

# YOUR DRINKING WATER SOURCE



The City of Rock Hill water system is located in York County, South Carolina in the Catawba-Santee Basin(s). Rock Hill Utilities treats and distributes water to a primary population of over 66,000 retail customers in Rock Hill. In addition, water is distributed through wholesale customers, to the eastern half of York County including Fort Mill, Tega Cay, River Hills, the Catawba Indian Nation and a small number of private water suppliers in the area. Rock Hill Utilities is well prepared to continue being the area's regional water provider for years to come.

The drinking water sources for the system are surface water intakes at the Catawba River/Lake Wylie in the northeast portion of the county. Water is then pumped to the Cherry Road treatment plant. There, conventional treatment and chemical addition produce the water you consume. Access to our raw water intake and treatment plant is highly restricted and closely monitored around the clock.

The South Carolina Department of Health and Environmental Control (SCDHEC) serves as coordinating agency for the State's Source Water Assessment and Protection Program (SWAP), a

program required by EPA's 1996 amendments to the Safe Drinking Water Act. SWAP provides added protection of our water by conducting assessments for all drinking water sources across South Carolina and implementing safeguard measures.

In 2003, SCDHEC completed the City of Rock Hill's Source Water Assessment. The assessment provides an inventory of potential contaminant sources (PCSs), identifies potential contaminants of interest and ranks the potential susceptibility of these PCSs with respect to the water source. SCDHEC has identified Rock Hill's source water to be susceptible to contaminants such as volatile organic contaminants, petroleum products, metals, nitrates, pesticides and herbicides. The City of Rock Hill continually monitors for the presence of these contaminants, and through state-of-the-art disinfection techniques, delivers safe drinking water to its customers.

For a complete copy of this assessment report, contact Susan Featherstone at 803-329-5502 or visit SCDHEC online: <http://www.scdhec.net/environment/water/srcewtrreports.htm>.



## Did You Know?

- In 1900, 25,000 Americans died of typhoid. By 1960, thanks to the use of chlorine in water treatment, that number dropped to 20.
- If you use a point-of-use home water treatment device, be sure to perform maintenance such as changing the filter to prevent bacterial growth from accumulating in the device.
- All waters contain harmless natural occurring minerals which over a period of time will coat the pipe walls within the distribution system. Black residue or particles observed on shower heads and in toilet bowls can be caused by the manganese contained within these naturally occurring minerals. Areas which are most susceptible to organic particle build up are dead-end mains, cul-de-sacs, low flow areas and homes located at the end of lines.
- The average person in the U.S. uses 80-100 gallons of water per day.
- If you have installed new carpet, draperies, furniture or have recently painted, water vapors from your tap water can diffuse with the odors from the new materials and result in an odor similar to cat urine.
- Fire hydrants are flushed to prevent deterioration of water quality due to "dead ends" (stagnant water), as well as required flow tests for the Fire Department to ensure adequate pressure.
- A running toilet can waste up to 200 gallons of water per day! At one drip per second, a faucet can leak 3,000 gallons per year!

## DIRECTORY

The City's water system is governed by Rock Hill City Council and operated by the Utilities Department under the supervision of City Management.

- A. Douglas Echols, Mayor**  
**Susie B. Hinton, Councilmember Ward 1**  
**Kathy Pender, Councilmember Ward 2**  
**Kevin Sutton, Councilmember Ward 3**  
**John A. Black III, Councilmember Ward 4/Mayor Pro Tem**  
**Osby Roddey, Councilmember Ward 5**  
**James C. Reno Jr, Councilmember Ward 6**

- David B. Vehaun, City Manager**  
**Gerald E. Schapiro, Deputy City Manager**  
**James G. Bagley Jr, PE, Deputy City Manager**  
**Scott Motsinger, PE, Utilities Director**  
**Susan Featherstone, Water Treatment Plant Superintendent**

Rock Hill City Council meets on the second and fourth Monday of each month at 6:00 p.m. Council meetings are broadcast live and re-aired on Rock Hill's government access channel, RHTV19 and streamed live on [www.rockhillontv.com/livestream.html](http://www.rockhillontv.com/livestream.html).

Website: [www.cityofrockhill.com](http://www.cityofrockhill.com)  
 Customer Service, Utility Bill Questions: **803-325-2500**  
 24-Hour Automated Service: **803-329-5500**  
 Rock Hill Water Treatment Plant: **803-329-5502**  
 Utilities Department: **803-329-5500**  
 City Council/Meeting Information: **803-329-7012**  
 TDD for Hearing Impaired: **803-329-8787**  
 EPA Safe Drinking Water Hotline: **1-800-426-4791**  
 Palmetto Utility Protection Service (PUPS) - "Call Before You Dig":  
**Dial "811" or call toll free 1-888-721-7877**



Spanish Line: **803-325-2537**  
 \*EN ESPAÑOL: Este informe contiene informacion importante acerca de su agua potable. Por favor, haga que alguien lo traduzca para usted, o hable con alguien lo entienda. Gracias.



