

2019 Annual Drinking Water Quality Report

Town of Princeton

Water System Number: 03-51-050

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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 source(s) 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 Glenn Holland at 919-252-9025. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at the Princeton Town Hall on the first Monday of each month at 7:00 pm.**

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. The Town of Princeton 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

The water used by our system is purchased from Johnston County East (40-51-018) which uses the Neuse River as its source. Johnston County also purchases bulk water from the Town of Smithfield (03-51-010) which uses the Neuse River as its source, and from Harnett Regional Water (03-43-045) which uses the Cape Fear River as its source.

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 Johnston County East 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)

Water Provider	Source Name	Susceptibility Rating	SWAP Report Date
Johnston County East	Neuse River	Higher	September 1, 2017
Town of Smithfield	Neuse River	Higher	September 13, 2017
Harnett Regional Water	Cape Fear River	Moderate	August 31, 2017

The complete SWAP Assessment report for Johnston County East (40-51-018), the Town of Smithfield (03-51-010), and Harnett Regional Water (03-43-045) 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.

Help Protect Your Source Water

Protection of drinking water is everyone’s responsibility. You can help protect your community’s drinking water source(s) in several ways: (examples: dispose of chemicals properly; take used motor oil to a recycling center, volunteer in your community to participate in group efforts to protect your source, etc.).

Violations that Your Water System Received for the Report Year

During 2019, or during any compliance period that ended in 2019, we did not receive any 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, 2019.** 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.

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

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.

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 – Town of Princeton (03-51-050)

Lead and Copper Contaminants – Town of Princeton

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	10-16-18	0	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	10-16-18	8	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary – Town of Princeton

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2019	N	0.97	0.62	1.55	4	4.0	Water additive used to control microbes
Chloramines (ppm)	2019	N	1.17	0.79	1.73	4	4.0	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Town of Princeton

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2019					N/A	80	Byproduct of drinking water disinfection
Location B01		N	58	29.5	85.6			
Location B02		N	59	31.9	86.8			
HAA5 (ppb)	2019					N/A	60	Byproduct of drinking water disinfection
Location B01		N	34	29	44			
Location B02		N	35	27	50			

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.*

Tables of Detected Contaminants – Johnston County East (40-51-018)

Turbidity* - Johnston County East

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	0.118 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	

* 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.

Inorganic Contaminants - Johnston County East

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	2019	N	0.26	N/A		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Unregulated UCMR 4 Contaminants – Johnston County East

Contaminant (units)	Sample Date	Your Water (average)	Range	
			Low	High
Bromochloroacetic acid (ppb)	Feb., May, Aug. 2019	3.95	1.0	6.8
Bromodichloroacetic acid (ppb)	Feb., May, Aug. 2019	3.09	ND	5.1
Chlorodibromoacetic acid (ppb)	Feb., May, Aug. 2019	0.79	ND	1.7

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides – Johnston County East

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Simazine (ppb)	2019	N	0.07	0.0	0.11	4	4	Herbicide runoff

Lead and Copper Contaminants – Johnston County East

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	July 2017	0.14	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	July 2017	0	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Total Organic Carbon (TOC) – Johnston County East

Contaminant (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#_)
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	1.48	1.38 – 1.73	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

Disinfectant Residuals Summary – Johnston County East

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2019	N	1.60	0.26	2.97	4	4.0	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA) Johnston County East

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2019	N	46			N/A	80	Byproduct of drinking water disinfection
Location B01				18	56			
Location B02				29	60			
Location B03				26	65			
Location B04				6	19			
HAA5 (ppb)	2019	N	29			N/A	60	Byproduct of drinking water disinfection
Location B01				17	33			

Location B02				25 - 30			
Location B03				24 - 35			
Location B04				6 - 11			

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.*

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (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.

Other Miscellaneous Water Characteristics Contaminants – Johnston County East

Contaminant (units)	Sample Date	Your Water	Range		SMCL
			Low	High	
Sodium (ppm)	April 2019	32.2	N/A		N/A
pH	April 2019	7.8	N/A		6.5 to 8.5

Special Note: During the months of May through October, Johnston County East supplements the water supply by purchasing water from Wayne Water Districts (04-96-065). In 2019, Wayne Water Districts exceeded the maximum contaminant level (MCL) for benzo(a)pyrene at the sample point that supplies Johnston County East. The standard level for benzo(a)pyrene is 0.0002 mg/L, and the average for Wayne Water Districts in 2019 was 0.0003 mg/L

The 2019 Consumer Confidence Report (CCR) for Wayne Water Districts can be viewed at:
https://waynewaterdistricts.com/documents/332/2019_CCR_combined.pdf

Tables of Detected Contaminants – Town of Smithfield (03-51-010)

Turbidity* - Town of Smithfield

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	0.252 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	

* 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.

