

# 2023 Annual Drinking Water Quality Report

## Hampden-Sydney College

PRINCE EDWARD CO.  
(pwsid:5147280) VDH District 14

### INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2023 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

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### GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Contaminants in source water may be naturally occurring substances, or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming 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.

Contaminants 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, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can, also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the number of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment. All drinking water, including bottled drinking water, may reasonably be expected to contain at least 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) or

[www.epa.gov/safewater](http://www.epa.gov/safewater).

## VULNERABLE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 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).

## SOURCES AND TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater from six drilled wells. Continuous chlorination for the disinfection of your water is provided. The water is also treated for corrosion control and elevated levels of iron and manganese, with greensand filtration.

A source water assessment of our system was conducted in 2020 by the Virginia Department of Health. The wells were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system operator at the phone number or address given elsewhere in this drinking water quality report.

## DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. In the table and elsewhere in this report you will find terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

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

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

**Picocuries per liter (pCi/l)** - picocuries per liter is a measure of the radioactivity in water.

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

**Maximum Contaminant Level Goal (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.

**Maximum Contaminant Level (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.

**Secondary Maximum Contaminant Level (SMCL)** - the maximum permissible level of a contaminant in water based on aesthetic considerations.

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

**Maximum Residual Disinfectant Level (MRDL)** - 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health.

ND – Not Detected.

## WATER QUALITY RESULTS

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table below lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	Highest: 0.33 Range: ND to 0.33	No	August 2023	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	Highest: 0.20 Range: 0.16 to 0.20	No	August 2023	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium (ppm)	2	2	Highest: 0.061 Range: 0.16 to 0.016	No	August 2023	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceedence	Date of Sample	Typical Source of Contamination
Lead (ppb)	0	AL=15	3 (90 <sup>th</sup> percentile) Range: ND to 3 Of the ten samples collected none exceeded the AL.	No	August 2021	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.17 (90 <sup>th</sup> percentile) Range: 0.05 to 0.2 Of the ten samples collected none exceeded the AL.	No	August 2021	Corrosion of household plumbing systems; Erosion of natural deposits
Radiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found/Range	Violation	Date of Sample	Typical Source of Contamination
Alpha emitters (pCi/L)	0	15	Highest: 5.6 Range: 1.5 to 5.6	No	August 2023	Erosion of natural deposits
Beta emitters (pCi/L)	0	15	Highest: 6.5 Range: 3.5 to 6.5	No	August 2017	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	Highest: 3.7 Range: 0.6 to 3.7	No	August 2023	Erosion of natural deposits
Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
HAA5s (Total Haloacetic Acids) (ppb)	N/A	60	Highest: 1	No	August 2023	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) (ppb)	N/A	80	Highest: 5.4	No	August 2023	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG =4	MRDL =4	Highest Qtlly Avg.: 1.65 Range: 0.48-3.90	No	Monthly 2023	Water additive used to control microbes

Aesthetic Quality						
Contaminant /Unit of Measurement	MCLG	SMCL	Level Found/Range	Exceedence	Date of Sample	Typical Source of Contamination
Iron (ppm)	N/A	0.3	Highest: <0.0010 Range: 0.00-<0.010	No	August 2023	Erosion of natural deposits
Manganese (ppm)	N/A	0.05	Highest: <0.005 Range: .ND- <0.005	No	August 2023	Erosion of natural deposits

SODIUM: According to results of the chemical analyses for Metals based on a sample collected for Well No. 4 on August 2023 the sodium in the treated water is 65.6 mg/L. This is above the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water, which is established for those individuals on a "strict" sodium intake diet. A Metals chemical analyses was also performed on August, 2023 from the Central Plant Entry Point, and showed a sodium level of 43.4 mg/L. This is ABOVE the EPA recommended optimal level of less than 20 mg/L for sodium in drinking water.

The results in the tables are from testing done in 2021 through 2023. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

The U.S. Environmental Protection Agency sets MCLs at very stringent levels. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten thousand to one-in-one-million chance of having the described health effect for other contaminants.

*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. Hampden Sydney College is 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 <http://www.epa.gov/safewater/lead>.*

*VIOLATIONS: The Hampden Sydney College water system did not receive any monitoring or operational violations in 2023.*

Did any MCL or TT violations occur during the year?  Yes  No

Did any monitoring, reporting, or other violations occur during the year?  Yes  No