



## Town of Elon

# 2022 Annual Drinking Water Quality Report

Public Water System ID # 02-01-025

Report Date: May 15, 2023

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. **The Town of Elon received a monitoring/reporting violation due to an outside laboratory error. The Town's outside laboratory failed to test and report a disinfection byproducts sample in November 2022. The Town resampled when it was made aware and the drinking water met all monitoring requirements. The specifics of the violation are attached to this report.**

The Town of Elon purchases all of our water from the City of Burlington. The City of Burlington utilizes two (2) surface water supply sources. Lake Mackintosh is located in Southwest Alamance County and Southeast Guilford County. It supplies the J.D. Mackintosh, Jr. Water Treatment Plant (JDMWTP) located in Southwest Alamance County. Stoney Creek Reservoir is located near the Hopedale community. It supplies the Ed Thomas Water Treatment Plant (ETWTP) located in downtown Burlington. Please visit <http://burlingtonnc.gov/waterquality> to view a copy of the City of Burlington's Annual Drinking Water Quality Report. Hard copies of this report are also available at Elon Town Hall.

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. The Town of Elon 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.

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 is 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 the City of Burlington's water supplies 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 watershed and its delineated assessment area). The assessment findings are summarized in the following table:

### Susceptibility of Sources to Potential Contaminant Sources (Per NC DEQ – Source Water Assessment Program)

Source Name	Inherent Vulnerability Rating	SWAP Report Date
Stoney Creek Reservoir (City of Burlington)	Moderate	September 2020
Lake Mackintosh (City of Burlington)	Higher	September 2020

It is important to understand that a susceptibility rating is only a measure of the systems' potential to become contaminated by pollutant contaminants sources (PCS) in the assessment area, and not an actual measure of water quality. 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.

The complete SWAP Assessment report for the City of Burlington's water supplies may be viewed on the Web at: [https://www.ncwater.org/SWAP\\_Reports/NC0201010\\_SWAP\\_Report-20200909.pdf](https://www.ncwater.org/SWAP_Reports/NC0201010_SWAP_Report-20200909.pdf). 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](mailto: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.

The Town of Elon monitors emerging and new potential contaminants of drinking water and works with our water supplier, the City of Burlington, to understand the risks and impacts of emerging contaminants. Emerging contaminants are contaminants that are unregulated due to their recent discovery as potential pollutants and the Town is in regular contact with regulators from NC DEQ as well as the Town's water supplier the City of Burlington with regards to evolving regulations and science on certain compounds. This includes "forever chemicals" like Perfluoroalkyl and polyfluoroalkyl substances (PFAS). Additional information on forever chemicals is available from the City of Burlington at <https://burlingtonnc.gov/2121/PFAS14-DIOXANE-INFORMATION/PFAS> and from EPA at <https://www.epa.gov/pfas>.

If you have any questions about this report or concerning your water utility, please contact:

Donnie Wood, Public Works Director  
Town of Elon  
104 S. Williamson Avenue, Elon, NC

Telephone #: 336-584-9600  
Email: [dwood@elon.gov](mailto:dwood@elon.gov)

This report shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2022. The Town of Elon's test results have also been inserted for your reference. As guidance, the U.S. Environmental Protection Agency (USEPA) recommends that we only report those parameters that have a recognized limit for drinking water and have been detected

in the water tested. All of the Town’s water quality sampling during the calendar year 2022 was within water quality standards (MCL).

The Board of Aldermen of the Town of Elon is the authority that determines infrastructure funding and the board members, under advisement of the Town’s management staff, make other decisions that affect the water supply and the quality of your drinking water. The Town of Elon Board of Aldermen meets on the second Tuesday of every month at 6:00 PM in the Town of Elon Municipal Building, 104 S. Williamson Avenue, Elon, NC.

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.).

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table on the following page 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.

In the following table, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we’ve provided the following definitions:

*Non-Detects (ND)* - laboratory analysis indicates that the constituent is not present.

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.

*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.

*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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Maximum Contaminant Level* - The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

*Maximum Contaminant Level Goal* - The “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health.

MCL’s are set at very stringent levels. For example: a person would have to drink 2 liters of water every day for seventy years at the MCL level in order to have a one-in-a-million chance of having the potential health effect associated with a particular contaminant. Many of the regulated contaminants MCL’s are set at this level.

