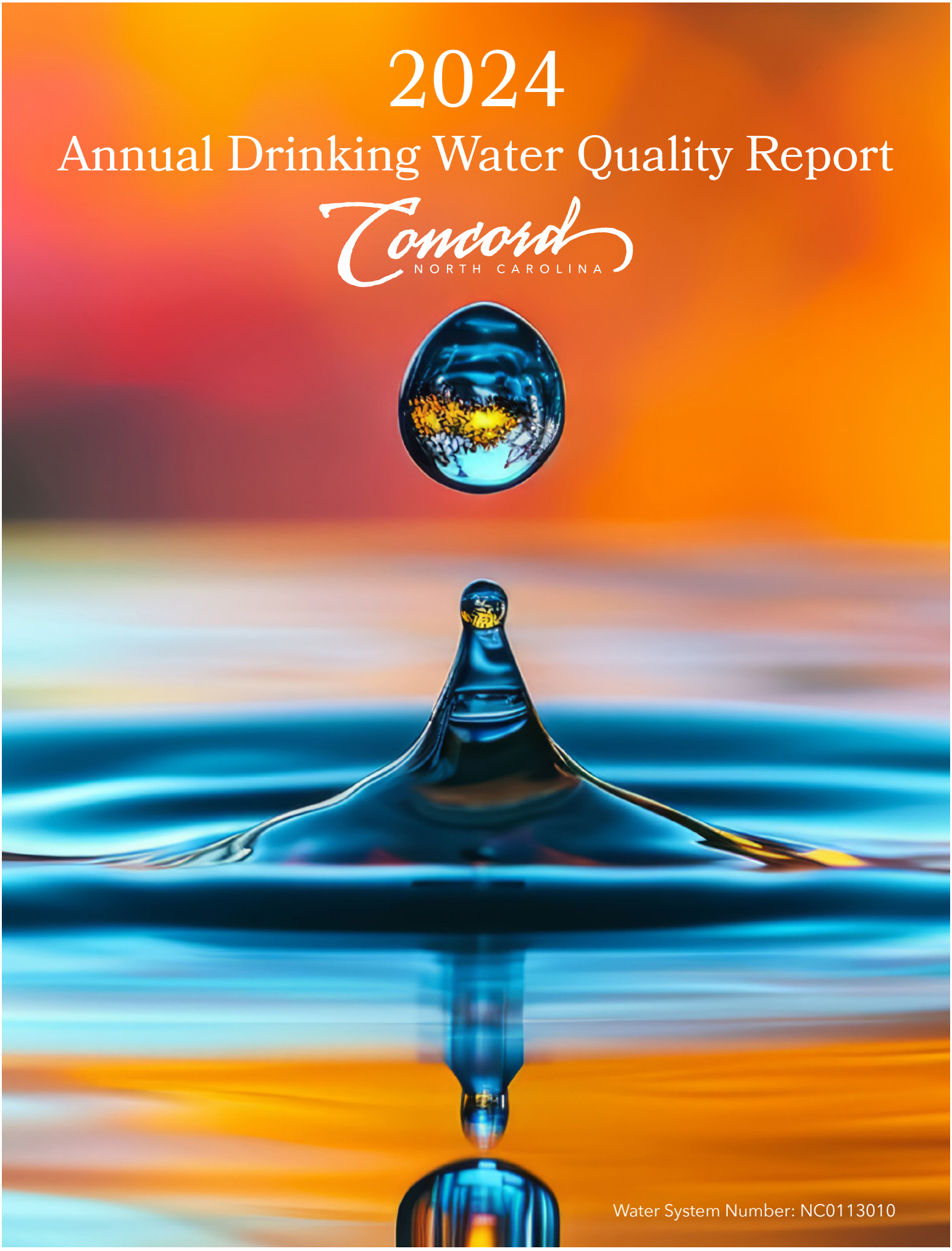
2024

Annual Drinking Water Quality Report

Concord
NORTH CAROLINA



Water System Number: NC0113010

Contents

Questions?

