



# ANNUAL WATER QUALITY REPORT

Reporting Year 2023



*Presented By*  
**Town of Clayton**



PWS ID#: 03-51-020

## Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. 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 providing you with this information because informed customers are our best allies.

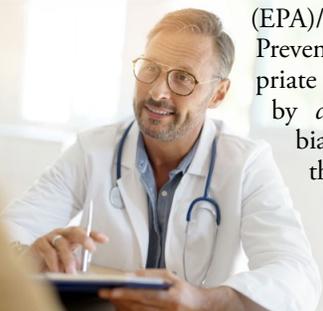
## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water and removing lead pipes, but we cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

## Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 at (800) 426-4791 or [water.epa.gov/drink/hotline](http://water.epa.gov/drink/hotline).



## What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants



Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit [bit.ly/3Z5AMm8](http://bit.ly/3Z5AMm8).

## QUESTIONS?

For more information, or for any questions relating to your drinking water, please contact Travis Jessup, Water Resources Operations Superintendent, at (919) 553-1530 or [water@townofclaytonnc.org](mailto:water@townofclaytonnc.org).

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



## Source Water Assessment

The North Carolina Department of Environment 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 is 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 is 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). It is important to understand that a higher susceptibility rating does not imply poor water quality, only the system's potential to become contaminated by PCSs in the assessment area. The assessment findings are summarized in the table below.

SUSCEPTIBILITY OF SOURCES TO POTENTIAL CONTAMINANT SOURCES (PCS)		
SOURCE NAME	SUSCEPTIBILITY RATING	SWAP REPORT DATE
Neuse River	Higher	September 2020

The complete SWAP report may be viewed at [ncwater.org/SWAP\\_Reports/NC0351020\\_SWAP\\_Report-20200909.pdf](http://ncwater.org/SWAP_Reports/NC0351020_SWAP_Report-20200909.pdf). Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this website may differ from the results that were available at the time this Consumer Confidence Report was prepared. If you are unable to access your SWAP report online, 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](mailto:swap@ncdenr.gov). Please indicate your system name and number and your name, mailing address, and phone number. If you have any questions about the SWAP report, please contact the source water assessment staff at (919) 707-9098.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Town of Clayton		Johnston County Utilities		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chloramines (ppm)	2023	[4]	[4]	1.93	0.2–3.8	2.61	ND–3.99	No	Water additive used to control microbes
Chlorine (ppm)	2023	[4]	[4]	0.54	0.3–3.0	0.72	0.06–3.45	No	Water additive used to control microbes
Fluoride (ppm)	2023	4	4	NA	NA	0.46	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	25.0	8.6–35.3	25	6–56	No	By-product of drinking water disinfection
Simazine (ppb)	2023	4	4	NA	NA	0.08	ND–0.16	No	Herbicide runoff
Total Organic Carbon [TOC] (removal ratio)	2023	TT <sup>1</sup>	NA	NA	NA	1.25	1.11–1.49	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	33.1	10.8–53.4	39	10–64	No	By-product of drinking water disinfection
Turbidity <sup>2</sup> (NTU)	2023	TT = 1 NTU	NA	NA	NA	0.114	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Town of Clayton		Johnston County Utilities		VIOLATION	TYPICAL SOURCE		
		AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES			AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES
Copper (ppm)	2023	1.3	1.3	0.147	0/30	0.133	0/	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2023	15	0	ND	0/30	ND	0/	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

## Where Does My Water Come From?

The Town of Clayton purchases all our water from Johnston County Public Utilities. The Johnston County water treatment facility is located 0.5 mile east of the Town of Wilsons Mills. The Johnston County water treatment facility's source is surface water from the Neuse River. Johnston County also purchases bulk water from the Town of Smithfield, Harnett County, City of Raleigh, City of Wilson, Sampson County, Northwest Sanitary District, and Southwest Wayne Sanitary District. To learn more about our watershed, visit the U.S. EPA's How's My Waterway at [epa.gov/waterdata/how-s-my-waterway](http://epa.gov/waterdata/how-s-my-waterway).



## Community Participation

For additional information or to offer comments, you are welcome to attend the bimonthly town council meetings held on the first and third Monday of every month at 6:00 p.m. in the Clayton Center Council Chambers, 111 East Second Street. You can also visit [townofclaytonnc.org](http://townofclaytonnc.org) and search for “water quality,” email [info@townofclaytonnc.org](mailto:info@townofclaytonnc.org), or follow us on Facebook and Instagram @townofclaytonnc or X @TownofClayton for news and information regarding our drinking water.

## OTHER REGULATED SUBSTANCES

				Town of Clayton			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
HAA5 [B01] (ppb)	2023	60	NA	17.8	11.1–19.8	No	By-product of drinking water disinfection
HAA5 [B02] (ppb)	2023	60	NA	17.8	8.6–19.9	No	By-product of drinking water disinfection
HAA5 [B03] (ppb)	2023	60	NA	33.7	26.1–35.3	No	By-product of drinking water disinfection
HAA5 [B04] (ppb)	2023	60	NA	30.7	20.0–35.2	No	By-product of drinking water disinfection
TTHM [B01] (ppb)	2023	80	NA	20.1	10.8–19.8	No	By-product of drinking water disinfection
TTHM [B02] (ppb)	2023	80	NA	25.6	10.9–31.5	No	By-product of drinking water disinfection
TTHM [B03] (ppb)	2023	80	NA	45.5	33.6–35.3	No	By-product of drinking water disinfection
TTHM [B04] (ppb)	2023	80	NA	41.0	26.1–35.2	No	By-product of drinking water disinfection

## SECONDARY SUBSTANCES

				Town of Clayton		Johnston County Utilities			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
pH (units)	2023	6.5–8.5	NA	8.80	7.22–9.75	7.1	NA	No	Naturally occurring

## UNREGULATED SUBSTANCES<sup>3</sup>

				Town of Clayton		Johnston County Utilities			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Calcium (ppm)	2023	8.26	7.07–9.75	NA	NA	NA			
Conductivity (µmho/cm)	2023	295	235–339	NA	NA	NA			
Hardness (ppm)	2023	43.38	33–63	NA	NA	NA			
Orthophosphate (ppm)	2023	1.21	0.14–5.09	NA	NA	NA			
Sodium (ppm)	2023	NA	NA	32.39	NA	NA			
Sulfate (ppm)	2023	NA	NA	19.6	NA	NA			

<sup>1</sup> Depending on the TOC in our source water, the system must have a certain percentage removal of TOC or achieve alternative compliance criteria. If we do not achieve that percentage removal, there is an alternative percentage removal. If we fail to meet the alternative percentage removal, we are in violation of a treatment technique.

<sup>2</sup> 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.

<sup>3</sup> Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (µg/L) (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (mg/L) (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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

**µmho/cm (micromhos per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