<b>Disinfection Byproducts Contaminants</b>						
Contaminant (units)	MCL/MRDL	Your Water	Range	MCLG	MCL for RAA	Likely Source of Contamination
	Violation		Low			
	Y/N		High			
TTHM (ppb) [Total Trihalomethanes]	N	47	24-59	N/A	80	By-product of drinking water chlorination
HAA5 (ppb) [Total Haloacetic Acids]	N	36	30-43	N/A	60	By-product of drinking water disinfection

If you have any questions about this report or concerning your water or sewer utility, please contact:

**Donnie Wood, Public Works Director**  
 Town of Elon Telephone #: 336-584-9600  
 Email: [dwood@elon.gov](mailto:dwood@elon.gov)

<b>Lead and Copper Contaminants</b>						
Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Copper (ppb) (90th percentile) Tested Every 3 Years	Sep-21	ND	0	1300	AL=1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) (90th Percentile) Tested Every 3 Years	Sep-21	ND	1	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits

<b>Inorganic Contaminants</b>							
Contaminant (units)	Sample Date	MCL Violation	Your Water (AVG)	Range	MCLG	MCL	Likely Source of Contamination
		Y/N		Low High			
Fluoride (mg/l)	6/7/2022	N	0.75	.6-1.0	4	4	Water Additive to promote strong teeth
Free Chlorine (mg/l)	2022	N	1.78	1.2-2.23	<4.0	N/A	Water additive used to control microbes.
Monochloramines (mg/l)	2022	N	2.09	1.8-2.36	<4.0	N/A	Water additive used to control microbes

<b>Microbiological Contaminants</b>					
Contaminant (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source of Contamination
	Y/N				
Total Coliform Bacteria (Presence or Absence)	N	ND	0	one positive monthly sample	Naturally present in the environment
Fecal Coliform or E. coli (Presence or Absence)	N	ND	0	0 (Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive)	Human and animal fecal waste
Average Turbidity (NTU)	N	0.045	0.3	Water must be less than 0.3 NTU 95% of time and cannot exceed 1.0 NTU.	Soil Runoff
Maximum Turbidity (NTU)	N	0.175	0.3	Water must be less than 0.3 NTU 95% of time and cannot exceed 1.0 NTU.	Naturally present in the environment

<b>Other Physical and Chemical Information</b>						
Parameter	Sample Date	Your Water	Parameter	Sample Date	Your Water	
PH	2022	8.5	Sodium (mg/l)	6/7/2021	60	
Alkalinity (mg/L)	2022	35	Sulfate (mg/L)	6/7/2021	32	
Orthophosphorus (ppb)	2022	980	Hardness (mg/L)	6/7/2021	30	
Carbon Dioxide	2022	6.6				

<b>Unregulated Contaminant Monitoring Rule Sampling (UCMR4)</b>				
Parameter	AVG	Range	Date of Analysis	Information
Quinoline (ppb)	23.7	ND-27.0	Mar-18	City of Burlington Water Plant Results, Only present at Ed Thomas WTP
Source Water TOC (ppb)	6,977	5,530-8,720	Mar-18	City of Burlington Water Plant Results
Manganese (ppb)	104	N/A	Nov-19	Town of Elon Water Distribution System
Source Water Bromide (ppb)	21	ND-21.8	Mar-18	City of Burlington Water Plant Results, Only present at Mackintosh WTP
Haloacetic Acids-9 (ppb)	30	28-32	Nov-19	Town of Elon Water Distribution System
Anatoxin-a (ppt)	38.85	ND-74.1	Mar-18	City of Burlington Water Plant Results, Only present in 5 of 16 samples

# NOTICE TO THE PUBLIC

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### TOWN OF ELON 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(s) specified in the table below, we did not complete all monitoring or testing for the contaminants groups listed and therefore cannot be sure of the quality of our drinking water during that time.

Contaminant group**	Entry point/ location code	Compliance period Beginning Date	Sampling Frequency	WHEN SAMPLES WERE TAKEN
Disinfection byproducts (DBPS)	D01	1-Oct-22	Quarterly (November 2022)	December 2022

\*\* See back of this notice for the complete list of individual contaminants for each contaminant group

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

**What happened? What is being done? When will the problem be corrected?**

The Town of Elon received a monitoring/reporting violation due to an outside laboratory error. The Town's outside laboratory failed to test and report a disinfection byproducts sample in November 2022. The Town resampled when it was made aware, and the drinking water met all monitoring requirements with the resubmittal in December 2022.

