



ANNUAL WATER QUALITY REPORT CARD 2021



It's our pleasure to share our 2021 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.

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high-quality water, reclaimed water, and wastewater services. On the lake, in the field, at the lab, and in the office, our diverse team manages your water system.

What follows 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!

KEEPING EQUIPMENT RUNNING & WATER FLOWING

Moving water from a reservoir, through a water treatment plant, and delivering it to customers takes a lot of moving parts along the way. To make sure those parts are all working as efficiently as they can, OWASA's Maintenance Team is constantly monitoring equipment to make any tweaks or repairs needed to keep providing essential services to the Carrboro, Chapel Hill, Orange County community.

James Dodson is OWASA's Maintenance Supervisor and leads a Team of three Maintenance Mechanics who are primarily focused on preventative and corrective maintenance. Dodson has worked in almost every aspect of OWASA's operations since 2006 and credits previous Team members who shared their knowledge in his early days with helping him throughout his career at OWASA. The Team Dodson leads now includes Cole Hudson, MG Murray, and Marie Waters. This group works at the Jones Ferry Road Water Treatment Plant, in addition to assisting other Team members across OWASA as needed.

Some of these maintenance projects are born from a culture of continuous improvement. Dodson said it's important that the maintenance Team understands OWASA's operation so that they can see an issue, identify a solution, and work toward a resolution as quickly and safely as possible. And this group goes through regular training sessions to keep safety as a top priority as they may have to work on electrical equipment, a chemical leak, or generally handling dangerous materials.

Anywhere the Team can have an impact by improving a process or equipment reliability, "that's where we get to get creative," Dodson said.

He added that anyone with a mechanical background or a mind that wants to know how something works and why it works that way would be a good fit for this sort of field. Doing this work at a place like OWASA also helps give back to the community every day.

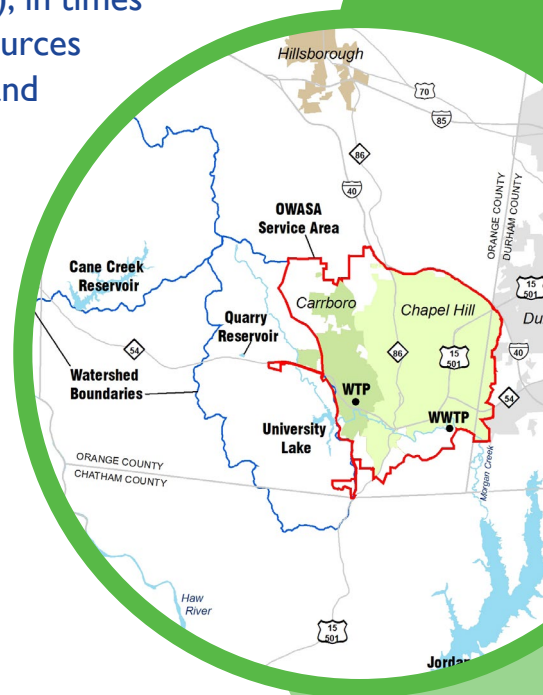
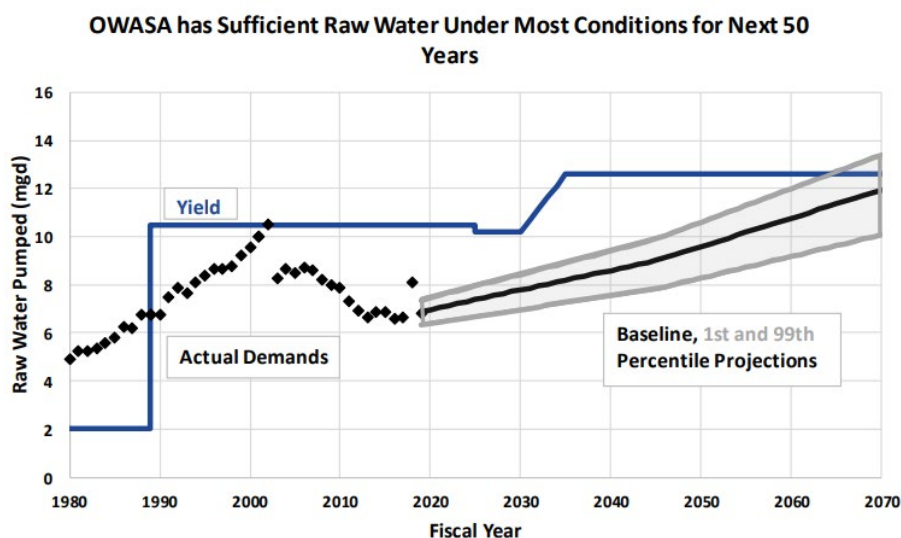


CARRBORO-CHAPEL HILL'S COMMUNITY WATER SYSTEM

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 is making plans to ensure that the community has ample drinking water for the next 50 years. Our planned water supply will meet demands under most conditions, but they are vulnerable to extended drought. Learn more at owasa.org.

