. We can adjust the treatment process to minimize this taste, but refrigerating your water or using ice will also help, as tastes and smells are less noticeable in cold water.

What causes that pink film around my bathroom drain and black growth on my faucet?

Both are caused by airborne microorganisms that thrive in warm, moist areas like bathrooms. The best way to combat these is to ensure proper ventilation and frequently clean problem areas with a bleach solution.

Do I need to boil my water after a service interruption?

Only if Charleston Water System issues a Boil Water Advisory or Notice, which is rare. Advisories are only issued after a major water main break, widespread loss of water pressure, or a problem at the treatment plant—problems that affect a large area. If this happens, we'll notify the media and post information on our web site, www.charlestonwater.com, Twitter (@ChasWaterSystem (http://twitter.com/ChasWaterSystem)) and phone system, 843-727-6800.

Advisories are not issued after most water main breaks because our crews can isolate the break by closing the nearest upstream and downstream valves. When the repair is complete, the affected pipe is cleaned and flushed, then put back into service by opening the valves.

Why does my water smell like rotten eggs?

A rotten egg odor is typically caused by one of three things in your home's plumbing system: Sulfur-producing bacteria in your water heater, a dried up S-trap in an unused sink, or decaying food in a kitchen sink disposal.

If you only notice the odor when you use hot water, it's probably your water heater. Consult the owner's manual for instructions on how to flush it. If the problem is in an unused bathroom, turn on the tap to fill the S-trap. If the odor is in the kitchen, try cleaning the drain disposal.

Why does brown water come out of my tap after a service interruption?

A change in the pressure or direction of water flow water can cause iron compounds that accumulate inside older water mains to break loose and become suspended in the water.

Typically, our crews will open a nearby fire hydrant to flush out this discolored water before it reaches customers' taps. If you experience discolored water, flush your plumbing by turning on a faucet until the water runs clear. If it persists, call us at (843) 727-6800.

Contact Us

(843)727–6800

www.charlestonwater.com

customerservice@charlestoncpw.com (mailto:customerservice@charlestoncpw.com)

Follow @ChasWaterSystem

Get Involved

Charleston Water System is governed by a board of elected Commissioners (../about_commissioners.htm), which meets monthly. These meetings are open to the public, and citizen participation is welcomed. Meetings are typically held the fourth Tuesday of every month at 9 a.m. at 103 St. Philip Street. Agendas are posted on our web site (..//about_board_info.htm).

Office Locations

Downtown: 103 St. Philip Street (https://maps.google.com/maps?q=charleston+water+system,+charleston,s+c&fb=1&gl=us&hq=charleston+water+system&hnear=0x88fe7a42dca82477:0x35faf7e0aee1ec6b,Charleston,+SC&cid=0,0

North Charleston: 6296 Rivers Avenue (https://maps.google.com/maps?q=charleston+water+system,+charleston,s+c&fb=1&gl=us&hq=charleston+water+system&hnear=0x88fe7a42dca82477:0x35faf7e0aee1ec6b,Charleston,+SC&cid=0,0

2012 Water Quality Report | Home (../index.htm)