If you have any questions about this report or concerning your water, please contact Anthony Allman, Water Operations Manager, at (704) 920-5336. We want our valued customers to be informed about their water utility.

Our Commitment

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.

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

Concord Water Maintains:

45,704
water meters/services

781
miles of water mains

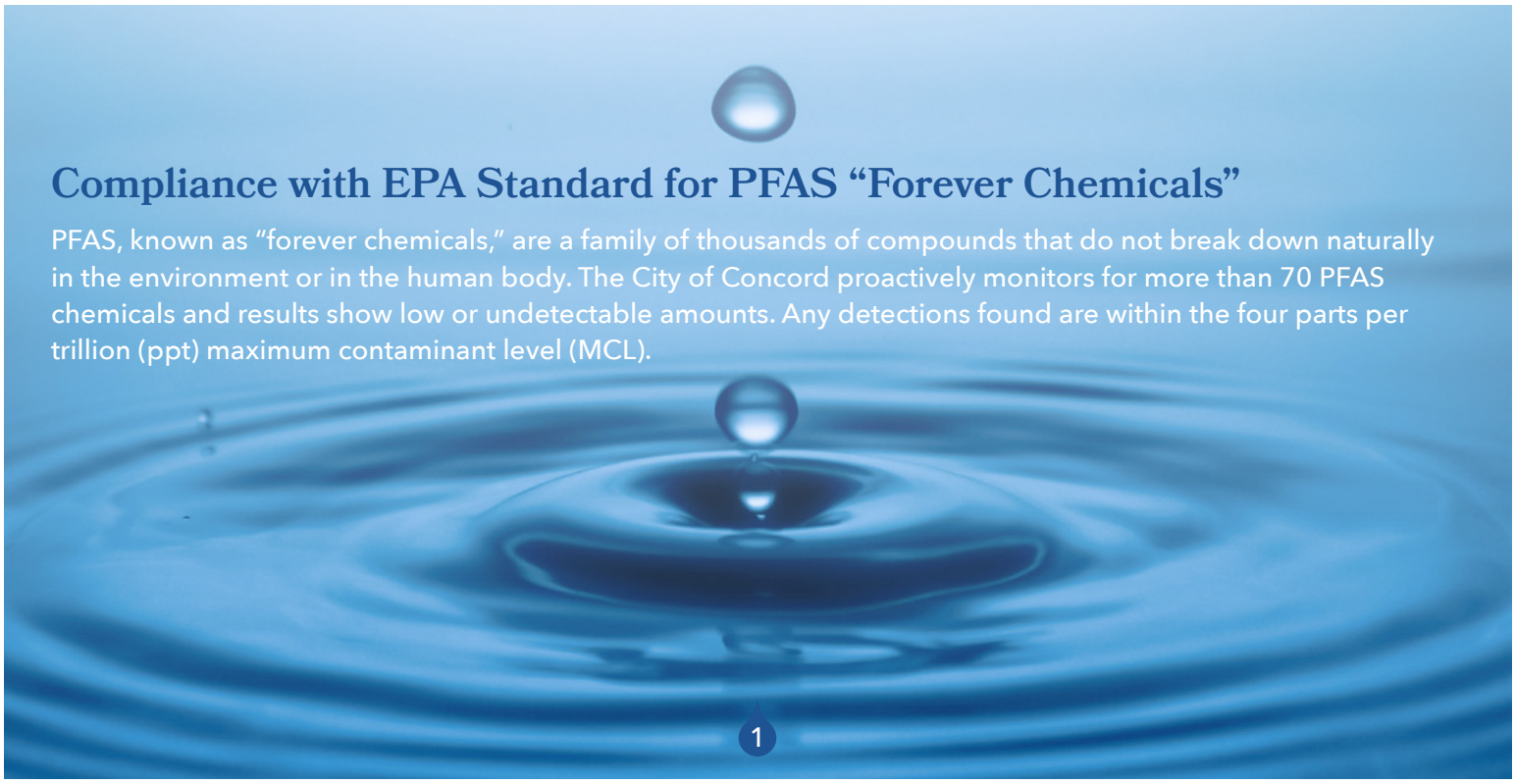
What EPA Wants You to Know

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).

