

THOMAS C. SLIWOSKI
Director of Public Works

**Birthplace of the
Council-Manager
Form of Government**



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The Staunton Public Works Department is proud to treat and deliver your drinking water. For the third consecutive year, the Water Treatment Plant achieved the Silver award in the Virginia Department of Health (VDH) Office of Drinking Water Virginia Optimization Program. This program recognizes those waterworks that provide quality water that exceeds minimum regulatory standards and who operate their water systems in an exemplary manner.

While the topic of lead in public drinking water systems has received extensive attention in the media as a result of the water contamination crisis in Flint, Michigan, the City of Staunton is in full compliance with drinking water standards for lead. Lead in drinking water is closely regulated by both VDH and the U.S. Environmental Protection Agency (EPA).

VDH has established regulations governing lead levels in drinking water, consistent with the federal Safe Drinking Water Act and the EPA's Lead & Copper Rule. They carefully monitor all water quality testing and ensure compliance. Elevated levels of lead in drinking water are typically associated with some building materials and plumbing fixtures used in service lines and homes, particularly in older homes. If lead levels in the public drinking water exceed the EPA action level of 15 parts per billion, then corrective action would be taken to reduce the levels of lead. A part per billion is equivalent to a single penny in \$10,000,000.

Water is essential for public health, fire protection, economic development, and quality of life. Our staff is committed to ensuring that quality water is delivered to meet your needs, when you need it. I am pleased to present this favorable report confirming that our drinking water meets all water quality standards. Should you have any questions about your water, its source, or how it is treated, please contact Mr. Daniel G. Campbell, Chief Water Plant Operator at 332-3961.

A handwritten signature in dark ink, appearing to read "Tom C. Slivoski".

THOMAS C. SLIWOSKI
Director of Public Works

City of Staunton

2017 Annual Drinking Water Quality Report

INTRODUCTION

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 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 land surfaces or through the ground, it dissolves naturally occurring minerals and may pick up some substances from the presence of animals or human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural activities, urban storm water runoff, residential uses, and many other types of activities. Water from 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 two reservoirs.

CONTAMINANTS

All drinking water, including bottled drinking water, may contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. However, 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 may be more at risk from infections. These people should seek advice about drinking water from their health care providers.

CRYPTOSPORIDIUM

Testing is conducted monthly for a two year period at the direction of VDH and the Environmental Protection Agency (EPA). The City is conducting this mandated sampling during 2016-2018. EPA and CDC guidelines on appropriate means to lessen the risk of infection by microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

LEAD

Much attention has been given to the issue of lead in drinking water because of the recent crisis in Flint, Michigan. The City is in full compliance with standards established by VDH and the EPA for lead in drinking water. The Water Treatment Plant samples for lead in finished water, just as it leaves the plant, annually. The City is in compliance with the EPA's 'Lead and Copper Rule'. The most recent mandated sampling for lead was completed 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 that leaving the water meter and entering into the structure, as well as various plumbing components. The City is responsible for providing high quality drinking water but

cannot control the various materials used in plumbing components installed in homes or other buildings. When drinking water has been sitting in the lines inside a home or building for several hours without use, you can minimize the potential for any exposure to lead by running the tap for 15 to 30 seconds or until the water becomes cold before using it. 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. (www.epa.gov/safewater/lead)

FLUORIDATION

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 and atmospheric conditions. Any additional source water assessments would be required at the discretion of VDH.



Dam at Staunton Reservoir - One of the City's water sources

QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored for a variety of contaminants based on State and Federal regulations. The tables that follow provide monitoring results for the period of January 1st through December 31st, 2017.

DEFINITIONS

In this 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 only contaminants listed are those 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 EPA. 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 TT = 95% of monthly samples must be < 0.3 NTU	Max turbidity = 0.123 NTU All monthly percentages were 100% of samples < 0.3 NTU	No	Daily 2017	Soil runoff.
Total Coliform Bacteria	0	Presence for coliform bacteria < 5% monthly	0	No	Monthly 2017	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: 0.55 to 0.82 Average: 0.69	No	Daily 2017	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate ppm	10	10	0.58	No	January 2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Barium ppm	2	2	0.0225	No	January 2017	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Radiological Contaminants (Next Mandated Sampling: February 2022)						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source
Combined Radium pCi/L	0	5	0.93	No	February 2016	Erosion of natural deposits.
Alpha Emitters pCi/L	0	15	2.4	No	February 2016	Erosion of natural deposits.
Gross Beta pCi/L	0	50	2.8	No	February 2016	Decay of natural and man-made deposits.
Lead & Copper (Next Mandated Sampling: June 2020)						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedance	Date of Sample	Typical Source
Copper ppm	0	AL=1.3	0.17 (90 th percentile) None of the 30 samples collected exceeded the AL.	No	June-August 2017	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead ppb	0	AL=15	4.7 (90 th percentile) None of the 30 samples collected exceeded the AL.	No	June-August 2017	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: 24.0 Range: 12.6 to 50.1	No	Quarterly 2017	By-product of drinking water chlorination.
Haloacetic Acids (HAA5's) ppb	NA	60	Running Average: 19.0 Range: ND to 53.6	No	Quarterly 2017	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: 0.29 to 0.72	No	Monthly 2017	Naturally present in the environment.

Disinfectant Residual Contaminants						
Contaminant/Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Chlorine mg/L	4	4	0.29 to 1.92	No	Monthly	By-product of drinking water chlorination

The results from the preceding table are from testing done in 2017, 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.