FUN WITH WATER

FISHING, BOATING, AND BIRDING AT OWASA RESERVOIRS

OWASA's primary drinking water sources – Cane Creek Reservoir and University Lake – are key pieces of the process in delivering treated drinking water to residents across Carrboro-Chapel Hill-southern Orange County. But these reservoirs are also great places to get out and enjoy the outdoors.

OWASA hosts a recreation season at the two reservoirs each year, running typically from late March through late October. Visitors can enjoy the calm waters, forest views, and wildlife that calls the reservoirs home.

You can bring your own small boat to either reservoir on a car or truck. Once the Team at the reservoir has inspected the boat to make sure no harmful materials are being introduced to the water, off you go! Boats are also available for rent from OWASA. Paddle around the reservoir and enjoy the scenery, or you can use an electric motor to scoot to your favorite fishing spot.

There are rules and regulations in place to ensure we are protecting water quality in the reservoirs, but we hope you come out and enjoy these great resources that serve major roles in our community!

GOOD WATER = GOOD BEER

While a nice glass of OWASA treated drinking water right from the tap hits the spot on its own, that same water is the base for many other home brewing options for residents, whether that's a cup of coffee every morning or something a bit more adventurous.

Home brewing has grown in popularity in recent years, and the water quality report card is your home for all the information you need to bring the most out of your ingredients to enjoy your own hoppy home creation.

OWASA has fairly soft water, overall, checking in at about two grains per gallon on average. We hope this information is helpful if you are inspired to go on your own brewing adventure. Either way, we'll have the high-quality tap water that you need from the beginning ready for you!

For more commonly requested parameters useful to brewers, please see page 13 of our report on all 150+ substances that we monitor at [owasa.org/water-health](https://www.owasa.org/water-health).



CHEERS!





JONES FERRY ROAD WATER TREATMENT PLANT RESILIENCY PROJECT

2021 saw a lot of work taking place to increase the reliability and resiliency of OWASA's services for residents across the area.

One of the larger projects during 2021 took place at the Jones Ferry Road Water Treatment Plant (WTP). This area was the site of a large water line break in November 2018. To minimize the chance for similar breaks in the future, a large-scale project added in additional redundancy to better serve customers.

The project totaled a roughly \$6 million investment to improve drinking water distribution and treatment facilities at the WTP. As part of this project, improvements were made to the pumps that send treated drinking water on its way to customers after leaving the WTP, new chemical facilities were installed, and aging water lines were replaced directly in front of the WTP.

This is just one of the many projects OWASA's crews and contractors addressed in 2021. Many other projects saw water lines replaced in neighborhoods across the service area to limit the amount of time anyone is without water.

A new map was also published on the OWASA website in 2021 to show residents where OWASA is working across the area to better serve you. OWASA's project map is available at [**owasa.org/projects-near-me**](https://owasa.org/projects-near-me).

OWASA AFFORDABILITY PROGRAM

Access to clean, affordable drinking water and wastewater services is one of the most important requirements for our community's quality of life. OWASA takes very seriously our responsibility to maintain affordable rates while providing high-quality and reliable water service.

Through OWASA's Affordability Program, we work in partnership with social service agencies across our community to provide information and tools to help community members manage and reduce their water and sewer bill. One key partnership is with the Interfaith Council for Social Services to manage our community's donor-supported water bill assistance program, Care to Share.

You can help too! Your donation to Care to Share helps to make sure that no one in our community will have to go without water - or scrimp on medications or food to pay their water bill. 100% of donations are used to provide water bill relief to members of our community.

Your gift of just \$12.50 added to your water bill each month will help a family in Chapel Hill or Carrboro pay two monthly water bills.

Visit [**owasa.org**](https://owasa.org) to learn how you can donate to or apply for Care to Share bill assistance.





