

2023

Maple Hill Drinking Water Quality Report

We are pleased to present to you the 2023 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 Pender County Utilities at (910) 259-1570. We want our valued customers to be informed about their water utility. If you want to learn more, please attend Pender County Board of Commissioners' meetings on the first and third Monday of each month at 4:00 p.m. All meetings are open to the public in the Public Assembly Room located at 805 South Walker Street, Burgaw, NC 28425 unless otherwise noted.



Pender County Utilities
605 East Fremont Street
Burgaw, NC 28425
910-259-1570 (8AM – 5PM)
Maple Hill System ID# 04-71-025

Un informe español de calidad del agua 2023 está disponible: <http://www.pendercountync.gov/utl/>

After 5PM – “Emergencies”
Water main breaks
or other emergencies
910-471-1041

What the 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. 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 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 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. Pender County Utilities 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 and 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 <http://epa.gov/safewater/lead>.



<http://www.epa.gov/safewater/lead>
Safe Drinking Water Hotline
800-426-4791



<https://www.cdc.gov/healthywater/drinking>
800-232-4636

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 Maple Hill Water and Sewer District purchases water from the Onslow Water and Sewer Authority (ONWASA). ONWASA utilizes groundwater wells located throughout Onslow County as its water source. Thirteen wells draw from the Black River and Pee Dee Aquifers; these require minimal treatment prior to use. The Hubert and Dixon water treatment facilities are served from a total of twenty-four wells that draw water from the Castle Hayne Aquifer. In addition, ONWASA purchases water intermittently from a treatment facility at the New River Air Station aboard Marine Corps Base Camp Lejeune.

A staff of highly trained, state certified water treatment operators, a state certified laboratory manager, and a team of skilled maintenance technicians keep all the facilities fully operational to ensure a safe, high quality, and reliable drinking water source.

ONWASA and Marine Corps Base Camp Lejeune's 2023 water quality reports can be viewed at: <https://www.onwasa.com/DocumentCenter/View/4644>



SOURCE WATER ASSESSMENT PROGRAM (SWAP)

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 for 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 ONWASA 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:

<i>Onslow Water & Sewer Authority NCO4-67-035</i>		
Source Name	Susceptibility Rating	SWAP Report Date
Well #1	Lower	September 2020
R2	Moderate	September 2020
Dixon 1	Lower	September 2020
Hubert 1	Moderate	September 2020

The complete SWAP Assessment report for ONWASA 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. We have implemented the following source water protection actions: Water Shortage Response Plan, Drought Management Plan, and Water Conservation Plan. You can help protect your community's drinking water source(s) in several ways:

- Disposal of fertilizers, pesticides, paints, and medications properly
- Taking motor oil to a recycling center
- Volunteering in your community to protect your drinking water source (Cape Fear River)

Recycling, Disposal, and Earth Day information will be

posted on: pendercountync.gov,



, &



Abbreviations

AL – Action Level; the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

LOD – Limit of Detection

Level 1 Assessment – A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment – A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

LRAA – Locational Running Annual Average; The average of sample analytical results for samples taken at a monitoring location during the previous for 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 Disinfection 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 Disinfection 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.

NTU – Nephelometric Turbidity Unit; is the measurement of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ND – Non-Detects; Laboratory analysis indicates that the contaminant is not present at the level of detection set for the methodology used.

N/A – Not-Applicable; Information not applicable/not required for that water system or for that rule.

ppm – Parts per million or mg/L – Milligrams per liter; One part per million corresponds to one minute in two years or a single penny in \$10,000.

ppb – Parts per billion or ug/L – Micrograms per liter; One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

ppt – Parts per trillion or nanograms/L – Nanograms per liter; One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

pCi/L – Picocuries per liter; is a measure of radioactivity in water.

RAA – Running Annual Average; The average of sample analytical results for samples taken during the previous four calendar quarters.

TT – Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Variations and Exceptions – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.

PUBLIC NOTICE

During 2023, or during any compliance period that ended in 2023, Pender County Utilities received a monitoring violation (Tier 2) without penalty that covered the period of January to December 2023. We have consulted with State officials and reviewed all sample compliance periods with all staff to ensure this does not happen again.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: June 30, 2023

Pender County Utilities – Maple Hill Water and Sewer District has levels of Total Trihalomethanes above Drinking Water Standards

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did (are doing) to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified in the table below, we exceed the standard, or maximum contaminant level (MCL) for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time. The standard for TOTAL TRIHALOMETHANES is 0.080 mg/L. Over the reference compliance period, the sample location with the highest average level of TOTAL TRIHALOMETHANES had a concentration of 0.087 mg/L.

(TTHM) – Total Trihalomethanes – include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane

Contaminant Group	Facility ID NO. / Sample Point ID	Compliance Period Begin Date	Number of Samples / Sampling Frequency	When Samples Were Taken (Returned to Compliance)
TTHMs	04-71-025 / B01	January 1, 2023	4 / Quarterly	Samples are over the (LRAA) Locational Running Annual Average
TTHMs	04-71-025 / B01	April 1, 2023	4 / Quarterly	Samples remain over the (LRAA) Locational Running Annual Average
TTHMs	04-71-025 / B01	July 1, 2023	4 / Quarterly	All samples meet the ML Requirements but remain over the (LRAA) Locational Running Annual Average
TTHMs	04-71-025 / B01	October 1, 2023	4 / Quarterly	All samples meet the ML Requirements but remain over the (LRAA) Locational Running Annual Average
TTHMs	04-71-025 / B02	October 1, 2023	4 / Quarterly	Samples remain over the (LRAA) Locational Running Annual Average

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.
- If you have severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water.

