

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By



DavidsonWater
INCORPORATED

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

PWS ID#: NC02-29-025



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



Non-English Speaking Populations

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

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by



Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

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 www.epa.gov/safewater/lead.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Craig Koonts, Water Plant Superintendent, at (336) 248-7691.

Annual Meeting Report on Operations of Davidson Water Inc.

May 8, 2023

Good evening. I want to introduce some of the management team that is with us tonight:

Robert Walters, Vice President, Construction and Engineering

Alison Brinkley-Michael, CFO

Eric Hege, CIO

Jonathan Ray, Director of Water Services

Danny Thompson, Civil Engineer/GIS Manager

Ben Palmer, Civil Engineer/Asset Manager

Craig Koonts, Water Plant Superintendent

Lisa Koonts, Human Resources

Susan Little, Administrative Services Supervisor

I am pleased to report to the membership that Davidson Water Inc. has 65,826 total connections and 59,479 active meters. Currently the company has 84 full-time employees and 1 part-time employee.

Water Treatment Plant and Water Quality

Our average daily flow was 11.18 million gallons per day (mgd), and peak flow was just under 16.73 mgd. Water quality remains our top priority, with all test results being well within U.S. EPA regulations. We are pleased to announce that in 2022, Davidson Water received the North Carolina Area Wide Optimization Program award given by the North Carolina Department of Environmental Quality (NCDEQ). The award recognizes water systems that meet much more stringent regulations and achieve higher levels of water quality than are required by U.S. EPA.

We completed a disinfectant conversion project from chlorine gas to sodium hypochlorite (liquid bleach). Bleach is much safer than chlorine gas for employees as well as the general public. We have completed a fluoride project with updated process equipment and an emergency containment area.

We started a \$500,000 Federal Emergency Management Agency (FEMA) grant stream bank restoration project along the Yadkin River, which was severely eroded by multiple heavy floods. This project should be completed in the near future. Other major projects included flume repair to Reservoir No. 3 (our Upper Reservoir, next to Highway 64), and we began design work and have placed an order for a new 2,700-kilowatt power generator for the water plant. This generator project will take place over the next two years at a cost of over \$2 million.

Distribution

Our distribution system saw large line upgrades, line extensions, and pipe relocation of 17 miles of new line and 3 miles of replacement pipe. We have approximately 1,916 miles of water lines. We had over 19 new projects permitted with NCDEQ and have approximately 50 active projects that are either under construction or in the process of beginning construction.

Projects

Some highlights of projects we're working on or completed in 2022:

- \$2.4-million pump station replacement at Old Highway 52 and Welcome Center Boulevard
- 12-inch line replacement on Turnpike Road in Trinity

- about 35,000 feet of line improvements to Jerusalem Road and Regan Road

North Carolina Department of Transportation Projects: Nucor turn lanes, I-85 and Highway 64 improvements, Finch Farm Road, Hickory Tree Road, Becks Church Road, Archdale Road, Gumtree Road Bridge, Hasty School Road, and Surratt Road in Trinity.

Industrial/Commercial Site Projects: New Bowers Road, Nucor, I-85 Corporate Center at Egger Parkway, and NC I-85 Center (Samet) development.

Meter Services

The Meter Services Department is continuing to install drive-by radio-read meters, or automatic meter read (AMR), for our high-demand, large-meter customers for detailed consumption tracking. Some of these high-demand customers are utilizing ultrasonic meters and cellular real-time consumption readings. For all residential and small business customers, we are utilizing 100-percent AMR technology. We have also implemented a retired meter change-out program for residential customers, currently replacing all meters from 2004 and earlier.

Customer Service and Information Technology

Throughout the past year, we have continued to refine our work order system. This has enabled us to create and track additional work orders, such as ones specifically focused on Puddles, our leak detection canine. We have also expanded the work order system into the beginnings of a robust asset management system. This will allow us to better track maintenance and data on items such as pumps and control valves.

