

Pender County Utilities

Maple Hill

2022 Annual Drinking Water Quality Report

System ID: 04-71-025

910-259-1570



We are pleased to present to you the 2022 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.



WHO WE ARE:

Operators, Meter Readers,
Customer Service, Technicians ,
Mechanics, Engineers , and
Scientists

WHAT WE MANAGE:

357 Residential Water Users
21 Commercial Water Users
157 Residential Sewer Users
1 Storage Tank
1 Wastewater Treatment Facility



WHAT WE DO:

Provide our customers with a
safe and dependable supply of
drinking water.

WHO WE SERVE:

The residents of Maple Hill



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. 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).

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.

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://www.epa.gov/safewater/lead>.

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 purchased water from the Chinquapin Water Association from January to April 2022. The water that is used by this system is groundwater and located at four well sites owned and operated by the Chinquapin Water Association. From April 2022 to current date Pender County purchases water from 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 2022 water quality reports can be viewed at <https://www.onwasa.com/DocumentCenter/View/4384/CCR-2022-WATER-QUALITY-REPORT>

Chinquapin Water Association's 2022 water quality report follows this document.



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 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 Chinquapin Water and 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:

SUSCEPTIBILITY OF SOURCES TO POTENTIAL CONTAMINANT SOURCES PCSs)

| <i>Chinquapin Water Association NC 04-31-050</i> | | |
|---------------------------------------------------------|------------------------------|-------------------------|
| Source Name | Susceptibility Rating | SWAP Report Date |
| Well #1 | Lower | September 2020 |
| Well #2 | Lower | September 2020 |
| Well #3 | Lower | September 2020 |
| Well #4 | Lower | September 2020 |

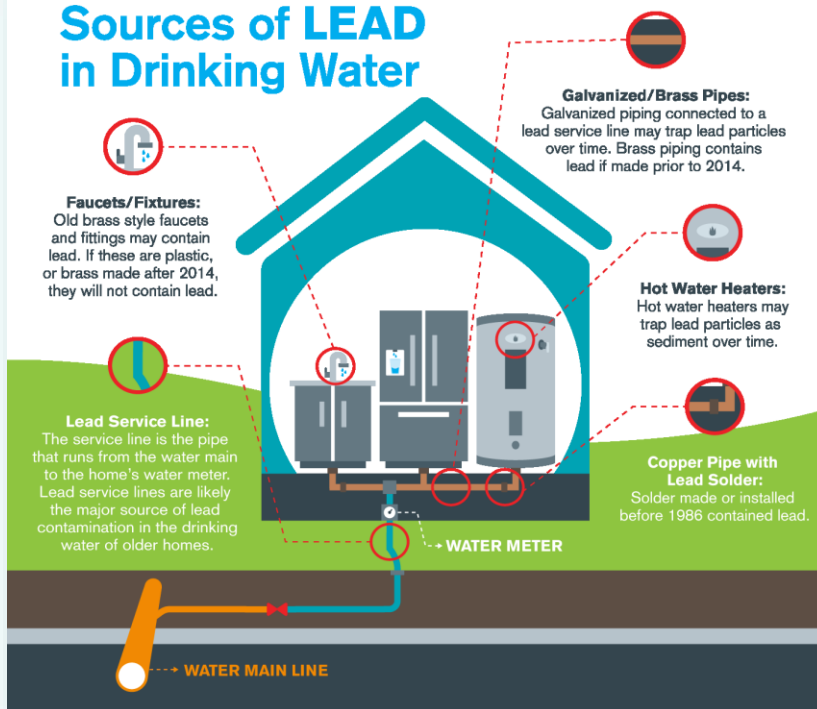
| <i>Onslow Water & Sewer Authority NCo4-67-035</i> | | |
|--------------------------------------------------------------|------------------------------|-------------------------|
| Source Name | Susceptibility Rating | SWAP Report Date |
| Well #1 | Lower | September 2020 |
| R2 | Moderate | September 2020 |
| Dixon 1 | Lower | September 2020 |
| Hubert 1 | Moderate | September 2020 |

The complete SWAP Assessment report for Chinquapin Water and 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.



Sources of LEAD in Drinking Water



Do you have a lead service line to your home?

Lead in drinking water has been a concern in the water industry for decades. The primary sources of lead in drinking water are corrosion in drinking water pipes, household plumbing, and appliances maintained by homeowners.

