

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020

*Presented By*





## Quality First

Once again, we are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

## 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.

## 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 a half mile east of the Town of Wilsons Mills. The Johnston County water treatment facilities' source water is surface water from the Neuse River. Johnston County also purchases bulk water from the Town of Smithfield and Harnett County. To learn more about our watershed on the internet, go to the U.S. EPA's Surf Your Watershed at [www.epa.gov/surf/](http://www.epa.gov/surf/).

## Community Participation

You can obtain additional information or share your comments at the Town Council meetings, which you are welcome to attend. These meetings are held on the first and third Monday of every month at 6:00 p.m. in the Clayton Center Council Chambers at 111 East Second Street, Clayton. You can also visit our website at [ClaytonNC.org](http://ClaytonNC.org) and search "water quality," email us at [info@TownofClaytonNC.org](mailto:info@TownofClaytonNC.org), or follow us on Facebook and Twitter @TownofClayton for news and information regarding our drinking water.

## 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. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.



## QUESTIONS?

For more information, or for any questions relating to your drinking water, please contact Byron W. Poelman, Distribution and Collection System Manager, at (919) 553-1530 or [bpoelman@townofclaytonnc.org](mailto:bpoelman@townofclaytonnc.org).

## 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 reports that include maps, background information, and a relative susceptibility rating of higher, moderate, or lower.

The relative susceptibility rating of each source 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). 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. The assessment findings are summarized in the table below:

SUSCEPTIBILITY OF SOURCES TO POTENTIAL CONTAMINANT SOURCES (PCSS)		
SOURCE NAME	SUSCEPTIBILITY RATING	SWAP REPORT DATE
Neuse River	Higher	September 2017

The complete SWAP report may be viewed online 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 website may differ from the results that were available at the time this CCR 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 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.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## 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.

During the fall of 2020, we did not report the sample results of our lead monitoring to the locations where the samples were taken in the required time frame. Upon being notified of this violation by the U.S. EPA, we immediately responded by reporting the required sample results and sending the certification to the state, as required by state and federal law. All of the sample results were below detection limits and, therefore, had no impact on public health and safety. We have already taken steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

We participated in the fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

### 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		
<b>Chloramines</b> (ppm)	2020	[4]	[4]	2.67	ND–5.6	2.75	ND–3.93	No	Water additive used to control microbes
<b>Chlorine</b> (ppm)	2020	[4]	[4]	1.8	0.2–2.7	0.56	0.06–3.67	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	2020	4	4	NA	NA	0.31	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAAs]</b> (ppb)	2020	60	NA	36.4 LRAA	22.5–43.8	26	12–34	No	By-product of drinking water disinfection
<b>Simazine</b> (ppb)	2020	4	4	NA	NA	0.08	ND–0.17	No	Herbicide runoff
<b>Total Organic Carbon [TOC]<sup>1</sup></b> (removal ratio)	2020	TT	NA	NA	NA	1.36	1.30–1.54	No	Naturally present in the environment
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2020	80	NA	46.7 LRAA	26.8–67.4	35	15–47	No	By-product of drinking water disinfection
<b>Turbidity<sup>2</sup></b> (NTU)	2020	TT = 1 NTU	NA	NA	NA	0.051	ND–0.051	No	Soil runoff
<b>Turbidity</b> (lowest monthly percent of samples meeting limit)	2020	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	AL	MCLG	Town of Clayton		Johnston County Utilities		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL		
<b>Copper</b> (ppm)	2020	1.3	1.3	0.072	0/32	0.119	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES <sup>3</sup>									
			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)	2020	6.5–8.5	NA	8.25	7.52–9.03	6.5	NA	No	Naturally occurring

UNREGULATED SUBSTANCES <sup>4</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
Sodium (ppm)	2020			NA	NA	36.8	NA	NA	

UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4) <sup>4</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
Bromochloroacetic Acid (ppb)	2020			3.528	0.505–5.21	5.28	3.0–7.7		By-product of drinking water disinfection
Bromodichloroacetic Acid (ppb)	2020			2.711	1.180–4.660	2.63	0.79–3.6		By-product of drinking water disinfection
Chlorodibromoacetic Acid (ppb)	2020			0.429	ND–0.602	0.96	ND–1.9		By-product of drinking water disinfection
Dibromoacetic Acid (ppb)	2020			0.279	ND–0.601	NA	NA		By-product of drinking water disinfection
Dichloroacetic Acid (ppb)	2020			13.518	2.49–18.5	NA	NA		By-product of drinking water disinfection
Germanium (ppb)	2020			0.454	ND–0.454	0.27	0.31–0.75		NA
Manganese (ppb)	2020			3.16	1.5–3.16	NA	NA		NA
Monobromoacetic Acid (ppb)	2020			0.039	ND–0.314	NA	NA		By-product of drinking water disinfection
Monochloroacetic Acid (ppb)	2020			0.174	ND–2.78	NA	NA		By-product of drinking water disinfection
Tribromoacetic Acid (ppb)	2020			ND	NA	NA	NA		By-product of drinking water disinfection
Trichloroacetic Acid (ppb)	2020			10.576	7.550–14.1	NA	NA		By-product of drinking water disinfection

<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 percent or more of the monthly samples be less than or equal to 0.3 NTU.

<sup>3</sup> Secondary contaminants, reported as required by the NC Public Water Supply Section, are substances that affect the taste, odor, or color of drinking water. These are aesthetic contaminants and normally do not have any health affects or affect the safety of your water.

<sup>4</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.

**LRAA (Locational Running Annual Average):** 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 By-products Rule.

**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 (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (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.