



ROCK HILL

SOUTH CAROLINA

2005 Consumer Confidence Report

A Message from the Director of Utilities

Consumer confidence in a product or service can be measured in several ways. The high level of product quality or reliability of the service, the ability to exceed safety and health standards and providing extraordinary customer service — all of these give the customer a true sense of trust in the products they consume and the services they use. No matter how it's defined, consumer confidence is the backbone of a successful business.

Exceeding Expectations

For the City of Rock Hill, South Carolina, consumer confidence means earning the respect of our customers by providing quality in all we do to meet the increasing needs of a dynamic community. The City provides many vital services to customers in the greater Rock Hill area — services that help make homes safer, businesses operate more efficiently and residents enjoy a higher quality of life. The treatment and distribution of potable water is one of these services that truly has a significant impact on the lives of people throughout York County.

I am pleased to present your 2005 Consumer Confidence Report (CCR), an annual publication that is provided to our valued customers so they may better understand the overall process by which safe drinking water is delivered to homes, businesses and institutions. As required by the Environmental Protection Agency's (EPA) Safe Drinking Water Act, community water systems must meet national drinking water standards and communicate with customers about how

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their water is treated, tested and distributed. Rock Hill's 2005 CCR shows that we have once again achieved a superior level of product excellence by going above and beyond all federal and state regulatory requirements to provide safe, clean drinking water to you.

Quality Service, Award-Winning Staff

I am proud to recognize Susan Featherstone, our Water Plant Superintendent, for receiving the Water Environment Association of South Carolina's (WEASC) 2005 Water Plant Operator of the Year award. As a result of the dedication of Susan and her highly qualified staff of operators, lab technicians and maintenance personnel, the treatment plant will receive the State Area Wide Optimization Achievement Award for 2005, recognizing their efforts to achieve optimal performance levels that exceed present regulatory requirements.

Planning for Your Future

The City of Rock Hill has been the provider of safe, clean drinking water to the Rock Hill community since the early 1900s. The water we treat serves a population of more than 55,000 people in Rock Hill and other parts of the county. Since so many depend on our plant to

provide them with this basic essential of life, the City has been pro-active in strategically planning to meet our customers' needs for decades to come.

As the water plant is being expanded to handle the treatment of up to 36 million gallons per day, the first phase of a water re-use system is being designed to accommodate commercial irrigation demand in eastern Rock Hill. Supplying re-used or recycled water for this purpose was a major goal established in the City's Water Conservation and Demand Management Plan, published in 2003.

Work has moved forward on construction of the City's fifth overhead water tank in northwestern Rock Hill. The site has been secured, and water distribution lines are being installed. The tank should be operational in 2007 and will facilitate increased water pressure in an area of the city that has experienced tremendous residential growth over the past decade.

These investments in our community's future will position your utility to continue its consistent record of service excellence. When it comes to delivering high-quality water on tap, you can count on Rock Hill Utilities, your hometown utility connection. Thank you for your support.



James G. Bagley Jr.,
Director
Utilities Department
City of Rock Hill

Water Quality Data for 2005: Table of Test Results

Regulated Contaminants Detected

Microbiological Contaminants

Contaminant	Violation?	Unit of Measure	MCLG	MCL	Highest Single Measurement	Date of Highest Measurement	Lowest Monthly Percentile	Likely Source
Turbidity	No	Ntu	0	TT=0.3	0.10	1/26/05	100%	Soil runoff
Contaminant	Violation?	Unit of Measure	MCLG	MCL	Range High/Low	Removal Ratio Running Average	Likely Source	
Total Organic Carbon	No	ppm	TT	TT	1.10 - 1.90	1.20	Naturally present in the environment	

Radionuclide Contaminants

Contaminant	Violation?	Unit of Measure	MCLG	MCL	Level Detected	Likely Source
Combined Radium	No	pCi/L	0	5 pCi/L	1.5	Erosion of natural deposits

