2023 Annual Drinking Water Quality Report
Chatham Estates

Water System Number: NC4092069

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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 Chatham Utilities at 919-827-8055.**

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. Chatham 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.

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

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

When You Turn on Your Tap, Consider the Source

The water provided by Chatham Utilities is purchased from the Town of Cary from the Cary/Apex Water Treatment Facility. The Cary/Apex Water Treatment Facility treats surface water from Jordan Lake which is located in eastern Chatham County.

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 the Town of Cary 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
Jordan Lake	Higher	September 2020

The complete SWAP Assessment report for [SYSTEM NAME] 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.

Violations that Your Water System Received for the Report Year

The Chatham Utilities had no regulatory violations.

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

Microbiological Contaminants in the Distribution System

Contaminant (units)	MCL Violation Y/N	Number of Positive/Present Samples	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT*	Naturally present in the environment

Asbestos Contaminant

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Total Asbestos (MFL)	08/2020	N	ND	N/A	7	7	Decay of asbestos cement water mains; erosion of natural deposits

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water (90th Percentile)	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	07/2023	ND	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	07/2023	ND	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (highest RAA)	Range Low	Range High	MRDLG	MRDL	Likely Source of Contamination
Chloramines (ppm)	N	2.5	0.48	3.12	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	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	N				N/A	80	Byproduct of drinking water disinfection
B01			40	19	75			
HAA5 (ppb)	2023	N				N/A	60	Byproduct of drinking water disinfection
B01			25	11	44			

END OF REPORT PERTAINING TO SAMPLING PERFORMED BY CHATHAM UTILITIES

THE FOLLOWING DATA IS PROVIDED BY THE TOWN OF CARY FOR REPORT PERIOD

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: MAY 4, 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 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)
E. COLI (FECAL INDICATORS)	FACILITY ID: D01 SAMPLE POINT ID: 501	MAY 3, 2023	1/MONTH	MAY 4, 2023

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

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

What is being done?

On May 3, 2023, as part of routine sampling of its water system, one of Cary's 137 water sampling stations returned a positive test for E. coli bacteria. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, and other symptoms. They may pose a greater health risk for infants, young children, and elderly, and people with severely compromised immune systems. These bacteria can make you sick and are especially a concern for people with weakened immune systems.

The sampling station site, located on Airgate Drive in Wake County, tested positive on the afternoon of May 3. In accordance with Public Water Supply regulations, Cary completed multiple water tests upstream and downstream for the sampling station in question over the next 24 hours. These results showed no other contamination within the system and that the bacteria isolated solely to the Airgate Drive sampling station. In addition to the water sampling, water system flushing was conducted and the area surrounding the sampling station was investigated to ensure conditions could not create additional detections. The site was officially cleared and in full compliance on May 5, 2023.

Because of the single detection of E.coli at the Airgate Drive sampling station, our utility was required to notify all our water customers. This notification was provided by news release, web page, e-mails to all major media outlets, and social media posts on May 5. In accordance with drinking water regulations, we are providing this additional notice to ensure our citizens and water customers are aware of the past testing results, and to assure them there have been no additional E. Coli detections since May 3.

Cary's water quality remains in full compliance with all federal and state water quality parameters. Because the situation was quickly resolved and no other detections have been made, you do not need to boil your water or take any corrective actions. No additional action is requested, and this notice is solely to inform our citizens and water customers.

For more information about this violation, please view FAQ online or contact Rachel Monschein, Water System Laboratory Supervisor at 919-362-5507. Please share this information with all 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. Citizens seeking more information may also contact Cary 311 online at carync.gov/311 or by dialing 311 within Cary limits or (919) 469-4000 outside town limits.

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.

REVISED TOTAL COLIFORM RULE:

Microbiological Contaminants in the Distribution System

Contaminant (units)	MCL Violation Y/N	Number of Positive/Present Samples	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N/A	N/A	N/A	TT*	Naturally present in the environment
E. coli (presence or absence)	Y	1	0	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 samples(s) are *E. coli* positive, a Tier 1 violation exists.	Human and animal fecal waste

* If a system collecting 40 or more samples per month finds greater than 5% of monthly samples are positive in one month, an assessment is required.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

− We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.

Required Assessment due to an E. Coli MCL Violation

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments**.** We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take 2 corrective actions and we completed 2 of these actions.

Turbidity*

Contaminant (units)	Treatment Technique (TT) Violation Y/N	Your Water	MCLG	Treatment Technique (TT) Violation if:	Likely Source of Contamination
Turbidity (NTU) - Highest single turbidity measurement	N	0.09 NTU	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (%) - Lowest monthly percentage (%) of samples meeting turbidity limits	N	100%	N/A	Less than 95% of monthly turbidity measurements are ≤ 0.3 NTU	

***** Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low	Range High	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	2023	N	0.62	N/A		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water (90th Percentile)	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	2021	0.0988	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	2021	ND	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Your Water (lowest RAA)	Range Monthly Removal Ratio Low - High	MCLG	Treatment Technique (TT) violation if:	Likely Source of Contamination
Total Organic Carbon (TOC) Removal Ratio (no units)	N	1.55 (running annual average)	1.36 – 1.86 (range of monthly)	N/A	Removal Ratio RAA <1.00 and alternative compliance criteria was not met	Naturally present in the environment

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (RAA)	Range Low	Range High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	N	2.19 (running annual average)	0.52 – 3.53 (individual sites)		4	4.0 (running annual average)	Water additive used to control microbes
Chloramines (ppm)	N	2.91 (running annual average)	1.12 – 4.00 (individual sites)		4	4.0 (running annual average)	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 Low	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2023	N				N/A	80	Byproduct of drinking water disinfection
B01				27	50			
B02				27	51			
B03				27	49			
B04			47	27	54			
B05				27	53			
B06				27	49			
B07				26	56			
B08				25	52			
HAA5 (ppb)	2023	N				N/A	60	Byproduct of drinking water disinfection
B01				14	22			
B02			21.3	16	29			
B03				12	33			
B04				14	30			
B05				4.3	34			
B06				13	33			
B07				11	30			
B08				5	30			

Other Disinfection Byproducts Contaminants

Contaminant (units)	MCL Violation Y/N	Your Water	Range Low	Range High	MCLG	MCL	Likely Source of Contamination
Bromate (ppb)	N	5	1	6	0	10	Byproduct of drinking water disinfection

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	Range High	SMCL
Iron (ppm)	Annually	ND	N/A		0.3
Manganese (ppm)	Annually	ND	N/A		0.05
Nickel (ppm)	Annually	ND	N/A		N/A
Sodium (ppm)	Annually	33	N/A		N/A
pH	Annually	7.80	N/A		6.5 to 8.5

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 whether future regulations are warranted.

Unregulated Contaminants

Contaminant (units)	Sample Date	Your Water (average)	Range Low	Range High
1,4-Dioxane (ppb)	2023	ND	ND – 0.15	
Perfluorobutanesulfonic acid (PFBS) (ppt)		3.5	2.5 – 4.7	
Perfluorobutanoic acid (PFBA) (ppt)		4.3	ND - 10	
Perfluoroheptanoic acid (PFHpA) (ppt)		ND	ND – 2.9	
Perfluorohexanoic acid (PFHxA) (ppt)		6.4	4.1 – 9.1	
Perfluorooctanoic acid (PFOA) (ppt)		2.1	ND – 3.2	
Perfluoropentanoic acid (PFPeA) (ppt)		7.3	5.3 - 11	

End Report