OWASA

ANNUAL WATER QUALITY REPORT CARD 2022

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high-quality water, wastewater, and reclaimed water services.

CARRBORO-CHAPEL HILL'S COMMUNITY WATER SYSTEM

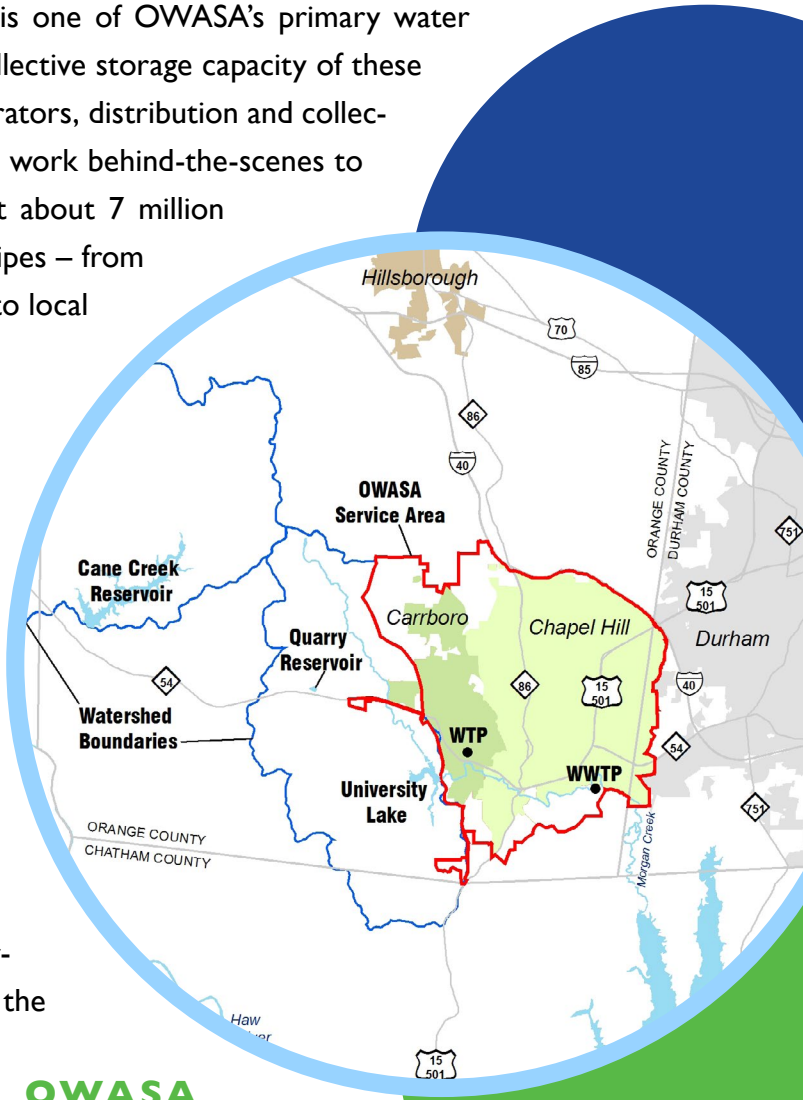
It's our pleasure to share our 2022 report card on the quality of your water, how we treat it to make it safe to drink 24/7, and trends in drinking water that we are monitoring locally and nationally.

The report card is an overview of the community's water sources, laboratory testing results of your water, and how it compares to regulatory standards. In other words, this is our report card to you. It's a team effort to provide you with safe, dependable drinking water and the information you need to know. Grab a glass of water, get comfortable, and read on!

WHERE DOES YOUR WATER COME FROM?

Tranquil University Lake at the edge of Carrboro is one of OWASA's primary water sources; the other is Cane Creek Reservoir. The collective storage capacity of these sites is 3.45 billion gallons. OWASA's engineers, operators, distribution and collections crews, scientists, administrative staff and more work behind-the-scenes to deliver safe and reliable water. Every day, we treat about 7 million gallons of water and pump it through 400 miles of pipes – from local water sources to OWASA's treatment plant – to local homes, schools, and businesses.

To ensure reliable access to water for customers long into the future, OWASA has secured two additional water sources: the Quarry Reservoir, on the north side of NC Highway 54 (current capacity: 200 million gallons, by 2030: 2.2 billion). The other is Jordan Lake in Chatham County, where the NC Environmental Management Commission has allocated OWASA 5 million gallons of water per day (accessible via water transfers through neighboring utilities), in times of severe drought or emergency. All four surface water sources (University Lake, Cane Creek Reservoir, Quarry Reservoir, and Jordan Lake) are part of the Cape Fear River watershed.