Inorganic Contaminants

Contaminant	Violation?	Unit of Measure	MCLG	MCL	Level Detected	Likely Source
Nitrate	No	ppm	10	10	0.38	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Flouride	No	ppm	2*	4	0.87	Water additive that promotes strong teeth
Sodium	No	ppm	Not regulated	Not regulated	23.0	Erosion of natural deposits. Sodium is not a regulated parameter in drinking water. Large amounts of sodium may be harmful to individuals suffering from cardiac, renal and circulatory diseases.
Contaminant	Violation?	Action Level	90th Percentile	Number of Sites Over Action Level	Likely Source	
Lead	No	15 ppb	8.1	0	Corrosion of household plumbing systems	
Copper	No	1.3 ppm	0.08	0	Corrosion of household plumbing systems	

* The EPA's MCL is 4.0 ppm; however, our state has set a lower MCL to better protect human health.

Disinfection Byproducts (DPB)

Contaminant	Violation?	Unit of Measure	MRDL	MRDLG	Level Detected	Running Annual Average	Likely Source
Chlorine	No	ppm	4	4	1.2 - 1.6	1.40	Water additive used to control microbes
Chlorite	No	ppm	0.80	0.80	Nondetect – 0.38	N/A	Byproduct of drinking water chlorination
Chlorine Dioxide	No	ppm	0.80	0.80	Nondetect – 0.023	N/A	Byproduct of drinking water chlorination

Volatile Organic Contaminants

Contaminant	Violation?	Unit of Measure	MCLG	MCL	Average Level Detected	Range of Detection	Likely Source
Total Trihalomethanes	No	ppb	0	80	59	12 - 92	Byproduct of drinking chlorinated water
Haloacetic Acids	No	ppb	0	60	41	21 - 49	Byproduct of drinking chlorinated water

Synthetic Organic Contaminants, including Pesticides and Herbicides

Contaminant	Violation?	Unit of Measure	MCLG	MCL	Average Level Detected	Range of Detection	Likely Source
2,4-D	No	ppb	70	70	0.56	N/A	Runoff from herbicides used in row crops

¹ In the 2004 Water Quality Report, the average level detected for total trihalomethanes was erroneously reported as 51; actual average level detected in 2004 was 56.

² In the 2004 Water Quality Report, the average level detected for haloacetic acids was erroneously reported as 36; actual average level detected in 2004 was 43.

About Your Water Source



The City of Rock Hill water system is located in York County, South Carolina, in the Catawba-Santee basin(s) and serves a primary population of more than 55,000. Rock Hill treats and distributes water to retail customers in the Rock Hill area and provides water to wholesale customers, such as the Town of Fort Mill, the River Hills community, portions of York County and a small number of private water suppliers in the area.

The drinking water sources for the system are surface water intakes at the Catawba River/Lake Wylie, located in the northeast portion of the county. Water is then pumped to the treatment plant on Cherry Road, where conventional chemical disinfection and treatment processes are used to produce the water that you consume. Access to your 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 the 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, the SCDHEC completed the City of Rock Hill's Source Water Assessment, which 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. The SCDHEC has identified Rock Hill's source water to be susceptible to such contaminants as volatile organic contaminants, petroleum products, metals, nitrates, pesticides and herbicides. The City of Rock Hill constantly monitors for the presence of these contaminants and, through state-of-the-art disinfection techniques, delivers safe drinking water to its customers.

A complete copy of this assessment report can be obtained by contacting Susan Featherstone at 803/329-5502 or visiting the SCDHEC's Web site at www.scdhec.net/water/html/srcewtr.html.

Other Testing Results

Parameter	Explanation	City of Rock Hill Tap Water
Hardness (CaCo3 mg/l)	Hardness in drinking water is caused by two minerals: calcium and magnesium. The amount of these minerals in potable water determines if it is hard or soft. If water is said to be "hard," making lather or suds for washing is hard to do.	The City of Rock Hill's tap water is "soft," with an average annual hardness of 21.0 mg/l.
Fluoride (mg/l)	When added or naturally present in the correct amounts, fluoride in drinking water has greatly improved the dental health of American consumers.	The City of Rock Hill's tap water has an average of 0.97 mg/l of fluoride.

