Annual WATER QUALITY REPORT

Reporting Year 2013

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, 2013. 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.

Where Does My Water Come From?

The Davidson Water, Inc., Water Treatment 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.

During 2013, 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 Winston-Salem: (336) 727-8000

City of Archdale: (336) 434-7364

Substances That Could Be in Water

To ensure that tap water is safe to drink, 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 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.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), 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. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

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.

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 by e-mail at waterplant@davidsonwater.com.

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 the table below.

Susceptibility of 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.), 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.

Annual Meeting

Davidson Water, Inc.'s annual meeting is held on the second Monday in March at the courthouse, either in Lexington or Thomasville, North Carolina. A notice with a proxy statement is mailed 2 months before the meeting. The annual meeting this year was held March 10, 2014, in Courtroom B at the Davidson County Courthouse in Lexington. President Lee Comer presided. Ben Hege, Secretary, read the minutes from 2013 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.:

- Gregg Stabler Zone 1
- Sheila Potter Zone 2
- Lee Comer Zone 3
- Jason Hedgecock Zone 4
- Barbara Ewings At Large

Also, Jason Gallimore was elected to fill the unexpired term of John Greer.

System Improvements

The new Gregg W. Stabler Water Plant is working smoothly and exceeding water quality standards. The C. O. Pickle Water Plant, our original water plant, has been put back in service after a $500,000 rehabilitation. The plant underwent a rehab of sedimentation basins, new filter media, new actuator valve controls, and new line relocations for chemical feed mixing. We have ample plant capacity to meet peak demands. In addition, we converted the original 500,000 gallon clearwell into a backwash tank. This will allow our backwash water to be properly treated and eventually go back into the Yadkin River.

We have upgraded water lines in the system including Allred Road, S. Happy Hill Road, Lingle Farm Road, Old Mountain Road, Front Street, Old Mill Farm Road, and a major project upgrade on Kennedy Road. Also, we have done several NC Department of Transportation line relocations where the Department of Transportation was replacing bridges and upgrading roads.

Security of the water facility complex is a top priority. We have installed a fiber optic cable to allow cameras to be utilized in key areas of the grounds. We have an Emergency Response Plan in place if needed. We keep staff on hand 24/7 everyday of the year. We routinely monitor our source water along with our treatment process and finished water. This report is a summary of all the testing we do.

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
Atrazine (ppb)	2013	3	3	0.2	0–0.8	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2013	[4]	[4]	1.93	0.4–2.6	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	2013	[800]	[800]	191	0–350	No	Water additive used to control microbes
Chlorite (ppm)	2013	1	0.8	0.228	0–0.48	No	By-product of drinking water disinfection
Haloacetic Acids [HAA]–Stage 1 (ppb)	2013	60	NA	22.9	10.2–32.2	No	By-product of drinking water disinfection
Haloacetic Acids [HAA]–Stage 2 (ppb)	2013	60	NA	34.5	29.9–39.0	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2013	80	NA	22.4	11.6–53.4	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	45.6	38.4–54.4	No	By-product of drinking water disinfection
Total Organic Carbon [TOC][1] (removal ratio)	2013	TT	NA	2.53	1.54–2.86	No	Naturally present in the environment
Turbidity[2] (NTU)	2013	TT=1 NTU	NA	0.187	0.053–0.187	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	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	3	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

[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] 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 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).

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.