City of Kinston
PWSID # 04-54-010
2020 Water Quality Report

Where Does Our Water Come From?

The City of Kinston is pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services that we deliver to you every day. 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. Our water source is ground water which is drawn from the Black Creek and Upper Cape Fear Aquifers. The City's use of ground water as a water supply was restricted in 2008 due to the Central Coastal Plain Capacity Use Area regulations. The Neuse Regional Water And Sewer Authority , a surface water treatment plant began supplying drinking water to the City Of Kinston in 2008.

How is Our Water Treated?

The City of Kinston has a total of 17 ground water wells that pump water from these aquifers. At each well site we have pumps to inject chlorine and ammonia into the water distribution system. Chlorine and ammonia are added to the system for disinfection and fluoride is added at the WASA plant to aid in the prevention of tooth decay.

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. City of Kinston 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 regulation establish limits for contaminants in bottled water, which must provide the same protection for public health.

Would You Like To Know More?

We want our valued customers to be informed about their water utility. If you have any questions about this report or concerning your water utility, please contact Joey Pittman at (252) 939-3282. You may also attend any of the regularly scheduled City Council meetings, held on the 1st and 3rd Monday night of each month in the council chambers at 207 E. King St at 5:30pm or the Utility Advisory Commission meetings on the first Wednesday of each month at 5:00 pm at the Public Service Complex.

Terms & Abbreviations

In this table you will find many terms and abbreviations that you might not be familiar with. To help you better understand these terms, we have provided the following definitions:
Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
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 - 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.
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum Contaminant Level Goal - The "Goal" (MCLG) is 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.

Contaminants and MCLs

The City of Kinston routinely monitors for over 100 contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2020 and the last test results of contaminants that were not due to be tested in 2020. As water travels over the land or underground it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose 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 at 800-426-4791.**
MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. 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.

Inorganic Contaminants

Contaminant	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	2/5/2019	N	.53	ND-.53	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants

Contaminant	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppm) (90th percentile)	2/14/2018	.118	0	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (90th percentile)	2/14/2018	N/D	0	4	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

Microbiological Contaminants **2020**

TEST RESULTS					
Contaminant	Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination

Total Coliform Bacteria	N	1	0	5% of monthly samples are positive	Naturally present in the environment

Nitrate/Nitrite Contaminants

Contaminant	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	2/10/2020	N	N/D	N/D	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Volatile Organic Contaminants

Contaminant	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Xylenes	11/5/2020	N	.0074	ND-.0074	10	10	Discharge from petroleum factories; discharge from chemical factories

Stage 2 Disinfection Byproduct Compliance

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (AVG)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2020	N	22.25	1.80-42.7	N/A	80	By-product of drinking water disinfection
HAA5 (ppb)	2020	N	18.9	1.30-36.5	N/A	60	By-product of drinking water disinfection

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	2020	N	2.24	1-4	4	4.0	Water additive used to control microbes
Chloramines (ppm)	2020	N	2.54	1-4	4	4.0	Water additive used to control microbes

As you can see by the tables, all of the contaminants tested were within allowable limits. We're proud that your drinking water meets or exceeds all state and federal requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water is safe at these levels.

Special Health Concerns

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 healthcare providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological's are available from the Safe Drinking Water Hotline **(800-426-4791).**

Conclusion

Please call our office if you have questions. Telephone # **(252) 939-3282**
Contact person - Joey Pittman
Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments.Thank you for understanding. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is ground water and purchased surface water. The ground water wells are in the black creek acquifer and the purchased surface water is from Neuse Regional water plant.

Source Water Assessment Program (SWAP) Results

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 assessment 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 the **CITY OF KINSTON** 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 Water Sources to Potential Contaminant Sources (PCSs)

The complete SWAP Assessment report for the CITY OF KINSTON may be viewed on the web at: www.ncwater.org/pws/swap To obtain a printed copy of this report please mail a written request to : Source Water Assessment Program - Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap @ ncmail.net. Please give your system name, PWSID, 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 919-707-9078.
It is important to understand that a susceptibility rating of " higher " does not imply poor water quality, only the systems potential to become contaminated by PCSs in the assessment area.

Water Source Name	Susceptibility Rating
Wells 1,3,4,6,7,9,11,14,17,19	Moderate
Wells 5,8,12,13,15,18,20,21,16	Lower

Neuse Regional Water and Sewer Authority

2020 Detected Contaminants

Substances (Measuring Units)	Highest Level Allowed [MCL]	Highest Level Detected	Range Detected	Description and Origin of Substance
Sodium (ppm)	n/a	**23.9**	23.9	Naturally occurring mineral; also a byproduct of disinfection processes.
Fluoride (ppm)	4.0	**0.90**	0.55 - 0.90	Natural occurring mineral; also added to water to promote dental health.
Sulfate (ppm)	n/a	**28.0**	28.0	Natural occurring mineral; also a byproduct of conventional water treatment.
Total Organic Carbon Raw (ppm)	TT*	**9.80**	5.67 - 9.80	Organic matter naturally present in the environment.
Total Organic Carbon Treated (ppm)	TT*	**2.90**	2.10 - 2.90	Organic matter naturally present in the environment.
Turbidity (NTU)	1.0 and 95% of samples below 0.3 (Treatment Technique)	**0.46 and 99.9% of samples below 0.3**	n/a	Measure of cloudiness in water; may be caused by inorganic soil particles or fragments of organic matter that can interfere with treatment.
pH (units)	9.0	8.1	7.5 - 8.1	Measure of the acidity of water, with acidity decreasing with increasing pH value; pH scale ranges 0-14.

TT = Treatment Technique

Surface Plant Filtration Efficiency

Total Organic Carbon Treated	RR*	**1.28**	1.28 - 1.52	Ratio of organic matter removed from treated water as a measure of process efficiency; must meet a minimum 1.0 ratio.

RR = Removal Ratio

Source Name	Suceptibility Rating	SWAP Report Date
Neuse River	**Higher**	September 2020