

A close-up photograph of water being poured from a glass pitcher into a clear glass. The water is captured in mid-pour, creating a dynamic splash and bubbles. The background is a blurred wooden surface.

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018



*Presented By*  
**Town of Clayton North**

## Safeguarding Public Health and Natural Resources for Now and Tomorrow

We are pleased to present once again our annual water quality report covering all water testing performed between January 1 and December 31, 2018. We appreciate your patience and continued support as we continually strive to improve our water system. Our ongoing mission is to deliver the best-quality drinking water at the highest level of customer service possible to all of our customers. As we continue to meet the requirements of the Safe Drinking Water Act, we are ensuring a future of healthy, clean drinking water for years to come.

Should you ever have any questions or concerns about your this report, we encourage you to contact us. After all, well-informed customers are our best allies. 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).

### Where Does My Water Come From?

The Town of Clayton purchases all of our water from Johnston County Public Utilities. The Johnston County water treatment facility is located one half-mile east of the Town of Wilson's Mills. The Johnston County water treatment facilities' source water is surface water from the Neuse River. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed Web site at [www.epa.gov/surf/](http://www.epa.gov/surf/).



### 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 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.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 those with cancer undergoing chemotherapy, those 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>.



### Community Participation

Additional information may be obtained, or your comments received, at the bimonthly Town Council meetings that you are welcome to attend. These meetings are on the first and third Mondays of every month at 6:00 p.m. in the Clayton Center Council Chambers, at 111 East Second Street, Clayton, North Carolina. You can also visit our website at [ClaytonNC.org](http://ClaytonNC.org) and search for Water Quality, e-mail 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.

## 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 that 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.

## FOG (Fats, Oils, and Grease)

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease, or any liquid from a pan used to cook food), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Just because a product claims to be flushable doesn't mean that it will not cause a back up in the sewer system, in your house or in the street. Here are some tips that you and your family can

follow to help maintain a well-run system now and in the future:

### NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

### ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty vegetable can, and dispose of it with your garbage. The Town will provide one can topper for each household to store FOG until ready for disposal.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes and applicators.

We remain vigilant in delivering the best-quality drinking water

## 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 Assessment 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	High	September 2017

The complete SWAP Assessment report 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](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.

## Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

### Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. Remember that detecting a substance does not mean the water is unsafe to drink. In some cases, the State recommends monitoring for certain substances less often than annually because the concentrations do not change frequently. In those cases, the most recent sample data are included, along with the year in which the samples were taken.

REGULATED SUBSTANCES									
				Town of Clayton North		Johnston County			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2018	[4]	[4]	0.96	0.20–2.0	1.59	0.22–3.27	No	Water additive used to control microbes
Fluoride (ppm)	2018	4	4	NA	NA	0.40	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2018	60	NA	27.3	15–38.5	37	0–52	No	By-product of drinking water disinfection
Simazine (ppb)	2018	4	4	NA	NA	0.27	NA	No	Herbicide runoff
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	65.2	48.8–72.2	66	6–84	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] <sup>1</sup> (removal ratio)	2018	TT	NA	NA	NA	1.62	1.36–1.73	No	Naturally present in the environment
Turbidity <sup>2</sup> (NTU)	2018	TT = 1 NTU	NA	NA	NA	0.385	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff

<sup>1</sup> Depending on the TOC in our source water, the system MUST have a certain percentage removal of TOC or must 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> Secondary Contaminants are substances that affect the taste, odor, and/or color of drinking water. These aesthetic contaminants normally do not have any health effects and normally do not affect the safety of your water.

<sup>4</sup> Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

SECONDARY SUBSTANCES <sup>3</sup>									
				Town of Clayton North		Johnston County			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
pH (Units)	2018	6.5–8.5	NA	7.83	7.15–8.62	7.4	NA	No	Naturally occurring

UNREGULATED SUBSTANCES <sup>4</sup>						
			Town of Clayton North		Johnston County	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2018	NA	NA	37.96	NA	Erosion of natural deposits

## 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 that, if exceeded, triggers treatment or other requirements that 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 Byproducts 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.