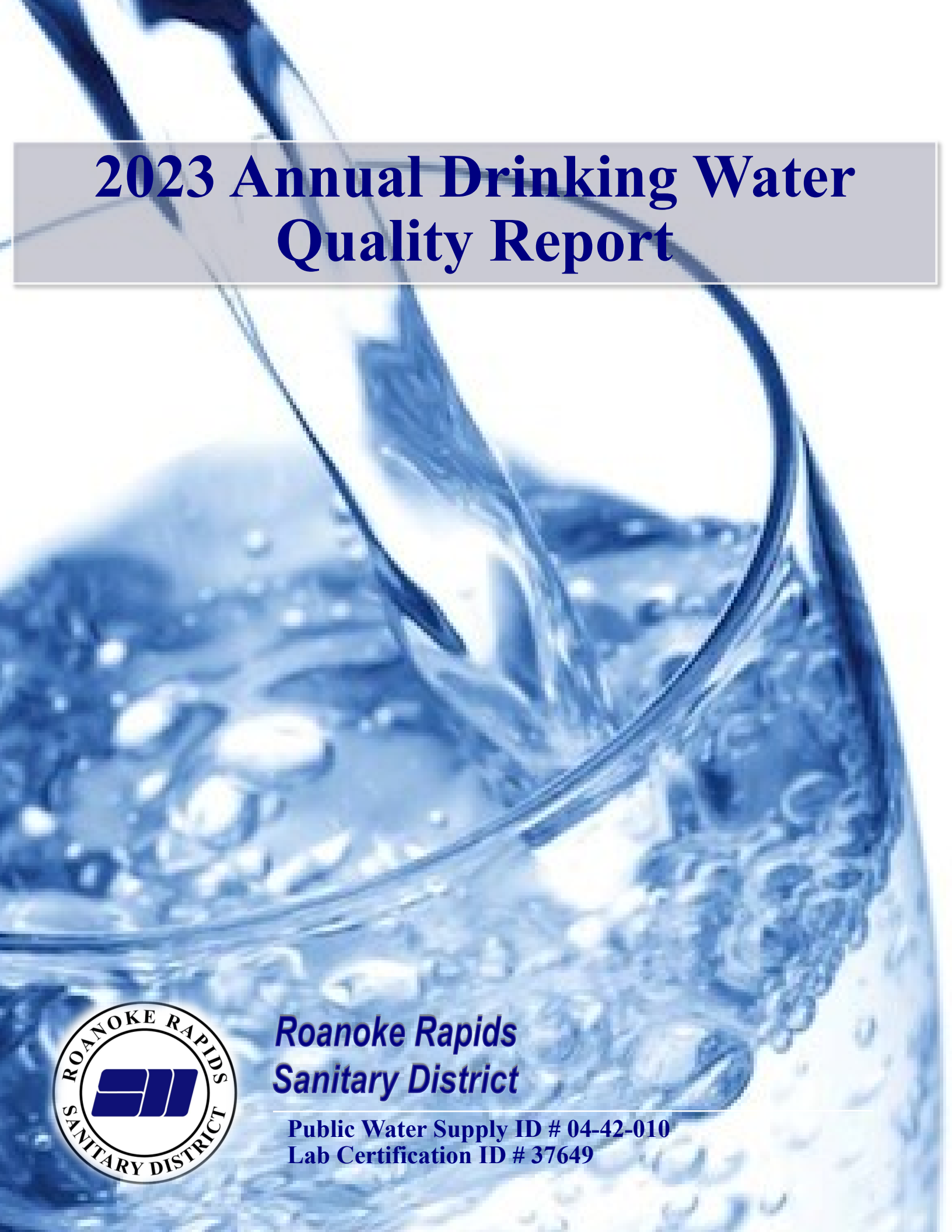
2023 Annual Drinking Water Quality Report



Roanoke Rapids Sanitary District

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

Roanoke Rapids Sanitary District

2023 Water Quality Report

"Delivering Safe Drinking Water While Protecting Environmental Water Quality"

Water Treatment Plant 537-3319
Wastewater Treatment Plant 536-4884
Distribution & Collection 537-9747

Administrative Office (252) 537-9137

Our Mission

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.

