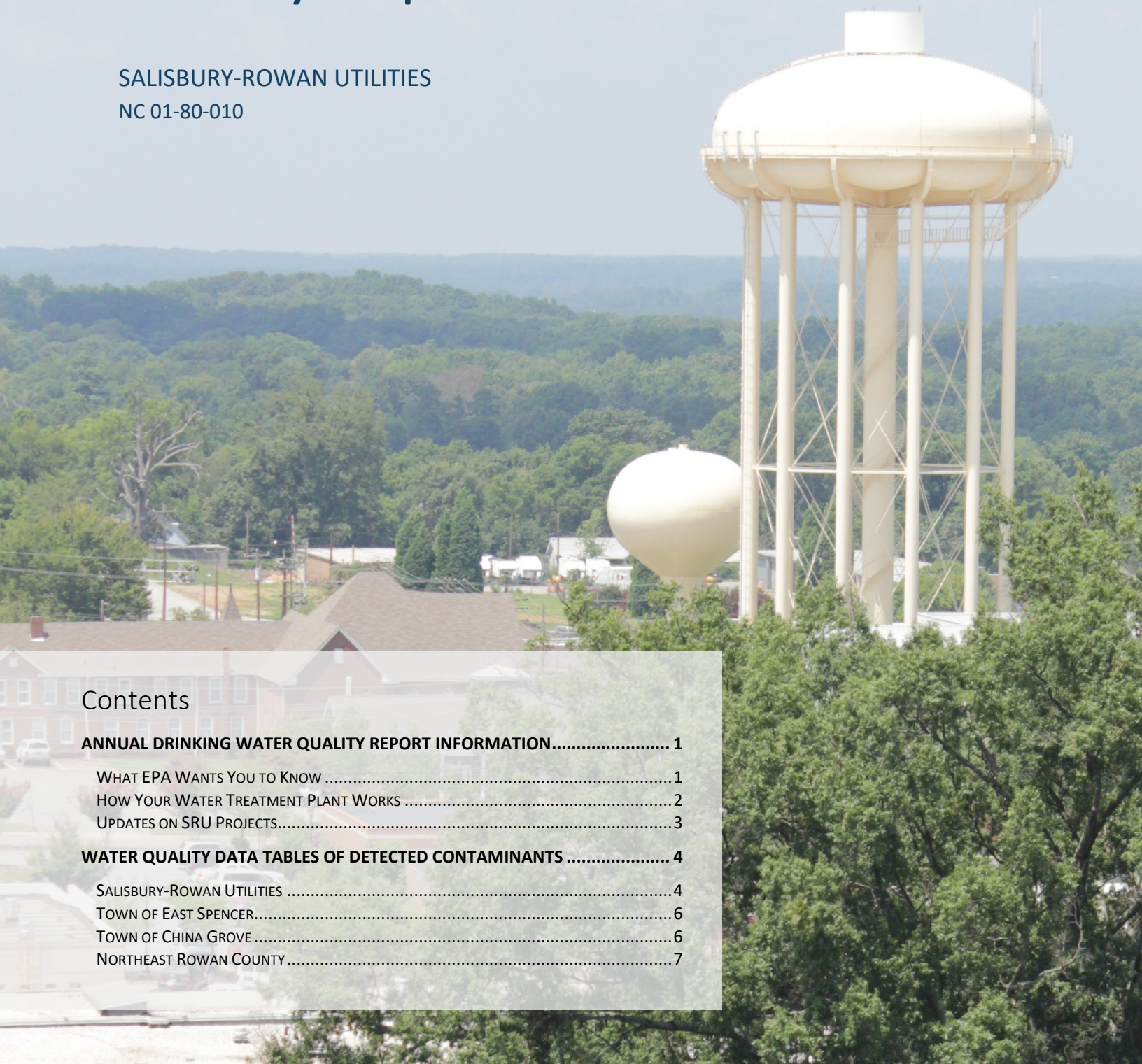
2023

Annual Drinking Water Quality Report

SALISBURY-ROWAN UTILITIES

NC 01-80-010



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Annual Drinking Water Quality Report Information

Salisbury-Rowan Utilities (SRU) is pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about SRU's source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide customers with a safe and dependable supply of drinking water. We want our customers to understand the efforts that are made to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and to providing you with this information.