What is being done?

- Flushing stations have been installed in the Maple Hill Distribution System.
- A mixer has been added to the Maple Hill Water Tower.
- Additional TTHM sampling is currently taking place.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (people in apartments, nursing homes, schools, and business). You can do this by posting this notice in a public place or distributing copies by hand or mail.

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 following tables 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 these tables is from testing done January 1 through December 31, 2023. 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.

Lead and Copper Contaminants

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, Pender County Utilities 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>.

Contaminant (Units)	Sample Date	Your Water (90th Percentile)	MCLG / MCL	# of sites found above the AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	2022	0.239	1.3 / 1.3 = AL	0	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	2022	<3.0	0 / 15 = AL	0	Corrosion of household plumbing systems; erosion of natural deposits

AL = Action Level

Disinfectant Residuals

The most common use of chlorine in water treatment is to disinfect water. Chlorine kills bacteria, viruses, and other microorganisms that cause disease and immediate illness. In addition to disinfection, chlorine can be effectively used to oxidize iron, manganese, and hydrogen sulfide to facilitate their removal, to reduce color in water, and to aid in such treatment process as sedimentation and filtration.

Chlorine is effective and continues to keep the water safe as it travels from the treatment plant to the consumer's tap.

Contaminant (units)	MRDL Violation Y/N	Your Water (Highest RAA)	Range Low to High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	NO	0.71	0.2 - 1.24	4	4	Water Additive used to control microbes

Microbiological Contaminants

Total coliforms are a group of related bacteria that are (with few exceptions) not harmful to humans. A variety of bacteria, parasites, and viruses, known as pathogens, can potentially cause health problems if humans ingest them. EPA considers total coliforms a useful indicator of other pathogens for drinking water. Total coliforms are used to determine the adequacy of water treatment and the integrity of the distribution system.

Pender County Utilities test one sample per month for Total Coliform in the Maple Hill Water and Sewer District. Pender County Utilities is pleased to report that zero Total Coliform samples were detected in 2023.

Contaminant (Units)	MCL Violation (Yes / No)	MCL	Your Water	MCLG	Likely Source of Contamination
Total Coliform Bacteria (Present or Absence)	No	>5% triggers level 1 assessment	0%	N/A	Naturally present in the environment
E. Coli (Present or Absence)	NO	positive and either is E. Coli - positive or system fails to take repeat samples following E. Coli - positive routine sample or system fails to analyze total coliform - positive repeat sample for E. Coli Note: If either an original routine sample and/or its repeat sample(s) are E. Coli positive a Tier 1 violation exists.	0%	0	Human and animal fecal waste

If a system collecting fewer than 40 samples per month has two or more positive samples in one month, the system has a MCL violation. E. Coli are bacteria whose presence indicates that the water may be contaminated with human or animal waste. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Disinfection Byproducts

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water Highest (LRAA)	Range Low to High	MCLG	MCL	Likely Source of Contamination
THM (ppb)	2023	Y			N/A	80	Byproduct of drinking water disinfection
B01			87	77-105			
B02			86	63-108			
HAA5 (ppb)	2023	N			N/A	60	Byproduct of drinking water disinfection
B01			16	11-21			
B02			15	13-18			

THM: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, central nervous systems, and may have an increased risk of getting cancer.

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.

What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made 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.

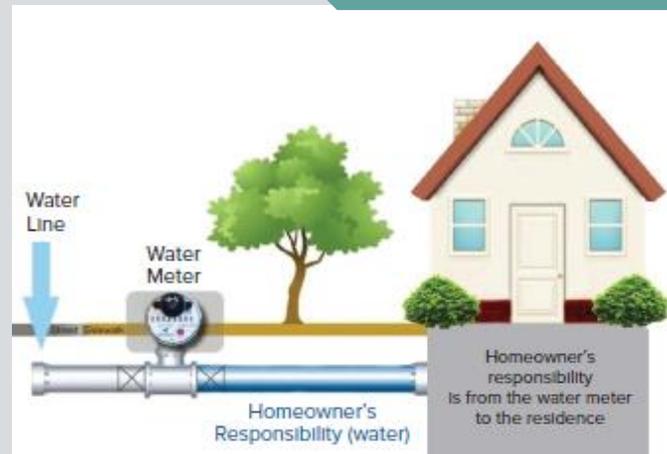
The most studied PFAS are perfluorooctanoic Acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

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.

Water Leaks?



It is the customer's responsibility to repair any leaks past their water meter. If you suspect a leak on PCU's side of the meter, please call 910-259-1570 (8 AM to 5 PM) after 5PM 910-471-1041

PENDER COUNTY EMERGENCY ALERT SYSTEM

Receive community information instantly!

Sign up today!

Be safe tomorrow!

Mobile Alerts: text your zip code to 8877

Or

<https://local.nixle.com/pender-county-nc>

Or

Download the Everbridge (Nixle Alert) app



Changes in water pressure, such as water main breaks or fire hydrants are used or flushed, can occasionally cause drinking water to be discolored. The discoloration is caused by sediments in pipes mixing with clear water. The sediments occur naturally from the oxidation of iron in pipes. While discolored water is ordinarily safe to drink, it is best to flush any discolored water from pipes by turning on all cold-water faucets. Avoid turning on any hot-water faucets, so the discolored water is not drawn into water heaters.

“Committed to Quality”

This Institution is an equal opportunity provider and employer.