



2022 Annual Drinking Water Quality Report

Town of Selma PWS# 03-51-015
Town of Selma County Line PWS# 40-51-009



We are 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 your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make 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 because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact Ken Wall at (919) 965-9841 Ext 9001. We want our valued customers to be informed about their water utility.**

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. Town of Selma 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

In 2022, our Water Department produced and provided approximately 232 million gallons of water to our customers. Our ground water system uses a network of nine wells. Our wells are located in the following locations: #1 Well (River Road), #3 Well (West Anderson Street), #4 Well (West Street), #5 Well (West Street), #6 Well (Eason Lane), #7 Well (Smithfield Street), #8 Well (Noble Street), #9 Well (Pollock Street), and #10 Well (Florence Ave). Each well has a depth of 200 to 300 feet. Our Wells draw from the Cape Fear Aquifer. Our Treatment facility has five main steps to remove harmful contaminants: Aeration, Coagulation, Sedimentation, Filtration, and Disinfection. In addition, 13% of your water was purchased from the Johnston County Water Plant (PWS ID# NC 40-51-018). The Johnston County Water Plant is a Surface Water System drawing water from the Neuse River and is located one half mile east of Wilson Mills.

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 Town of Selma 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	Source Name	Susceptibility Rating	SWAP Report Date
Well #1	Moderate	September 2020	Well #7	Higher	September 2020
Well #3	Higher	September 2020	Well #8	Higher	September 2020
Well #4	Moderate	September 2020	Well #9	Moderate	September 2020
Well #5	Higher	September 2020	Well #10	Moderate	September 2020
Well #6	Moderate	September 2020			

The complete SWAP Assessment report for Town of Selma 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.

Violations that Your Water System Received for the Report Year

During 2022, or during any compliance period that ended in 2022, we received no violations.

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, 2022.** 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:

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.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in 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.

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.

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.

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.

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.

Tables of Detected Contaminants

Water Quality Data Tables Town of Selma PWS # (03-51-015)

REVISED TOTAL COLIFORM RULE:

Microbiological Contaminants in the Distribution System - For systems that collect *less than 40* samples per month

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	0	N/A	TT*	Naturally present in the environment
<i>E. coli</i> (presence or absence)	N	0	0	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> Note: If either an original routine sample and/or its repeat samples(s) are <i>E. coli</i> positive, a Tier 1 violation exists.	Human and animal fecal waste

* If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	7/22/20	0.082	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	7/22/20	16	1	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

Disinfectant Residuals	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2022	N	1.51	0.68 2.15	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 High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2022	N	15		N/A	80	Byproduct of drinking water disinfection
B01				16			
HAA5 (ppb)	2022	N	2		N/A	60	Byproduct of drinking water disinfection
B01				2			

Water Quality Data Tables Town of Selma County Line PWS # (40-51-009)

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	7/27/2021	ND	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	7/27/2021	ND	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

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 High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2022	N	56		N/A	80	Byproduct of drinking water disinfection
B01				32 87			
B02				24 80			
HAA5 (ppb)	2022	N	25		N/A	60	Byproduct of drinking water disinfection
B01				18 37			
B02				13 33			

Disinfectant Residuals Summary

Disinfectant Residuals	Year Sampled	MRDL Violation Y/N	Your Water (Highest RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2022	N	1.70	0.7 2.69	4	4.0	Water additive used to control microbes

Water Quality Data Table(s) Johnston County East PWS# 40-51-018

Stage 2 Disinfectant Byproduct Compliance- Based on Locational Running Average (LRAA) 2022

Disinfection Byproduct	Units	MCLG	MCL	Your Water (Highest LRAA)	Range Low High	Year Sampled	MCL/Violation (Yes / No)	Likely Source of Contamination
TTHM	ppb	N/A	80	73		2022	No	Byproduct of drinking water disinfection
B01					31 - 79			
B02					36 - 117			
B03					50 - 116			
B04					10 - 156			
HAA5	ppb	N/A	60	31		2022	No	Byproduct of drinking water chlorination
B01					14 - 46			
B02					17 - 37			
B03					16 - 40			
B04					3 - 35			

Inorganic Contaminants

Fluoride	ppm	4	4	0.30	N/A	2022	No	Erosion of natural deposits; Water additive which promote strong teeth; discharge from fertilizer and aluminum factories
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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 chance of getting cancer.

Lead and Copper Contaminants: Pregnant women, infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Contaminant	Units	Sample Date	Your Water	Number of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (90 th percentile)	ppm	July 2020	0.113	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (90 th percentile)	ppb	July 2020	0	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

Contaminant (units)	Year Sampled	MRDL Violation Y/N	Your Water (Highest RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2022	N	1.33	0.34 - 2.8	4	4.0	Water additive used to control microbes

Turbidity* 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	0.112 NTU	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	

Water Quality Data Table(s) Johnston County East PWS# 40-51-018 : Continued

*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.

Total Organic Carbon (TOC): 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 the alternative % removal, we are in violation of a Treatment Technique. (2022)							
Contaminant (units)	TT Violation Yes/No	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	MCL	Likely Source of Contamination	Compliance Method (Step 1 or ACC#__)
Total Organic Carbon (removal ratio) (TOC)-TREATED	No	1.26	1.07 - 1.39	N/A	TT	Naturally present in the environment	Step 1

Step 1 TOC Removal Requirements (%)

Source Water TOC (mg/L)	Source Water Alkalinity Mg/L as CaCO3 (in percentages)		
	0 – 60	> 60 – 120	> 120
> 2.0 – 4.0	35.0	25.0	15.0
> 4.0 – 8.0	45.0	35.0	25.0
> 8.0	50.0	40.0	30.0

Water Characteristics Contaminants: The PWS section requires monitoring of other misc contaminants, some for which the EPA has set national secondary drinking water standards (SMCLs) because they may cause cosmetic 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	Range Low High	Secondary MCL
Sodium (ppm)	April 2022	41.7	N/A	N/A
pH	April 2022	7.4	N/A	6.5 to 8.5

Synthetic Organic Chemical (SOC) Contaminants including Pesticides and Herbicides 2021							
Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Simazine (ppb)	2022	N	0.05	0.0 – 0.22	4	4	Herbicide runoff

2022 Wastewater Collection System Annual Report Permit # WQCS00294

The Town of Selma operates a wastewater collection system that contains approximately 41.8 miles of gravity sewer, 6.7 miles of force main, and 19 duplex wastewater pump stations. The system has 3437 taps that serve residential and commercial customers. All wastewater collected is treated by the Johnston County Wastewater Treatment Facility (NC0030716).

This institution is an equal opportunity provider and employer.