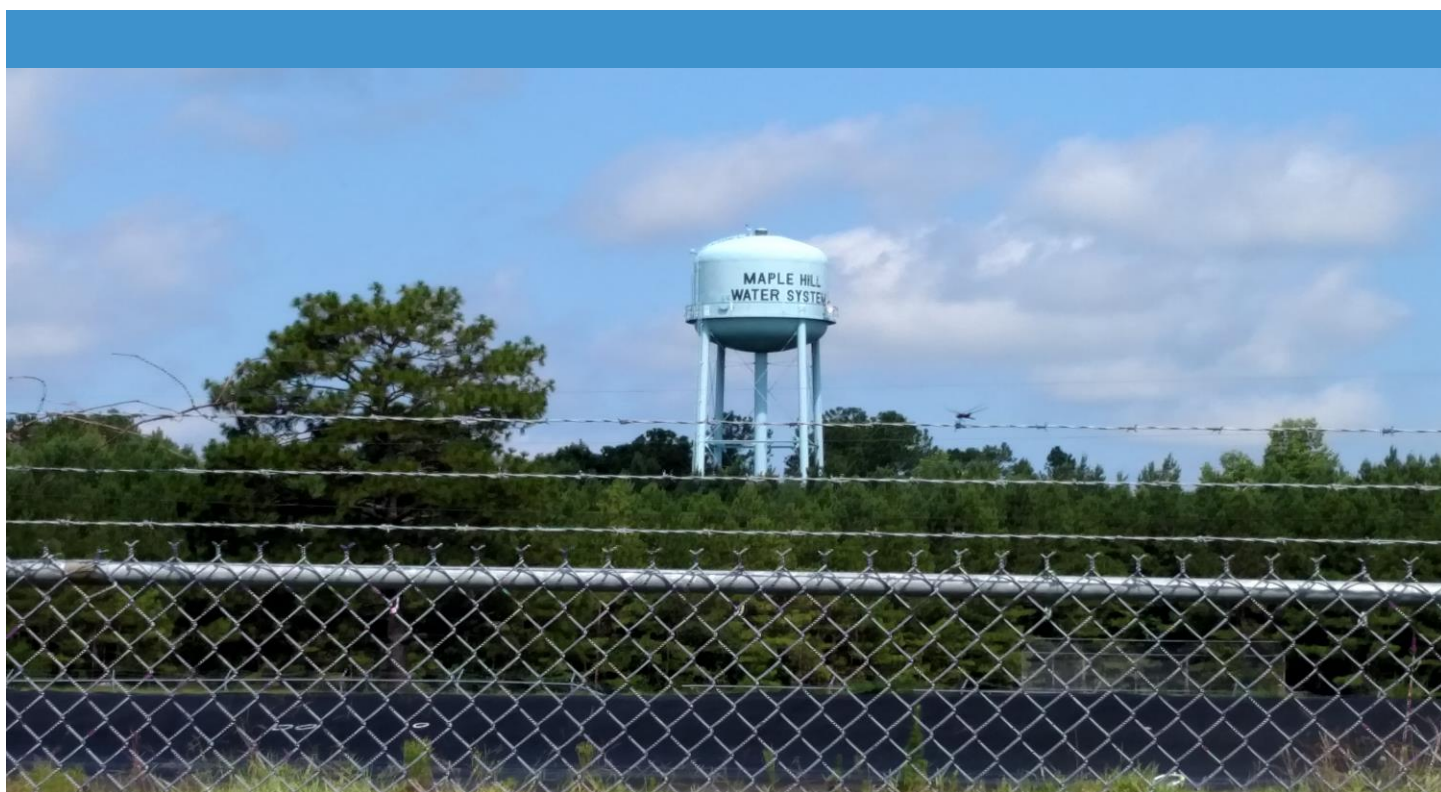


2019 Annual Water Quality Report For Maple Hill Water & Sewer District



IN CASE OF EMERGENCY

For water main breaks or other emergencies, please contact us via our On Call phone number:

910-471-1041

DEAR CUSTOMER

This report is a snapshot of last year's water quality. Included are details about where your water comes from, 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 are committed to ensuring the quality of your water and to providing you with this information, because informed customers are our best allies.

