



2023 Annual Drinking Water Quality Report “Currituck County Mainland Water System”

Water System Number: “04-27-010”

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 Chase E. Brinkley at (252)-232-6060. We want our valued customers to be informed about their water utility.**

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. [Name of Utility] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

Currituck County customers are fortunate because we enjoy an abundant water supply from two sources. The original 1.4 million gallon per day Green Sand Filter Treatment Plant draws water from 28 shallow wells that are supplied from the Yorktown Aquifer and the Upper Tertiary Aquifer. In 2009, our 1.5 million gallon per day Reverse Osmosis Plant came online. It draws water from

three deep wells located in the Yorktown Aquifer. Combined, our treatment facilities can provide 2.9 million gallons of clean drinking water every day.

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 Currituck County Mainland Water System 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
RO Well # 1	Moderate	September 2020
RO Well #2	Moderate	September 2020
RO Well #3	Lower	September 2020
Well # 1	Moderate	September 2020
Well # 2	Moderate	September 2020
Well # 3	Lower	September 2020
Well # 4	Moderate	September 2020
Well # 5	Moderate	September 2020
Well # 6	Lower	September 2020
Well # 7	Moderate	September 2020
Well # 8	Lower	September 2020
Well # 9	Lower	September 2020
Well # 11	Moderate	September 2020
Well # 12	Moderate	September 2020
Well # 13	Moderate	September 2020
Well # 14	Lower	September 2020
Well # 15	Moderate	September 2020
Well # 17	Moderate	September 2020
Well # 18	Moderate	September 2020
Well # 19	Higher	September 2020
Well # 20	Higher	September 2020
Well # 21	Moderate	September 2020
Well # 22	Moderate	September 2020
Well # 23	Moderate	September 2020
Well # 24	Moderate	September 2020
Well # 25	Moderate	September 2020
Well # 26	Moderate	September 2020
Well # 27	Moderate	September 2020
Well # 28	Moderate	September 2020

The complete SWAP Assessment report for Currituck County Mainland Water System 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 website 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@deq.nc.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at (919) 707-9098.

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

Help Protect Your Source Water

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

Violations that Your Water System Received for the Report Year

We received one violation in 2023 and more information is provided in the notice to the public below.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: **November 1, 2023**

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 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 ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE TAKEN (Returned to Compliance)
DISINFECTION RESIDUAL	DO1 / RTOR	AUGUST 1, 2023	MONTHLY/20	20

(DI) Disinfectant Residual must be tested with the collection of each compliance bacteriological sample, at the same time and site.

What should I do? There is nothing you need to do at this time.

What is being done? We have since taken the correct number of samples needed.

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 the responsible person listed in the first paragraph of this report.

Important Drinking Water Definitions:

- **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.
- **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.
- **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, 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

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)	7/21/2021	0.053	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	7/21/2021	< 3	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
			Low	High			
Chlorine (ppm)	N	0.82	.46	– 1.27	4	4.0	Water additive used to control microbes

Total Trihalomethanes (TTHM) and Haloacetic Acids (five) (HAA5)

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)						N/A	80	Byproduct of drinking water disinfection
BO1	2023	N	37	0.000	– 80			
BO2	2023	N	27	0.000	– 80			
HAA5 (ppb)						N/A	60	Byproduct of drinking water disinfection
BO1	2023	N	4	0.000	– 60			
BO2	2023	N	4	0.000	– 60			

<https://currituckcountync.gov/annual-water-quality-report/>

SERVICE ADDRESS: 174 HAPPY LANDING DR							
ACCOUNT NUMBER		BILL DATE		CURRENT CHARGES DUE BY		CUTOFF DATE	
012884		02/15/2024		03/11/2024		03/20/2024	
SERVICE PERIOD		DAYS	METER NUMBER	CURRENT	PREVIOUS	USAGE	
01/05/2024 - 02/05/2024		31	22953564	11261	10967	294	
CODE	SERVICE DESCRIPTION					CHARGE	
1WR	MAINLAND RESIDENTIAL WATER					\$20.00	
Total Current Charges						\$20.00	
Unpaid Previous Balance						\$0.00	
Total Due						\$20.00	

YOU CAN VIEW THE ANNUAL WATER QUALITY REPORT AT: [HTTPS://CO.CURRITUCK.NC.US/WP-CONTENT/UPLOADS/MAINLAND-2023-H2O-REPORT.PDF](https://co.currituck.nc.us/wp-content/uploads/mainland-2023-h2o-report.pdf) -----> AFTER HOURS EMERGENCIES: PLEASE CALL 252-453-3633<-----

Property owners please help the fire department with access to fire hydrants that are located in the right of way near your property by following the NC Fire Code recommendations

507.5.4 Obstruction

Posts, fences, vehicles, growth, trash, storage, landscaping and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants.