Throughout Pender County, homes may rely on aging plumbing systems that haven't been updated to meet newer standards. When internal plumbing components contain lead, residents and customers are more likely to be exposed to these metals as they leach into drinking water from faucets and other plumbing materials.

What is New with Lead and Copper:

In 1991, EPA published a regulation to control lead and copper in drinking water. This regulation is known as the lead and copper rule which can be found in the Code of Federal Regulations (40 CFR Part 141 Subpart I). In 2021 the lead and copper rule was revised to identify and replace all lead service lines. Lead is a common metallic element in nature and can be found in air, soil, and water. Lead was used for centuries in plumbing because of its pliability and resistance to leaks. In 1986, lead pipes were banned in the United States and plumbing materials were required to meet federal "lead free" specifications.

The new EPA standards require utilities to complete an inventory of their and customer water service lines by fall of 2024. Rather than wait for the deadline, PCU's staff launched the start of our inventory in 2021. Phase 1 of the inventory is to gather the date which the water customers' home was built. Build date of mobile homes is a large missing piece of the inventory data. Phase 2 will be to create a database of water service line materials, including lead.

Pender County Utilities is seeking customers to participate in the Safe Water Act Lead and Copper Rule monitoring program. Pender County Utilities' water mains are not made of lead. However, the water service line running from the water meter to your home may be made of lead. Pender County Utilities requests your help to determine the type of service line that is going from our water main to your home to complete our lead and copper sampling site plan.

To effectively monitor and manage lead and copper in drinking water utilities often implement corrosion-control measures. For years, ONWASA has had a Corrosion-Control Program that is highly effective at preventing pipes from leaching metals, especially lead. Orthophosphate, a corrosion-control inhibiting mineral that is safe to drink, creates a protective coating on pipes as it flows through the water system and is the key to a successful Corrosion-Control Program. ONWASA's Lead and Copper Sampling Program also ensures corrosion control is working effectively by having staff work with our customers to sample water from homes across the county. ONWASA's corrosion control program has successfully managed the threat of lead in our drinking water. However, we cannot control the variety of materials used inside the home's plumbing system.

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 Contaminate Level; The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs allow for a margin of safety.

MCLG – Maximum Contaminant Level Goal; The level of a contaminate 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 Goal; 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 more than 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; This is measurement of the mass of a chemical or contaminate per unit volume of water.

ppb – Parts per billion or ug/L – Micrograms per liter; is the number of units of mass of a contaminant per 1000 million units of total mass.

ppt - Parts per trillion or nanograms/L – Nanograms per liter; is the number of units of mass of a contaminant per 100000 billion units of total mass.

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

RAA – Running Annual Average; The average of samples taken at all locations throughout the system.

SDWA – Safe Drinking Water Act

S.U. – Standard Units (pH measurements)

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

µmhos/cm – microhos per centimeter, unit of measurement for conductivity which is the reciprocal of the unit of resistance.

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

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)



Maple Hill Solid Waste Convenience Center, 875 Maple Hill School Road, Maple Hill, NC

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, 2022.** 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 | 0.39 | 0.15 - 0.74 | 4 | 4 | Water Additive used to control microbes |

Analyses of Interest

The Public Water Supply 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.

Analyses of Interest Sample Point (E02) – ONWASA

| Contaminant (Units) | Your Water (annual average) | Range Low to High | SMCL | Likely Source of Contamination |
|-------------------------|-----------------------------|-------------------|-----------|--------------------------------|
| pH (S.U.) | 8.50 | N/A | 6.5 - 8.5 | N/A |
| Alkalinity (ppm) | 350 | N/A | N/A | Soil Runoff |
| Calcium (ppm) | 3.12 | N/A | N/A | N/A |
| Silica (ppm) | 11.8 | N/A | N/A | N/A |
| Conductivity (µmhos/cm) | 838 | N/A | N/A | N/A |
| Orthophosphate (ppm) | 1.21 | N/A | N/A | N/A |

Analyses of Interest Sample Point (701) – Chinquapin

| Contaminant (Units) | Your Water (annual average) | Range Low to High | SMCL | Likely Source of Contamination |
|-------------------------|-----------------------------|-------------------|-----------|--------------------------------|
| pH (S.U.) | 8.30 | 8.3 | 6.5 - 8.5 | N/A |
| Alkalinity (ppm) | 263 | 250 - 275 | N/A | Soil Runoff |
| Calcium (ppm) | 7.52 | 2.13 - 12.9 | N/A | N/A |
| Silica (ppm) | 11.6 | 13.5 - 19.5 | N/A | N/A |
| Conductivity (µmhos/cm) | 557 | 531 - 583 | N/A | N/A |
| Orthophosphate (ppm) | 0.4 | 0.35 - 0.44 | N/A | N/A |

