



ANNUAL
WATER
QUALITY
REPORT

Water testing performed in 2009



Presented By:
DAVIDSON WATER, INC.

PWS ID#: 0229025

Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, 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 www.epa.gov/safewater/hotline.

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 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.

Payment Options

As of March 1, 2010, Newbridge Bank no longer accepts Davidson Water, Inc., payments.

To ensure a more efficient payment process, Davidson Water contracted with Global Express to automate the payment process. Customers will incur a processing fee of \$1.00 for each transaction. For a complete list of pay stations, you may visit our Web site at www.davidsonwater.com.

In addition to paying at our office or by mail, we also offer online payment (www.davidsonwater.com) and automatic draft with no additional charge. For a \$2.00 convenience fee, the bill can be paid by phone with a debit or credit card.

Lawn Irrigation Systems

All lawn irrigation systems connected to the Davidson Water, Inc., system are **required** to have a backflow preventer installed. Backflow preventers have internal seals, springs, and moving parts that are subject to fouling, wear, or fatigue and **MUST** be tested annually to ensure they are functioning properly. Visit www.davidsonwater.com for more information on backflow prevention and a list of approved testers. Failure to install and test these devices could result in disconnection of service.



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.



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 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.

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.

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.

System Improvements

This past May we celebrated 40 years of providing water services to our membership. We have grown from 2,800 connections to over 58,000 providing service to a population of 140,000 in four different counties, plus portions or all of seven municipalities, while providing commercial and industrial growth as well. The C. O. Pickle Water Plant has been expanded six times, from 2 million gallons per day (mgd) to our present capacity of 20 mgd. We once operated out of a one room office. Now our Therrell C. Grimes Operation Center has over 40,000 square feet of office, maintenance, and warehouse facility under one roof, along with our C. Boyce Sink Board Room. We truly have been blessed over the past 40 years, from our visionaries to the leadership from our Board and Management and dedicated, skilled employees, the heart and soul of our company.

This past year we received \$28,609 of generator credits at our Hyatttown and office facilities and were able to reduce our plant electrical cost by an additional \$150,000 by load management with our two plant generators. We produced 3,953,524,000 gallons of water, billing for 3,240,600,000 gallons, with a water loss of 14.8 percent. Our Consumer Confidence Report went out showing no violations. We have continued our capital improvement program, completing our 20" transmission line to Welcome. We also replaced lines that were giving us trouble on Black Sawmill, County Home, Old Salisbury, East Park, and Robert Everhart Roads. Our service leaks have been reduced from a high of 1,214 in 1997 to only 18 in 2009. We repaired 388 main line leaks, a low for the past 10 years. We moved 15 meters, repaired 23 hydrants, made 324 water taps; 210 valve boxes were raised and realigned, and 73 valves were repaired or replaced. We continue our meter replacement program, changing out 5,343 meters, making a total of 35,671 since October 2001. We are continuing our automatic meter read program, now having over 24,000 in use, and we will be adding 1,200 this year. Over 635,000 meters were read, billed, and payments posted; 5,343 were cut off for non payment, and 6,049 final readings were obtained when customers moved out and then processed by our office personnel as customers moved in, out, and signed up for new taps.

Continued growth and water demand in our service area has required us to make plans for a new water plant, river intake, and larger reservoir. Phase I will be a new river intake 5 to 7 feet deeper in the river than our present intakes, river pumps capable of pumping 40 mgd (expandable to 60 mgd), and a new 100 million gallon reservoir. Pipe work will be 36", 42", and 48". We have taken bids, awarded contracts, and work should begin shortly on Phase I.

Phase II will be a new 10 million gallons per day water plant (expandable to 40 mgd), a 5 million gallon clearwell, 30 million gallon flashmix, 15 million gallon flocculators, 15 million gallon enhanced settling basins, 30 million gallon GAC contactors, high service pumps, better sludge control, filters, track vac system, chemical storage, electrical, and SCADA. We hope to bid Phase II in June 2010. It is better to look ahead and prepare than to look back and regret. Today's preparation determines tomorrow's achievements.

Through these initiatives, we hope to provide better service to you, our members, now and in the future.

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 when 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.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at www.epa.gov/safewater/crossconnection.html. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

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 2010 was held at the courthouse in Lexington. 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.:

Kent Phillips	Section 1
Chad Young	Section 2
James Louya	Section 3
Rick Hunt	Section 4
Theresa Matthew	At Large

We would like to welcome our newest member to our Board of Directors, Mr. Kent Phillips, who is from the Reedy Creek area. We look forward to him serving on our Board in the years to come.

On a sadder note, this will be John Faust's last Board meeting. Nine years ago John joined the Davidson Water, Inc., Board of Directors, bringing new talents and leadership. His perspective as a developer and entrepreneur brought needed insight on new regulations for developments. Every calling is great when greatly pursued. John Faust exemplified this as a Board member. Our success will be measured by our ability to complete and sustain what our founding fathers began. John, the past nine years, you have truly measured up as a Board member. Thank you for your years of service and may God bless you.

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 table below shows only those contaminants that were detected in the water.

The state requires us to monitor 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)	2009	[4]	[4]	2.9	1.7–3.3	No	Water additive used to control microbes
Fluoride (ppm)	2009	4	4	1.09	0.12–1.44	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	37.9	21.9–58.5	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	43.7	26.0–82.5	No	By-product of drinking water chlorination
Total Organic Carbon [TOC] ¹ (ppm)	2009	TT	NA	1.24	1.19–1.3	No	Naturally present in the environment
Turbidity ² (NTU)	2009	TT = 1 NTU	NA	0.28	0.03–0.28	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2009	TT	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)	2007	1.3	1.3	0.094	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2007	15	0	5	1/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

INITIAL DISTRIBUTION SYSTEM EVALUATION ³				
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 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.

² 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 percent or more of the monthly samples must be less than or equal to 0.3 NTU.

³ 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 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.

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.