507.5.5 Clear space around hydrants.

A 3-foot (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

(BOTH SIDES OF THIS NOTICE MUST BE COPIED AND DISTRIBUTED TO YOUR CUSTOMERS)

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

CURRITUCK COUNTY WATER SYSTEM HAS NOT MET MONITORING REQUIREMENTS

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 [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 ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE OR WILL BE TAKEN (Water System to Complete)
Disinfectant Residual	D01 / RTOR	August 1, 2023	/ MONTH [HMK5]	20 every month

** See back of this notice for further information on contaminants.

What should I do? There is nothing you need to do at this time.

What is being done? We have since taken the correct number of samples needed.

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, please contact:

Responsible Person Chase Brinkley	System Name CURRITUCK COUNTY WATER SYSTEM	System Address (Street) 446 Maple Rd.
Phone Number 252-202-2594	System Number NC0427010	System Address (City/State/Zip) Maple NC 27956

Violation Awareness Date: November 1, 2023

Date Notice Distributed: 2/21/24 Method of Distribution: Consumer confidence report

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.

Owner/Operator: Chase Brinkley Chase Brinkley 2/21/24
(Signature) (Print Name) (Date)

Contaminant Group List

(BA) Total Coliform Bacteria – includes testing for Total Coliform bacteria and *E.coli* bacteria. Testing for *E.coli* bacteria is required if Total Coliform is present in the sample.

(B) Bromate – includes testing for Bromate.

(CD) Chlorine Dioxide/Chlorite – includes testing for Chlorine Dioxide and/or Chlorite.

(DI) Disinfectant Residual must be tested with the collection of each compliance bacteriological sample, at the same time and site.

Fecal Indicators – includes *E.coli*, enterococci or coliphage.

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

(IOC) Inorganic chemicals - includes Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

(LC) Lead and Copper are tested by collecting the required number of samples and testing each of the samples for both lead and copper.

(NT) Nitrate/ (NI) Nitrite – includes testing for nitrate and/or nitrite.

(RA) Radionuclides – includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Potassium 40 (Total), Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

(SOC) – Synthetic Organic Chemicals/Pesticides – includes 2,4-D, 2,4,5-TP (Silvex), Alachlor (Lasso), Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane (BHC-Gamma), Methoxychlor, Oxamyl (Vydate), PCBs, Pentachlorophenol, Picloram, Simazine, and Toxaphene.

(TOC) - Total Organic Carbon - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

(TTHM) - Total Trihalomethanes - includes Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.

(VOC) - Volatile Organic Chemicals - includes 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes (Total), Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, and Styrene.

(WQP) Water Quality Parameters (for Lead and Copper Rule) - includes Calcium, Orthophosphate (as PO₄), Silica, Conductivity, pH, Alkalinity and Water Temperature.

Instructions for Completing the Notice/Certification Form & for Performing Public Notice for Tier 3 Monitoring Violations

1. Complete **ALL** the missing information on the "Notice to the Public." (Note: Under the section of the notice entitled "What is being done?" describe corrective actions you took, or are taking. You may choose the appropriate language below, or develop your own:
 - We have since taken the required samples, as described in the last column of the table above. The sample results showed we are meeting drinking water standards.
 - We have since taken the required samples, as described in the last column of the table above. The sample for [contaminant] exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
 - We plan to take the required samples soon, as described in the last column of the table above.

2. Provide public notification to your customers as soon as reasonably possible after you learn of the violation as follows:

<p>Community systems must use one of the following:</p> <ul style="list-style-type: none"> • Hand or direct delivery • Mail, as a separate notice or included with the bill <p>For community systems, this notice is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met [CFR 141.204(d)].</p>	<p>Non-community systems must use one of the following:</p> <ul style="list-style-type: none"> • Posting in conspicuous locations • Hand delivery • Mail <p>For non-community systems, if you post the notice, it must remain posted as long as the violation or situation persists; in no case should the notice be posted less than 7 days, even if the violation is resolved. [CFR 141.204(b)].</p>
--	--

(Note: **Both** community and non-community systems must use *another* method reasonably calculated to reach others **IF** they would not be reached by one of the required methods listed above [CFR 141.204(c)]. Such methods could include newspapers, email, or delivery to community organizations.

- **Both sides of this public notice/certification MUST be delivered to the persons served by the water system in order for your customers to have access to the required Contaminant Group List.**
 - If you mail, post, or hand deliver, print your notice on letterhead, if available.
 - Notify new billing customers or units prior to or at the time their service begins.
 - Provide multi-lingual notifications if 30% of the residents served are non-English speaking.
 - Should you decide not to use this notice and develop your own version instead, the mandatory language in ***bold italics*** may not be altered, and you **MUST** include the ten required elements listed in CFR 141.205. The certification located at the bottom of this sample notice **MUST** also be submitted.
3. After issuing the "Notice to the Public" to your customers, sign and date the "Public Notification Certification" at the bottom of the notice. Within ten days after issuing the notice [CFR 141.31(d)], use our on-line ECERT application located on our website at: <https://pws.ncwater.org/ECERT> to submit your completed Notice/Certification to the Public Water Supply Section. If you do not have access to the internet, mail your completed Notice/Certification to: Public Water Supply Section, ATTN: Public Notification Rule Manager, 1634 Mail Service Center, Raleigh, NC 27699-1634.

Keep a copy for your files.

(06/2019)