



# ROCK HILL

SOUTH CAROLINA

*Always on.*

ROCK HILL UTILITIES

WATER SYSTEM #4610002

## 2014 WATER QUALITY CONSUMER CONFIDENCE REPORT

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. The EPA allows this report to be posted on the City's website for customer viewing or printing. If you would like this report mailed to you, please call Customer Service at 803-325-2500 to request a paper copy.



*Rock Hill Utilities is committed to being "Always on." City staff will continue their endeavor to provide safe, reliable drinking water that exceeds drinking water regulatory standards.*

On behalf of the City of Rock Hill Utilities Department, I am pleased to present the 2014 Water Quality Consumer Confidence Report (CCR). This report contains fundamental information about where your water comes from, what it contains, and why that is important.

Rock Hill Utilities values the trust you put in its staff every day to safeguard the quality and reliability of your drinking water. As part of the safeguard process, Rock Hill Utilities' staff monitors the water plant processes 24 hours a day, 365 days a year. State certified operators utilize a central monitoring system to observe water treatment functions, including tank levels, pressures and flows. Staff also performs over 700,000 tests per year to validate the treatment processes and to assure the quality of the drinking water in the distribution system.

Over the past year, the City has completed several construction projects to enhance the treatment process and has even more upgrades planned. Two of the five elevated water storage tanks have been cleaned and have mixers installed to improve water quality. The Laurel Street tank, which was constructed in 1939, is being replaced with a modern, composite tank. There are also technology advancements and facility expansions planned for the raw water intake facility and water filter plant.

The City of Rock Hill strives to provide its citizens and customers with an uninterrupted supply of safe 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 is "Always on" for you. Thank you for your business and trust.

Mark Kettlewell, PE, PLS  
Director of Water & Sewer Utilities

# 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 [www.water.epa.gov/drink/info/lead/](http://www.water.epa.gov/drink/info/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 2014, Rock Hill performed more than 3,000 routine water quality 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 the routine tests, the City performed 3,328 special monitoring tests for disinfection by-products control at sixteen additional sites, lead and copper at thirty designated homes and corrosion control 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 2014, 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.



# Glossary of Terms Referenced in Water Quality Data Table

**Definitions** - The water quality data tables contain scientific terms and measures, some of which may require explanation.

## **Action Level (AL)**

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

## **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.

## **Minimum Reporting Level (MRL)**

The minimum concentration that can be reported as a quantitated value for a target analyte in a sample following analysis. This defined concentration can be no lower than the concentration of the lowest calibration standard for that analyte, and can only be used if acceptable quality control criteria for the analyte at this concentration are met.

**NA** - Not applicable.

**ND** - Not detected.

**NR** - Monitoring not required, but recommended.

## **Nephelometric turbidity units (NTU)**

The unit of measure for measuring turbidity. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

## **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.

## **Piouries per Liter (pCi/L)**

A measure of the radioactivity in water.

**RAA** - Running Annual Average.

## **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.

## **Unregulated Contaminant (UCMR3) - every 3 years**

Rock Hill Utilities was monitored for the Unregulated Contaminant Monitoring Regulations 3 (UCMR3) in 2013. The purpose of this regulation is to collect occurrence data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act (SDWA). Assessment Monitoring targets contaminants that are analyzed with methods that utilize existing and widely used technology. The UCMR program is the primary source of drinking water contaminant occurrence data used by EPA in regulatory determinations.



The City of Rock Hill water system is located in York County, South Carolina in the Catawba River Basin. Rock Hill Utilities treats and distributes water to a primary population of over 68,000 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,

## YOUR DRINKING WATER SOURCE

City of York, 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 north-east 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 the City's water by conducting assessments for all drinking

water sources across South Carolina and implementing safeguard measures.

In 2009, SCDNR completed the South Carolina State Water Assessment Second Edition. 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 filtering and disinfecting 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 Department of Natural Resources online: [www.dnr.sc.gov/water/waterplan/assessment.html](http://www.dnr.sc.gov/water/waterplan/assessment.html)



## 2014 Water Quality Data Table

### REGULATED CONTAMINANTS 2014

#### 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 |   | 0.19   | No        | Soil runoff                          |
|                   | 0.3 NTU                        |  | Lowest Monthly Percentile  |   | 100%   | No        | Soil runoff                          |

#### INORGANIC CONTAMINANTS

| Contaminants                   | Year | MCLG | MCL | Units | Highest Level Detected | Range of Levels Detected | Violation | Likely Source of Contamination  |
|--------------------------------|------|------|-----|-------|------------------------|--------------------------|-----------|---|
| Nitrate [measured as Nitrogen] | 2014 | 10   | 10  | ppm   | 0.46                   | 0.46-0.46                | No        | Leaching from septic tanks, sewage; Erosion of natural deposits   |
| Fluoride                       | 2014 | 4    | 4.0 | ppm   | 0.7                    | 0.70-0.70                | No        | Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.           |
| Contaminants                   | Year | ALG  | AL  | Units | 90th Percent tile      | Number of Sites Over AL  | Violation | Typical Source  |
| Copper                         | 2014 | 1.3  | 1.3 | ppm   | 0.033                  | 0                        | No        | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead                           | 2014 | 0    | 15  | ppb   | 2                      | 0                        | No        | Corrosion of household plumbing systems; Erosion of natural deposits.                                   |



