Annual WATER QUALITY REPORT

Reporting Year 2012

Presented By
Davidson Water, Inc.

PWS ID#: 0229025

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2012. 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 to assist you should you ever have any questions or concerns about your water.

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 insure they are functioning properly. Visit www.davidsonwater.com for more information on backflow prevention and a list of approved testers.

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.

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.

Where Does My Water Come From?

The Water Treatment Plant for Davidson Water, Inc., 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.

During 2012, Davidson Water, Inc., purchased a small amount of water from the City of Winston Salem. To obtain a Water Quality Report from the City of Winston Salem, please contact the City of Winston Salem at (336) 727-8418.

Questions?

For more information about this report, or for any questions relating to your drinking water quality, please call Tom Johnson, Plant Superintendent, or Craig Koonts, Lab Technician, at (336) 731-5585, or send e-mail to waterplant@davidsonwater.com.

System Improvements

Our new 15-million-gallon-per-day water plant is now online. The North Carolina Department of Environment and Natural Resources approved the new plant on March 20, 2013. All components, the new river intake, river pumps, raw water pumps, reservoirs, network of water lines 30" thru 54", flash mix , chemical storage and feed system, super pulsators, filters, laboratory, SCADA operations room, granular activated carbon filtering, and 5-million-gallon contact chamber have been put in operation. The components are sized for a minimum of 40 million gallons per day. Additional filters and pulsators are all that would be needed for extra capacity at our new plant.

The 20-million-gallon-per-day C.O. Pickle Water Plant has been taken down for renovation and improvements. This work should be completed before there is high demand this summer, giving us ample plant capacity for now and way into the future.

After 40 years of service, I will be retiring at the end of June. I thank the Board of Directors for their support and all the employees who have been like family.

Gregg Stabler

Manager
Davidson Water, Inc.

Source Water Assessment Program (SWAP) Results

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 (PCSs). 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 for Davidson Water, Inc., was determined by combining the contaminant rating (number and location of PCSs 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). The assessment findings are summarized in this table:

Susceptibility of Water Sources to Potential Contaminant Sources (PCSs)		
Source Name	Susceptibility Rating	Swap Report Date
Yadkin River	Higher	February 2010

The complete SWAP Assessment report for Davidson Water, Inc., may be viewed on the Web at www.ncwater.org/pws/swap. Note that, because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, 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 (Davidson Water, Inc.) and number (PWS ID 02 29 025), 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 by phone at (919) 707-9098.

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 PCSs in the assessment area.

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. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also request that our customers with backflow preventers have them tested annually to make sure they are providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm. 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 on 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 2013 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.:

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

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
Chlorine (ppm)	2012	[4]	[4]	2.5	1.5–3.2	No	Water additive used to control microbes
Fluoride (ppm)	2012	4	4	0.70	0.50–1.2	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2012	60	NA	31.5	18.8–38.8	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2012	60	NA	41.66	25.7–79.1	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2012	80	NA	22.8	18.8–28.2	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2012	80	NA	51.26	22.0–114.8	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] (ppm)	2012	TT	NA	ND	ND	No	Naturally present in the environment
Turbidity (NTU)	2012	Turbidity > 1 NTU	NA	0.18	0.05100–0.18	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	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
Lead (ppb)	2010	15	0	5	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE) [1]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAAs]–IDSE Results (ppb)	2008	41.66	25.7–79.1	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	51.26	17.8–91.9	By-product of drinking water disinfection

[1] 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 that, 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

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).

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