OWASA SERVICE MAP

OWASA LAKES TEAM READY TO SERVE IN ALL CONDITIONS

Water quality begins at the source, and OWASA takes our responsibility for providing high-quality drinking water seriously throughout the process. That includes having a dedicated Lakes Team to help protect water quality in our primary reservoirs, ensure the reservoirs are functioning even in the worst weather conditions, and helping our community enjoy the reservoirs for the wonderful recreational space they also provide.

Johnny Riley is OWASA's Reservoir and Land Resources Supervisor – which Johnny often describes as "the best position at OWASA" – and has been working for OWASA for 10 years after previously working for the North Carolina Wildlife Resources Commission. Riley is an Orange County native who leads a team at both Cane Creek Reservoir and University Lake.

Riley is joined by Lake Warden Justin Blankinship, Assistant Lake Warden Adam Nicholson, and Assistant Lake Warden Aaron Wagoner.

This group works at both of OWASA's primary reservoirs – Cane Creek Reservoir and University Lake. While their office view can be lovely many days of the year, this dedicated team is also at the reservoir during severe weather.

This team also welcomes visitors from Orange County and beyond to OWASA's reservoirs for recreation each year from late March through October. OWASA's reservoirs are open to fishing and boating, although no gas-powered motors are allowed at the reservoirs and boats must be brought in on a car or truck (no trailers).

Check OWASA's website at **owasa.org/recreation** for more information on recreation opportunities. And thank you to our team for their dedicated service to the community!

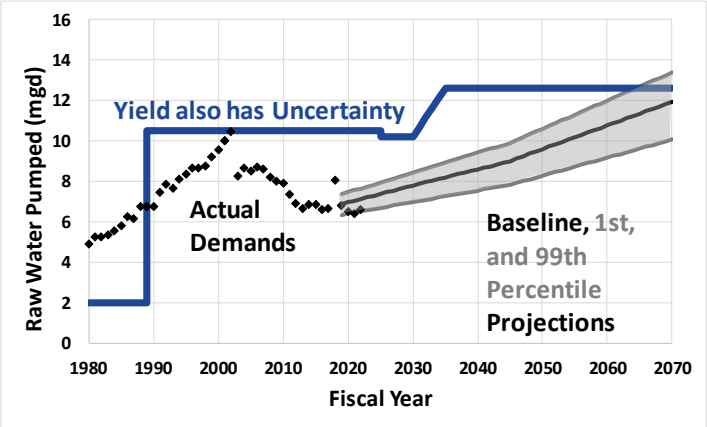
PROVIDING HIGH-QUALITY DRINKING WATER FOR DECADES TO COME

The OWASA Board of Directors voted in 2022 to approve a new Long-Range Water Supply Plan. This plan is a critical factor in OWASA's mission to continue providing customers with high-quality drinking water through 2070.

OWASA worked with local planners and stakeholders updating the water demands projected for our community over the next 50 years as well as OWASA's projected water supply with current resources in a changing climate. These results showed that OWASA has enough water under most circumstances in the coming decades. However, the projections showed that there may be times approaching 2070 where OWASA would not be able to meet our community's water demand.

The OWASA Board ultimately voted to move forward with plans to access OWASA's allocation of source water from Jordan Lake to augment our current primary sources: Cane Creek Reservoir and University Lake. OWASA is moving forward with plans to expand the Quarry Reservoir in the early 2030s, which increases the estimated yield of our local supplies shown in the figure.

OWASA's Local Water Supply Reservoirs Supply Sufficient Water Under Most Conditions for Next 50 Years



We are grateful to the Carrboro-Chapel Hill-Orange County community and partners for your feedback throughout the development of this Long-Range Water Supply Plan. OWASA remains committed to providing high-quality drinking water for customers, and this plan will help ensure that we meet that need through 2070. More information is available at **owasa.org**.

HEALTHY FORESTS ARE GOOD FOR HEALTHY WATER SUPPLY

OWASA owns roughly 2,400 acres of forested lands, the majority of which is in the Cane Creek watershed. Cane Creek Reservoir is a main water source for the Carrboro-Chapel Hill community. Protecting the Cane Creek watershed helps safeguard water quality for the community. Sustainable forest management improves the health of our forests so they are more resilient to disease and climate change impacts.