**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:

Donnie Wood	Town of Elon	104 S. Williamson Avenue
(336) 584-9600	PWSID# NC 02-01-025	Elon, NC 27244

Violation Awareness Date: January 26, 2023

Date Notice Distributed: May 22, 2023 Method of Distribution: With Annual Drinking Water Quality 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: Donnie Wood Donnie Wood 5/18/23  
(Signature) (Print Name) (Date)

## Contaminant Group List

**(BA) Total Coliform Bacteria** includes Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if repeat samples confirm presence of total coliform.

**(AS) Asbestos** - includes testing for Chrysotile, Amphibole and Total Asbestos.

**(TTHM) - Total Trihalomethanes** - include Chloroform, Bromoform, Bromodichloromethane, and Chlorodibromomethane.

**(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.

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

**(BB) Bromate/Bromide** - includes testing for Bromate and/or Bromide.

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

**(IC) 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 one sample and testing that sample 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, Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

**(SOC) - Synthetic Organic Chemicals/Pesticides** - SOC's are commonly used in industrial and manufacturing processes. SOC's include 2,4-D, 2,4,5-TP (Silvex), 3-Hydroxycarbofuran, Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Atrazine, Benzo(a)pyrene, Butachlor, Carbaryl, Carbofuran, Chlordane, Dalapon, Dieldrin, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dicamba, Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methomyl, Metolachlor, Methoxychlor, Metribuzin, Oxamyl(vydate), PCBs, Propachlor, Pentachlorophenol, Picloram, Simazine, Toxaphene.

**(VOC) - Volatile Organic Chemicals** - VOCs are commonly used in industrial and manufacturing processes. VOCs include p-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Bromomethane, Chloroethane, Fluorotrichloromethane, Hexachlorobutadiene, Naphthalene, 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Dibromomethane, 1,1-Dichloropropene, 1,3-Dichloropropane, 1,3-Dichloropropene, 1,2,3-Trichloropropane, 2,2-Dichloropropane, 1,2,4-Trimethylbenzene, 1,2,3-Trichlorobenzene, n-Butylbenzene, 1,3,5-Trimethylbenzene, Tert-Butylbenzene, Sec-Butylbenzene, Bromochloromethane, Chloroform, Bromoform, Bromodichloromethane, Chlorodibromomethane, Xylenes (Total), Dichloromethane, o-Chlorotoluene, p-Chlorotoluene, m-Dichlorobenzene, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, 1,1-Dichloroethane, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, 1,1,1,2-Tetrachloroethane, Tetrachloroethylene, 1, 1,2,2-Tetrachloroethane, Chlorobenzene, Benzene, Toluene, Ethylbenzene, Bromobenzene, Isopropylbenzene, Styrene, and n-Propylbenzene.

### 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 Happened? What is being done? When will the problem be corrected?" 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 coliform bacteria 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 within 12 months after you learn of the violation as follows:**

<p><b>Community systems</b> must use one of the following:</p> <ul style="list-style-type: none"> <li>• Hand or direct delivery</li> <li>• Mail, as a separate notice or included with the bill</li> </ul> <p><b>For community systems</b>, 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 (C.F.R. 141.204(d)).</p>	<p><b>Non-community systems</b> must use one of the following:</p> <ul style="list-style-type: none"> <li>• Posting in conspicuous locations</li> <li>• Hand delivery</li> <li>• Mail</li> </ul> <p><b>For non-community systems</b>, 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. (C.F.R. 141.204(b)).</p>
<p>(Note: <b>Both</b> community and non-community systems must use <i>another</i> method reasonably calculated to reach others <b>IF</b> they would not be reached by one of the <u>required</u> methods listed above (C.F.R. 141.204(c)). Such methods could include newspapers, e-mail, or delivery to community organizations.</p>	

- **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.
- Repeat the notice quarterly for as long as the violation exists.
- Should you decide not to use this enclosed 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 C.F.R. 141.205.

3. **After issuing the "Notice to the Public" to your customers, sign and date the "Publication Notification Certification" at the bottom of the notice. Mail the completed public notice/certification form to the Public Water Supply Section, ATTN: Public Notification Rule Manager, 1634 Mail Service Center, Raleigh, NC 27699-1634 within ten days after issuing the notice (C.F.R. 141.31(d)). Keep a copy for your files.**