Inorganic Contaminants – Town of Smithfield

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	2019	N	<0.01	N/A		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides – Town of Smithfield

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Simazine (ppb)	2019	N	0.1	0.0 – 2.4		4	4	Herbicide runoff

Alternative Compliance Criteria (ACC)

Alt. 1	Source Water TOC < 2.0 mg/L
Alt. 2	Treated Water TOC < 2.0 mg/L
Alt. 3	Source Water SUVA ≤ 2.0 L/mg-m
Alt. 4	Treated Water SUVA ≤ 2.0 L/mg-m
Alt. 5	Treated Water Alkalinity < 60 mg/L (for softening systems only)
Alt. 6	THM & HAA RAA's ≤ 1/2 MCL & uses only chlorine
Alt. 7	Source TOC RAA < 4.0 mg/L and Source Alkalinity > 60 mg/L and THM & HAA RAAs ≤ 1/2 MCL

Total Organic Carbon (TOC) – Town of Smithfield

Contaminant (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#_)
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	1.13	1.06 – 1.45	N/A	TT	Naturally present in the environment	Step 1 and Alt #4

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

Unregulated Contaminants – Town of Smithfield

Contaminant (units)	Sample Date	Your Water (average)	Range	
			Low	High
Bromochloroacetic acid (ug/L)	2019	2.16	N/A	
Bromodichloroacetic acid (ug/L)	2019	1.57	N/A	
Dichloroacetic acid (ug/L)	2019	17.5	N/A	
Trichloroacetic acid (ug/L)	2019	8.16	N/A	

Lead and Copper Contaminants – Town of Smithfield

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	2019	0.122	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	2019	8	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary – Town of Smithfield

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2019	N	1.06	0.39	1.64	4	4.0	Water additive used to control microbes
Chloramines (ppm)	2019	N	3.19	1.24	4.0	4	4.0	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA)

Town of Smithfield

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2019	N	36.0	24.0	65.0	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2019	N	25.0	24.8	51.8	N/A	60	Byproduct of drinking water disinfection

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.*

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (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.

Other Miscellaneous Water Characteristics Contaminants – Town of Smithfield

Contaminant (units)	Sample Date	Your Water	Range		SMCL
			Low	High	
Sodium (ppm)	2019	47.6	N/A		N/A
Sulfate (ppm)	2019	52.1	N/A		250 mg/L
pH	2019	8.0	N/A		6.5 to 8.5

Tables of Detected Contaminants – Harnett Regional Water (03-43-045)

Microbiological Contaminants 2019 – Harnett Regional Water

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	2%	0	>5% triggers level 1 assessment	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> <u>Note:</u> 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

Turbidity* - Harnett Regional Water

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	0.06 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	

* 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.

Inorganic Contaminants – Harnett Regional Water

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	2019	N	0.44	N/A		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants – Harnett Regional Water

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	2019	0.097	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	2019	ND	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Total Organic Carbon (TOC) – Harnett Regional Water

Contaminant (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#_)
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	1.44	1.20 – 1.64	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 CaCO ₃ (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

Disinfectant Residuals Summary – Harnett Regional Water

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	March 2019	N	1.59	0.4 – 2.95		4	4.0	Water additive used to control microbes
Chloramines (ppm)	2019	N	2.95	1.26 – 3.95		4	4.0	Water additive used to control microbes
Chlorine dioxide (ppb)	2019	N	21.5	0 - 228		800	800	Water additive used to control microbes

Stage 2 Disinfection Byproduct Compliance - Based upon Locational Running Annual Average (LRAA) Harnett Regional Water

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2019	N	34.9			N/A	80	Byproduct of drinking water disinfection
Location B01				14.7 – 41.7				
Location B02				13.3 – 43.5				
Location B03				12.0 – 37.1				
Location B04				15.1 – 51.6				

Location B05				14.6 – 39.0			
Location B06				12.8 – 33.0			
Location B07				11.4 – 43.0			
Location B08				15.2 – 43.8			
HAA5 (ppb)	2019	N	23.7		N/A	60	Byproduct of drinking water disinfection
Location B01				15.1 – 20.8			
Location B02				13.8 – 19.4			
Location B03				13.1 – 16.8			
Location B04				20.1 – 23.7			
Location B05				13.1 – 19.8			
Location B06				13.5 – 18.5			
Location B07				12.8 – 16.1			
Location B08				17.0 – 21.0			

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.*

Other Disinfection Byproducts Contaminants – Harnett Regional Water

Contaminant (units)	MCL/MRDL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
			Low	High			
Chlorite Distribution 2019 (ppm)	N	0.326	0.14	– 0.50	0.8	1.0	By-product of drinking water chlorination

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (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.