To improve communication with our field crews, we have started switching our cell service over to FirstNet from AT&T. This will give us more complete coverage than we were experiencing utilizing the Verizon network. This project is expected to be completed by early fall 2023.

Our lobby opened back up last spring after being closed for several months due to COVID-19, parking lot storm drainage work, paving, and lobby renovation. We also added another drive-through customer service lane. Lobby hours are 9:00 am to 4:00 pm Monday through Friday. The drive-through lanes are still open from 8:00 a.m. to 5:00 p.m., Monday through Friday, as is customer service by phone.

Capital Credits

The board of directors approved the retirement of \$596,089.81 in capital credits. Capital credits are excess margins (or profits) created by nonprofit companies. This money was distributed to members and former members that received water service from Davidson Water Inc. in 1990. Some of the checks sent out also included outstanding capital credits from 1989.

Employee Giving and Community Outreach

Davidson Water employees have been very generous, giving back to the community in more ways than one. This past year our annual United Way campaign contributions totaled \$8,469. Our annual food drive is always a huge success. This past year, employees and the company contributed \$1,290, along with nonperishable food items, for Greater Things



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Outreach Center in Welcome.

Scholarships

Davidson Water annually awards four college scholarships in the amount of \$2,000 each to deserving high school seniors in memory of past board members. Last year's recipients were:

Paris Griffin, Wheatmore High School
Kaylie Sink, North Davidson High School
Emily Stambaugh, West Davidson High School
Salem Ward, Central Davidson High School

Davidson Water also awarded four \$1,000 scholarships to students attending Davidson County Community College. Last year's recipients were:

Angel Burns, Central Davidson High School
Morgan Cooley, West Davidson High School
Carson Shoaf, West Davidson High School
Bryson Young, East Davidson High School

In closing, I want to emphasize our commitment to our mission of providing safe, reliable water to our members at the lowest possible cost. We will continue to do that with the leadership of our board and management, the expert guidance of our professional partners, the dedication and expertise of our employees, and the support of our members. Thank you.

Respectfully submitted,

Ron Sink

Annual Meeting

Annual Member Meeting was held March 13, 2023 at the company's office in Welcome, NC. Lee Comer, President called the meeting to order. Mr. Comer then requested for a motion to adjourn the meeting until May 8, 2023. A motion was made, seconded, and passed.

In reviewing documents in preparation for the annual meeting, it was discovered that there are a very small number of members who may not have received adequate notification of the annual meeting. The remedy for this is to ask for a motion and vote to adjourn this annual meeting and reconvening at a later date of Monday, May 8th at 7:30 p.m. at the company offices.

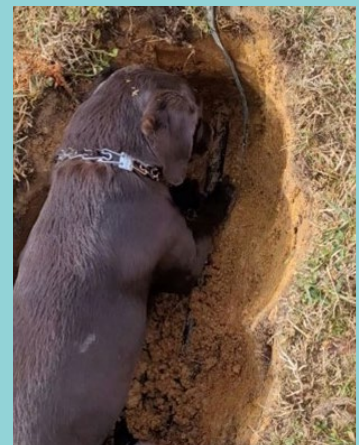
The error only affected a small number of members who receive their bill by email. However, we know meeting notice was given and received by most of these because we know an appreciable number of those paying their bill online or submitting proxy online saw the notice, but we can't be certain as to the exact number who may not have received their notice electronically. However, in an effort to ensure notice to all members it was best to adjourn the annual meeting until May 8, 2023 at 7:30 pm at the company offices. This allowed time to ensure proper notice of meeting.

Think before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3leRyXy>.

Puddles, Our Leak Detection Dog

In 2021 we introduced Puddles, our first leak detection dog. Puddles and her handler, Sean Griffin, meter services technician, have been actively searching out members' leaks. Over the past year, Puddles has made several local appearances, and her work orders have increased. If you need help finding a leak, give Puddles a call!



Puddles in action



Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.



- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

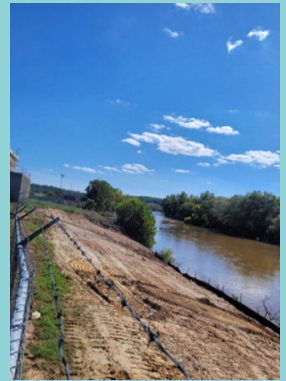
Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention (www.cdc.gov) websites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. The nonprofit organization Clean Water for North Carolina's website (<https://goo.gl/na06hQ>) provides complete and current information on water issues in North Carolina, including valuable information about our watershed.

Yadkin River Stream Bank Restoration

Davidson Water has been working on the Yadkin River Stream Bank Restoration Project for several months. This restoration project is downstream of the Yadkin River, below the Highway 64 bridge crossing and adjacent to the water treatment plant (see map). The banks and the facility were damaged during Hurricane Michael in 2018, resulting in the need for restoration. Davidson Water applied for FEMA funding and engaged S&ME Consultant Engineers to assess and identify stream banks that needed restoration and identify the damage to the facility in need of rehabilitation.

S&ME has assisted in monitoring the progress of the \$500,000 project and provided analysis regarding potential improvements that would minimize impacts from future flood events. S&ME also provided bidding, construction inspection, construction administration, remediation, and damage prevention with Davidson Water personnel.



Where Does My Water Come From?

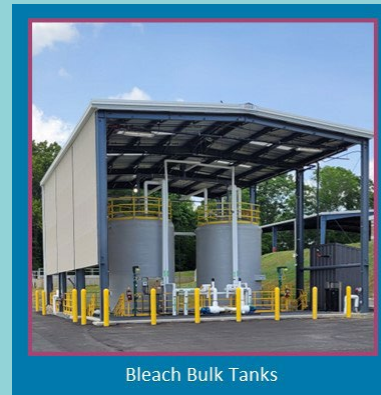
The Gregg W. Stabler Treatment Plant is located on Koontz Road near Highway 64 West in Lexington. Our source water is the Yadkin River. The Yadkin River begins in Blowing Rock, where it starts out as a small stream and follows along Highway 321 and then along State Road 268, deepening as other tributaries feed into it. The Yadkin then feeds into the W. Kerr Scott Dam Reservoir. The W. Kerr Scott Dam is an earthen dam built in 1960 by the U.S. Army Corps of Engineers for flood control. The reservoir has 125 miles of shoreline and holds up to 112,000 acre-feet of water, or 36.5 billion gallons. (An acre-foot is one acre of water one foot deep, or 325,000 gallons.) A minimum flow must be released through the dam to keep a constant supply of water flowing down the Yadkin.

During 2022 Davidson Water purchased water from the cities of Winston-Salem and Archdale to supplement peak usage or emergency needs. To obtain a water quality report from the city of Winston-Salem, please call (336) 727-8000. To obtain a water quality report from the city of Archdale, please call (336) 434-7364.

Bleach Tanks Installed

The water treatment plant installed a bleach system to convert from disinfecting with chlorine gas to sodium hypochlorite (bleach). Chlorine gas poses many risks, which could result in increased liability. The conversion to bleach provides a much safer disinfection alternative for the employees and the community with no change in water quality.

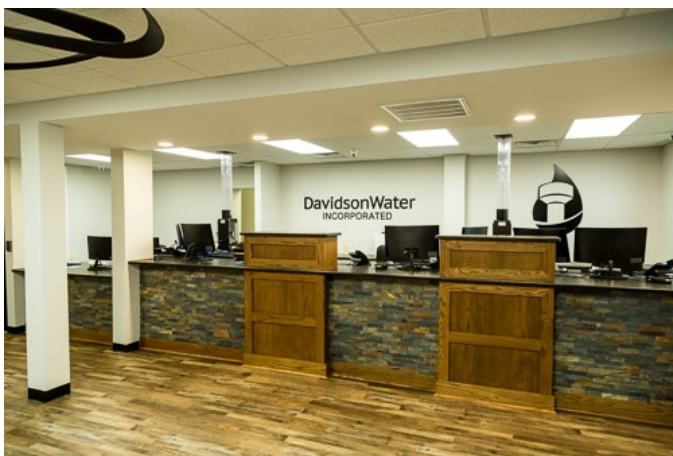
Pictured to the right are two bulk tanks to house the bleach. These fiberglass reinforced plastic (FRP) tanks are flexible, resistant to ultraviolet light, and will hold up well to bleach, providing longer life and a better choice for storing the chemical. Black & Veatch (Charlotte) was the consulting engineer, and Omega Construction (Winston-Salem) was the general contractor for the \$3.8-million project.