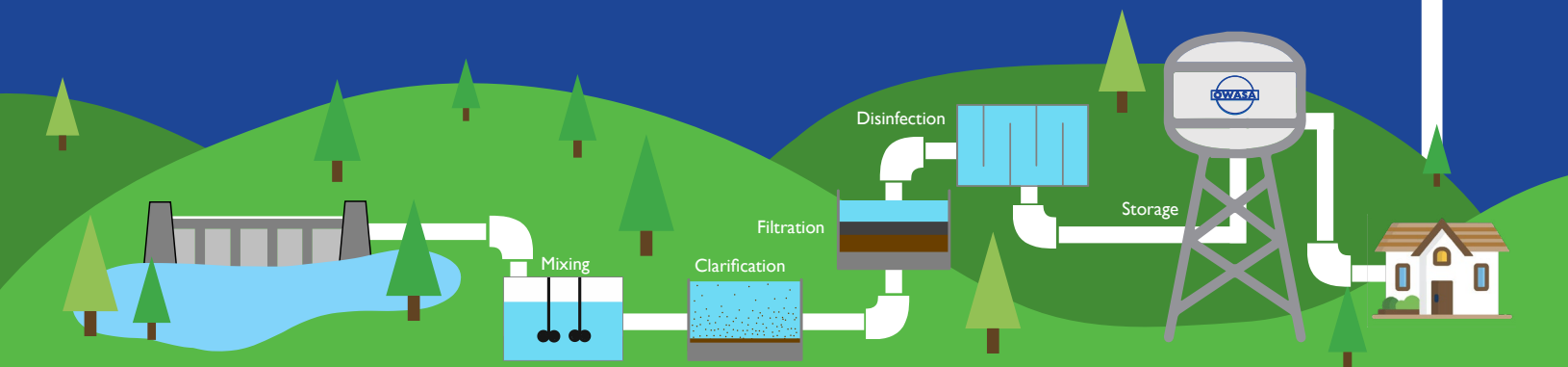
THE WATER TREATMENT PROCESS

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 2021.

WHAT'S IN OWASA'S WATER?

Most of the data presented below are from tests done January 1 through December 31, 2021. 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

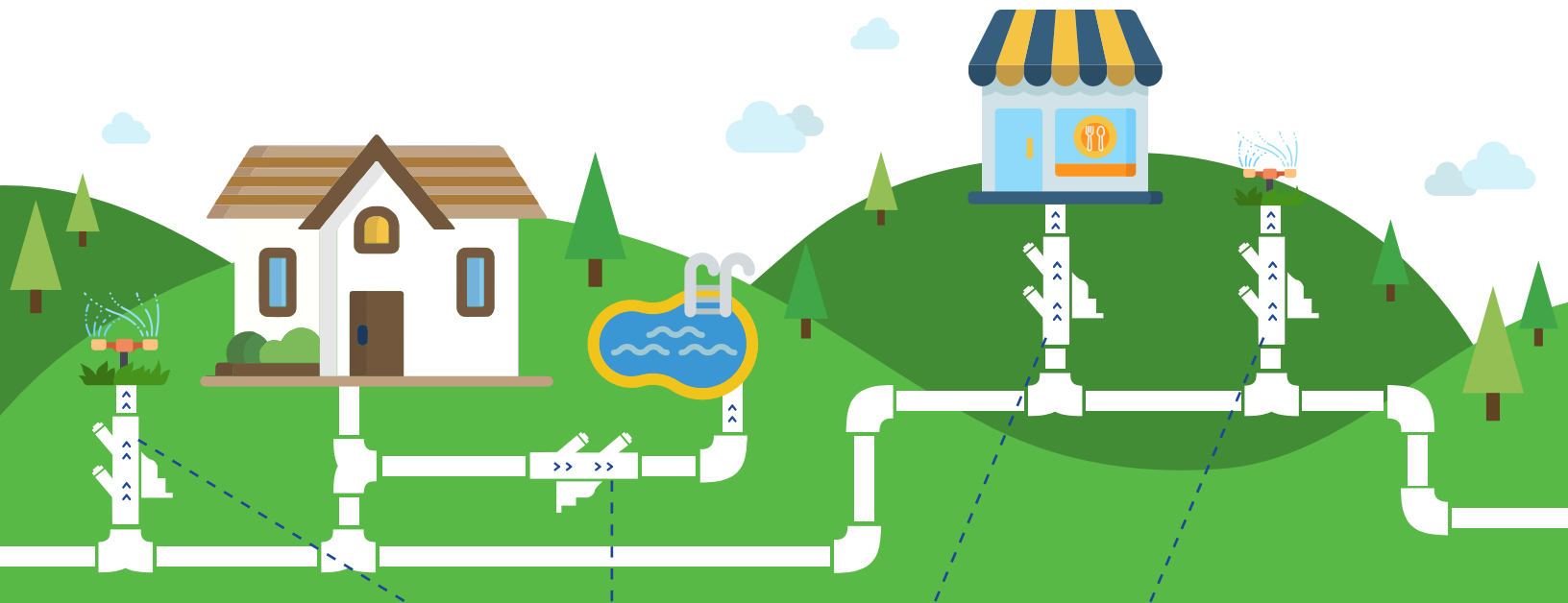
Protecting our water supply includes properly maintaining backflow prevention devices that keep wastewater from entering the drinking water supply. These devices are required in locations with irrigation systems, swimming pools, and at many businesses.