OWASA has an active forest management program based off of seven guiding principles: protect water quality; improve ecological health of forested land; reduce the risk of wildfire; improve wildlife habitat and species diversity; sustainably manage OWASA's resources; engage the community and partner agencies; and minimize adverse impacts on neighbors and surrounding communities.

Using these principles as guidance, OWASA completed forest management activities on Meadow Crest North and South properties in 2022 located on each side of Teer Road. We expect additional forest management work taking place in the coming years on other OWASA-owned sites as we work to improve the long-term health of the forest to better protect water quality.

SEEING IS BELIEVING

OWASA was grateful to be able to host a series of tours late last fall for seventh-grade students across Chapel Hill – Carrboro City Schools (CHCCS) who are part of the AVID program. AVID is a nationwide program standing for Advancement Via Individual Determination and supports students by preparing them for continuing their education after high school. Many of these students are potentially first-generation college students or have been under-represented in collegiate prep courses in the past.

As part of this program, these students were able to tour the Jones Ferry Road Water Treatment Plant and hear from all facets of OWASA's operations. There was also a career panel with each session to show the potential areas they could focus on and find a productive career they are passionate about.

Overall, OWASA provided over 30 tours of the Jones Ferry Road Water Treatment Plant in 2022! We are always excited to show the community more of what we do and how we do it to continue serving customers. Email **info@owasa.org** to set up a tour for your group in the future.

BRINGING THE TOUR TO YOU

If you are unable to come by for a tour, don't worry! You can see our reservoirs, hear more about our treatment process, and what we are doing throughout the community by watching a short video called "Water Treatment at OWASA" video on our Youtube page!

The video is a great way to learn more about the water treatment process and hear directly from OWASA Team members working to provide these essential services every day.

We also have other information on water quality, forest management, updates on projects around the community and much more on our website – owasa.org.

If you are a teacher or would like a member of the OWASA Team to speak to your group about what OWASA does, please email us at **info@owasa.org**.

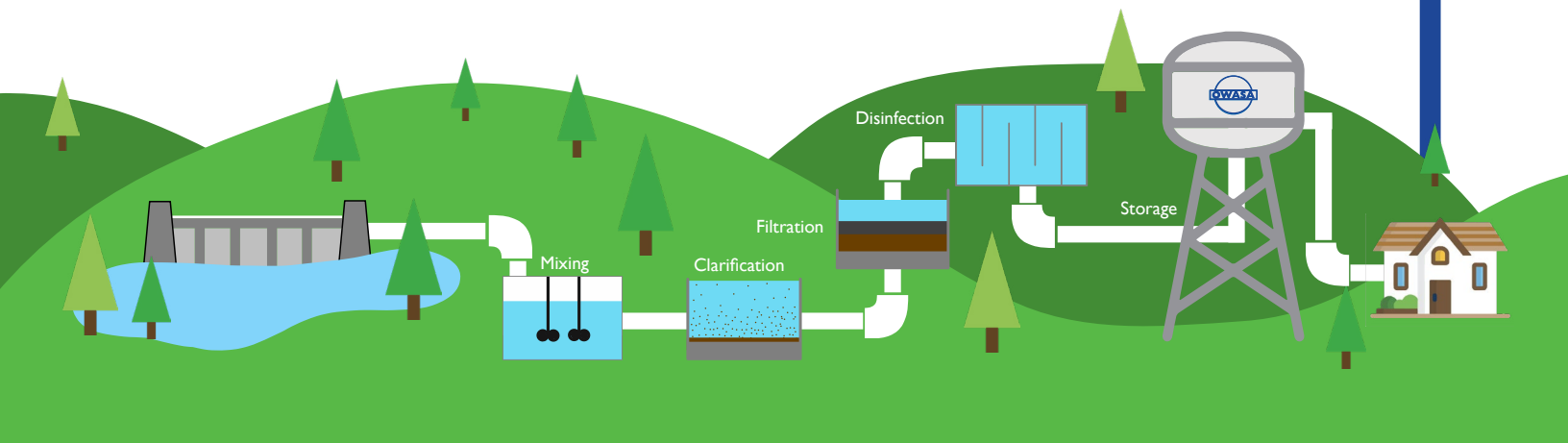
THE WATER TREATMENT PROCESS

AFTER RAW WATER IS PUMPED

from University Lake and Cane Creek Reservoir to OWASA's water plant, it goes through a series of treatment processes to remove particles such as dirt, and add substances such as chlorine to mitigate for potentially harmful bacteria. These are some of the substances we monitor for to ensure your water is safe: turbidity, total organic carbon, disinfectants and their byproducts, fluoride, sulfate, PFAS, and more. View results from all 150 substances that we monitor at **owasa.org/water-health**. OWASA met or surpassed all Federal and State standards for drinking water quality in 2022.