Glossary of Terms*

- **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 of health. MRDLGs allow for a margin of safety.
- **Nephelometric turbidity units (Ntu)** — The unit of measure for measuring turbidity.
- **Parts per billion (ppb) or micrograms 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.
- **Picocuries 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.

*Referenced in Table of Test Results

Water Quality and Your Health



In order 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 manmade contaminants. 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 that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800/426-4791. You can also visit the EPA's Web site at 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 and radioactive materials 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 septic systems, agricultural and livestock operations and wildlife;

- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, from 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, stormwater runoff or residential uses;
- **Organic chemicals**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff and septic systems; and
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

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

For most customers, water that meets all the federal, state and local regulations is considered safe to drink. Certain customers may be more vulnerable to contaminants in drinking water than the general population. Individuals with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly people and infants can be particularly at risk from infection. People with these health concerns should seek advice about drinking water from their health care provider.

EPA and CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available by calling the EPA's Safe Drinking Water Hotline at 800/426-4791.

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 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 2005, Rock Hill performed more than 3,000 system tests at 146 local sites. These tests measured for bacteria, chlorine residual, pH and temperature. Sites included schools, residences, commercial businesses and industries in the Rock Hill water service territory. Once a year, we also perform special monitoring for phosphate levels at 10 sites across the city. Every three years, we monitor for lead and copper levels at 30 sites. Test results are provided in the table on page 2.

Every regulated contaminant that is detected in the water, even in the most minute traces, is listed. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected and the likely sources of contamination. In 2005, 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 pertaining to bottled water provide the same level of protection for public health as the EPA's standards for tap water.*

How is My Water Treated?

Step 1

The Source: Lake Wylie is our raw water source. Chlorine is added to the water to start the disinfection process.

Step 2

Transmission: Raw water travels four miles through a 54-inch transmission line to the treatment plant.

Step 3

Pre-treatment Chemical Addition/Coagulation: Once the water enters the plant, pre-treatment chemicals are added, such as chlorine for disinfection and Delpac to aid in the coagulation or removal of particles.

Step 4

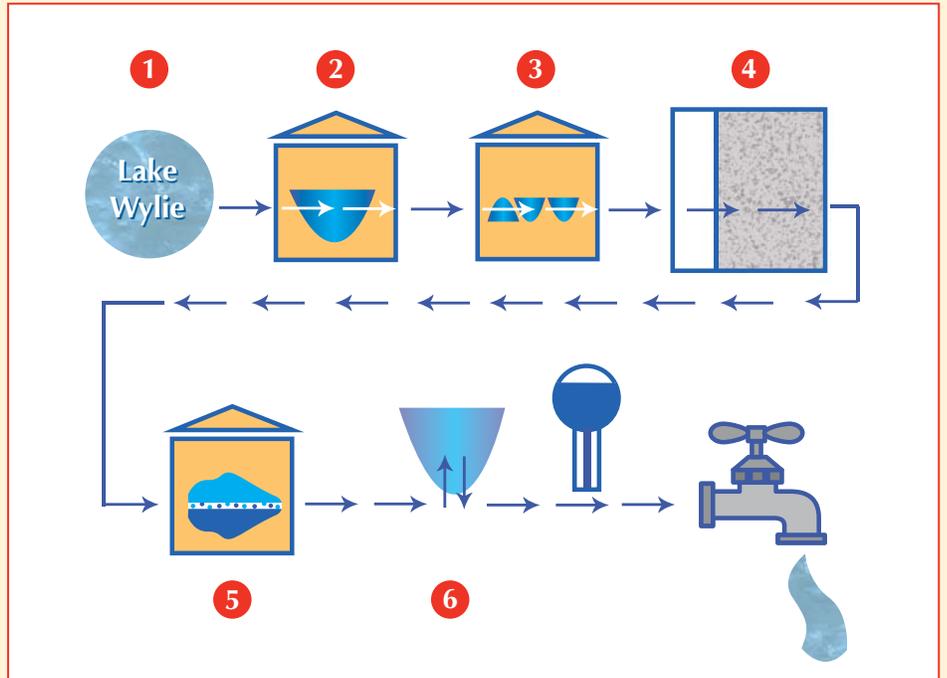
Flocculation/Sedimentation: Once under the influence of the pre-treatment chemicals, the water goes through a two-stage mixing chamber where flocculation, or the combination of solids and chemicals, occurs. This “floc,” or heavier solids, travels through large sedimentation basins, where the heavy particles settle out of the water.