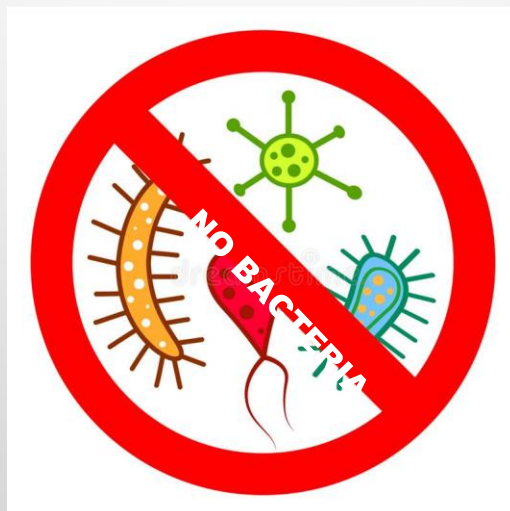
Microbiological Contaminants

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 district. PCU is pleased to report that zero Total Coliform samples were detected in 2022.

| 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 | Routine and repeat samples are total coliform - 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 - Fecal coliforms and E. Coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. 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

Based upon Locational Running Annual Average (LRAA)

| Disinfection Byproduct | Year Sampled | MCL Violation Y/N | Your Water Highest (LRAA) | Range Low to High | MCLG | MCL | Likely Source of Contamination |
|------------------------|--------------|-------------------|---------------------------|-------------------|------|-----|------------------------------------------|
| THM (ppb) | 2022 | N | | | N/A | 80 | Byproduct of drinking water disinfection |
| B01 | | | 83 | 74 - 91 | | | |
| B02 | | | 67 | 45 - 88 | | | |
| HAA5 (ppb) | 2022 | N | | | N/A | 60 | Byproduct of drinking water disinfection |
| B01 | | | 12 | 12 - 13 | | | |
| B02 | | | 8 | 7 - 8 | | | |

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.

Drink More Water!





Water Discoloration

Changes in water pressure, such as when water mains break 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 in your home or business. Avoid turning on any hot-water faucets, so the discolored water is not drawn into water heaters.

Frequently Asked Questions

What is the pink slime or black ring in my bathroom? Biofilm is not from our water supply. These organisms are naturally in the environment and love the humid and damp areas. They are not harmful.

Why does my water smell like rotten eggs or sulfur?

A rotten egg or sulfur smell usually indicates bacteria growing in your drain or water heater. When hair or other materials clog the drain and decompose over time and water faucet is turned on it will cause a sulfur smell to drift up.

Why does my tap water appear milky?

In the winter, water contains more oxygen or air because it is cold. When water is delivered to your house, it warms up and releases oxygen. As the glass of water sits, the water clears from the bottom of the glass upward as the air bubbles rise and escape.



How to watch for leaks

Turn off all water indoors and outdoors including sprinklers, ice maker, etc. If the flow indicator moves, this may indicate a leak in an appliance or pipe. If the meter shows no obvious movement, note the reading on the meter and return in 4 hours to see if there is any change. Note: if you use water during that time, the meter reading will change.

It is the customer's responsibility to repair any leak past their water meter.

“Committed to Quality”

Pender County Utilities
605 East Fremont Street
Burgaw, NC 28425
910-259-1570 (8AM to 5PM)



Emergencies - after 5PM
Water main breaks or other
emergencies
910-471-1041

This institution is an equal opportunity provider and employer.

2022 Annual Drinking Water Quality Report

Chinquapin Water Association

Water System Number: NC 04-31-050

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 Mobley at (910) 285-2478. 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 Chinquapin Water Office on the second Monday night of each month at 7:00pm.**

What EPA Wants You to Know

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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 that is used by this system is ground water located throughout the Chinquapin Water Association.

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 Chinquapin Water Association 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)

| Source Name | Susceptibility Rating | SWAP Report Date |
|-------------|-----------------------|--------------------|
| Well # 1 | Lower | September 10, 2020 |
| Well # 2 | Lower | September 10, 2020 |
| Well # 3 | Lower | September 10, 2020 |
| Well # 4 | Lower | September 10, 2020 |

The complete SWAP Assessment report for Chinquapin Water Association 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: 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.).