WHAT'S IN OWASA'S WATER?

Most of the data presented below are from tests done January 1 through December 31, 2022. There are some exceptions: the EPA and State allow water utilities to monitor some contaminants less than once per year because their concentrations are not expected to vary significantly year-to-year. Where noted, some data are more than one year old. We know the science of water can be complex so we've also included a list of drinking water definitions.



PROTECT THE WATER

What you pour down the drain in your home or the storm drain in the street, what you flush down the toilet, how you fertilize your lawn – these all impact water quality. Wastewater treatment processes, regulated by the State and Federal governments, remove many of these contaminants. But traces of chemicals that get sprayed on the ground or pharmaceuticals flushed down the drain can end up in local waterways.

You can help protect your community's water in so many ways. For example, by sweeping debris that collects in your walkway or driveway (instead of washing it), disposing of chemicals and pharmaceuticals responsibly (not down a drain or toilet), and properly fertilizing your landscape – if you use too much, it can runoff into a local waterway. Learn more ways to protect, and conserve, water at **owasa.org**.

BACKFLOW PREVENTION

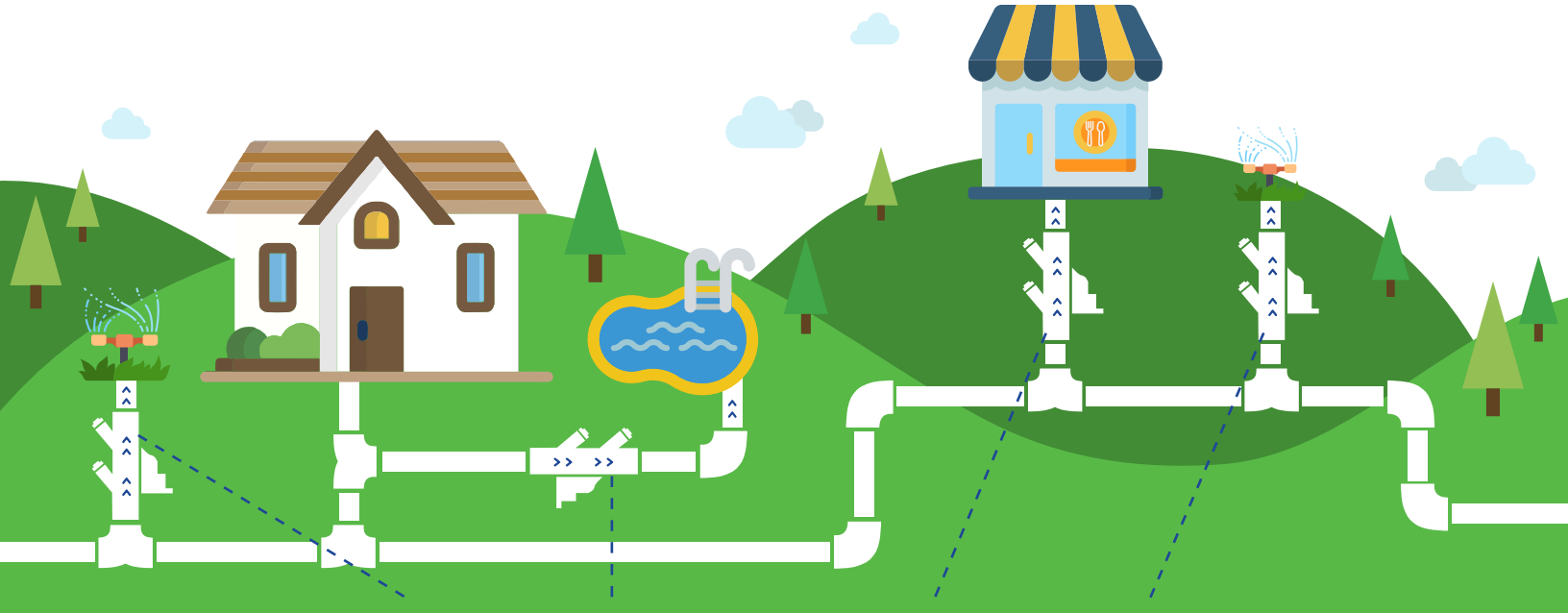
Protecting our water supply includes properly maintaining backflow prevention devices that keep potential pollutants from entering the drinking water supply. These devices are required in locations with irrigation systems, swimming pools, and at many businesses.