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.

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 AND 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.

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 2021.

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	0.067 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	

RADIOLOGICAL SUBSTANCES

Radium is a naturally occurring radioactive metal. It occurs at trace levels in virtually all rock, soil, water, plants and animals.

Substance (units)	Sample Date	MCL Violation Y/N	Your Water	Range Detected	MCLG	MCL	Likely Source
Combined radium (pCi/L)	6/14/17	No	0.33	No Range	0	5	Erosion of natural deposits

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	MCLG	Treatment Technique (TT) Violation If:	Likely Source
Total Organic Carbon (TOC) (percent removal, mg/L)	No	Percent removal: 79 to >91 Source water: 4.41 to 6.91 mg/L Treated water: <0.50 to 1.04 mg/L	N/A	TT <45% removal	Naturally present in the environment

Note: The method used to comply with the disinfectants and disinfection byproducts treatment technique requirements is classified by the State as Step 1. Our treatment process successfully removes more than the required 45%. This removal requirement is determined based on the alkalinity and TOC level of our source water.

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)	2021	No	1.30	0.00 – 2.70	4	4	Water additive used to control microbes
Chloramines (ppm)	2021	No	3.1	0.2 – 3.9	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	2021	No	21.1	9.4 – 14.1	N/A	80	Byproduct of drinking water disinfection
	B02		No		11.6 – 15.5			
	B03		No		8.8 – 14.6			
	B04		No		13.1 – 17.4			
	B05		No		10.8 – 14.8			
	B06		No		11.0 – 15.0			
	B07		No		10.2 – 14.1			
	B08		No		9.9 – 15.2			
HAA5 (ppb)	B01	2021	No	12.4	2.9 – 8.0	N/A	60	Byproduct of drinking water disinfection
	B02		No		6.1 – 8.5			
	B03		No		2.7 – 7.3			
	B04		No		8.2 – 9.4			
	B05		No		5.0 – 7.2			
	B06		No		4.8 – 6.8			
	B07		No		4.8 – 7.5			
	B08		No		4.4 – 8.1			

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 2021 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)	2021	No	0.61	0.32 - 0.72	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)	2/9/21	62	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, lead can enter drinking water from corrosion of plumbing materials that contain lead.

OWASA treats our drinking water to prevent lead from entering drinking water through corrosion. 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.

However, 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.

A revised Lead and Copper Rule (LCR) from the Environmental Protection Agency goes further than the previous rule to address potential lead in service lines and strengthens related regulations.

In order to ensure we comply with the new rule as it is officially implemented, OWASA has engaged a consultant to assist in developing an inventory of materials of service lines within our community and a strategy for removing any identified lead service lines. Where possible, OWASA will look to leverage federal and state funding from the Infrastructure and Jobs Act to assist in addressing any identified issues.

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 of 3 parts per billion (ppb). One update in the new LCR is a lower detection limit, which means samples must be analyzed using a method that can measure lower levels of lead than before. In anticipation of this change, OWASA began testing all samples at the new threshold beginning in 2020, including our most recent regulatory sampling carried out from June to September 2020; all samples came back below this updated level of 1 ppb.

As we review this new update to the LCR, we will be in touch with customers as further updates are necessary. In the meantime, please reach out to our Water Treatment Plant Team with any questions or concerns.

OWASA is committed to working with our customers and offers free lead and copper testing of our water to all customers in our service area. In 2021, 22 customers requested samples in homes and businesses. Lead was detected in one business at a level of 2.8 ppb and was not detected at any other sites.

