2024 Annual Water Quality Report for Darden's Mill Estates

(PWSID # 3175282)

Introduction

This new Annual Water Quality Report 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 not only meet our standards, but also state and federal requirements administered by the Virginia Department of Health (VDH).

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. 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 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.

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

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 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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 amount 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.

Drinking water, including bottled 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 about contaminants and potential health effects 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 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Maximum Contaminant Levels (MCLs) are set at very stringent levels by the U.S. Environmental Protection Agency. 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-a-million chance of having the described health effect for other contaminants.

Sources and Treatment of YOUR Water

Water for Darden's Mill Estates is supplied by a groundwater system consisting of two wells which are located near Darden Point Road and Lakeside Drive. There is no treatment of the water.

The Virginia Department of Health conducted a Source Water Assessment of the Darden's Mill Estates waterworks in 2018. 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 and Potential Sources of Contamination, Potential Conduits to Groundwater, Susceptibility Explanation Chart, and Definitions of Key Terms. The report is available by contacting Bobby Weeks at 888-429-1913.

Definitions

In this report you will find many terms and abbreviations with which you might not be familiar. 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) - *one part per million corresponds to one minute in two years or a single penny in $10,000.*

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, or MCL - *the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG 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.*

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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.*

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

Level 1 Assessment – *An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment.*

Level 2 Assessment – *An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment in a more comprehensive investigation than a Level 1 assessment.*

Water Quality Results

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The EPA requires that the tables reflect monitoring results for the period of January 1, 2020, to December 31, 2024. 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, although accurate, may be more than one year old. Only the most recent sample results from the prescribed period are reported. The tables list 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.

LEAD AND COPPER CONTAMINANTS

Contaminant	Action level	MCLG	The 90th Percentile Value for all Samples	Range	Action Level Exceedance (Y/N)	Month of Sampling	Typical Source of Contamination
Lead (ppb)	15	0	1.62	ND – 3.23	N	09/2023	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	1.3	1.3	0.085	ND – 0.083	N	09/2023	Corrosion of household plumbing systems; erosion of natural deposits

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. Darden's Mill Waterworks 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 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 http://www.epa.gov/safewater/lead.

REGULATED CONTAMINANTS

Contaminant	MCL/PMCL	MCLG	Level Found	Range	Violation (Y/N)	Date of Sample	Typical Source of Contamination
Fluoride (ppm) Nitrate	4 10	4	0.94 0.26mg/L	NA NA	N N	05/2023 07/2024	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Gross Alpha (pCi/L)	15	0	0.6	NA	N	10/2020	Erosion of natural deposits.
Gross Beta (pCi/L)	50**	0	4.4***	NA	N	10/2020	Erosion of natural deposits.
Combined Radium (pCi/L)	5	0	1.2*	NA	N	10/2020	Decay of natural and man-made deposits

**If the results of the sample had been above 5 pCi/L, our system would have been required to do additional testing for radium. Because the results were below 5 pCi/L, no testing for radium was required.*

***The MCL for Gross Beta is 4 mrem/year however EPA considers 50 pCi/L to be the level of concern.*

****Because the beta particle results were below 50 pCi/L, no testing for individual beta particle constituents was required*

UNREGULATED CONTAMINANT

Contaminant	SMCL	Level Found	Range	Date of Sample	Typical Source of Contamination
Sodium (ppm)	NA	89.7	NA	05/2023	Erosion of natural deposits widely distributed in nature, discharge from softeners, human or animal waste disposal, leachate from landfill or seawater intrusion

Sodium was detected in your drinking water. The most recent results indicated an average sodium concentration of 89.7 mg/L. Drinking water does not play a significant role in sodium exposure for most individuals. Those persons who are under treatment for sodium-sensitive hypertension should consult with their health care provider regarding sodium levels in their drinking water supply and the advisability of using an alternate water source or point-of-use treatment to reduce the sodium concentration. Water containing more than 20 mg/L should not be used as drinking water by those persons whose physicians placed them on a severely restricted sodium diet. Water containing more than 270 mg/L of sodium should not be used by those persons whose physician has placed them on a moderately restricted sodium diet. Sodium occurs naturally in groundwater. However, sources such as road salt, water softeners, natural underground salt deposits, pollution from septic systems as well as saltwater intrusion due to proximity to the ocean are often causes of elevated levels in drinking water wells.

System Assessment for Total Coliform

Coliforms are bacteria that are present in the environment and are used as an indicator that other, potentially harmful,

waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. There was one positive total coliform sample during the 2023 sampling period. The required repeat sampling was conducted and returned no positive total coliform results. Therefore, there were no assessments required or conducted.

No lead or copper service lines were discovered in the LCRR findings completed for the Darden Mills waterworks. If you would like information concerning all findings from the LCRR, please contact our office at 757-356-6517 or via email at lifeessentialsva@gmail.com

There were no violations during the period covered by this report. There were no deficiencies during this period or unresolved significant deficiencies during the period covered by this report.

Questions???

For more information about any aspect of your drinking water or to find out how to get involved in decisions that may affect the quality of your water, we encourage you to contact Bobby Weeks at 757-356-6517. For additional information call the Safe Drinking Water Hotline (1-800-426-4791).