### Rock Hill Utilities Water Treatment and Distribution System

Miles of Water Main Lines: 498 Miles  
 Number of Fire Hydrants Maintained: 2,890 Hydrants  
 Number of Elevated Water Tanks: 4 Tanks  
 Number of Water Meters: 34,640 Meters  
 Average Daily Consumption: 15.75 Gallons Per Day  
 Annual Water Consumption: 5,735,473,000 Gallons  
 Maximum Plant Capacity: 36 Million Gallons Per Day  
 Population Served: 92,000 (Rock Hill, York & Fort Mill)

## 2014 Water Quality Data Table (continued)

### DISINFECTANTS AND DISINFECTANTS BY-PRODUCTS

Not all sample results may have been used in calculating the Highest Level of Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

| Contaminants                   | Year | MCLG                  | MCL | Units |                        | Range of Levels Detected | Violation | Likely Source of Contamination            |
|--------------------------------|------|-----------------------|-----|-------|------------------------|--------------------------|-----------|---|
| Total Organic Carbon           | 2014 | TT                    | TT  | ppm   |                        | 1.15-1.74                | No        | Naturally present in the environment      |
| Chlorine (as CL2)              | 2014 | 4                     | 4   | ppm   |                        | 1.22-1.44                | No        | Water additive used to control microbes   |
| Chlorine Dioxide (as CLO2)     | 2014 | 0.8                   | 0.8 | ppm   |                        | nd-0.072                 | No        | Water additive used to control microbes   |
| Chlorite                       | 2014 | 0.8                   | 1.0 | ppm   |                        | 0.095-.524               | No        | By-Product of drinking water disinfection |
| Contaminants                   | Year | MCLG                  | MCL | Units | Highest Level Detected | Range of Levels Detected | Violation | Likely Source of Contamination            |
| TTHMs (Total Trihalomethanes)* | 2014 | No goal for the total | 80  | ppb   | 65                     | 25.6-137.7               | No        | By-Product of drinking water disinfection |
| Halocetic Acids (HAA5)*        | 2014 | No goal for the total | 60  | ppb   | 21                     | 11.1-33.0                | No        | By-Product of drinking water chlorination |

### Radioactive Contaminants and Other Contaminants of Interest

| Contaminants            | Year | MCLG         | MCL          | Units | Highest 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           |
| Sodium (optional)       | 2014 | Not Required | Not Required | ppm   | 7.2                    | 7.2-7.2                  | No        | Erosion of natural deposits; Leaching |
| Hardness (optional)     | 2014 | Not Required | Not Required | ppm   |                        | 20-36                    | No        | Erosion of natural deposits           |

### City Drought Ordinance Encourages Efficient Irrigation

The City revised its drought ordinance November 11, 2011 after collaborating with local landscape experts to allow greater flexibility during drought conditions and to encourage the use of more efficient irrigation systems.

Recently, the drought status moved to Stage 1 - Voluntary Conservation. Keep in mind, if the drought status is increased to mandatory conservation (Stage 2 or 3), the use of low-volume drip irrigation and smart irrigation systems will be allowed.

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.



## AWARDS

Water Environment Association of  
South Carolina Catawba District:

**David Garris**

**2014 Maintenance Technician of the Year**

South Carolina Department of Health and  
Environmental Control (DHEC):

**Consecutive Awards 2010-2014**

**Area-Wide Optimization Award**

**Water Fluoridation Quality Award**

### Ten Consecutive Years

#### Rock Hill Utilities Earns Award For Drinking Water Exceeding Regulatory Standards

2014 marks the tenth consecutive year that the Rock Hill Water Treatment Plant has earned the South Carolina Area-Wide Optimization Award! This annual award from the SC Department of Health Environmental Control (SCDHEC) in conjunction with the USEPA, is given to filtration plants **exceeding** water regulations for particle removal and disinfection.

The Rock Hill Water Plant is one of a handful of plants in South Carolina to receive this award by meeting the goals set by SCDHEC. South Carolina adopted this voluntary EPA program to maximize public health protection by improving drinking water quality **beyond** regulatory requirements.

Water filtration plants earning this award provide customers with high quality drinking water through

enhanced staff training and focus on improved treatment plant performance and public health protection.



## 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

**Sandra Oborokumo**, Councilmember Ward 1

**Kathy Pender**, Councilmember Ward 2

**Kevin Sutton**, Councilmember Ward 3

**John A. Black III**, Councilmember Ward 4

**Ann Williamson**, Councilmember Ward 5

**James C. Reno Jr**, Councilmember Ward 6/Mayor Pro Tem

**David B. Vebaun**, City Manager

**Gerald E. Schapiro**, Deputy City Manager

**James G. Bagley Jr, PE**, Deputy City Manager

**Mark Kettlewell, PE**, Director of Water & Sewer Utilities

**Bill Yetman, PE**, Water & Wastewater Treatment Plants Manager

**Susan Featherstone**, Water Treatment Plant Superintendent

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

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**



Know what's below.  
Call before you dig.

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.*