Step 5

Filtration: The water flows from the sedimentation basin to a filter area. The filter area, which contains a carbon-like substance and sand, traps any remaining suspended particles in the water.

Step 6

Post-treatment Chemical Addition: Once through the filters, post-treatment chemicals, such as chlorine for continued disinfection and fluoride for cavity prevention, are added to the water before it leaves the plant to your tap.



Rock Hill Water Treatment Plant

The water treatment plant is not only being expanded for service functionality, but many aesthetic improvements, such as exterior upgrades, a new tree grove, colorful landscaping and a decorative outdoor water feature, are also incorporated into the design. This facility will be a value-added contribution to the quality of redevelopment encouraged in the Cherry Road corridor.



Important Information

www.cityofrockhill.com

Customer Service 803/325-2500

Spanish Line 803/325-2537

*En Español: Este informe contiene información importante acerca de su agua potable. Por favor, haga que alguien lo traduzca para usted, o hable con alguien lo entienda. Gracias.

Important Numbers

EPA Safe Drinking Water Hotline
800/426-4791

803/329-7012 City Council

803/329-5502 Rock Hill Water Plant

803/329-8787 TDD for Hearing Impaired

803/325-2500 Questions About Your Utility Bill

Treatment, distribution and maintenance of the City's water system are administered by the Utilities Department under the supervision of City Management.

City Manager: Carey F. Smith

Assistant City Manager: Gerald E. Schapiro

Public Services Administrator: Nick Stegall

Utilities Director: James G. Bagley Jr.

For more information about water treatment or distribution, contact the Rock Hill Utilities Department at 803/329-5500.

Rock Hill's water system is governed by the Rock Hill City Council.

Doug Echols, Mayor

John Gettys Jr.

Kathy Pender, Mayor Pro Tem

Jim Reno

Osbey Roddey

Winston Searles

Kevin Sutton

Rock Hill City Council meets the second and fourth Mondays of each month at 6:00 p.m. Council meetings are broadcast live on Rock Hill's government access channel, cable channel 19.

For more information about City Council meetings, call 803/329-7012.



Water Treatment and Distribution System

2005 Statistics

Current Service Area (approximate square miles)	40
Miles of Water Main Lines	460
Number of Fire Hydrants Maintained	2,620
Number of Elevated Water Tanks	4
Number of Water Meters	29,471
Daily Average Consumption (in mill. gallons)	13.7
Annual Water Consumption (in mill. gallons)	4,980.8
Maximum Plant Capacity (in mill. gallons/day)	24.0



Water Savings Add Up

- Keep shower under five minutes = **SAVE 1,000 gallons per month**
- Fix a leaky faucet = **SAVE 500 gallons per month**
- Install low-flow shower head = **SAVE 500 gallons per week**
- Plant drought-resistant, local/native plants = **SAVE 550 gallons per year**
- Wash only full loads of clothes = **SAVE 600 gallons per month**
- Turn off water while brushing teeth or shaving = **SAVE 100 gallons per month**



As your hometown utility, we encourage our customers to be water-wise consumers. Not only can you save money by using less water, but you can also help save the Earth by conserving one of our most precious natural resources.

For more information on water conservation and water quality, visit:



- www.cityofrockhill.com/utilities/mission.asp and click on the "H₂OUSE" icon
- www.epa.gov/safewater
- www.scdhec.net/water