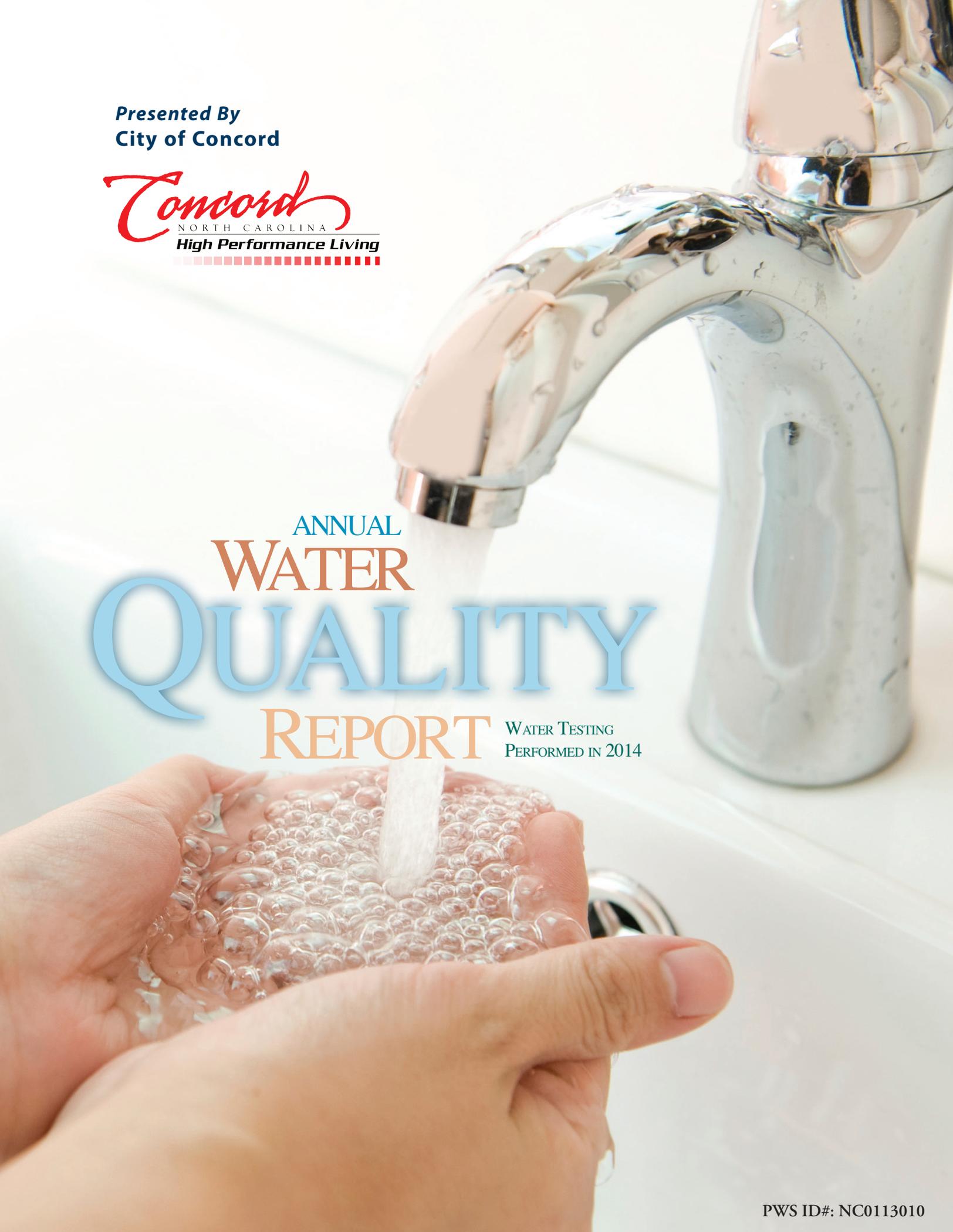


Presented By
City of Concord

A close-up photograph of a hand cupped under a running faucet, with water splashing and creating bubbles. The faucet is chrome and the background is a white sink.

ANNUAL
WATER
QUALITY
REPORT

WATER TESTING
PERFORMED IN 2014

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.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. The Concord City Council meets the second Thursday of each month at 6 p.m. in the Council Meeting Room at the Municipal Building, 26 Union Street South, Concord, NC.

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.

Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed up water in which bacteria (i.e., pink and black colored slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets, and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration/Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time so regular filter replacement is important. (Remember to replace your refrigerator filter!)



Where Does My Water Come From?

The City of Concord obtains water from five different sources. The City has two water treatment plants, which draw water from three surface water reservoirs. The Coddle Creek Water Treatment Plant draws water from Lake Don T. Howell. The Hillgrove Water Treatment Plant draws water from Lake Concord, Lake Fisher, and Lake Don T. Howell. The City of Concord also purchases water from the City of Kannapolis. For information on the quality of Kannapolis' water, contact Wilmer Melton, Director of Public Works, at (704) 920-4200. Plans are under way to ensure that we have an adequate water supply. Additionally, the City of Concord can purchase water from the City of Charlotte. For information on the quality of Charlotte's water, contact Charlotte-Mecklenburg Utilities at (704) 391-5144.

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.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Rusty Campbell, Water Treatment Superintendent, at (704) 920-5337.

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 Reports that include maps, background information and a relative susceptibility rating of higher, moderate, or lower.