# WATER QUALITY 2011 CONSUMER CONFIDENCE REPORT

ROCK HILL UTILITIES, ROCK HILL, SC ■ WATER SYSTEM #4610002

Through the Safe Drinking Water Act (SDWA), the Environmental Protection Agency (EPA) requires public water systems meet national drinking water standards to ensure that the health of water consumers is carefully protected.

All public water systems must publish an annual Consumer Confidence Report that tells how the drinking water standards are achieved.



*We value the trust you put in us every day to safeguard the quality and reliability of your drinking water.*

On behalf of the City of Rock Hill, I am pleased to present the 2011 Water Quality Consumer Confidence Report. This report contains important information about where your water comes from, what it contains and why that is important.

Rock Hill Utilities values the trust you put in us every day to safeguard the quality and reliability of your drinking water. You and your family can feel secure in knowing that the City of Rock Hill provides drinking water that continues to exceed drinking water regulatory standards.

Rock Hill Utilities' employees monitor the water plant processes 24 hours a day 365 days a year. State certified operators utilize a central monitoring system for observing water treatment functions including tank levels, pressures, flows and in-line tests. Our staff performs over 700,000 annual lab tests.

We will continue to provide our citizens an uninterrupted supply of safe drinking water as we continuously maintain and expand our water infrastructure. Rock Hill Utilities thanks you for your business and continued support.

*Scott Motsinger*

Scott Motsinger, PE  
 Director, City of Rock Hill Utilities Department



## Late City Employee, Jon White, Earns Prestigious Achievement Award

Late Rock Hill Utilities employee, Jon White, received the 2011 Dennis Pittman Collection System Award. The award is given for excellent achievement in the maintenance of a wastewater collection system in South Carolina.

Throughout the last 18 years, Jon was instrumental in integrating the use of an extensive monitoring system and work order system to help accurately record and predict routine and preventative maintenance. He implemented energy efficiencies, variable frequency drives (VFDs) and programmable logic controls (PLCs). Jon's innovations continued with the development of a system to remotely monitor and manipulate equipment in the field and at the water and wastewater facilities. Jon worked at the City of Rock Hill from 1993 - 2011.



## New City Drought Ordinance Encourages Efficient Irrigation

The City recently revised its drought ordinance after collaborating with local landscape experts to allow greater flexibility during drought conditions and to encourage the use of more efficient irrigation systems.

Currently, the drought status is Stage 1 - Voluntary Conservation. During the next few months, *if* the status is increased to mandatory conservation (Stage 2 or 3), the use of low-volume drip irrigation and smart irrigation systems will be permitted.

As always, the City encourages the use of "Best Management Practices" to preserve our limited water supply. Utilize "smart irrigation" techniques. Check with a landscape expert for information on how to retrofit your existing irrigation methods to increase water efficiency.

# WHY WATER IS IMPORTANT TO YOU



To ensure that tap water is safe to drink, the EPA prescribes stringent maximum contaminant levels (MCLs) for certain contaminants in water supplied by public water systems.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants in drinking water does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791. You can also visit the EPA's web site at: [www.epa.gov/safewater](http://www.epa.gov/safewater).

The sources of both drinking water and tap water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over land surfaces and underground, it dissolves naturally occurring minerals, radioactive minerals and can pick up substances resulting from the presence of animals and human activity.

Contaminants that might 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, farming, mining, industrial or domestic wastewater discharges or oil and gas production.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff or residential uses.
- Organic chemical, 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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water results primarily from materials and components associated with service lines and home plumbing.

The City of Rock Hill Utilities 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, one way to minimize the potential for lead exposure is 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, consider having your water tested for lead levels. The Safe Drinking Water Hotline offers information on lead in drinking water, testing methods, and steps you can take to minimize exposure. Or go online to: <http://www.epa.gov/safewater/lead>.

Removing all contaminants from drinking water would be extremely costly, and in nearly all cases, this would not provide any greater protection of health. In fact, a few naturally occurring substances may actually improve the taste of drinking water and may have low-level nutritional values.

For most customers, water that meets all federal, state and local regulations is considered safe to drink. Some customers may be more vulnerable to contaminants in drinking water than the general population. People with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS and other immune system disorders, and some elderly people and infants can be at particular risk from infection. People with these health concerns should seek advice about drinking water from their health care provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available by calling the EPA SAFE DRINKING WATER HOTLINE at 1-800-426-4791.

To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL for a lifetime to have a one-in-a-million chance of having the described health effect.

As required by law, Rock Hill monitors around the clock for contaminants in the drinking water that we treat and supply to our customers. In 2011, Rock Hill performed more than 3,000 system tests at 146 local sites. These tests measure for bacteria, chlorine residual, pH and temperature. Sites include schools, residences, commercial businesses and industries in the Rock Hill water service territory. Along with these routine sites, we perform special monitoring such as lead and copper every three years at 30 designated sites. We also test for corrosion control annually at ten approved sites throughout the City.