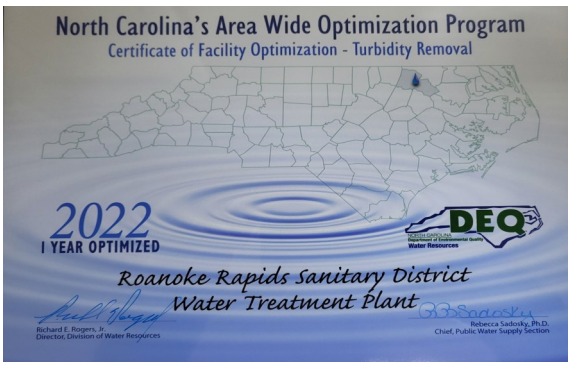
The Roanoke Rapids Sanitary District is governed by a 3-member board; which is elected, at large, to two year terms.

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 Tuesday of every month beginning at 4:00 P.M. at the Administrative Office, 1000 Jackson St. Roanoke Rapids, NC 27870

Should you have any questions concerning this Report, please call our Administrative Office at: **(252) 537-9137**.

"What we do is bring life to homes."
-David Scott, ORC
Distribution & Collection



HOW TO: BILL PAY

Roanoke Rapids Sanitary District offers a wide variety of convenient payment options for our customers. Simply choose the option that best suits your needs. The worry– free way to pay is Auto Bank Draft. Avoid unnecessary penalties and never forget the water bill again! Other ways to pay include: In person in office or at the drive thru, drop box, online, automated phone service, post mail, or with bank bill pay.

"When the well is dry, we know the worth of water "
-Benjamin Franklin

2023 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 Roanoke Rapids Lake. We also have an intake in the Roanoke River to draw water in an emergency. We 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 these test results are reported in accordance with the Water Quality Standards established by the Environmental Protection Agency (EPA) and the North Carolina Department of Environmental Quality (DEQ). We are proud that the water provided by the Roanoke Rapids Sanitary District exceeds all established water quality standards.

This 2023 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 BUSINESS OFFICE between 8:30 AM and 5 PM at (252) 537-9137.

EN ESPANOL

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

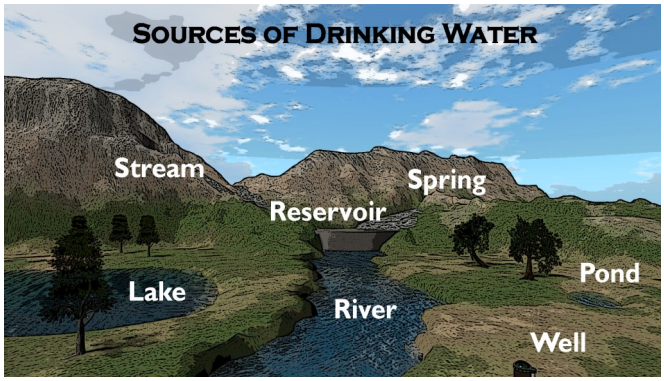
Why Should You Drink More Water?

What the EPA wants you to know

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. 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.



The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Various types of contaminants may be present in source water, including microbial contaminants, organic and inorganic contaminants, pesticides and herbicides, and radioactive contaminants which can be naturally occurring or result from urban stormwater runoff, septic systems, agricultural/livestock operations, and wildlife. To ensure safe drinking water, the EPA and FDA have established regulations limiting the number of certain contaminants in water provided by public water systems and bottled water.

PFAS are a group of useful manufactured chemicals that are found in many consumer products like cosmetics, take out containers, nonstick pans, waterproof fabric, and firefighting foams. These chemicals are a concern because they break down very slowly in the environment and can accumulate in people, animals, and the environment over time. Even though manufacturers have largely phased out some specific PFAS due to health and environmental concerns, they may still be found in the environment and in drinking water . While it is uncertain how exactly these chemicals affect people's health, the EPA is proposing new regulations to limit two specific PFAS chemicals, PFOA and PFOS, to no more than four parts per trillion each in drinking water.