The relative susceptibility rating of each source for the City of Concord and the City of Kannapolis 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 PCSs		
Source Name	Susceptibility Rating	SWAP Report Date
Lake Fisher/Coldwater Creek (Concord)	Moderate	August 5, 2014
Lake Concord/Coldwater Creek (Concord)	Moderate	August 5, 2014
Lake Don T. Howell (Concord and Kannapolis)	Moderate	August 5, 2014
Kannapolis Lake (Kannapolis)	Moderate	June 20, 2014
Second Creek/Back Creek (Kannapolis)	Moderate	June 20, 2014

The complete SWAP Report for the city of Concord may be viewed on the Web at http://swap.ncwater.org/swap_app/pdfreports/0113010_8_4_2014_85_11.PDF and the complete swap report for the City of Kannapolis may be viewed at http://swap.ncwater.org/swap_app/pdfreports/0180065_6_20_2014_85_11.PDF. Please 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 consumer confidence report was prepared. If you have any questions about the SWAP Report, please contact the Source Water Assessment staff by phone at (919) 715-2633.

A susceptibility rating of higher does not imply poor water quality, but rather the system's potential to become contaminated by PCSs in the assessment area.

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.

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 EPA needs to introduce new regulatory standards to improve drinking water quality.

Our water system recently violated a drinking water standard that has now been corrected. Monitoring results for water samples collected during the time period ending September 30, 2014, show that the contaminant concentration from one sampling location in our water system exceeded the MCL for total haloacetic acids (HAA). All other locations were in compliance. We have taken additional samples at this location and had them tested. These samples show that we met the standards with a level of 53.6 ppb. In addition, we are investing in additional piping in this area and additional treatment capabilities at our water treatment plant, to ensure future compliance.

REGULATED SUBSTANCES													
				City of Concord		Hillgrove WTP		Coddle Creek WTP		City of Kannapolis			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2014	3	3	NA	NA	NA	NA	NA	NA	0.230	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2014	[4]	[4]	0.91	0.20–2.16	NA	NA	NA	NA	0.67	0.20–1.57	No	Water additive used to control microbes
Fluoride (ppm)	2014	4	4	NA	NA	0.90	NA	0.99	NA	0.71	ND–0.85	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 2¹ (ppb)	2014	60	NA	61.7 (Highest LRAA)	16.4–72.2	NA	NA	NA	NA	46.6 (Highest LRAA)	22.9–54.2	Yes	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2² (ppb)	2014	80	NA	76 (Highest LRAA)	27–81	NA	NA	NA	NA	63.5 (Highest LRAA)	23–78	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2014	5% of monthly samples are positive	0	1.11 ³	NA	NA	NA	NA	NA	4 ⁴	NA	No	Naturally present in the environment
Total Organic Carbon [TOC] (removal ratio)	2014	TT	NA	NA	NA	1.33 ⁵	1.13–1.39	1.28	1.09–1.51	1.33	1.06–1.58	No	Naturally present in the environment
Turbidity⁶ (NTU)	2014	TT=1 NTU	NA	NA	NA	0.162	0.028–0.162	0.270	0.03–0.270	0.259	0.037–0.259	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	NA	NA	100	NA	100	NA	100	NA	No	Soil runoff
Tap water samples were collected for lead and copper analyses from sample sites throughout the community													
				City of Concord		City of Kannapolis							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE				
Copper (ppm)	2013	1.3	1.3	0.391	0/30	0.056 ⁷	0/30 ⁷	No	Corrosion of household plumbing systems; Erosion of natural deposits				
Lead (ppb)	2013	15	0	ND	0/30	ND ⁷	0/30 ⁷	No	Corrosion of household plumbing systems; Erosion of natural deposits				

SECONDARY SUBSTANCES - CODDLE CREEK WTP

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese (ppb)	2014	50	NA	13	NA	No	Leaching from natural deposits

UNREGULATED SUBSTANCES ⁸

		Hillgrove WTP		Coddle Creek WTP		City of Kannapolis				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2014	19.81	NA	18.1	NA	22.31	NA	NA	NA	Naturally occurring
Sulfate (ppm)	2014	29.0	NA	41.7	NA	21.5	NA	NA	NA	Naturally occurring

UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3) ⁸

		City of Concord		Hillgrove WTP		Coddle Creek WTP		City of Kannapolis		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2014	124	ND-124	306	168-306	113	84.7-113	NA	NA	
Chromium, hexavalent (ppb)	2014	0.43	0.12-0.43	0.16	0.051-0.16	0.48	0.19-0.48	NA	NA	
Chromium, total (ppb)	2014	0.47	0.21-0.47	NA	NA	0.41	ND-0.41	NA	NA	
Strontium (ppb)	2014	137	116-137	127	86.2-127	131	113-131	NA	NA	
Vanadium (ppb)	2014	0.70	ND-0.70	0.87	ND-0.87	0.57	ND-0.57	NA	NA	

Definitions

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

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).

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

SMCL (Secondary Maximum Contaminant Level): A non-enforceable guideline regarding a chemical that may cause cosmetic or aesthetic effects in drinking water.

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

¹ Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

² Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

³ 1 sample out of 90 samples/month.

⁴ 2 samples out of 50 samples/month.

⁵ TOC compliance method: Step 1.

⁶ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of filtration systems. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

⁷ Sampled in 2012.

⁸ Unregulated contaminants are those for which U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.