Every regulated contaminant detected in the water, even in the most minute traces, is listed in the table, which contains the name of each substance; the highest level allowed by regulation; the ideal goals for public health; the amount detected and the likely sources of contamination. In 2011, there were more than 100 contaminants that were tested for and not detected. (For a list of non-detects, call 803/329-5502.)

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

# 2011 WATER QUALITY DATA TABLE

REGULATED CONTAMINANTS 2011								
MICROBIOLOGICAL CONTAMINANTS								
Contaminant	Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest Number of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination	
Coliform Bacteria	0	5% of monthly samples are positive	0	0	0	No	Naturally present in the environment	
Contaminant	Limit (Treatment Technique)				Level Detected	Violation	Likely Source of Contamination	
Turbidity	1 NTU		Highest Single Measurement		0.04	No	Soil Runoff	
	0.3 NTU		Lowest Monthly Percentile		100%	No	Soil Runoff	
INORGANIC CONTAMINANTS								
Contaminant	Year	MCLG	MCL	Units	Highest Level Detected	Range of Levels Detected	Violation	Likely Source of Contamination
Nitrate (measured as Nitrogen)	2011	10	10	ppm	0.31	.031-.031	No	Leaching from septic tanks, sewage; Erosion of natural deposits
Flouride	2011	4	4.0	ppm	0.7	.073-.073	No	Additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Contaminant	Year	MCLG	Action Level (AL)	Units	90th Percentile	Number of Sites over AL	Violation	Typical Source
Copper - Action Level at Consumer Taps	2011	1.3	1.3	ppm	0.069	0	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead - Action Level at Consumer Taps	2011	0	0.015	ppm	0.009	3	No	Corrosion of household plumbing systems; Erosion of natural deposits.
DISINFECTANTS AND DISINFECTANTS BY-PRODUCTS								
Contaminant	Year	MCLG	MCL	Units		Range of Levels Detected	Violation	Likely Source of Contamination
Total Organic Carbon	2011	TT	TT	ppm		1.0-1.38	No	Naturally present in the environment
Chlorine (as CL2)	2011	4	4	ppm		1.0-1.0	No	Water additive used to control microbes
Chlorine Dioxide (as CLO2)	2011	0.8	0.8	ppm		0-.095	No	Water additive used to control microbes
Chlorite	2011	0.8	1.0	ppm		0.119-.637	No	By-Product of drinking water disinfection
Contaminant	Year	MCLG	MCL	Units	Highest Level Detected	Range of Levels Detected	Violation	Likely Source of Contamination
TTHMs (Total Trihalomethanes)*	2011	No goal for the total	80	ppb	49	12.84-93.63	No	By-Product of drinking water disinfection
Haloacetic Acids (HAA5)*	2011	No goal for the total	60	ppb	22	7.26-51.9	No	By-Product of drinking water disinfection
*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.								
RADIOACTIVE CONTAMINANTS								
Contaminant	Year	MCLG	MCL	Units	Level Detected	Range of Levels Detected	Violation	Likely Source of Contamination
Combined Radium 226/228	2010	0	5**	pCi/L	0.507	0.203-.507	No	Erosion of natural deposits
Contaminant	Year	MCLG	MCL	Units	Highest Level Detected	Range of Levels Detected	Violation	Likely Source of Contamination
Sodium (optional)	2011	Not regulated	Not regulated	ppm	10	9.5-9.5	No	Erosion of natural deposits; Leaching

## Glossary of Terms

### Referenced in Water Quality Data Table

#### Action Level (AL)

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

#### Detect(ed)

Laboratory analysis indicates that a contaminant is present.

#### 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 treatment technology.

#### Maximum Contaminant Level Goal (MCLG)

The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

#### Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in finished drinking water.

#### Maximum Residual Disinfectant Level Goal (MRDLG)

The level of disinfectant below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

#### Nephelometric turbidity units (Ntu)

The unit of measure for measuring turbidity.

#### Parts per billion (ppb) or micro-grams per liter

One part per billion corresponds to a single penny in \$10 million.

#### Parts per million (ppm) or milligrams per liter (mg/l)

One part per million corresponds to a single penny in \$10,000.

#### Picuries per Liter (pCi/L)

A measure of the radioactivity in water.

#### Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

#### Turbidity

The degree of cloudiness due to particles suspended in water.

## The City of Rock Hill Continues To Exceed Drinking Water Regulatory Standards

The Rock Hill Water Treatment Plant has earned the South Carolina Area-Wide Optimization Award for seven consecutive years! The Rock Hill Water Plant is one of a handful of plants in South Carolina to meet the goals set by SC Department of Health and Environmental Control (SCDHEC). These optimization goals exceed water quality regulations for particle removal and disinfection at filtration plants. South Carolina adopted this voluntary EPA program to maximize public health protection by improving drinking water quality *beyond* regulatory requirements.

