

# ROCK HILL

## UTILITIES

2004 Consumer Confidence Report  
Water System #4610002



## A Message from the Director of Utilities

### Rock Hill Wins Awards for Excellence

In October 2004, the Water Environment Association of South Carolina/Catawba District recognized three staff members from Rock Hill Utilities for their service excellence:

- **Jimmy Bagley**, Engineer of the Year
- **Margaret Walker**, Pre-Treatment Coordinator of the Year
- **Susan Featherstone**, Water Plant Operator of the Year

In August 2005, the Rock Hill Water Treatment Plant will also receive the State Area Wide Optimization Achievement Award for 2004. This award is given to water systems across South Carolina that successfully achieve optimized performance levels which exceed present regulatory requirements.

[www.cityofrockhill.com](http://www.cityofrockhill.com)

Utility Customer Service

803/329-5500

Spanish Line 803/325-2537

\*En Español: Este folleto contiene información sobre su agua potable. Por favor, pide a alguien que traduzcas esto para ti o que llamas el número indicado (\*) arriba. Gracias.

### Important Numbers

- 803/329-7003 City Council
- 803/329-5502 Rock Hill Water Plant
- 803/329-8787 TDD for Hearing Impaired
- 803/325-2500 Questions About Your Utility Bill
- 800/426-4791 EPA Safe Drinking Water Hotline



*"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives."* — William A. Foster



When we speak of high quality, we think of confidence, value and assurance. Quality is a pledge made by those who want the best for the people they serve. A careful commitment to excellence is the essence of quality. When the City of Rock Hill speaks of water quality, these are the things on which we focus.

On behalf of the City of Rock Hill, I am pleased to present our 2004 Consumer Confidence Report. This report provides essential information about the drinking water that is delivered to your home every day. As a requirement of the Safe Drinking Water Act, the Environmental Protection Agency (EPA) requires community water systems to meet national drinking water standards and calls for these water systems to communicate with customers about how their water is treated, tested and distributed. As this report shows, the City has achieved excellence in the level of the product and services we provide to you.

The quality and adequate supply of the potable water provided by the City are accomplished through careful treatment, regular testing, continuous monitoring, preventive maintenance and strategic planning — all of which are the responsibility of our valued team of loyal employees. Our successes can be directly attributed to the around-the-clock efforts of our highly trained and dedicated treatment plant staff, engineers and field maintenance technicians.

As we move forward and plan for the future of our community, we strive to be consistent with the quality we have achieved so far. For this reason, the City's water treatment plant is being expanded to treat 36 million gallons per day, and enhanced treatment processes are being implemented to better serve the demands of our growing population. A new overhead water storage tank will be constructed in northwestern Rock Hill this coming year. This tank will facilitate increased water pressure and distribution in a fast-developing area of the city. This and other planned improvements will help position our utility to meet the needs of our citizens for decades to come.

**Quality:** "the result of ... sincere effort, intelligent direction and skillful execution." This is what our staff and product are all about. When it comes to delivering high-quality water on tap, you can count on Rock Hill Utilities, your hometown utility connection. We thank you for your continued support.

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

# Water Quality Data for 2004: 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 (95% of samples)	0.51	9/11/04	99.1%	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	0.9 - 1.5	1.109	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	0.41	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Flouride	No	ppm	2*	4	0.69	
Sodium	No	ppm	Not regulated	Not regulated	8.5	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	7.0	2	Corrosion of household plumbing systems
Copper	No	1.3 ppm	0.24	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 - 1.5	1.30	Water additive used to control microbes
Chlorite	No	ppm	0.80	0.80	0.02 - 0.38	N/A	Byproduct of drinking water chlorination
Chlorine Dioxide	No	ppm	0.80	0.80	0.02 - 0.14	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	51	17 - 88	Byproduct of drinking chlorinated water
Haloacetic Acids	No	ppb	0	60	36	22 - 57	Byproduct of drinking chlorinated water

# What's in My Drinking Water?

All sources of drinking water contain some naturally occurring contaminants. Since water is the universal solvent, as it travels over land surfaces and underground, it dissolves naturally occurring minerals and, in some cases, radioactive materials. Water can also 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, and from 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;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

The South Carolina Department of Health and Environmental Control (SCDHEC) has completed its Source Water Assessment and Protection Report on the City of Rock Hill's drinking water sources. A copy of this assessment report can be obtained by contacting Susan Featherstone at [803/329-5502](tel:8033295502) or by visiting the SCDHEC's Web site at [www.scdhec.net/water/html/srcewtr.html](http://www.scdhec.net/water/html/srcewtr.html).

