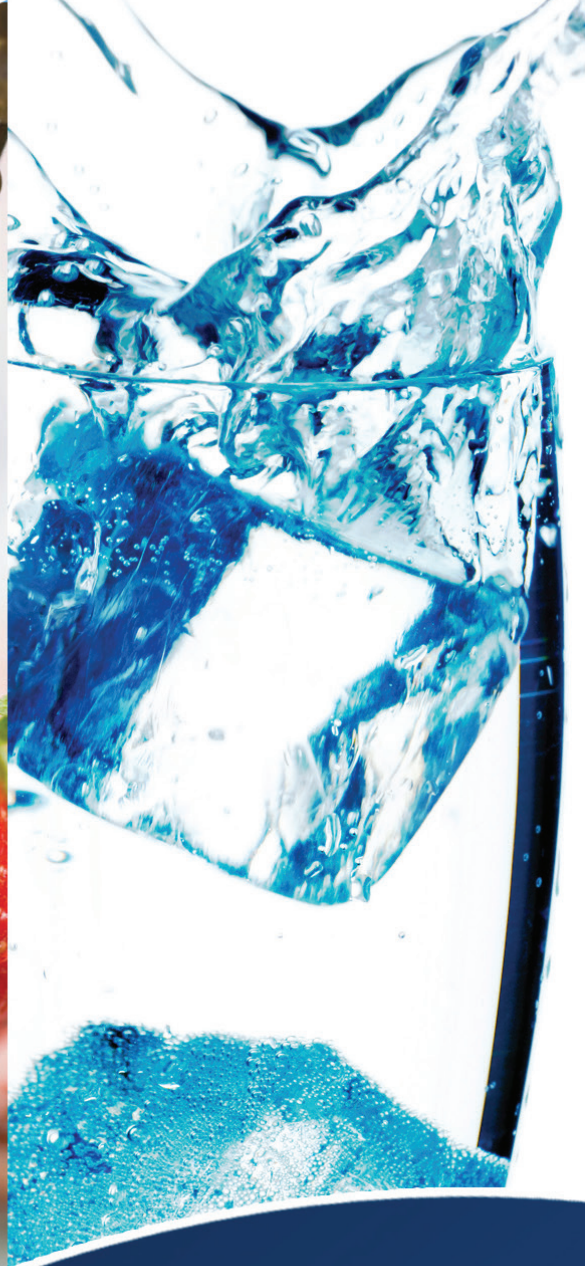


# ANNUAL WATER QUALITY REPORT

WATER TESTING  
PERFORMED  
IN 2014



*Presented By*  
**Davidson Water, Inc**

## Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation's drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best-quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

## 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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>.

## 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 that 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.

## Additional Information

This institution is an equal opportunity provider and employer.

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at [http://www.ascr.usda.gov/complaint\\_filing\\_cust.html](http://www.ascr.usda.gov/complaint_filing_cust.html), or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue S.W., Washington, D.C. 20250-9410, by fax at (202) 690-7442, or by email at [program.intake@usda.gov](mailto:program.intake@usda.gov).

## Where Does My Water Come From?

The Gregg W. Stabler and C. O. Pickle Water Treatment Plants are located on Koontz Road near Highway 64 West, Lexington, NC. Our source of 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 the Yadkin. 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 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 325,800 gallons.) A minimum flow must be released through the dam to keep a constant supply of water flowing down the Yadkin.

During 2014, Davidson Water, Inc., purchased water from the City of Winston Salem and the City of Archdale to supplement peak usage or emergency needs. To obtain a Water Quality Report from the City of Winston Salem or the City of Archdale, please contact the following:

City of Winston Salem: (336) 727-8000

City of Archdale: (336) 434-7364

## Missed Monitoring

North Carolina Public Water Supply issued a Notice of Violation (NOV) for failure to monitor/report second round of Synthetic Organic Chemicals (SOC) within the reporting period of January 1, 2011 - December 31, 2013. We collected first round sample in November, 2013. The samples were found to be “not detected,” and no further action was needed. Public Water Supply wrote us in September 2014 stating: “The public notification requirements associated with violation have been waived. No further action on your part with regard to this violation is required.” We do not believe missing this monitoring requirement date had any impact on public health, and steps have been taken to assure future compliance.

