

# Roanoke Rapids Sanitary District

**The mission of the Roanoke Rapids Sanitary District is to affordably provide the highest quality water services; then safely collect wastewater and return clean water to the environment while promoting public trust and partnerships to the benefit of our associates and the satisfaction of our customers.**

#### *Board Members*

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*J.D. Bailey, Secretary*

*E.J. St Clair, Member*

*Water Treatment Plant 537-3319*

*Wastewater Treatment Plant 536-4884*

*Distribution & Collection 537-9747*

*Administrative Office 537-9137*

#### *Administrative Officers*

*Dan Brown, P.E., CEO*

*C.R. Potter, Finance Officer*

*J.B. Bennett, Jr., Chief Operator*

*A.G. Camp, Chief Operator*

*C.E. Turner, Chief Operator*

*Website: rrsd.org*

## 2008 Water Quality Report

As many of you are aware, in the past you have received information about the quality of the water you receive from the Sanitary District. This years report will only include information on the water you receive from the District. The Wastewater and Collections System Reports will be sent at a later time. Should you have any questions concerning any of these Reports, please call our Administrative Office at **(252) 537-9137**.

The Roanoke Rapids Sanitary District welcomes public participation in decisions concerning your water, wastewater, or distribution/collection systems. The District Board holds a public meeting the second Thursday of every month beginning at 5:30 P.M. at the Administrative Office, 1000 Jackson Street, Roanoke Rapids.

**Water Treatment Plant  
Public Water Supply ID # 04-42-010  
Lab Certification ID # 37649**



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**537-9137**



# 2008 Water Quality Report



The Roanoke Rapids Sanitary District's number one priority is to provide all our customers with a safe and reliable supply of water that can be used with confidence. Every day, our employees are working to ensure that the water you drink meets all regulatory requirements and your expectations for safety, reliability, and quality.

To do this we conduct over 35,000 tests yearly on the water you drink. These tests start in the raw (untreated) water from the Roanoke Rapids Lake. (We also have an intake in the Roanoke River to draw water from in an emergency) We also run hundreds of tests on the water at different phases of the treatment process. The final tests are done on water from randomly selected homes and businesses. All of these test results are reported in accordance with the Water Quality Standards established by the United States Environmental Protection Agency (EPA) and the North Carolina Department of Environmental Health. We are proud to report that the water provided by the Roanoke Rapids Sanitary District exceeds all established water quality standards.

This 2008 **WATER QUALITY REPORT** is a summary of many of these tests and explanations of terms used in water quality reporting. If you have any further questions, please contact the **WATER TREATMENT PLANT** between 8AM and 4PM at **(252) 537-3319**.

## Lead & Copper Rule Testing

The 1994 Federal Lead & Copper Rule mandates a household testing program for these substances. According to the rule, 90% of the samples from high risk homes must have levels less than 0.015 mg/L of lead and 1.3 mg/L of copper. In 2008 lead levels in the District averaged .005 mg/L and copper levels averaged .235 mg/L, well below the Federal levels. Our next lead and copper testing will be conducted in August, 2009. 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. The Roanoke Rapids Sanitary District 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, 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 water, you may wish to have your water tested. 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>.

### EN ESPANOL

El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien.

### Special Concerns

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 Environmental Protection Agency's [Safe Drinking Water Hotline \(800-426-4791\)](http://www.epa.gov/safewater/hotline).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline.

## TERMS

**Maximum Residual Disinfection Level Goal** – The “Level” (MRDLG) 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 contaminants.

**Maximum Residual Disinfection Level-** The “Highest Level” (MRDL) of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Contaminant Level (MCL)-** An enforceable level of a contaminant as close to the goal as is practical to achieve in light of available treatment technology and cost/benefit considerations.

**Maximum Contaminant Level Goal (MCLG)-** A level of a contaminant, not necessarily achievable, safely below the level of human health concerns.

**Action Level (AL)-** The level of a contaminant at which a water treatment plant must take some type of action to reduce or contain the contaminant.

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

**Parts Per Million (PPM)-** Equivalent to milligrams per liter (mg/L). One part per million is comparable to one minute in two years.

**Parts Per Billion (PPB)-** Equivalent to micrograms per liter. One part per billion is comparable to one minute in two thousand years.

**Nephelometric Turbidity Units (NTU)-** Turbidity is a measure of cloudiness in water

## TURBIDITY

Turbidity is usually thought of as cloudiness of the water, and is caused by suspended matter. Organic and inorganic material, silt, algae or other tiny organisms can contribute to the turbidity of the water.

The degree of turbidity is measured at the Water Treatment Plant laboratory by shining a beam of light through water and measuring the angle at which the light is scattered by suspended matter. The reading gives the turbidity of the water measured in Nephelometric Turbidity Units (NTU'S).

Regulations passed in 1989 recognize reducing turbidity as one way to measure the removal or inactivation of certain targeted microorganisms. Currently, Giardia is one of those microorganisms and future regulations may include Cryptosporidium.