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 2004, Rock Hill performed more than 870 system tests at 146 local sites. Sites included our local hospital, schools, residences, commercial businesses and industries in the Rock Hill water service territory. 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 source of contamination. In 2004, there were more than 100 contaminants that were tested for and not detected (for a list of non-detects, call [803/329-5502](tel:8033295502)).

## Other Testing Results

Parameter	Explanation	City of Rock Hill Tap Water
Hardness (CaCo <sub>3</sub> 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 25.0 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 0.95 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 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 a disinfectant allowed in finished drinking water.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** — The level of a disinfectant below which there is no known or expected risk of health. MRDLGs allow for a margin of safety.
- **Nephelometric turbidity unit (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

## Where Does My Water Come From?

The City of Rock Hill pumps source water from Lake Wylie in the northeastern portion of York County to the treatment plant on Cherry Road. There, conventional chemical disinfection and treatment processes are used to produce the water that you consume.



## Water Quality and Your Health

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

The presence of contaminants in drinking water does not necessarily pose a health risk. Even bottled water may be reasonably expected to contain at least small amounts of some contaminants. However, bottled water is not regulated by the Safe Drinking Water Act\*.

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, specifically immuno-compromised individuals who may be particularly at risk from infection, may be more vulnerable to contaminants in drinking water than the general population. These people include those with cancer undergoing chemotherapy, people who have undergone organ transplants, people who are undergoing dialysis, people with HIV/AIDS, and some elderly people and infants.

If anyone in your household has a special health concern regarding how drinking water could compromise or suppress their immune system, they should seek advice from their health care provider and call the EPA's Safe Drinking Water Hotline at [800/426-4791](tel:8004264791).

\*The EPA has established drinking water standards for public water systems under the authority of the Safe Drinking Water Act. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water. 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 the removal of particles.

## Step 4

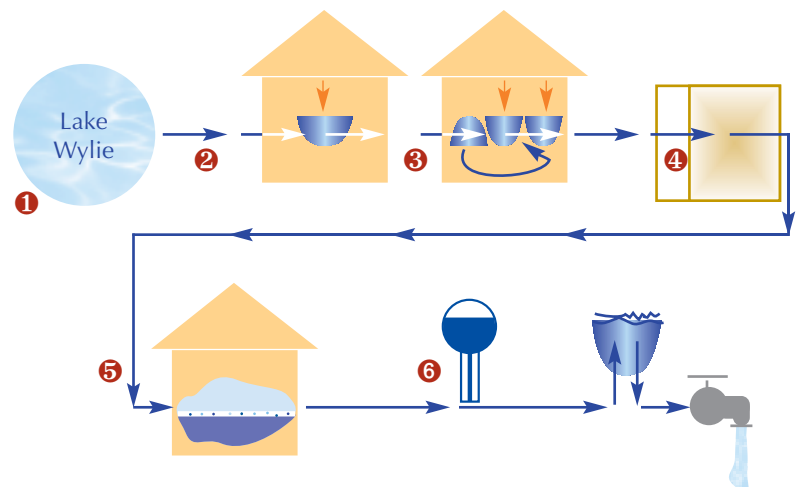
**Flocculation/Sedimentation:** Once under the influence of the pre-treatment chemicals, the water goes through a two-stage mixing chamber where flocculation, or the combination of solids and chemicals, occurs. This "floc," or heavier solids, travels through large sedimentation basins, where the heavy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



The Rock Hill water treatment and distribution system is governed by the Rock Hill City Council.

Doug Echols, Mayor

John Gettys Jr., Mayor Pro Tem

Kathy Pender

Jim Reno

Osbey Roddey

Winston Searles

Kevin Sutton

City Manager: Carey F. Smith

Assistant City Manager: Gerald E. Schapiro