Bleach Bulk Tanks

Office Renovations

The office renovations are complete. This project consisted of a redesigned lobby, a face-lift for the front entrance, a parking lot upgrade, an additional drive-through, an upgrade to the landscape, new stormwater drainage, and new offices added to the Distribution and Engineering Departments. Throughout construction we encountered many delays due to supply shortages. However, we are grateful for the reopening of our member service lobby in June. Thank you for being patient with us during this renovation.



Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent through a series of three reservoirs to allow natural settling of silt and particulate matter. The first chemical added is chlorine dioxide. The water then goes to a mixing tank where ferric sulfate and pH-adjusting chemicals are added. The addition of these substances causes small particles (called floc) to adhere to one another, making them heavy enough to be removed from the water in a set of clarifiers. Sodium hypochlorite (bleach) is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears and clear water emerges. Bleach is added again as a precaution against any bacteria that may still be present throughout the distribution system. (We carefully monitor the amount of bleach, adding the lowest quantity necessary to protect the safety of your water without compromising taste.)

Seasonally, a portion of filtered water is processed through granular activated carbon filters to polish the water, removing taste- and odor-causing compounds as well as reducing potential disinfection by-products. Finally, caustic soda (to adjust the final pH and alkalinity), fluoride (to prevent tooth decay), and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to clearwells and water towers and into your home or business.

Failure in Flint

The national news coverage of water conditions in Flint, Michigan, has created a great deal of confusion and consternation. The water there has been described as being corrosive; images of corroded batteries and warning labels on bottles of acids come to mind. But is corrosive water bad?

Corrosive water can be defined as a condition of water quality that will dissolve metals (iron, lead, copper, etc.) from metallic plumbing at an excessive rate. There are a few contributing factors, but generally speaking, corrosive water has a pH of less than 7; the lower the pH, the more acidic, or corrosive, the water becomes. (By this definition, many natural waterways throughout the country can be described as corrosive.) While all plumbing will be somewhat affected over time by the water it carries, corrosive water will damage plumbing much more rapidly than water with low corrosivity.

By itself, corrosive water is not a health concern; your morning glass of orange juice is considerably more corrosive than the typical lake or river. What is of concern is that exposure of drinking water to elevated levels of the dissolved metals increases adverse health risks. And therein lies the problem.

Public water systems are required to maintain their water at optimal conditions to prevent it from reaching corrosive levels. Rest assured that we routinely monitor our water to make sure that what happened in Flint never happens here.

Lead Awareness

Lead is never present when water flows from the treatment facility, nor is it present in the water mains running along our roads. However, in structures built before North Carolina began enforcement of the federal ban on lead (March 1987), lead may be present in the pipe connecting the structure to the water system – known as a service line -- or in the plumbing. Plumbing sources of lead include lead-based solder used to join copper pipes and some brass and chrome-plated brass faucets. Lead enters drinking water primarily as the result of corrosion of materials. Lead solder was not banned until 1986, so older homes may have lead solder within their plumbing systems. Old faucets and other end-use devices can also contain lead.

Stable water quality greatly reduces the potential for lead corrosion and the release of lead into drinking water. Davidson Water has never changed water sources in over 50 years, and our operations staff monitor and adjust water quality daily to ensure water is stable and not corrosive. We also routinely take representative samples throughout our water system to verify that we comply with all drinking water regulations for lead and many other water quality parameters. The results of those tests are provided to you each year in our annual water quality report.