The EPA has established a Maximum Contaminant Level (MCL) for treated water turbidity of 0.3 NTU. The rule requires us to meet this standard 95% of the time during the month. In 2008, we met the standard 99.99% of the time with our highest reading at 0.311 NTU. For the year, we averaged 0.050 NTU.

## Treated Water Quality Roundup

Constituent	Highest Level Allowed (EPA'S MCL)	Ideal Goals (EPA'S MCLG)	Normal Range	Frequency Of Sample	Sanitary District Annual Average	Sources of Constituents
Fluoride	4mg/L	4mg/L	.9mg/L- 1.2mg/L	Every 4 Hours	.98mg/L	Naturally occurring, Water additive
Nitrate	10mg/L	10mg/L	1mg/L- 10mg/L	Yearly	.05mg/L	Wildlife & septic systems
Sodium	Not Regulated	20mg/L	15mg/L-25mg/L	Yearly	9.07mg/L	Naturally occurring
Sulfate	Not Regulated	500mg/L	None	Yearly	Less than 15mg/L	Soil runoff
Turbidity	.3NTU'S	Treatment Technique	.1NTU-.5NTU	Every 4 Hours	.050NTU'S	Soil runoff
Total Coliforms (Bacteria)	Less than 5% positive	0	Less than 5% positive	Daily	0	Naturally occurring
Iron	.3mg/L	.3mg/L	Less than .3mg/L	Weekly	.14mg/L	Naturally occurring
Manganese	.05mg/L (Action Level)	.05mg/L (Action Level)	Less than .05mg/L	Weekly	.05mg/L	Naturally occurring
pH (Standard Units)	N/A	N/A	6.5-8.0	Hourly	7.34	N/A
Alkalinity ,mg/L	N/A	N/A	Less than 35 mg/L	Daily	32.68mg/L	N/A
Hardness, mg/L	N/A	N/A	20mg/L-100mg/L	Daily	34.84mg/L	N/A

### Disinfection By-Product Precursors Contaminants

Contaminant (units)	Sample Date	MCL/TT Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Total Organic Carbon (ppm) (TOCs)-RAW	Monthly	N	3.16	2.50	3.80	N/A	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOCs)-TREATED	Monthly	N	1.98	1.61	2.16	N/A	TT	Naturally present in the environment

Note: Depending on the TOC in our source water the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. If we do not achieve that % removal there is an "alternative % removal". If we fail to meet that, we are in violation of a Treatment Technique.

### Disinfection By-Product Contaminants

Contaminant (units)	MCL/MRDL Violation Y/N	Your Water (AVG)	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
TTHM (ppb) [Total Trihalomethanes]	N	57.5	37.0	105.0	N/A	80 or 100	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	22.4	8.0	59.0	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	N	1.39	.80	2.18	MRDLG = 4	MRDL = 4	Water additive used to control microbes

# Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for The Roanoke Rapids Sanitary District was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area.). The assessment findings are summarized in the table below:

## Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating
Roanoke Rapids Lake	Moderate
Roanoke River	Moderate

The complete SWAP Assessment report for RRSD may be viewed on the Web at: <http://www.deh.enr.state.nc.us/pws/swap> To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to [swap@ncmail.net](mailto:swap@ncmail.net). Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at **919-715-2633**.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the systems’ potential to become contaminated by PCS’s in the assessment area.

## The Value of Quality Drinking Water

*Water is our most precious natural resource. And while most of us don’t give it a second thought when we grab a glass and head to the faucet, a safe drinking water supply should not be taken for granted. Our country’s drinking water community creates jobs, attracts industry and investment, and provides for the health and welfare of our citizens in ways ranging from disease prevention to fire suppression. The value of the highest quality tap water in the world is almost too vast to measure.*

### Consider the Health Effects Worldwide:

- North America’s water and medical professionals have virtually eradicated most waterborne diseases, such as cholera, typhoid fever and dysentery.
- The U.S. Centers for Disease Control and Prevention ranked a drinkable, safe water supply as among the **top ten humanitarian achievements of the 20<sup>th</sup> century**.
- According to the World Health Organization, **1.1 billion people** globally do not have access to improved water supply sources and **2.4 billion people** do not have access to any type of improved sanitation facility.
- The World Health Organization also estimates that about **2 million people** die each year due to waterborne-related diseases. The most affected are the populations in developing countries, living in extreme conditions of poverty.

### Consider a Cost Comparison Per Gallon:

Between an overabundance of choices and companies’ clever marketing and advertising campaigns, it is easy to lose sight of true value. Tap water may not come with a fancy label, but between its numerous benefits and its cost, it sells itself. Following is a cost comparison of a gallon of the more popular beverages regularly consumed. To ensure a uniform comparison, all prices were gathered locally.

- Soda Pop: \$2.61
- Flavored Iced Tea: \$7.99
- Milk: \$2.99
- Drip Coffee (Incl. tax): \$12.99
- Imported Beer: \$17.75
- Bottled Water: \$4.03
- Orange Juice: \$5.58
- **Tap Drinking Water: \$0.0035**



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