To ensure safe drinking water, water systems may need to install new treatment barriers or switch to alternative water sources. The Roanoke Rapids Sanitary District (RRSD) is committed to taking proactive measures to protect public health by monitoring unregulated contaminants and staying ahead of potential health risks. RRSD provides water that meets federal and state safety standards, and any past violations were addressed quickly and effectively using a scientific framework to assess and manage water risk.

If required to meet the new PFAS regulations, RRSD will make operational changes and install treatment barriers to ensure safe drinking water for the community. Overall, RRSD is dedicated to providing safe and clean drinking water to the community and will take all necessary measures to ensure its safety.

When You Turn on Your Tap, Consider the Source

The primary source that is used by this system is a surface water intake located at Roanoke Rapids Lake. As secondary source, the District uses a surface water intake for emergencies at Roanoke River. Both sources are located within Roanoke Rapids City limits.

The North Carolina Department of Environmental Quality (DEQ), 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 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 Roanoke Rapids Sanitary District may be viewed on the Web at:
https://www.ncwater.org/?page=600

Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to:
Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. *Please indicate your system name, number, 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 919-707-9098. It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the system's potential to become contaminated by PCSs in the assessment area.

Help Protect Your Source Water

Protecting source water is crucial to ensure clean and safe drinking water. Here are some ways that you can help protect source water:

* Properly dispose of hazardous waste such as chemicals, medicines, paint, & motor oil.
* Reduce fertilizer and pesticide use
* Don't litter: Dispose of trash properly and recycle when possible.
* Use environmentally-friendly cleaning products
* Conserve water: The less water we use, the less stress we put on our water supply.

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.

– 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. As we learn the value of clean, safe water and how scarce it truly is, we can take steps to protect it.

Here are a few steps you can take to conserve water:

* Turn off taps tightly & fix leaks promptly
* Wash dishes or shave using partially-filled sinks
* Install low-flow showerheads and toilets
* Wash only full loads of laundry
* Water lawns & gardens during the cooler parts of the day

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2023. The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Important Drinking Water Definitions

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 available treatment technology.

Maximum Contaminant Level Goal (MCLG)
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Locational Running Annual Average (LRAA)
The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

Running Annual Average (RAA)
The average of sample analytical results for samples taken during the previous four calendar quarters.

Action Level (AL)
The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Nephelometric Turbidity Unit (NTU)
Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Parts per million (ppm) or Milligrams per liter (mg/L)
One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L)
One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/L)
One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

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 AL less than 15 ppb of lead and 1.3 ppm of copper and the MCLG 0 and 1.3 ppm, respectively. From the sampling event on June 13, 2022, the 90% percentile results for your water: lead non-detect and copper .093 ppm. The number of sites found above the action level for each of these contaminants was 0, well below the Federal levels. Our next lead and copper testing will be conducted in June of 2025. 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, corrosion of household plumbing systems and erosion of natural deposits. There are no known lead service lines between the main and the meter in our system. 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 click this link: Basic Information about Lead in Drinking 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 2023, we met the standard 100% of the time with our highest reading at .140 NTU. For the year, we averaged 0.043 NTU.

Water Quality Data Tables of Detected Contaminants

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Your Water (lowest RAA)	Range Monthly Removal Ratio Low - High	MCLG	Treatment Technique (TT) violation if:	Likely Source of Contamination
Total Organic Carbon (TOC) Removal Ratio (no units)	N	1.30	1.30-1.73	N/A	Removal Ratio RAA <1.00 and alternative compliance criteria was not met	Naturally present in the environment

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (highest RAA)	Range Low	Range High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	N	1.10	.38	1.83	4	4.0	Water additive used to control microbes