PENDER COUNTY UTILITIES

605 E. Fremont St.
P.O. Box 995
Burgaw, NC 28425
Phone: 910-259-1570
Fax: 910-259-1579

Law Enforcement Center

www.pendercountync.gov

Copies of the CCR can be obtained from web site or the Utilities Office



WHAT THE EPA WANTS YOU TO KNOW

Environmental Protection Agency's Safe Drinking Water Hotline

(800-426-4791)

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. The Environmental Protection Agency (EPA) and Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological 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 storm water 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 storm water 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 storm water 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 that is used by this system is groundwater and located at 4 well sites owned and operated by the Chinquapin Water Association and purchased by the Maple Hill Water & Sewer District.

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:

- 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)



Definition of Terms:

Non-Detects (ND) - Contaminant concentration below detectable limit

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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.

Maximum Residual Disinfection Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary to control microbial contaminants.

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.

Running Annual Average (RAA) - The average of sample analytical results for samples taken at a monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproduct Rule.

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

Not - Applicable (N/A) - Information not applicable/not required for that particular water system or for that particular Rule.

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.

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.



Water Quality Data Table of Detected Contaminants

WE ROUTINELY MONITOR FOR OVER 150 CONTAMINANTS IN YOUR DRINKING WATER ACCORDING TO FEDERAL AND STATE LAWS. THE TABLE BELOW LIST ALL THE DRINKING WATER CONTAMINANTS THAT WE DETECTED IN THE LAST ROUND OF SAMPLING FOR THE PARTICULAR CONTAMINANT GROUP. THE PRESENCE OF CONTAMINANTS DOES NOT NECESSARILY INDICATE THAT WASTRE 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 OR THE STATE REQUIRES 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, THROUGH 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 FUTURE REGULATIONS IS WARRANTED.

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 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 relative susceptibility rating of Higher, Moderate, or Lower.

The relative susceptibility rating of each source for Chinquapin Water Association (Maple Hill Water & Sewer District) 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 |
|-------------|-----------------------|-------------|
| Well # 1 | Lower | March 2017 |
| Well #2 | Lower | March 2017 |
| Well #3 | Lower | March 2017 |
| Well # 4 | Lower | March 2017 |

The complete SWAP Assessment report for Chinquapin Water Association (Maple Hill Water & Sewer District) may be viewed on the Web at: <https://deq.nc.gov/about/divisions/water-resources/drinking-water/drinking-water-protection-program>. 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@ncdenr.gov. Please indicate 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 Association staff by phone at 919-707-9089.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, on the systems’ potential to become contaminated by PCS’s in the assessment area.

PWS ID # NC04-31-050
Chinquapin Water Association

PWS ID # NC04-71-025
Maple Hill Water and Sewer District

IOC Contaminants – (Chinquapin Water Association)

| Contaminant (units) | Your Water | MCL Violation | MCL | MCLG | Likely Source of Contamination |
|--|------------|---------------|------------|------|--|
| Inorganic Chontaminants (IOC) (ppm) | | | | | |
| Sample Point 001 - Fluoride | 0.56 | N | 4 | 4 | Erosion of natural deposits water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sample Point 001 - pH (pH units) | 7.78 | N | 6.5 to 8.5 | N/A | N/A |
| Sample Point 001 - Sodium | 54.5 | N | N/A | N/A | N/A |
| Sample Point 002 - Fluoride | 0.18 | N | 4 | 4 | Erosion of natural deposits water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sample Point 002 - pH (pH units) | 7.55 | N | 6.5 to 8.5 | N/A | N/A |
| Sample Point 002 - Sodium | 22.6 | N | N/A | N/A | N/A |
| Sample Point 003 - Fluoride | 0.75 | N | 4 | 4 | Erosion of natural deposits water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sample Point 003 - pH (pH units) | 8.45 | N | 6.5 to 8.5 | N/A | N/A |
| Sample Point 003 - Sodium | 142 | N | N/A | N/A | N/A |
| Sample Point 012 - Fluoride | 0.23 | N | 4 | 4 | Erosion of natural deposits water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sample Point 012 - pH (pH units) | 7.49 | N | 6.5 to 8.5 | N/A | N/A |
| Sample Point 012 - Sodium | 34.5 | N | N/A | N/A | N/A |