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.



Compliance with EPA Standard for PFAS "Forever Chemicals"

PFAS, known as "forever chemicals," are a family of thousands of compounds that do not break down naturally in the environment or in the human body. The City of Concord proactively monitors for more than 70 PFAS chemicals and results show low or undetectable amounts. Any detections found are within the four parts per trillion (ppt) maximum contaminant level (MCL).

When You Turn on Your Tap, Consider the Source

The water that is used by this system in 2024 is surface water and comes from five sources. The city has two water treatment plants, which draw water from two surface water reservoirs. The Coddle Creek Water Treatment Plant draws water from Lake Don T. Howell. The Hillgrove Water Treatment Plant draws water from Lake Fisher and Lake Don. T. Howell. The city of Concord also purchases water from the City of Albemarle. For information on the quality of Albemarle's water, contact the Public Utilities Department at (704) 984-9605. Additionally, the City of Concord can purchase water from the City of Charlotte and the City of Kannapolis. For information on the quality of Charlotte's water, contact Charlotte-Mecklenburg Utilities at (704) 336-7600. For information on the quality of Kannapolis's water contact Alex Anderson at (704) 920-4444.

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 City of Concord 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
Lake Fisher/Coldwater Creek (Concord)	Higher	September 2020
Lake Don T. Howell (Concord)	Moderate	September 2020
Tuckertown Reservoir (Albemarle)	Higher	September 2020
Narrows Reservoir/Badin Lake (Albemarle)	Moderate	September 2020

The complete SWAP Assessment report for City of Concord may be viewed on the Web at **concordnc.gov**. 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

During 2024, or during any compliance period that ended in 2024, we received a Level 1 Assessment violation for improper sampling technique that resulted in numerous positive coliform results. This assessment covered the time period of July 2024. We have implemented Standard Operating Procedures that state sample technicians are to flush sample lines attached to hydrant legs 5-10 minutes and decontaminate with flame before pulling samples to assure this does not happen again.

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.
- **Nephelometric Turbidity Unit (NTU)** Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Variances and Exceptions** State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.
- **Action Level (AL)** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT)** A required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Residual Disinfection Level (MRDL)** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Residual Disinfection Level Goal (MRDLG)** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Locational Running Annual Average (LRAA)** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.
- **Running Annual Average (RAA)** The average of sample analytical results for samples taken during the previous four calendar quarters.
- **Level 1 Assessment** *A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.*
- **Level 2 Assessment** *A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.*
- **Maximum Contaminant Level (MCL)** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **Maximum Contaminant Level Goal (MCLG)** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2024.** 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	CITY OF CONCORD WATER (90TH PERCENTILE)	NUMBER OF SITES FOUND ABOVE THE AL	RANGE LOW - HIGH	MCLG	AL	LIKELY SOURCE OF CONTAMINATION
Copper (ppm) (90th percentile)	2022	0.119	0/53	ND – 0.305	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits

The table above summarizes our most recent lead and copper tap sampling data. If you would like to review the complete lead tap sampling data, please email Anthony Allman, Water Operations Manager, at allmana@concordnc.gov .

We have been working to identify service line materials throughout the water system and prepared an inventory of all service lines in our water system. To access this inventory, concordnc.gov/LCR.

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. City of Concord is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact City of Concord and Anthony Allman, Water Operations Manager, at (704) 920-5336. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or at epa.gov/safewater/lead.

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

DISINFECTION BYPRODUCT	YEAR SAMPLED	MCL VIOLATION Y/N	CITY OF CONCORD WATER	RANGE LOW - HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
TTHM (ppb)	2024	N	59.4	20.5 – 93.5	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2024	N	47.4	21.0 – 64.0	N/A	60	Byproduct of drinking water disinfection

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfectant Residuals Summary

	MRDL VIOLATION Y/N	CITY OF CONCORD WATER (RAA)	RANGE LOW - HIGH	MRDLG	MRDL	LIKELY SOURCE OF CONTAMINATION
Chlorine (ppm)	N	1.01	0.23 – 1.85	4	4.0	Water additive used to control microbes