## Annual Meeting

Davidson Water, Inc.’s annual meeting is held on the second Monday in March. A notice with a proxy statement is mailed 2 months prior to the meeting. The annual meeting this year was held March 9, 2015, at the Mary E. Rittling Conference Center on the campus of Davidson County Community College. President Lee Comer presided. Ben Hege, Secretary, read the minutes from the 2014 meeting. Craig Adcock from Turlington & Company went over the financial statements and year-end audit. Mr. Adcock stated the company was in sound financial shape. Ron Sink, General Manager, reported on operations and maintenance of the water system along with capital improvements to the system.

The following were elected to serve three-year terms on the Board of Directors of Davidson Water, Inc.:

- Ben Hege Zone 1
- Reid Smith Zone 2
- Jason Gallimore Zone 3
- Rick Motsinger Zone 4
- Danny Fitzgerald At Large

Amendment to the by-laws to provide indemnification for board members and officers was approved. There was no further business and meeting was adjourned.

## Source Water Assessment

The North Carolina Department of Environment and Natural Resources, Public Water Supply Section, Source Water Assessment Program (SWAP) has assessed all water sources across North Carolina. The assessments determined the susceptibility of each drinking water source to potential contaminants.

It is important to understand that a susceptibility rating of high does not imply poor water quality. Susceptibility is an indication of a water supply’s potential to become contaminated by the identified Potential Contaminant Sources (PCSs) within the assessment area.

The assessment finds are summarized in the table below:

Source	Inherent Vulnerability	Contaminant Rating	Susceptibility Rating
Yadkin River	High	Moderate	High

The complete SWAP Assessment Report for Davidson Water, Inc., Public Water Source ID No. 0229025, may be viewed on the Web at <http://swap.ncwater.org/website/swap/GetPWSNameForm.asp>. Enter “Davidson Water Inc” when asked to enter the Public Water Supply system name, and then click Get Report.

## Davidson Water, Inc., Operations and System Improvements

Davidson Water, Inc., has 59,996 total connections and 52,991 active meters. That is an increase of 463 from the prior year. We added 322 new taps in the past year, up 101 from the previous year. That is a significant increase, and we believe the trend of decreasing number of new taps each year has reversed. Not since 2007 have we had an increase in prior-year new taps; in 2007 the number was 907. Currently, we have 73 employees with one position open.

The Gregg W. Stabler Water Plant and the C. O. Pickle Water Plant ran an average of approximately 9.2 mgd (million gallons per day). Included in that average was the C. O. Pickle Water Plant, our original plant, that ran for 3 months at 2 mgd average. Our highest peak day produced 13.4 mg.



**New Sludge Maintenance Building**

All of our state-mandated tests including for copper, lead, total organic carbon (TOC), total trihalomethanes (TTHMs), and haloacetic acids (HAA5) have tested well below accepted limits. TTHMs and HAA5 are undesirable by-products that form in water as a result of chlorine used for disinfection. We are pleased to report much lower level test results. We attribute this to a pilot study we are doing of feeding chlorine-dioxide. The results are so good we will apply to the state to make this treatment permanent. We have completed a \$1.4 million sludge and maintenance building. Soon, we will start up dewatering equipment to process ferric sludge cheaper and more efficiently. Other improvements include the following: Improved security by installing surveillance cameras and

upgrading fencing and gates at the river pump station; upgraded the air compressor that blows off screens at the river pump station to improve intake efficiency; made improvements to the CAT generator to meet the EPA's more stringent air quality regulations; improved gravel roadways around the plant site; and made much improvement of the site's erosion caused by the prior year's plant construction. We have made progress on the conversion of our original 500,000 gallon clear well to a backwash storage tank. Once completed, we will send our backwash and filter water to this tank and collect the solid sludge for dewatering and processing. Last, we have begun the design phase of electrical upgrades, which will include new switchgear to control our two large generators.