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.
- **Parts per trillion (ppt) or Nanograms per liter (nanograms/L)** – One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- **Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** – One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Picocuries per liter (pCi/L)** – Picocuries per liter is a measure of the radioactivity in water.
- **Million Fibers per Liter (MFL)** – Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **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.
- **Variances and Exceptions** – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.
- **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.
- **Running Annual Average (RAA)** – The average of sample analytical results for samples taken during the previous four calendar quarters.
- **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.
- **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.

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, 2022.** 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.

Inorganic Contaminants

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range | | MCLG | MCL | Likely Source of Contamination |
|---------------------|-------------|-------------------|-------------|---------------------------|------|------|-----|---------------------------------------------------------------------------------------------------------------------------|
| | | | | Low | High | | | |
| Fluoride (ppm) | 1-6-22 | N | 0.891 (ppm) | 0.210 (ppm) - 0.891 (ppm) | | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |

Unregulated Inorganic Contaminants

| Contaminant (units) | Sample Date | Your Water (average) | Range | |
|---------------------|-------------|----------------------|------------------------|------|
| | | | Low | High |
| Chloride (ppm) | 9-23-20 | 6.75 (ppm) | 0.0 (ppm) - 12.0 (ppm) | |

Lead and Copper Contaminants

| Contaminant (units) | Sample Date | Your Water (90 th Percentile) | Number of sites found above the AL | | MCLG | AL | Likely Source of Contamination |
|--------------------------------------------|-------------|------------------------------------------|------------------------------------|--|------|--------|----------------------------------------------------------------------|
| Copper (ppm) (90 th percentile) | 6-22-20 | 0.299 (ppm) | 0 | | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) (90 th percentile) | 6-22-20 | 0.0 (ppb) | 0 | | 0 | AL=15 | Corrosion of household plumbing systems; erosion of natural deposits |

Radiological Contaminants

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water (RAA) | Range | | MCLG | MCL | Likely Source of Contamination |
|------------------------------------------------------------------|-------------|-------------------|------------------|-------------|------|------|-----|--------------------------------|
| | | | | Low | High | | | |
| Alpha emitters (pCi/L) (Gross Alpha Excluding Radon and Uranium) | 1-21-20 | N | 3.7 (pCi/L) | 3.7 (pCi/L) | | 0 | 15 | Erosion of natural deposits |

* Note: The MCL for beta/photon emitters is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

Disinfectant Residuals Summary

| | MRDL Violation Y/N | Your Water (highest RAA) | Range | | MRDLG | MRDL | Likely Source of Contamination |
|----------------|--------------------|--------------------------|-------------------------|------|-------|------|-----------------------------------------|
| | | | Low | High | | | |
| Chlorine (ppm) | N | 0.64 (ppm) | 0.21 (ppm) - 1.06 (ppm) | | 4 | 4.0 | Water additive used to control microbes |

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

| Disinfection Byproduct | Year Sampled | MCL Violation Y/N | Your Water (highest LRAA) | Range Low High | MCLG | MCL | Likely Source of Contamination |
|------------------------|--------------|-------------------|---------------------------|-------------------|------|-----|------------------------------------------|
| TTHM (ppb) | 2022 | N | | | N/A | 80 | Byproduct of drinking water disinfection |
| Location | | | | | | | |
| B01 | | | 25.0 (ppb) | 25.0 (ppb) | | | |
| B02 | | | 23.0 (ppb) | 23.0 (ppb) | | | |
| | | | | | | | |
| HAA5 (ppb) | 2022 | N | | | N/A | 60 | Byproduct of drinking water disinfection |
| Location | | | | | | | |
| B01 | | | 15.0 (ppb) | 15.0 (ppb) | | | |
| B02 | | | 17.0 (ppb) | 17.0 (ppb) | | | |
| | | | | | | | |

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.

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

| Contaminant (units) | Sample Date | Your Water | Range Low High | SMCL |
|---------------------|-------------|--------------|--------------------------|------------|
| Sodium (ppm) | 1-6-22 | 56.875 (ppm) | 26.4 (ppm) - 129.0 (ppm) | N/A |
| pH | 1-6-22 | 8.03 | 7.72 - 8.53 | 6.5 to 8.5 |