Roanoke Rapids Sanitary District

2012 Water Quality Report

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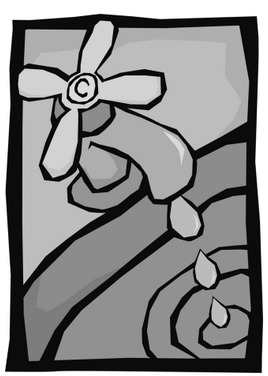
Website: www.rrsd.org

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.

The Roanoke Rapids Sanitary District, a municipal corporation, was created by the North Carolina State Board of Health on April 21, 1931; under and by virtue of an act of the General Assembly, ratified on March 4, 1927, providing for the creation, government and operation of Sanitary Districts. The Roanoke Rapids Sanitary District is governed by a 3-member board; which is elected, at large, to two year terms. Should you have any questions concerning this Report, 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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*Must establish or *have* Satisfactory Credit

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. 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.

*Straight Talk On **Water Conservation***

As a society, we have become more and more environmentally conscious and better informed about the effect our lifestyles can have on the world around us. Yet, the demand for our most valuable natural resource – drinking water – continues to grow while local supplies can be threatened by drought conditions and the cost of service increases. Only one percent of the earth's water is available for human consumption and yet, according to the latest U.S. Geological Survey completed in 2005, the United States uses 410 billion gallons a day. On the industrial level, numerous water-saving technologies have been employed to help conserve water. And while strong progress has been made, there are several simple steps that consumers can take to help preserve our water supply for future generations while controlling their monthly bill.

What can you do?

- Water your lawn early in the morning to reduce loss from evaporation. Do not over water your lawn. Place a tuna can on the lawn; when full, lawn watering requirements have been satisfied. Use lawn chemicals only when necessary.
- Fully load the dishwasher and clothes washer before running.
- When washing dishes by hand, or when brushing your teeth, do not leave the water running.
- Repair dripping faucets and leaky toilets. Dripping faucets can waste up to 2,000 gallons of water each year in the average home. Leaky toilets can waste as much as 200 gallons per day.
- If you have a swimming pool, use a cover. By so doing, you can cut the loss of water by evaporation by 90 percent.
- Use a broom, rather than a hose, to clean sidewalks or driveways.
- Defrost frozen food in the refrigerator or in a microwave instead of running hot water over the food.
- Raise the lawn mower blade to at least 3 inches. A lawn cut higher encourages grass roots to grow deeper, shades the root system and holds soil moisture better than a closely clipped lawn.

Together, we share in the benefits of some of the safest drinking water in the world, and it is incumbent upon us all to protect this valuable natural resource for future generations. By making simple changes in our daily routines, we can feel confident that we are doing our part at the lowest possible cost.

Roanoke Rapids Sanitary District

www.rrsd.org

a proud member of

American Water Works Association
The Authoritative Resource for Safe Drinking Water®
www.awwa.org

2012 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 2012 **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 2012 lead levels in the District averaged .005 mg/L and copper levels averaged .120 mg/L, well below the Federal levels. Our next lead and copper testing will be conducted in October 2013. 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 1-800-426-4791 or at http://www.epa.gov/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**).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 or at **http://www.epa.gov/safewater**.

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 2012, we met the standard 100% of the time with our highest reading at 0.291NTU. For the year, we averaged 0.056 NTU.

Treated Water Quality Roundup 2012

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	.65mg/L– .75mg/L	Every 4 Hours	.53mg/L	Naturally occurring, Water additive
Nitrate	10mg/L	10mg/L	1mg/L– 10mg/L	Yearly	Less than 1mg/L	Wildlife & septic systems
Sodium	Not Regulated	20mg/L	15mg/L-25mg/L	Yearly	15.4 mg/L	Naturally occurring
Sulfate	Not Regulated	500mg/L	None	Yearly	20 mg/L	Soil runoff
Turbidity	.3NTU'S	Treatment Technique	.1NTU-.5NTU	Every 4 Hours	.056 NTU'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	.05 mg/L	Naturally occurring
Manganese	.05mg/L (Action Level)	.05mg/L (Action Level)	Less than. .05mg/L	Weekly	.04 mg/L	Naturally occurring
pH (Standard Units)	N/A	N/A	6.5-8.0	Hourly	7.46	N/A
Alkalinity ,mg/L	N/A	N/A	Less than 35 mg/L	Daily	34.71 mg/L	N/A
Hardness, mg/L	N/A	N/A	20mg/L-100mg/L	Daily	39.78 mg/L	N/A

Disinfection By-Product Precursors Contaminants

Contaminant (units)	Sample Date	MCL/TT Violation Y/N	Your Water	Range Low	Range High	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon (ppm) (TOCs)-RAW	Monthly	N	3.17	2.63	4.00	N/A	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOCs)-TREATED	Monthly	N	1.94	1.69	2.60	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 Low	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) [Total Trihalomethanes]	N	47.6	25.0	64.6	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	31.5	17.9	47.6	N/A	60	By-product of drinking water disinfection
Chlorine (ppm)	N	1.38	.81	3.24	MRDLG = 4	MRDL = 4	Water additive used to control microbes