Our distribution system saw upgrade and pipe relocation of 57,664 feet or 10.9 miles. Projects included Pilot School Road, Friendship Ledford Road, Hill Everhart Road, Sink Road, South Happy Hill Road, Odell Owen Road, 10 NC DOT projects requiring line relocations, and 8 new or expanded subdivisions. We began a hydraulic modeling and Master Plan study with Hazen and Sawyer Environmental Engineers. Long term, this study will give us a road map for system improvements through the year 2060; it will determine our capital improvement priorities for the near future. The complete study will be finished by the end of this month.

Our meter department installed 4,935 radio read meters, bringing the total number in our system to 35,321. This year we plan to be just as aggressive. These meters are very accurate, have a 10-year warranty, and are the best value for the company to measure and bill for water.

Our office has been busy with providing the best customer service as our Number 1 priority. Our customers preferring electronic bank and online payments continue to rise. That number is now over 50% of our customer base. Email bill delivery, albeit small at 4,100 customers, is trending upward. Both electronic pay and e-bill are good for us, as it is less costly than processing U.S. mail, making night deposits, and fielding customer service counter transactions. Last, we installed a new phone system that was badly needed, and plans for enhanced security via cameras are underway.

In closing, I 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 expertise of our professional staff, the dedication of our employees, and the support of our members.

--Ron Sink, CEO/General Manager



## Water Main Flushing

**D**istribution 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 themselves 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 such times. 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.



## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Tom Johnson, Water Plant Superintendent, or Craig Koonts, Assistant Water Plant Superintendent, at (336) 731-5584, or email [waterplant@davidsonwater.com](mailto:waterplant@davidsonwater.com).





## When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

## How much water do we use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times, a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

## When was chlorine first used in the U.S.?

In 1908, Jersey City, New Jersey, and Chicago, Illinois, were the first water supplies to be chlorinated in the U.S.

## What are the benefits of chlorination?

Before communities began routinely treating drinking water with chlorine, cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S.

## Seventy-one percent of Earth is covered in water: How much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the Earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.

## How much water is in our atmosphere?

Forty trillion gallons of water are carried in the atmosphere across the U.S. each day.

## How much water is in our bodies?

Water makes up almost two-thirds of the human body and 70 percent of the brain. Four hundred gallons of water are recycled through our kidneys each day.

## How long can a person go without water?

Although a person can live without food for more than a month, a person can live without water for only approximately one week.

## Is tap water cheaper than soda?

Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And water has no sugar or caffeine.

## Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2014	3	3	0.225	0–0.9	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2014	[4]	[4]	2.15	1.89–2.29	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	2014	[800]	[800]	25.41	4–45	No	Water additive used to control microbes
Chlorite (ppm)	2014	1	0.8	0.137	0.057–0.206	No	By-product of drinking water disinfection
Fluoride (ppm)	2014	4	4	0.45	0.030–0.98	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2014	60	NA	25.1 (Highest LRAA)	12.4–42.5	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	37.9 (Highest LRAA)	12.3–63.1	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] <sup>1</sup> (removal ratio)	2014	TT	NA	2.45	1.22–2.86	No	Naturally present in the environment
Turbidity <sup>2</sup> (NTU)	2014	TT = 1 NTU	NA	0.076	0.048–0.076	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT = 95% of samples <0.3 NTU	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%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.055	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	0.003	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

### UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Strontium (ppb)	2014	51.2	46.3–59.8
Chlorate (ppb)	2014	143	61–240
Chromium (VI) (ppb)	2014	0.06	0.04–0.08
Vanadium (ppb)	2014	0.3	0.3–0.3

<sup>1</sup> Depending on the TOC in our source water, the system MUST have a certain percent removal of TOC or must achieve alternative compliance criteria. If we do not achieve that percent removal, there is an alternative percent removal. If we fail to meet the alternative percent removal, we are in violation of a Treatment Technique.

<sup>2</sup> 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.

## Definitions

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

**LRAA (Locational Running Annual Average):** 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 By-products Rule.

**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

**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).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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