

Roanoke Rapids Sanitary District

*Water Treatment Plant 537-3319
Distribution & Collection 537-9747
Wastewater Plant 536-4884
Administrative Office 537-9137*

Website: rrsd.org

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2007 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**

HYDRO-PAY

An easier way to pay your water bill.

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537-9137

2007 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 2007 **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 2007 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, 2008.

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. 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 (800-426-4791).

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 2007, we met the standard 100% of the time with our highest reading at 0.204 NTU. For the year, we averaged 0.056 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 | .26mg/L | Wildlife & septic systems |
| Sodium | Not Regulated | 20mg/L | 15mg/L-25mg/L | Yearly | 14.7mg/L | Naturally occurring |
| Sulfate | Not Regulated | 500mg/L | None | Yearly | 14mg/L | Soil runoff |
| Turbidity | .3NTU'S | Treatment Technique | .1NTU-.5NTU | Every 4 Hours | .056NTU'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 | .13mg/L | Naturally occurring |
| Manganese | .05mg/L (Action Level) | .05mg/L (Action Level) | Less than .05mg/L | Weekly | .03mg/L | Naturally occurring |
| pH (Standard Units) | N/A | N/A | 6.5-8.0 | Hourly | 7.40 | N/A |
| Alkalinity ,mg/L | N/A | N/A | Less than 35 mg/L | Daily | 31.24mg/L | N/A |
| Hardness, mg/L | N/A | N/A | 20mg/L-100mg/L | Daily | 32.99mg/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 | 3.24 | 2.75 | 4.20 | N/A | TT | Naturally present in the environment |
| Total Organic Carbon (ppm) (TOCs)-TREATED | Monthly | N | 1.98 | 1.76 | 2.38 | 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.

| Contaminant (units) | MCL/MRDL Violation Y/N | Your Water (AVG) | Range | | MCLG | MCL | Likely Source of Contamination |
|-------------------------------------|------------------------|------------------|-------|------|-----------|-----------|---|
| | | | Low | High | | | |
| TTHM (ppb) [Total Trihalomethanes] | N | 50.5 | 27.0 | 91.0 | N/A | 80 or 100 | By-product of drinking water chlorination |
| HAA5 (ppb) [Total Haloacetic Acids] | N | 38.1 | 29.0 | 53.0 | N/A | 60 | By-product of drinking water disinfection |
| Chlorine (ppm) | N | 1.38 | .92 | 1.93 | 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 The Roanoke Rapids Sanitary District 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.

Keep drains fat-free

Fats, oils, and greases aren't just bad for your arteries and your waistline; they're bad for sewers, too. Never put grease down the drain! Grease is considered a hazardous waste and sticks to the insides of your service lines (both on your property and in the streets). Over time, the grease can build up, block the entire lines, and cause growth of undesirable bacteria in the wastewater collection lines and treatment plant. Even a small amount of grease in sink drains can cause serious blockage in plumbing lines or even worse, an overflow in your home or yard. To dispose of grease safely, pour it into a metal can; once it hardens, cover and place in the garbage. The result will reduce our costs and keep us from having to pass the expense on to you, the consumer, in the form of wastewater rates.

Security

In the aftermath of the tragic events of September 11th, 2001 all Americans have had to take a second look at what security means to them. We at the Sanitary District are no exception. While we took security very seriously before September 11th, since that time we have taken some additional steps to insure your water supply is safe. Intrusion alarms on all our elevated tanks, computer monitoring of the Distribution system and Wastewater lift stations, and securing our two plant sites 24 hours a day are just a few of the security measures we have taken to insure your safe water supply.