OWASA also worked closely with the Chapel Hill – Carrboro City Schools district in 2021 to restore water quality in their buildings after nearly a year of the buildings being largely unoccupied due to the COVID-19 pandemic. When buildings are vacant or operating at significantly reduced capacity for a long period of time, the water that would flow every day is left sitting in pipes and fixtures. Although the drinking water that leaves our Jones Ferry Road Water Treatment Plant is carefully treated including to prevent corrosion, when water sits unused for long periods of time, the water quality can deteriorate. This can include leaching of metals from pipes, fixtures, and fittings. Recognizing this risk, school officials took proactive and precautionary measures to ensure that water in each of the schools was flushed and tested before students and staff consumed the water. Results of lead testing performed in collaboration with OWASA included 263 samples ranging from less than 1 ppb to 1900 ppb. While some of these samples did have high levels of lead, the samples were collected proactively before the buildings were occupied and normal water usage resumed to ensure that the water being provided was safe. As a result of this testing, the school officials hired a consultant agency to perform remediation efforts and additional testing to confirm the issues were resolved before water usage was resumed in the schools.

Protecting our community from lead is a responsibility we share with you. Our Water and Health webpage has additional information for reducing your risk to 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. We test 100 liters of our treated drinking water annually for Cryptosporidium, and it has not been detected.

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)

Compounds that help prevent grease and stains on materials such as clothing or cookware contain PFAS. These compounds are very persistent in the environment, meaning they don't break down, and they accumulate over time with exposure.

Protecting public health is our top priority and delivering safe water is our mission. On a quarterly basis, OWASA monitors for 45 PFAS compounds in our reservoir and drinking water. We publish these results on our website after each round of sampling. Low levels of PFOS and PFOA – two of the more-extensively produced and studied of these chemicals – have been detected in OWASA samples; drinking water samples remain well below the Environmental Protection Agency Health Advisory Level of 70 ppt for the combined total of the two compounds.

Research into the health effects of PFAS exposure is relatively recent and ongoing. OWASA is an active and contributing member of this research. You can view our monitoring results below and see the newest information on our PFAS dashboard at owasa.org.

PFAS Substance (units)	Year Sampled	Your Water	Range Detected	Likely Source
Perfluorobutanesulfonic acid (PFBS) (ppt)	2021	1.3	0 – 2.6	Man-made chemicals used in waterproof and stain proof fabrics, nonstick cookware, some food packaging materials, and some fire suppression foams
Perfluoroheptanoic acid (PFHpA) (ppt)		2.3	0 – 5.4	
Perfluorohexanesulfonic acid (PFHxS) (ppt)		1.7	0 – 4.0	
Perfluorohexanoic acid (PFHxA) (ppt)		3.0	0 – 5.1	
Perfluorooctanesulfonic acid (PFOS) (ppt)		5.4	0 – 11.0	
Perfluorooctanoic acid (PFOA) (ppt)		7.9	0 – 17.0	
Perfluoropentanoic acid (PFPeA) (ppt)		3.5	2.3 – 4.5	

SOURCE WATER ASSESSMENT PROGRAM (SWAP) RESULTS

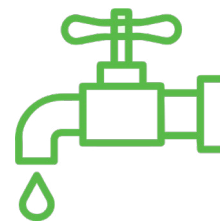
The NC Department of Environment Quality's Source Water Assessment Program (SWAP) conducts assessments for all drinking water sources in the State to determine their susceptibility to Potential Contaminant Sources (PCSs). SWAP assessment reports include background information and a relative susceptibility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

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 ($\mu\text{g/L}$) – 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.

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.



THIRSTY FOR WATER KNOWLEDGE?



REAL-TIME OUTAGES AND ALERTS

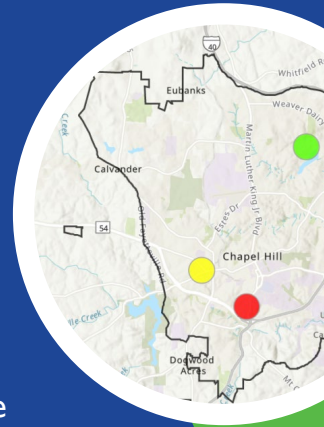
OWASA added an online outage map in 2021 to show where there are any active water outages or boil water advisories in our service area. We also communicate directly with customers during water outages through OC Alerts. Sign up for OC Alerts and keep updated with any outages on [owasa.org](https://www.owasa.org).

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](https://www.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](https://www.owasa.org)

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