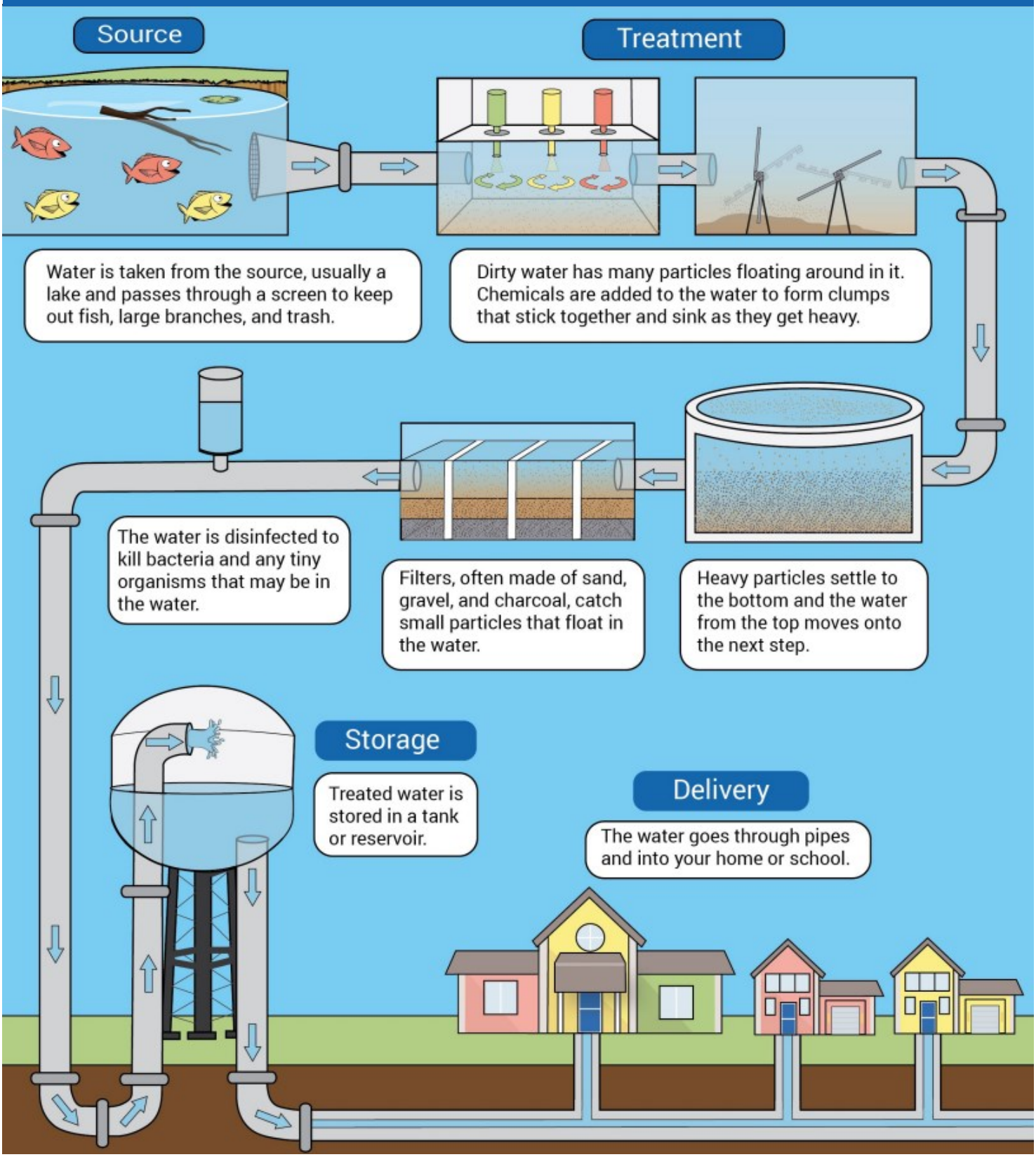
Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	N				N/A	80	Byproduct of drinking
B01			36	24	62	***Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.***		
B02			51	29	83			
B03			43	27	66			
B04			47	27	69			
HAA5 (ppb)	2023	N				N/A	60	Byproduct of drinking
B01			26	15	38			
B02			24	12	36			
B03			23	11	43			
B04			26	14	40			

Other Miscellaneous Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Range Low	Range High	SMCL
Iron (ppm)	2/22/2023	.03	.01	.03	0.3 mg/L
Nickel (ppm)	2/22/2023	.00	N/A		N/A
Sodium (ppm)	2/22/2023	12.60	N/A		N/A
pH	2/22/2023	7.43	7.22	7.55	6.5 to 8.5

Drinking Water from the Lake to the Tap



Roanoke Rapids Sanitary District
1000 Jackson Street
Roanoke Rapids, NC 27870
(252) 537-9137