Remember - backflow protection devices must be tested annually in order to keep everyone's drinking water safe!

WHERE IS A BACKFLOW PREVENTION DEVICE REQUIRED?*

Irrigation
Swimming Pool
Sprinkler System
Commercial Businesses

**Not intended to be an exhaustive list.*



WITHOUT A BACKFLOW PREVENTION DEVICE, DANGEROUS CONTAMINANTS COULD ENTER THE DRINKING WATER SUPPLY.

SPOTLIGHT: CAREERS IN WATER

UTILITIES ENGINEER

Role: Provide project management and oversight over important water and wastewater infrastructure projects and engineering studies

Training: Four-year bachelor's degree or equivalency; requires a licensed professional engineer (PE)

Salary Range: $63,059 - $97,111

Pros of the Trade: Meaningful work; diverse working opportunities; flexible schedule

UTILITIES TECHNICIAN

Role: Maintains critical water and wastewater infrastructure; operates a variety of machinery and heavy equipment

Training: Four years of high school or equivalency; OWASA provides training and pays for the pursuit of necessary industry specific certifications and Class A CDL

Salary Range: $36,656 - $56,450

Pros of the Trade: Provide essential service to community; on the job training; advancement opportunities

TREATMENT PLANT OPERATOR

Role: Monitor and control plant processes, providing high quality water; trouble shooting issues as they arise

Training: Four years of high school or equivalency; OWASA provides training and pays for the pursuit of necessary industry specific certifications

Salary Range: $47,228 - $72,731

Pros of the Trade: Provide essential service to community; typically a 3-day work-week

LABORATORY ANALYST

Role: Conduct water sampling and testing; ensure water is safe to drink and meets all regulatory requirements

Training: Two-year associate degree, diploma, or equivalent

Salary Range: $47,228 - $72,731

Pros of the Trade: Use of innovative technology; traditional schedule

WHAT IS A CONTAMINANT?

Carrboro and Chapel Hill's primary water sources are University Lake and Cane Creek Reservoir. As water travels over the land's surface or through the ground, it dissolves naturally-occurring minerals (in some cases, radioactive material) and can pick up substances, or contaminants, from the presence of animals or human activity. **There are five types of contaminants that may be present in raw source water:**

MICROBIAL CONTAMINANTS
such as viruses and bacteria – may come from septic systems, wastewater treatment plants, agricultural livestock operations, and wildlife.

INORGANIC CONTAMINANTS
such as salts and metals – can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

PESTICIDES & HERBICIDES
may also come from urban stormwater runoff, residential uses, or agriculture.

ORGANIC CHEMICAL
contaminants include synthetic and volatile organic chemicals. They are byproducts of industrial processes and petroleum production. They can also come from gas stations, septic systems, and urban stormwater runoff.

RADIOACTIVE CONTAMINANTS
can occur naturally or be the result of oil and gas production and mining activities.

REGULATORY GUIDELINES

To ensure tap water is safe to drink, the Environmental Protection Agency (EPA) has regulations limiting the amount of contaminants that can be present in water provided by public systems. Drinking water may reasonably be expected to contain small amounts of some contaminants. In other words, 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 EPA's Safe Drinking Water Hotline (800-426-4791) or visiting their website at www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information. Bottled water is not regulated by the EPA; it is the Food and Drug Administration that establishes limits for contaminants in bottled water.

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 (µg/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 (ng/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.

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.

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

Maximum Contaminant Level Goal (MCLG) The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Running Annual Average (RAA) Removal Ratio A removal ratio greater than 1.00 indicates the utility has exceeded State requirements for Total Organic Carbon (TOC) removal.

WHAT'S IN YOUR WATER?

OWASA routinely monitors for over 150 contaminants, or substances, in the community's drinking water, in accordance with Federal and State laws. The tables below list the substances detected in our most recent round of sampling for each substance group. To access results from all 150 substances tested, please visit **owasa.org/water-health**. OWASA met or surpassed all Federal and State standards for drinking water quality in 2022.

TURBIDITY

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 our monthly samples must be less than or equal to 0.3 NTU. OWASA meets this requirement.