If present, elevated levels of lead can cause serious health problems if ingested over many years, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with private service lines and home plumbing and not the distribution mains or water supply. The Rocky Point/Topsail Water & Sewer District is responsible for providing high quality drinking water but cannot control the variety of materials uses in plumbing components. Most sources of drinking water have no lead or very low levels of lead. Most lead gets into drinking water after the water leaves the local water well or treatment plant and comes into contact with plumbing materials containing lead with a home or business. 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. Do not boil water to remove lead and identify if your plumbing fixtures contain lead. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at the office of Pender County Utilities or from the Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

If more than 10% of tap water samples exceed the lead “action level”, Pender County Utilities is required to inform the site authorizing the sample about their water quality results, provide public education on lead to those sampling sites that participate in our lead tap monitoring program, continue monitoring for lead and copper; and document our efforts to the North Carolina Department of Environment and Natural Resources Division of Environmental Health.

Lead and Copper Contaminants – (Chinquapin Water Association)

| Contaminant (units) | Sample Date | Your Water | MCLG / MCL | # of sites found above the AL | Likely Source of Contamination |
|-----------------------------------|-------------|------------|--------------------------|-------------------------------|--|
| Copper (ppm) (90th percentile) | 6/6/2017 | 0.63 | 1.3 / 1.3 = AL | 1 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ppm) (90th percentile) | 6/6/2017 | 0.004 | 0 / 0.015 = AL | 1 | Corrosion of household plumbing systems; erosion of natural deposits |
| | | | AL = Action Level | | |

Lead and Copper Contaminants – Maple Hill Water & Sewer District

| Contaminant (units) | Sample Date | Your Water | MCLG / MCL | # of sites found above the AL | Likely Source of Contamination |
|-----------------------------------|-------------|------------|--------------------------|-------------------------------|--|
| Copper (ppm) (90th percentile) | 6/5/2019 | 0.117 | 1.3 / 1.3 = AL | 0 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (ppm) (90th percentile) | 6/5/2019 | 0 | 0 / 0.015 = AL | 0 | Corrosion of household plumbing systems; erosion of natural deposits |
| | | | AL = Action Level | | |

Maple Hill Water and Sewer District

| Contaminant (units) | MRDL Violation Y/N | Your Water | Range Low to High | MRDLG / MRDL | Likely Source of Contamination |
|---------------------|--------------------|------------|-------------------|--------------|---|
| Chlorine | N | 0.89 | 0.64 - 1.43 | 4 / 4 | Water Additive used to control Microbes |

| Contaminant (units) | Your Water | MCL Violation Yes / NO | MCL | MCLG | Likely Source of Contamination |
|---|------------|--|------------------------------|------|--------------------------------|
| Turbidity (NTU) Annual Average Turbidity measurement for Raw Water | 5.9 | Turbidity > 1 NTU No | TT | N/A | Soil Runoff |
| Turbidity (NTU) Annual Average Turbidity measurement for Treated Water | <1 | Less than 95% of monthly turbidity measurements are ≤1.0 NTU No | TT | N/A | Soil Runoff |
| Alkalinity (mg/L) Annual Average Alkalinity measurement for Raw Water | 17.2 | No | Range Low to High 12 - 26 | N/A | Soil Runoff |

Bacteria Contaminants – (Chinquapin Water Association)

| Contaminant (units) | Your Water | MCL Violation Yes / NO | MCL | MCLG | Likely Source of Contamination |
|--|------------|---------------------------|---|------|--------------------------------------|
| Total Coliform Bacteria (Presence or Absence) | No Detect | NO | Determined by one positive monthly sample | 0 | Naturally present in the environment |
| E. Coli (Presence or Absence) | No Detect | NO | 0* | 0 | Human and animal fecal waste |
| * The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also E. Coli positive | | | | | |

Bacteria Contaminants – Maple Hill Water & Sewer District

| Contaminant (units) | Your Water | MCL Violation Yes / NO | MCL | MCLG | Likely Source of Contamination |
|--|------------|---------------------------|---|------|--------------------------------------|
| Total Coliform Bacteria (Presence or Absence) | No Detect | NO | Determined by one positive monthly sample | 0 | Naturally present in the environment |
| E. Coli (Presence or Absence) | No Detect | NO | 0* | 0 | Human and animal fecal waste |
| * The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also E. Coli positive | | | | | |

