

City of Staunton

2015 Annual Drinking Water Quality Report

INTRODUCTION

This Annual Drinking Water Quality Report for 2015 provides you with information about the quality of your drinking water. The City of Staunton is committed to providing you with safe drinking water. All efforts are made to protect our water supply and to deliver the best quality water possible to your home. You can be assured that your drinking water meets all state and federal requirements. The treatment of your drinking water is administered by the Virginia Department of Health (VDH), Office of Drinking Water.

If you have any questions about this report, need additional information about your drinking water, or simply want to know how to participate in decisions that may affect the quality of your drinking water, please contact Mr. Daniel G. Campbell, Water Plant Chief Operator, at (540) 332-3961.

GENERAL INFORMATION

As water travels over the land surface or through the ground, it dissolves naturally occurring minerals and may pick up some substances resulting from the presence of animals or from human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from all surface sources is treated to make it drinkable while groundwater may or may not have any treatment. Staunton's primary water sources include a natural underground spring and reservoirs.

All drinking water, including bottled drinking water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, the elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Testing was conducted monthly for a two year period. All tests were found to be negative. As all tests were negative, we are no longer required to test for this organism.

Staunton's drinking water is fluoridated by the addition of an optimum fluoride concentration to help prevent tooth decay. Fluoridation at an optimum level is recommended by the Virginia Board of Health, the American Dental Association, the Centers for Disease Control, and the National Institutes of Health, among numerous other public health organizations.

SOURCE WATER ASSESSMENT

A source water assessment was completed by the VDH on April 11, 2002. This assessment determined that the City's water sources may be susceptible to contamination because it is surface water exposed to a wide array of contaminants at varying concentrations and changing hydrologic, hydraulic, and atmospheric conditions that promote migration of contaminants from land use activities of concern within the assessment area. Another source water assessment isn't required at this time but would be at the discretion of VDH. More specific information may be obtained by contacting the Water Treatment Plant Chief Operator.

QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The tables that follow indicate the results of our monitoring for the period of January 1st through December 31st, 2015.

DEFINITIONS

In the table and elsewhere in this report, you will find many terms and abbreviations you may not be familiar with. The following definitions are provided to help you better understand these terms:

Non-detects (ND) - lab analysis indicates that the contaminant is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Picocuries per liter (pCi/L) - a measure of radioactivity in water.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Contaminant Level, or MCL - 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.

Maximum Contaminant Level Goal, or MCLG - 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.

Variances and exemptions - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

VIOLATION INFORMATION

The City routinely monitors for contaminants in the water supply and all regulatory requirements are met. The table lists only those contaminants where some level of detection has been found. Many of these contaminants are naturally occurring. Other contaminants have been analyzed, however, they were not present or were below prescribed detection limits and no violations occurred.

Maximum Contaminant Levels (MCL's) are set at stringent levels by the U.S. Environmental Protection Agency. In developing these standards, EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCL's at levels that will result in no adverse health effects for these contaminants or a one-in-ten-thousand to a one-in-a-million chance of having the described health effect for these contaminants.

WATER QUALITY RESULTS

Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source
Turbidity NTU	NA	TT= 0.3 NTU	Max turbidity = 0.312 NTU	No	Daily 2015	Soil runoff.
		TT = 95% of monthly samples must be < 0.3 NTU				
Total Coliform Bacteria	0	Presence for coliform bacteria < 5% monthly	0	No	Monthly 2015	Naturally present in the environment.
Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source
Fluoride ppm	4	4	Range: 0.54 to 0.99 Average: 0.69	No	Daily 2015	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate ppm	10	10	0.47	No	January 2015	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Barium ppm	2	2	0.02	No	January 2015	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Radiological Contaminants (Next Mandated Sampling: February 2016)						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source
Combined Radium pCi/L	0	5	0.36	No	February 2010	Erosion of natural deposits.
Alpha Emitters pCi/L	0	15	1.5	No	February 2010	Erosion of natural deposits.
Gross Beta pCi/L	0	50	2.7	No	February 2010	Decay of natural and man-made deposits.
Lead & Copper (Next Mandated Sampling: June 2017)						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedance	Date of Sample	Typical Source
Copper ppm	0	AL=1.3	0.256 (90 th percentile) One of the 30 samples collected exceeded the AL.	No	June 2014	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead ppb	0	AL=15	8 (90 th percentile) Three of the 30 samples collected exceeded the AL.	No	June 2014	Corrosion of household plumbing systems; erosion of natural deposits.

Disinfection By-products						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source
Total Trihalomethanes (TTHM's) ppb	0	80	Running Average: 27.0 Range: 7.4 to 53.6	No	Quarterly 2015	By-product of drinking water chlorination.
Haloacetic Acids (HAA5's) ppb	NA	60	Running Average: 29.0 Range: 10.1 to 54.4	No	Quarterly 2015	By-product of drinking water chlorination.
Disinfection By-Products Precursors						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source
Total Organic Carbon (TOC's) ppm	NA	TT	Range: 0.31 to 1.02	No	Monthly 2015	Naturally present in the environment.

The results from the preceding table are from testing done in 2015, unless otherwise noted. The state allows us to monitor for some contaminants less than once per year because the concentrations for these contaminants rarely change.

ADDITIONAL HEALTH INFORMATION FOR LEAD:

Much attention has been given to the issue of lead in drinking water because of the recent crisis in Flint, Michigan. The City of Staunton is in full compliance with standards established by the Virginia Department of Health (VDH) and the Environmental Protection Agency (EPA) for lead in drinking water. The Water Treatment Plant samples for lead in its finished water (just as it leaves the plant) annually. Of the lead testing sampling done in 2014, the City was in compliance with the EPA's 'Lead and Copper Rule'. The next mandated sampling for lead will be done in June 2017.

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water results primarily from materials and components used in service lines (the line leaving the meter and running into the structure) and home plumbing components. The City is responsible for providing high quality drinking water but cannot control the various materials used in plumbing components. When drinking water has been sitting in the lines inside your home for several hours without use, you can minimize the potential for any exposure to lead by running your tap for 15 to 30 seconds or until the water becomes cold before using it for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Lead test kits are available online or at local home improvement stores. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the safe drinking water website sponsored by the Environmental Protection Agency at www.epa.gov/safewater/lead.