Substance (units)	Treatment Technique (TT) Violation Y/N	Your Water	MCLG	Treatment Technique (TT) Violation If:	Likely Source
Turbidity (NTU) - Highest single turbidity measurement	No	0.091 NTU	N/A	Turbidity > 1 NTU	Soil runoff
Turbidity (NTU) - Lowest monthly percentage (%) of samples meeting turbidity limits	No	100%	N/A	Less than 95% of monthly turbidity measurements are < 0.3 NTU	

TOTAL ORGANIC CARBON (DISINFECTION BYPRODUCT PRECURSOR)

Natural organic matter (usually measured as Total Organic Carbon (TOC)) and inorganic matter (bromide) are disinfection byproduct precursors. All commonly used chemical disinfectants (e.g. chlorine, chlorine dioxide, chloramines and ozone) react with organic matter and/or bromide to varying degrees to form different disinfection byproducts.

Substance (units)	TT Violation Y/N	Your Water (Lowest RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	Treatment Technique (TT) violation if:	Likely Source
Total Organic Carbon (removal ratio) (TOC)-TREATED	No	1.83	1.77 – 1.90	N/A	Removal Ratio RAA <1.00	Naturally present in the environment

DISINFECTANTS AND DISINFECTION BYPRODUCTS

Drinking water is disinfected to reduce or eliminate illnesses potentially acquired through drinking water. Disinfection byproducts can form when disinfectants combine with naturally occurring materials found in source water. These regulations limit public exposure to such byproducts.

DISINFECTANT RESIDUALS SUMMARY

Chloramine, a compound of chlorine and ammonia, is used to disinfect the water throughout the year except in the month of March when we switch to chlorine. This ensures a high level of disinfection. Chloramines and chlorine are both toxic to fish and amphibians such as frogs; if you have an aquarium, please contact a pet supply store for information on how to neutralize chloramines and chlorine. Please also use rubber materials in your plumbing that are chloramine-resistant; for example, for toilet flappers, flexible hoses, and connectors.

Substance (units)	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range Detected Low - High	MRDLG	MRDL	Likely Source
Chlorine (ppm)	2022	No	1.29	0.00 – 2.70	4	4	Water additive used to control microbes
Chloramines (ppm)	2022	No	3.1	0.1 – 3.8	4	4	Water additive used to control microbes

STAGE 2 DISINFECTION BYPRODUCT COMPLIANCE (BASED UPON LOCATIONAL RUNNING ANNUAL AVERAGE)

Substance (units)	Sample Locations	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Detected Low - High	MCLG	MCL	Likely Source
TTHM (ppb)	B01	2022	No	31.4	17.2 – 32.2	N/A	80	Byproduct of drinking water disinfection
	B02		No		18.5 – 37.5			
	B03		No		17.4 – 32.3			
	B04		No		18.4 – 36.5			
	B05		No		19.8 – 37.2			
	B06		No		19.8 – 47.4			
	B07		No		19.0 – 33.5			
	B08		No		18.8 – 33.5			
HAA5 (ppb)	B01	2022	No	17.2	9.7 – 16.1	N/A	60	Byproduct of drinking water disinfection
	B02		No		10.0 – 27.1			
	B03		No		9.1 – 21.0			
	B04		No		3.2 – 20.2			
	B05		No		9.2 – 22.2			
	B06		No		9.3 – 19.3			
	B07		No		9.9 – 21.2			
	B08		No		9.8 – 20.7			

FLUORIDE (INORGANIC SUBSTANCE)

Fluoride occurs naturally in water. It is also added to drinking water to reduce tooth decay. The fluoride level in our water in 2022 was well below the maximum amount allowed (4 parts per million). The US Public Health Service's recommended fluoride level is 0.7 parts per million.

Substance (units)	Sample Date	MCL Violation Y/N	Your Water	Range Detected Low - High	MCLG	MCL	Likely Source
Fluoride (ppm)	2022	No	0.66	0.28 - 0.76	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

**In accordance with Federal requirements, our report card includes a statement that potential fluoride sources include discharge from fertilizer and aluminum factories; however, there are no fertilizer or aluminum factories in the watersheds of University Lake or Cane Creek Reservoir.*

SULFATE (INORGANIC SUBSTANCE)

Sulfates occur naturally and are abundant in the environment, generally originating from mineral deposits, soil, and rocks, or the combustion of sulfur-containing fuels.