Asbestos Contaminant

CONTAMINANT (UNITS)	DATE LAST SAMPLED	MCL VIOLATION Y/N	CITY OF CONCORD WATER	RANGE LOW - HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Asbestos (MFL)	9/2021	N	<0.18	N/A	7	7	Decay of asbestos cement water mains; erosion of natural deposits

Inorganic Contaminants

CONTAMINANT (UNITS)	SAMPLE DATE	MCL VIOLATION Y/N	CITY OF CONCORD WATER	RANGE LOW - HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Barium (ppm)	2-13-24	N	0.032	0.03 - 0.032	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	2-13-24	N	0.57	0.51 – 0.57	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate/Nitrite Contaminants

CONTAMINANT (UNITS)	SAMPLE DATE	MCL VIOLATION Y/N	CITY OF CONCORD WATER	RANGE LOW - HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Nitrate (as Nitrogen) (ppm)	2-13-24	N	0.64	0.43 – 0.64	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Radiological Contaminants

CONTAMINANT (UNITS)	SAMPLE DATE	MCL VIOLATION Y/N	CODDLE CREEK WTP WATER (RAA)	HILLGROVE WTP WATER (RAA)	RANGE LOW - HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Combined radium (pCi/L)	10-21-19	N	<1.0	<1.0	N/A	0	5	Erosion of natural deposits
Uranium (pCi/L)	10-21-19	N	0.01	0.01	N/A	0	20.1	Erosion of natural deposits

Did You Know?

Potential contaminants are often measured and regulated in parts per million all the way to parts per trillion!

One part per million (ppm) is like dropping two drops of ink into a 10-gallon fish tank.

One part per trillion (ppt) is equal to one drop of water in approximately 20 Olympic-sized swimming pools.

Turbidity*

CONTAMINANT (UNITS)	TREATMENT TECHNIQUE (TT) VIOLATION Y/N	CODDLE CREEK WTP WATER	HILLGROVE WTP WATER	MCLG	TREATMENT TECHNIQUE (TT) VIOLATION IF:	LIKELY SOURCE OF CONTAMINATION
Turbidity (NTU) - Highest single turbidity measurement	N	0.13 NTU	0.12 NTU	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (%) - Lowest monthly percentage (%) of samples meeting turbidity limits	N	100 %	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.

Total Organic Carbon (TOC)

CONTAMINANT (UNITS)	TT VIOLATION Y/N	CITY OF CONCORD WATER (LOWEST RAA)	RANGE MONTHLY REMOVAL RATIO LOW - HIGH	CITY OF ALBEMARLE 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	1.30	1.30-1.43	1.39	1.21-1.61	N/A	Removal Ratio RAA <1.00 and alternative compliance criteria was not met	Naturally present in the environment

Required Assessments not due to an *E. Coli* MCL Violation

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment to identify problems and to correct any problems that were found during these assessments. During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective action, and we completed one action.

Unregulated Contaminants

CONTAMINANT (UNITS)	SAMPLE DATE	HILLGROVE WTP WATER (AVERAGE)	ABLEMARLE WATER (AVERAGE)	RANGE LOW - HIGH
Perfluorohexanesulfonic Acid (PFHxS) ug/L	10-23-24	0.0036	ND	0.00 – 0.0036
Perfluorooctanesulfonic Acid (PFOS) ug/L	10-23-24	0.0082	ND	0.00 – 0.0082

Our water system has sampled for a series of unregulated contaminants. 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. If you are interested in examining the results, please contact Anthony Allman, Water Operations Manager, at (704)-920-5336.

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	CITY OF CONCORD WATER	RANGE LOW - HIGH	SMCL
Sodium (ppm)	02-13-24	17 mg/L	16 - 17	N/A
Sulfate (ppm)	02-13-24	29 mg/L	25 - 29	250
pH	02-13-24	8.0 SU	7.7 – 8.0	6.5 to 8.5

We purchase water from The City of Albemarle and here is the link to their CCR.

albemarlenc.gov/departments/public-utilities/water-consumer-confidence-report