Disinfection Byproduct Contaminants: (Chinquapin Water Association)

| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
|--------------------------------------|---|----------------------|-------------------|------------------------------------|---|
| THM (ppb) (Total Trihalomethanes) | | | | 80 / No | By-product of drinking water chlorination |
| Location B01 | 1/15/2019 5/14/2019 7/2/2019 10/1/2019 | 36 42 59 44 | 36-59 | 80 / No | By-product of drinking water chlorination |
| Location B02 | 1/15/2019 5/14/2019 7/2/2019 10/1/2019 | 13 15 18 9 | 9-18 | 80 / No | By-product of drinking water chlorination |

Disinfectants and Disinfection Byproducts Contaminants - Based on Location Running Annual Average

| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
|--|---|----------------------|-------------------|------------------------------------|---|
| HAA5 (ppb) (Total Haloacetic Acids) | | | | 60 / No | By-product of drinking water disinfection |
| Location B01 | 1/15/2019 5/14/2019 7/2/2019 10/1/2019 | 20 29 37 26 | 26-37 | 60 / No | By-product of drinking water disinfection |
| Location B02 | 1/15/2019 5/14/2019 7/2/2019 10/1/2019 | 11 10 10 7 | 7-11 | 60 / No | By-product of drinking water disinfection |

Disinfectants and Disinfection Byproducts Contaminants - Based on Location Running Annual Average

Disinfection By-Product Contaminants – Maple Hill Water and Sewer District

| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
|--|-------------|------------|-------------------|---------------------------------|---|
| THM (ppb) (Total Trihalomethanes) | | | | 80 / No | By-product of drinking water chlorination |
| Location D01 | 7/25/2019 | 40 | 0 to 40 | 80 / No | By-product of drinking water chlorination |
| Disinfectants and Disinfection Byproducts Contaminants - Based on Location Running Annual Average | | | | | |
| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
| HAA5 (ppb) (Total Haloacetic Acids) | | | | 60 / No | By-product of drinking water disinfection |
| Location D01 | 7/25/2019 | 2 | 0 to 2 | 60 / No | By-product of drinking water disinfection |
| Disinfectants and Disinfection Byproducts Contaminants - Based on Location Running Annual Average | | | | | |

**** 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.

***** HAA5:** Some people who drink water containing Haloacetic in excess of the MCL over many years may have an increased risk of getting cancer.

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.

Chinquapin Water Association

| Radiological Contaminants | | | | | |
|--|--------------------------|-------------------|-------------------|---------------------------------|---|
| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
| Combined Radium (pCi/L) | | 0.57 | 0.3 - 0.98 | 5 / No | Erosion of natural deposits |
| Contaminant (units) | Your Water (Highest RAA) | Range Low to High | MRDLG | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
| Chlorine | 1/0/1900 | 0.107 - 1.38 | 4 | 4 / No | Water Additive used to control Microbes |
| Volatile Organic Chemical (VOC) | | | | | |
| Contaminant (units) | Sample Date | Your Water | Range Low to High | MCL / MCL Violation (Yes or No) | Likely Source of Contamination |
| Xylenes (Total) (mg/L) Site 002 | 2/2/2019 | 0.003 | 0.0 - 0.0030 | 10 / No | Discharge from petroleum factories; discharge from chemical factories |

| Contaminant (units) | Sample Date | Your Water (Average) | Range Low to High |
|---------------------|-------------|----------------------|-------------------|
| Chloride | 9/23/2019 | 1.5 | 0 - 6 |

Notice to the Public / Important Information About Your Drinking Water

Violation Awareness Date: May 17, 2019

Chinquapin Water Association is 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 {did not monitor or test' or 'did not complete all monitoring or testing'} for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

| Contaminant Group | Facility ID No / Sample Point | Compliance Period Begin Date | Number of Samples / Sampling Frequency | When samples were taken (returned to) |
|--------------------------------|-------------------------------|------------------------------|--|---------------------------------------|
| Disinfection Byproducts (DBPS) | D01 | April 1, 2019 | 2/Quarterly (month of April) | May 14, 2019 |

(HAA5) - Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid

(THM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane
 What should I do? There is nothing you need to do at this time.

What is being done? Samples were taken May 4, 2019

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

For more information about this violation, please contact Chinquapin Water Association, Glenn Mobley at 910-285-2478.

WHAT IF I HAVE ANY QUESTIONS OR WOULD LIKE TO BECOME MORE INVOLVED?

If you have any questions regarding 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 quality.