The U.S. EPA has recently updated the Lead and Copper Rule to include a requirement for water utilities to create an inventory of all service lines in their system and develop a replacement plan for all lines that are lead. The ownership of the service line splits at the meter between Davidson Water and the member, with both portions of the service line included in the inventory.

First, some background information. No lead exists in Davidson Water's source water or the main water lines, and Davidson Water does not have any lead service lines. In December 2022, Davidson Water began a comprehensive inventory of our entire water distribution network, which encompasses more than 65,000 residential and commercial service connections.

Davidson Water-Owned Portion of Service Lines

Davidson Water has historical engineering specifications, purchase orders, and as-built records to demonstrate that lead was not a material used for any of the utility-owned portions of the service lines in our system.

Member-Owned Portion of Service Lines

Using our tap installation records and county tax information, we have identified approximately 33,000 connections made prior to the 1987 North Carolina enforcement of the federal lead ban. Because our system originated in the late 1960s and lead pipe was phased out in the 1950s, it is unlikely that any of those connections utilized service lines constructed from lead. However, regardless of the low likelihood of lead anywhere in our system, we must verify the material of construction utilizing one of the approved verification methods before we can declare a service line "non-lead."

In the upcoming months, Davidson Water will be conducting a survey where we ask our members to attempt to identify the material of construction for their portion of the service line. The purpose of collecting this data is to reduce the number of service lines with a material of construction characterized as "unknown." Please be on the lookout for future communications regarding the survey, as well as additional information on this service line inventory process.

Additional Resources on Lead in Water:

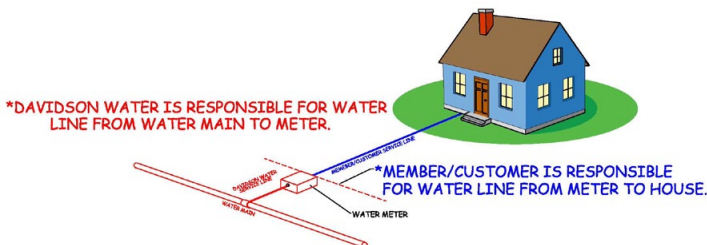
www.davidsonwater.com/MemberInfo/FaqLead.aspx

American Water Works Association, "Together, Let's Get the Lead Out"

<https://www.youtube.com/watch?v=PqFHrae92OM>

Water Line Improvements

Contractors have recently completed two water line projects. Breece Construction completed a 15,000-foot improvement on Turnpike Road in Trinity to upgrade from a 6-inch to a 12-inch line. A. S. Backhoe and Sam Watford Construction finished a 35,000-foot betterment to an eight-inch water line in the area of Jerusalem and Regan Roads.



Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

New Highway 52 Pump Station Project

Our existing Highway 52 Pump Station is one of two that presently supply a combined total of 3.55 mgd of drinking water from the Welcome pressure zone to the Hickory Tree pressure zone. This pump station currently contributes approximately 1.3 mgd of that total, and Enterprise Pump Station supplies the remainder. The Highway 52 Pump Station is located on the east side of Old Highway 52 at the intersection of Welcome Center Boulevard. We broke ground for a new pump station in October 2021. We hope to complete this project by June of 2023.

Davidson Water's recent master planning efforts concluded that future demand would require increased capacity from the Highway 52 Pump Station. This project will increase the pump station capacity from 1.3 to 2.9 mgd. Although this project is being completed several years ahead of schedule, it is important to note that the existing Highway 52 Pump Station was constructed in 1969 and the current pumps have been in service since 1980. Both the building and the pumps are nearing the end of their useful lives and would not be expected to last until the project is required to accommodate projected demand growth.



Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Handwashing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (i.e., pink or black slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly and flush with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals, resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen, as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and showerheads may be caused by water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration/Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, check out its website at <https://goo.gl/Jxb6xG>.