If you have any questions about this report or concerning your water, please contact Kalah Simpson, Utility Environmental Compliance Coordinator for SRU at (704) 216-2731. Additional contacts for other water-related questions or concerns are listed below.

Water Bills & Service Reconnection	Customer Service	(704) 638-5300
SRU Administration	1 Water Street	(704) 638-5205
Water Plant Supervisor	Jeff Parker	(704) 638-4480
Water Quality Concerns	Michael Rector	(704) 638-5372
Line Leaks	Systems Maintenance	(704) 638-5390
Emergencies (after-hours)	Systems Maintenance	(704) 638-5339
New Service Connections	Development Services	(704) 638-5208

Concernimientos sobre la calidad de su agua?
Si usted nota un cambio en el sabor, olor o color de su agua, llame al (704) 638-5372 de 8:30am - 5:00 pm

Cuenta/factura de agua o conexion de servicio?
Si tiene una pregunta sobre su cuenta/factura de agua o si su agua ha sido desconectada llame al (704) 638-5208

Nuevo servicio / Conexion
Si acaba de transladarse a una nueva casa y necesita servicio de agua llame al (704) 638-5208

Emergencias y escape de agua, despues de las 5 pm
Si ve que hay agua que esta saliendo del piso, o poca presion de agua. En su casa u otros problemas que no pueden esperar hasta las horas regulares que son de 8:30 am – 5: 00 pm , llame al (704) 638-5339

Este reporte contiene información importante sobre la calidad de agua en su comunidad. Léelo o llame por teléfono al (704) 638-2168 para una traducción en Español, gratis.

What 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. SRU 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. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

SRUs' intakes are located on the Rowan – Davie - Davidson County line at the confluence of the South Yadkin River and the Yadkin River. The Yadkin Pee Dee River basin, which has a watershed classification of WS-IV, is the second largest river basin in NC, covering 7,213 square miles of which 50% is forested. Rain that falls on the eastern slopes of the Blue Ridge Mountains in Caldwell, Wilkes, and Surry Counties begins the flow to Salisbury and High Rock Lake. For more information on flow of the Yadkin River, the USGS web site is https://waterdata.usgs.gov/monitoring-location/02116500.

Source Water Assessment Program (SWAP) Results

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 Salisbury-Rowan Water System 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	SWAP Report Date
Yadkin River	Moderate	September 2020

The complete SWAP Assessment report for Salisbury-Rowan Water System may be viewed on the Web at:
https://www.ncwater.org/SWAP_Reports/NC0180010_SWAP_Report-20200909.pdf

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

Protection of drinking water is everyone's responsibility. SRU offers educational programs for all ages about water concerns including: water and wastewater treatment and FOG (Fats, Oils and Grease).

You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides; they contain hazardous chemicals that can reach your drinking water source.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.

How Your Water Treatment Plant Works

The SRU Water Treatment Plant uses a pretreatment process called Actiflo, which is a high-rate clarification unit. Salisbury treats an annual average of 9.7 million gallons of water per day (MGD). There is off stream storage of 28 MG if the Yadkin River should ever be unsuitable for drinking water. Micro-Sand, Polymer, and Poly-Aluminum Chloride are added to the raw water as it enters the pretreatment units to begin the coagulation process. After mixing, the solids are removed by the pretreatment process and then the pretreatment process water is sent to the filters to remove all remaining solids. After filtration, Sodium hypochlorite, Fluoride and Zinc-orthophosphate are added and the pH is adjusted using liquid lime. Fluoride is added to promote stronger teeth, and zinc-orthophosphate helps to prevent pipe corrosion in the distribution system. Solids that are removed from the raw water are de-watered using a centrifuge and transported to the Rowan County landfill to be used as a beneficial soil cover.