Other Miscellaneous Water Characteristics Contaminants – Harnett Regional Water

Contaminant (units)	Sample Date	Your Water	Range		SMCL
			Low	High	
Sodium (ppm)	2019	25.94		N/A	N/A
Sulfate (ppm)	2019	36.0		N/A	250 mg/L
pH	2019	7.8		N/A	6.5 to 8.5

Unregulated Contaminants Harnett County Water Treatment Plant 2019

Contaminant	B01 3/13/2019	B02 3/13/2019	B03 3/13/2019	B04 3/13/2019	B05 3/13/2019	B06 3/13/2019	B07 3/13/2019	B08 3/13/2019
Bromochloroacetic acid (ppb)	4.08	4.19	4.3	4.56	4.62	4.59	3.83	4.27
Bromodichloroacetic acid (ppb)	4.64	4.44	4.7	4.01	4.64	4.57	5.04	4.46
Chlorodibromacetic acid (ppb)	0.659	0.647	1.24	0.568	0.876	0.828	1.42	0.602
Dibromoacetic acid (ppb)	0.394	0.397	0.901	0.414	0.56	0.567	0.805	0.373
Dichloroacetic acid (ppb)	15.3	17.7	8.4	20.9	13.8	15.5	6.78	17.2
Monobromoacetic acid (ppb)				0.377				
Monochloroacetic acid (ppb)								
Tribromoacetic acid (ppb)	16	15.4	6.79	15.6	12.2	13.4	6.22	17.1
Contaminant	B01 6/12/2019	B02 6/12/2019	B03 6/12/2019	B04 6/12/2019	B05 6/12/2019	B06 6/12/2019	B07 6/12/2019	B08 6/12/2019
Bromochloroacetic acid (ppb)	7.31	5.35	4.99	8.31	5.74	6.33	4.93	6.72
Bromodichloroacetic acid (ppb)	5.42	5.12	5	4.06	5.12	5	4.76	5.33
Chlorodibromacetic acid (ppb)	4.13	3.91	3.84	3.56	3.93	4.17	3.52	4.23
Dibromoacetic acid (ppb)	4.85	3.25	3.03	4.39	3.82	4.31	3.05	4.49
Dichloroacetic acid (ppb)	6.43	4.83	4.19	9.61	4.82	5.58	4.29	5.78

Monobromoacetic acid (ppb)	0.745	0.546	0.517	0.632	0.6	0.671	0.49	0.636
Monochloroacetic acid (ppb)								
Tribromoacetic acid (ppb)								
Trichloroacetic acid (ppb)	1.43	1.53	1.5	1.83	1.38	1.33	1.48	1.39
Contaminant	B01 9/17/2019	B02 9/17/2019	B03 9/17/2019	B04 9/17/2019	B05 9/17/2019	B06 9/17/2019	B07 9/17/2019	B08 9/17/2019
Bromochloroacetic acid (ppb)	7.95	7.07	6.12	8.8	8.11	7.06	5.99	8.2
Bromodichloroacetic acid (ppb)	3.66	4.47	4.25	3.87	4.21	4.03	4.49	4.25
Chlorodibromacetic acid (ppb)	2.91	4.45	3.51	3.32	3.58	3.73	4.28	3.67
Dibromoacetic acid (ppb)	8.56	8.26	6.89	9.55	9.25	8	7	9.14
Dichloroacetic acid (ppb)	5.41	3.99	3.26	7.11	5.02	4.31	3.15	5.19
Monobromoacetic acid (ppb)	0.88	1.16	1.11	1.18	1.06	1.17	1.04	0.994
Monochloroacetic acid (ppb)			2.08			2.53		
Tribromoacetic acid (ppb)	3.81	5.46	5.02	3.97	4.61	4.73	5.04	4.59
Trichloroacetic acid (ppb)	0.929	0.855	0.828	0.854	0.907	0.849	0.922	0.944
Contaminant	B01 12/4/2019	B02 12/4/2019	B03 12/4/2019	B04 1 2/4/2019	B05 12/4/2019	B06 12/4/2019	B07 12/4/2019	B08 12/4/2019
Bromochloroacetic acid (ppb)	5.84	5.3	4.42	6.17	5.64	4.8	4.34	6.02
Bromodichloroacetic acid (ppb)	4.02	4	4.45	4.18	4.36	4.23	4.5	4.29
Chlorodibromacetic acid (ppb)	2.19	2.18	2.72	2.84	2.72	2.39	2.58	2.35
Dibromoacetic acid (ppb)								
Dichloroacetic acid (ppb)	5.51	4.92	4	6.73	5.17	4.64	3.95	5.68
Monobromoacetic acid (ppb)	0.732	0.736	0.619	0.435	0.77	0.595	0.602	0.627
Monochloroacetic acid (ppb)								
Tribromoacetic acid (ppb)								
Trichloroacetic acid (ppb)	1.71	1.62	1.66	1.53	1.62	1.61	1.72	1.7