What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, and toothbrush holders and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including humans). The bacteria can be introduced into the house through any of the above-mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to clean and dry these surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence. *Serratia* will not survive in chlorinated drinking water.

Flume Repair

The concrete overflow flume for Raw Water Pond No. 3, located at the water treatment plant on Koontz Road, Lexington, was designed in 1996. It developed concentrated seepage downstream of the flume wall in December 2021. Davidson Water partnered with Schnabel Engineering and designed a plan to repair the 27-year-old flume. Davidson Water crews excavated and cored the flume to pump flowable grout into and below it to fill the voids caused by the seepage and installed a filter blanket and compacted clay around the flume to stop the leakage.



What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to potential contaminant sources (PCS). 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 was determined by combining the contaminant rating (number and location of PCS 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). 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 PCS in the 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
Yadkin River	Higher	September 5, 2017

The complete SWAP Assessment Report may be viewed online at <https://www.ncwater.org/?page=600>. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this website may differ from the results that were available at the time this Consumer Confidence Report was prepared. If you are unable to access your SWAP report online, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name and 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 at (919) 707-9098.

What Are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit <http://bit.ly/3Z5AMm8>.

Q&A

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7PC (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?

Typically, one gallon per person per day is recommended. For a family of four, that would be 12 gallons for three days. Humans can survive without food for one month but can only survive one week without water.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of treated drinking water?

It can take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40 percent of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2022	[4]	[4]	3.45	1.38–3.45	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	2022	[800]	[800]	280	ND–280	No	Water additive used to control microbes
Chlorite (ppm)	2022	1	0.8	0.67	ND–0.67	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	48	12–48	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] (ppm)	2022	TT ¹	NA	2.6	ND–2.6	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80 ²	NA	117	14–117	No	By-product of drinking water disinfection
Turbidity ³ (NTU)	2022	TT = 1 NTU	NA	0.19	0.05–0.19	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.133	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluoride (ppm)	2020	2.0	NA	0.4	ND–0.4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
pH (units)	2021	6.5–8.5	NA	7.3	6.6–7.3	No	Naturally occurring

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.



UNREGULATED SUBSTANCES⁴

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2015	110	86–110	NA
Chromium-6 (ppb)	2015	0.05	0.04–0.05	NA
HAA9 (ppb)	2018	40	18–40	Disinfection by-product
Manganese (ppb)	2018	0.47	ND–0.47	Naturally occurring
Strontium (ppb)	2015	47.9	46.8–47.9	NA
Total Organic Carbon [TOC] (ppm)	2019	1.981	1.123–1.981	Naturally occurring
Sodium (ppm)	05/14/2021	13.6	NA	NA
Sulfate (ppm)	2021	18	NA	Runoff/leaching from natural deposits; Industrial wastes

¹ Depending on the TOC in our source water, the system must have a certain percentage removal of TOC or achieve alternative compliance criteria. If we do not achieve that percentage removal, there is an alternative percentage removal. If we fail to meet the alternative percentage removal, we are in violation of a treatment technique.

² 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 system and may have an increased risk of getting cancer. The TTHM MCL (80.0 ppb) exceedance in the 3rd quarter of 2022 was not a violation, we are regulated based on a running annual average, which for 2022 was 52.3 ppb. Currently, our RAA is 49.2 ppb after 1st quarter of 2023.

³ 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.

⁴ Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

Table Talk

Get the most out of the Testing Results data table with these simple suggestions. In less than a minute, you will know all there is to know about your water.

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL or SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Verify that there were no violations of the state or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. NA means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.



BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1

The average cost in cents for about 5 gallons of water supplied to a home in the U.S.

The percent of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

99

50

The average daily number of gallons of total home water use for each person in the U.S.

The percent of Earth's surface that is covered by water.

71

330
MILLION

The amount of water on Earth in cubic miles.

The percent of the human brain that contains water.

75