Updates on SRU Projects

SRU utilizes Advanced Metering Infrastructure (AMI), giving customers the ability to monitor water usage via a free web-based customer service tool called Eye on Water. For more information on how to sign up, visit www.salisburync.gov/EyeOnWater or call (704) 638-5300.

In recent years, SRU has prioritized capital reinvestment. Major facility upgrades, as well as rehabilitation and replacement projects are continuing as indicated in the 10-Year Capital Improvement Plan (CIP), which prioritizes and forecasts future capital needs. Complementing the CIP is an asset management program for water and wastewater treatment facilities that assists in scheduling preventive maintenance, as well as identifying necessary upgrades and replacements. SRU is expanding the asset management program to include water distribution and sanitary sewer collection assets. Additionally, the water distribution system master plan and hydraulic model further enable to SRU to plan for associated capital improvement and rehabilitation projects.

SRU continues to safeguard and protect your water supply and has been actively involved in the Federal Energy Regulatory Commission (FERC) relicensing of the Yadkin Hydroelectric Project. Cube Hydro Carolinas (CUBE) is required by FERC to provide safe road access and address sedimentation and flooding that occurs at SRU's river pump station facilities due to its Project. The City of Salisbury reached an agreement with Cube Yadkin Generation to fund a portion of the $31.5 million project to relocate the City's raw water pump station at the Yadkin River. The City was also selected as a finalist for a $22.5 million FEMA Building Resilient Infrastructure and Communities (BRIC) grant for this project. The new station, which is expected to be constructed and operational by the end of 2027, will be located in a much more favorable location to allow access during severe flooding events. The pump station is a critical piece of the City's water supply infrastructure and provides drinking water for all Salisbury-Rowan Utilities' customers.

SRU also protects its customers and their water supply during periods of drought by conducting regular monitoring of the water supply to track the flow and volume of the Yadkin River and by encouraging wise use of water. A copy of the water shortage response plan can be found on our webpage at https://salisburync.gov/Government/Salisbury-Rowan-Utilities/Water-Quality

Important Drinking Water Definitions

Not-Applicable (N/A) – Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

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.

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.

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.

Total Organic Carbon (TOC) - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

Maximum Residual Disinfection Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Level Goal (MRDLG) – The level 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.

Variances and Exceptions – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.

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.

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.

Haloacetic Acids (HAA5) - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

Total Trihalomethanes (TTHM) - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.

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.

Salisbury-Rowan Utilities also provides water to the Town of East Spencer, Town of China Grove, and Northeast Rowan County water systems. SRU operates, maintains, and performs all water testing for these water systems. The tables of detected contaminants for samples collected within each individual water system are included in this report.

Salisbury-Rowan Utilities

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Contaminant (units)	Treatment Technique (TT) Violation Y/N	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) - Highest single turbidity measurement	N	0.09	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) - Lowest monthly percentage (%) of samples meeting turbidity limits	N	100%	N/A	Less than 95% of monthly turbidity measurements are ≤ 0.3 NTU	

* Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Contaminant (units)	Year Sampled	MRDL Violation Y/N	Your Water (RAA)	Range Low - High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2023	N	1.09	0.24-1.94	4.0	4.0	Water additive used to control microbes

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	**No**			N/A	80	Byproduct of drinking water disinfection
Location: B01			73	30-**95***			
Location: B02			55	18-74			
Location: B03			50	17-80			
Location: B04			60	22-**83***			
HAA5 (ppb)	2023	**No**			N/A	60	Byproduct of drinking water disinfection
Location: B01			47	34-**63***			
Location: B02			40	25-56			
Location: B03			39	26-57			
Location: B04			39	27-51			

*Two individual TTHM samples exceeded 80 ppb and one individual HAA sample exceeded 60 ppb. However, the locational running annual average was below the MCL for both parameters.