Substance (units)	Sample Date	Your Water	Range Detected Low - High	SMCL	Likely Source
Sulfate (ppm)	2/8/22	55	No range	250 mg/L	A mineral that occurs naturally in soils

LEAD AND COPPER

Lead is not typically found in raw water sources, like OWASA's primary drinking water supplies Cane Creek Reservoir and University Lake. There is no detectable lead in the drinking water that we provide to your home. However, when the water comes in contact with pipes, plumbing, and fixtures that contain lead, the lead can release into your drinking water.

OWASA is required to test water samples collected from homes with lead to ensure the water chemistry of our water is not causing significant corrosion of these metals in the water service line or internal home plumbing. OWASA treats the water to prevent lead from entering drinking water through corrosion.

For over 20 years, samples of drinking water leaving OWASA's Jones Ferry Road Water Treatment Plant have tested below the detectable level for lead. During our most recent round of regulatory sampling carried out from June to September 2020, all samples came back below detection level.

In addition, we offer free lead testing to our customers. In 2022, 19 customers requested samples in homes and businesses. Lead was detected in one home at a level of 4.5 ppb and at one business at a level of 0.68 ppb. Both detects are below the regulatory action level of 15 ppb. Please contact our WTP Laboratory for more information at wtplaboratory@owasa.org or (919) 537-4228.

Members of the OWASA Team also continue working with officials at UNC – Chapel Hill as the university is investigating the cause of some lead detections at different fountains and fixtures on campus. OWASA is assisting with technical information and guidance to UNC, as well as publishing information on our website. We have no indication there is a threat of lead being present in drinking water across the community.

Identifying Lead Sources

Protecting drinking water from lead sources is the shared responsibility of OWASA and our customers. OWASA strongly encourages customers to identify and replace any lead pipes or plumbing materials serving their home.

OWASA's water lines are not made of lead. Small sections of lead pipe called goosenecks were used to connect some service lines (a service line is the water line connecting your home to the OWASA main line) to the OWASA distribution system; OWASA removed all known lead goosenecks in the 1990s.

Despite these efforts, it is possible lead may be found in some service lines. Additionally, some plumbing components within homes and businesses can also contain lead such as brass or chrome-plated brass faucets and lead solder, which was used to connect sections of copper pipe. Lead solder is more likely to be found in homes built before its use was banned in 1986. Lead sources and lead levels vary between buildings, so it is important to identify and remove lead sources in every household.

The revised Lead and Copper Rule (LCRR) from the Environmental Protection Agency also requires some additional measures from OWASA beginning in October 2024. OWASA has been working to create an inventory of the material making up the pipes across our community – including your private service line that connects your home to OWASA's distribution system. We will be publicizing information about this inventory with our community as these efforts progress.

OWASA is creating this inventory by collecting pipe material data for service lines based on construction records, water main records, water meter records and maintenance logs, repair and replacement work. However, much of the service line pipe material data is based on the historic records and is not confirmed. The water service line coming into many homes can help identify or confirm your pipe material. You can identify your pipe material by checking your household water service connection inside the home or in your crawl space. To learn more about identifying your water service line and ways to report to OWASA go **here** (**tinyurl.com/35h4vykt**).

OWASA will continue working with regional utility partners to collaborate on efficient and effective methods so that we all can work in the best interest of our customers. OWASA will be in contact with customers as further updates are available.

Protecting our community from lead is a responsibility we share with you. Our Water and Health webpage has additional information for reducing your risk of exposure to lead through drinking water.

Substance (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source
Copper (ppm) (90th percentile)	June – Sept. 2020	0.029	0/30	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	June – Sept. 2020	0	0/30	0	15	Corrosion of household plumbing systems; erosion of natural deposits

Please note: *if present, elevated levels of lead can cause serious health problems, especially for pregnant people and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. OWASA is responsible for providing high-quality drinking water, but cannot control the variety of materials used in home 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 EPA's Safe Drinking Water Hotline (800-426-4791) or by visiting their website at* **www.epa.gov/safewater/lead**.

CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. The raw water that is pumped from local lakes to OWASA's water treatment plant undergoes a comprehensive treatment process, including steps such as disinfection and clarification. OWASA tests 100 liters of its treated drinking water annually. Cryptosporidium has not been detected in our treated drinking water. OWASA is also a member of the Partnership for Safe Water, a voluntary association of over 300 water utilities and drinking water organizations. Together, we foster water treatment optimization beyond regulatory requirements. This optimization includes stringent turbidity reduction throughout the treatment process, providing further protection against Cryptosporidium.

Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

For people with special risk of infection

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).

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

A group of compounds called PFAS has drawn a lot of attention recently as more research is done into the potential health effects of these "forever chemicals." These compounds are used in consumer materials that are water or stain-repellent. They do not naturally occur in water, but we have found detections of these compounds in our raw water sources as well as our finished drinking water.

The Environmental Protection Agency worked in 2022 preparing to release new guidelines to regulate these chemicals in drinking water for the first time. Ahead of this regulation, OWASA has worked to expand our quarterly PFAS monitoring testing that has been ongoing since 2018. OWASA is also evaluating our treatment process and modifications that can be made in the short and long term to reduce PFAS levels in our finished drinking water.

In addition to reporting results in this report card, we also post quarterly results to our PFAS Monitoring Program dashboard at **owasa.org/pfas-monitoring-program**.

PFAS Substance (units)	Year Sampled	Your Water	Range Detected	Likely Source
Perfluorobutanesulfonic acid (PFBS) (ppt)	2022	3.0	2.3 – 3.3	Man-made chemicals used in waterproof and stain proof fabrics, nonstick cookware, some food packaging materials, and some fire suppression foams
Perfluorobutanoic acid (PFBA) (ppt)		1.0	0 – 3.8	
Perfluoroheptanoic acid (PFHpA) (ppt)		5.6	4.1 – 6.3	
Perfluorohexanesulfonic acid (PFHxS) (ppt)		4.5	3.2 – 5.2	
Perfluorohexanoic acid (PFHxA) (ppt)		5.5	4.7 – 5.9	
Perfluorooctanesulfonic acid (PFOS) (ppt)		12.1	7.2 – 15.0	
Perfluorooctanoic acid (PFOA) (ppt)		16.0	11.0 – 19.0	
Perfluoropentanoic acid (PFPeA) (ppt)		4.4	4.1 – 4.9	

SOURCE WATER ASSESSMENT PROGRAM (SWAP) RESULTS

The NC Department of Environment Quality's Source Water Assessment Program (SWAP) conducts assessments for all drinking water sources in the State to determine their susceptibility to Potential Contaminant Sources (PCSs). SWAP assessment reports include background information and a relative susceptibility rating of Higher, Moderate or Lower.

The rating of each raw water source for OWASA (University Lake and Cane Creek Reservoir) was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (characteristics or existing conditions of the watershed and its delineated assessment area). Susceptibility ratings are not indicative of poor water quality, rather, they indicate a system's potential to become contaminated by PCSs in the assessment area.

Source Name	Susceptibility Rating	SWAP Report Date
Cane Creek Reservoir	Moderate	September 2020
University Lake	Moderate	September 2020

The complete SWAP Assessment report for OWASA can be accessed at **www.ncwater.org/?page=600** *(enter OWASA's system ID number, 0368010, in the search function). Because SWAP reports are periodically updated, the results available online may differ from the results that were available at the time this report card was prepared. If you have questions about SWAP, please contact the SWAP team at 919-707-9098 or* **swap@ncdenr.gov**.

THIRSTY FOR WATER KNOWLEDGE?

REAL-TIME OUTAGES AND ALERTS

OWASA added an online outage map in 2021 to show where there are any active water outages or boil water advisories in our service area. We also communicate directly with customers during water outages through OC Alerts. Sign up for OC Alerts and keep updated with any outages on **owasa.org**.

WATER GOVERNANCE

Be part of the community's important conversations on water. Everyone is invited to attend OWASA's Board of Directors meetings where we convene to discuss and decide on plans, policies, fees, standards for water quality and watershed protection, and more. Board meetings are held the second and fourth Thursday of most months. Check owasa.org for the latest information.

FOR MORE INFORMATION ABOUT YOUR WATER

If you have any questions or comments about our drinking water, we invite you to contact our Water Treatment Plant Laboratory Team at 919-537-4228 or our Water Supply and Treatment Manager at 919-537-4205.

CONTACT OWASA ANYTIME

ORANGE WATER AND SEWER AUTHORITY

Public Water Supply No.: 0368010
400 Jones Ferry Road, Carrboro, NC, 27510
919-968-4421 | info@owasa.org | owasa.org

@OWASA_NC
Orange Water and Sewer Authority
Orange Water & Sewer Authority

EPA SAFE DRINKING WATER HOTLINE

Call 800-426-4791