

Annual
Water Quality
Report

Water testing performed in 2010



Presented By _____
Davidson Water, Inc.

Quality First

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

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>.



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.

Going High Tech

In an effort to be more efficient, Davidson Water Inc. is implementing several new software systems. These include our new GIS (geographic information system) that has near-survey-grade GPS coordinates for all our water system, a new work order system, and a GPS tracking system. We are excited about all of these new programs that are being developed to replace and expand the current systems.

The work order program will interface with our new GIS system that will also be activated soon. The new work orders will each be linked to an actual asset (meter, pipe, hydrant or valve) which shows on our maps and will allow us to run analysis programs assisting us in making future decisions on what lines may need replacing and when. It will also be expanded to allow inventory items to be entered on a per-job basis and improve our accountability for materials. The GIS will work with the current map books to expand their capabilities by allowing us to see aerial maps overlaid with our as-builts dimensions, our GPS shots, and any other scanned document that is relevant to that area of the map.

Also, when an event happens such as a water main break, we will be able to determine what vehicle or crew is located in the area of concern. This will be accomplished with a GPS tracking system for our vehicles, initially installed on 12 units and then expanding to the full fleet as we develop the system capabilities.

“THOUSANDS HAVE LIVED WITHOUT LOVE, NOT ONE WITHOUT WATER.”
-W.H. Auden

Community Participation

If you want to learn more, please attend any of our regularly scheduled meetings by appointment. They are held the fourth Monday of each month at 7:30 p.m. at our Operations Facility, 7040 Old U.S. Highway 52, Welcome, North Carolina.

We also hold an annual meeting on the second Monday in March at the courthouse in either Lexington or Thomasville, North Carolina. A notice is mailed immediately prior to the annual meeting. The annual meeting in 2011 was held at the courthouse in Thomasville. President Ron Sink presided. John Greer, Secretary, read the minutes from the previous year; Bob Biesecker from Turlington and Company went over our financial statements; and Gregg Stabler, Manager, reported on operations and maintenance of the water system along with capital improvements to the system. Five board members were elected to serve three-year terms on the Board of Directors of Davidson Water, Inc.:

RON SINK	SECTION 1
SHELIA POTTER	SECTION 2
F. LEE COMER	SECTION 3
ROGER HEDGECOCK	SECTION 4
BARBARA EWINGS	AT LARGE

We would like to welcome our newest member to our Board of Directors, Ms. Shelia Potter, who is from the Churchland area. We look forward to her serving on our Board in the years to come.

On a sadder note, R. V. Potter retired from our Board of Directors. Thanks goes to you, R. V. Potter, for providing 27 years of dedicated service to our members of Davidson Water, Inc.

Questions?

For more information about this report, or for any questions relating to your drinking water quality, please call Ron Farnsworth, Plant Superintendent, or Tim Gwaltney at (336) 731-5571, or e-mail [waterplant@davidsonwater.com](mailto:waterplant@ davidsonwater.com).

Lead and Drinking Water

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. Davidson Water, Inc., is 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.

Where Does My Water Come From?

The Davidson Water, Inc., water plant is located on Koontz Road near Highway 64 West. 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 acrefoot 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.



System Improvement Update

Phase I of our Water Plant Improvements is well under way. A survey of the river bottom has been completed to determine the best location for the new river intake. The new location and deeper depth should be more resistant to drought conditions, assuring a more dependable source of water. A Porta Dam was installed into the river, allowing us to dewater an area, remove soil and rock, and build a head wall with four 42" water lines to bring water back into a wet well. The four 42" water lines have large screen tees on the end to reduce trash and sediment and allow flows to be under .5 feet per second even if flows would reach 60 million gallons per day (mgd). The wet well, river pumps, and raw water pumps should be in place by June 2011. The new 100 mg reservoir is 75% complete and should be in service by May 2011. These improvements will give us a total of 160 mg of off-stream storage.

Phase II of our Water Plant Improvements, a new 15 mgd water plant, utilizing new technology and improvements enhancing our existing water plant, will give us a total plant capacity of 30 mgd. Bids on Phase II will be opened on March 30, 2011, and construction should start within 60 days of bid openings.

The ability to obtain a long-term low-interest loan from the USDA-RD has made these projects possible, assuring an adequate water source and plant capacity for new and future generations. Thanks go to Allen Hart, USDA-RD, Area Specialist, who helped obtain funding.

Source Water Assessment

The North Carolina Department of Environment and Natural Resources, Public Water Supply Section, Source Water Assessment Program (SWAP) 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	YADKIN RIVER
INHERENT VULNERABILITY	HIGH
CONTAMINANT RATING	MODERATE
SUSCEPTIBILITY RATING	HIGH

The complete SWAP Assessment Report for Davidson Water, Inc., Public Water Source ID No. 0229025, may be viewed on the Web at www.deh.enr.state.nc.us/pws/swap.

Online Web Services

Davidson Water, Inc., offers electronic billing (E-bill) to our customers. When you switch to E-bill, you will receive your regular monthly bill on the normal billing date by email notification. You can then log on to our Web site at www.davidsonwater.com and immediately view your bill. Simply call our office to sign up. Our customers can also take advantage of paying online with a credit or debit card for no charge at www.davidsonwater.com. This online service through our official website is a quick and easy way to assure that your bill is paid in a timely manner. When you use our official Web site, you can be confident that your payment will be received by us within one business day. NOTE: Payment Web sites such as "charge smart" may sometimes appear when you use a search engine to find Davidson Water, Inc. These Web sites charge a fee to use their services to pay your bill. Paying through your bank's website is available; however, using any online form of payment besides our website can take up to a week, sometimes longer, for us to receive the actual payment.

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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2010	3	3	0.4	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2010	[4]	[4]	2.8	2.0–3.5	No	Water additive used to control microbes
Fluoride (ppm)	2010	4	4	1.00	0.02–1.49	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2010	60	NA	38.2	20.6–61.3	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	33.0	7.8–83.1	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] ¹ (ppm)	2010	TT	NA	1.13	0.94–1.45	No	Naturally present in the environment
Turbidity (NTU)	2010	TT = 1 NTU	NA	0.23	0.04–0.23	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	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)	2010	1.3	1.3	0.05	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2010	15	0	5	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

INITIAL DISTRIBUTION SYSTEM EVALUATION RESULTS²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]- IDSE Results (ppb)	2008	41.5	34.0–53.3	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	42.6	25.9–86.0	By-product of drinking water disinfection

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

² We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that 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

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).

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