For TTHM: *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.*

For HAA5: *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	08/2023	0.162	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	08/2023	< 3	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low - High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	2/8/2023	N	0.72	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	1/25/2023	N	1.09	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Unregulated Contaminant Monitoring: PFAS Chemicals

Every five years, the EPA reviews a list of over 20,000 unregulated contaminants that are known or expected to be present in drinking water sources. They choose at least five of these contaminants based on their risk of causing negative health effects, and study them further under the Unregulated Contaminant Monitoring Rule (UCMR). In the current fifth iteration of the UCMR, the EPA chose 29 chemicals from the perfluorinated and polyfluorinated substances (PFAS) chemical group as well as lithium for further study. PFAS are a class of over 4,000 synthetic chemicals that have been used since the 1940s to make a variety of consumer products. These chemicals are widely used in manufacturing because they can make items stain resistant, water resistant, non-stick, and heat resistant.

The EPA is working to regulate these chemicals by setting maximum contaminant limits (MCLs). A critical step in creating MCLs is determining the concentration of PFAS chemicals present in drinking water. SRU is one of many water systems participating in the fifth UCMR. **We tested drinking water for 29 PFAS chemicals and lithium in October 2023 and none of these contaminants were detected.** We will continue testing quarterly through July 2024 and any detected contaminants will be included in the next water quality report.

Miscellaneous Water Characteristics and Contaminants

The PWS Section requires monitoring for miscellaneous contaminants and water characteristics, some for which the EPA has set national secondary maximum contaminant levels (SMCLs) because they may cause cosmetic effects or aesthetic effects (such as taste, odor, and/or color) in drinking water. The contaminants with SMCLs normally do not have any health effects and normally do not affect the safety of your water.

Contaminant (units)	Sample Date	Your Water (Annual average)	SMCL
Alkalinity (ppm)	Daily	26	N/A
Carbon Dioxide (ppm)	Daily	9.7	N/A
Hardness (ppm)	Daily	26	N/A
Iron (ppm)	Daily	0.007	0.3
Manganese (ppm)	Daily	0.003	0.05
Orthophosphate (ppm)	Daily	1.3	N/A
pH (standard units)	Daily	7.0	6.5 - 8.5
Sodium (ppm)	2/8/2023	10.345	N/A

Town of East Spencer

NC 01-80-060

Contaminant (units)	Year Sampled	MRDL Violation Y/N	Your Water (RAA)	Range Low - High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2023	N	0.93	0.45-1.47	4.0	4.0	Water additive used to control microbes

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	**No**			N/A	80	Byproduct of drinking water disinfection
Location: B01			64	24-**87***			
Location: B02			67	22-**87***			
HAA5 (ppb)	2023	**No**			N/A	60	Byproduct of drinking water disinfection
Location: B01			47	28-55			
Location: B02			44	28-**62***			

*Two individual TTHM samples exceeded 80 ppb and one individual HAA sample exceeded 60 ppb. However, the locational running annual average was below the MCL for both parameters.

For TTHM: *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.*
For HAA5: *Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.*

Town of China Grove

NC 01-80-040

Contaminant (units)	Year Sampled	MRDL Violation Y/N	Your Water (RAA)	Range Low - High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2023	N	0.77	0.38-1.35	4.0	4.0	Water additive used to control microbes

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	09/2022	< 0.050	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	09/2022	7	1	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	**No**			N/A	80	Byproduct of drinking water disinfection
Location: B01			59	27-**108***			
Location: B02			72	30-**114***			
HAA5 (ppb)	2023	**No**			N/A	60	Byproduct of drinking water disinfection
Location: B01			46	33-51			
Location: B02			45	30-43			

*Two individual TTHM sample exceeded 80 ppb. However, the locational running annual average was below the MCL.

For TTHM: *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.*

Contaminant (units)	Year Sampled	MRDL Violation Y/N	Your Water (RAA)	Range Low - High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2023	N	0.98	0.56-1.15	4.0	4.0	Water additive used to control microbes

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water(highest LRAA)	RangeLow - High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) Location B01	2023	No	69	23-79	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb) Location B01	2023	No	48	30-58	N/A	60	Byproduct of drinking water disinfection

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	10/2023	0.162	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	10/2023	13	1	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits