Prince George County Utilities – Keeping the Community's Trust

2022 ANNUAL WATER QUALITY REPORT FOR Puddledock Road - VAPWSID 3419700

Este informe contiene informacion muy importante sobre su agua de beber. Traduzcalo o hable con alguien que lo entienda bien.

Introduction

This Annual Drinking Water Quality Report for calendar year 2022 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).

For information pertaining how you may participate in decisions regarding your water supply you may contact:

Prince George Public Utilities
6602 Courts Drive
Prince George, VA 23875
804-722-8706
Email: utilities@princegeorgecountyva.gov

Website:
http://www.princegeorgeva.org/residents/property_and_taxes/engineering_and_utilities/index.php

Water Quality Meets Regulatory Mark

Prince George County's Department of Utilities is committed to providing its customers with a safe and reliable supply of high-quality drinking water. The quality of our drinking water is verified through regular testing using sophisticated equipment and advanced procedures. The annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), explains where your water comes from, what our test results show about its quality, and contains other useful information concerning the water Utilities provides to its customers. This year, in an effort to be more environmentally and financially responsible and in response to new federal guidance, we are making the annual Consumer Confidence Report available in a digital format via our website rather than mailing it to each of our customers. Customers that want a paper copy can obtain one by calling Utilities at (804) 722-8706 and requesting that a copy be mailed to them or by stopping by our office during normal business hours and picking up a copy. Utilities can also be contacted with any questions or comments about this report or your service.

Meeting the Challenge

Prince George County Utilities owns, operates, and maintains public water and wastewater systems in the County's Planning Area. Prince George County Utilities provides service to approximately 4,562 water and wastewater customers. The Prince George County Water System supports approximately 3,251 water customers with an average daily use of approximately 1,000,000 gallons.

Prince George County Utilities is a self-supporting enterprise whereby the operations and capital expenditures are funded with revenues generated from customer user fees and one-time fees paid for capacity at the time of connection.

The Prince George County Utilities operates and maintains five well systems located throughout the County, and a large central system supplied by surface water from Appomattox River Water Authority.

Virginia Department of Health General Information

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 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 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 by-products 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.

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).

In order to ensure that tap water is safe to drink, the 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.

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 lifespan. 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.

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).

Source of Your Drinking Water and Treatment

The Puddledock Road water system, commonly referred to as the County's Central System, receives its water from the Appomattox River Water Authority. Your water is treated with chlorine to preserve water quality.

The U.S. Environmental Protection Agency required the Virginia Department of Health (VDH) to evaluate the susceptibility of a water system's source water becoming contaminated. Contamination sources and

pathways were reviewed using maps, known and observed activities, water quality data, and information about the Appomattox River Water Authority. Based on the criteria used in the study, the VDH found that on a relative basis, Lake Chesdin is of high susceptibility to contamination. This does NOT mean that your drinking water is unsafe. The Appomattox River Water Authority successfully uses multiple protection barriers to assure a high quality water supply as described in the rest of this report. A copy of the source water assessment report is available by contacting the Appomattox River Water Authority at (804) 590-1145

DEFINITIONS

In this report, you will find terms and/or abbreviations you might not find 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 Micrograms per liter (mg/l) - One part per million corresponds to one minute in 2 years, or a single 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 a single penny in $10,000,000.
- 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 (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 (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.
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking 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.
- Sanitary Defect - A defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

WATER QUALITY RESULTS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The EPA requires that Table I reflect monitoring results for the period of January 1st 2018 through December 31st, 2022. 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 accurate, may be more than one year old. Only the most recent sample results from the prescribed period are reported. The table 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.

The following tables show the results of our water quality analyses for the 2022 calendar year. The Environmental Protection Agency (EPA) requires Prince George County to routinely monitor a wide range of drinking water contaminants. Every regulated contaminant that was detected in the water, even in trace amounts, is listed here. Some contaminants are not tested annually since their levels generally do not change over time.

WATER QUALITY RESULTS (Detected Contaminants Only)

Contaminant (units)	MCLG	MCL	Level Found	Range	Violation	Date of Sample	Typical Source of Contamination
Fluoride (ppm)	4	4	0.96	0.03 – 0.96	No	2022	Erosion of natural deposits.
Nitrite/Nitrate (ppm)	10	10	0.15	NA	No	2022	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium (ppm)	2	2	0.023	NA	No	2022	Discharge from drilling waste; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/L)	0	5	0.2	NA	No	2020	Erosion of natural deposits
Gross Beta (pCi/L)	0	50*	1.9	NA	No	2020	Erosion of natural and man-made deposits

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

DISINFECTION AND DISINFECTION BY-PRODUCTS

CONTAMINANT (units)	MCLG or MRDLG	MCL or MRDL	Level Detected	Range	Date of Sample	Violation	Typical Source of Contamination
Chlorine dioxide (ppm)	0.8	0.8	<0.1 *average*	ND-0.12	2022	No	Water additive used to control microbes
Chlorine (ppm)	4	4	0.86	0.72 – 1.06	2022	No	Water additive used to control microbes
HAA5 (ppb)	60	60	8	6.0 – 10.0	2022	No	By-product of drinking water chlorination
TTHM (ppb)	80	80	20	16 – 25	2022	No	By-product of drinking water chlorination
Chlorite (ppm)	0.8	1	0.48	0.01 – 0.48	2022	No	By-product of drinking water chlorination
Turbidity	N/A	TT=1.0 NTU Max	<0.3 NTU 99.72% of the time	<0.04 – 0.119	2022	No	Soil runoff

LEAD AND COPPER CONTAMINANTS

CONTAMINANT (units)	MCLG	Action Level	Level Detected	Range	# of samples above AL	Date of Sample	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.208	ND – 0.862	0	2020	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching of wood preservatives.
Lead (ppb)	0	15	3.24	ND-5.55	0	2020	Corrosion of household plumbing; Erosion of natural deposits

A Note about Lead in Drinking Water:

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. This 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.

A note about fluoride in drinking water:

Some people who drink water containing fluoride in excess of the MCL (4 ppm) over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Additional Nonregulated Monitoring Results

Analyte (units)	Level Detected	Range	Date of Sample	Typical Source of Contamination
Sodium (ppm)	19.4	NA	2022	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 supplies.

Sodium in Drinking Water

Sodium was detected in your water sample. There is presently no established standard for sodium in drinking water. Water containing more than 270 mg/l of sodium should not be used as drinking water by those persons whose physician has placed them on moderately restricted sodium diets. Water containing more than 20 mg/l should not be used as drinking water by those persons whose physician has placed them on severely restricted sodium diets. Individuals that 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 alternative water source or point-of-use treatment to reduce the sodium.

Protecting Your Water

Have you ever considered all of the places that you use water in your home? You may be surprised by how many diverse ways water can be used. The water entering your home is free of contamination; however, it is your responsibility to protect the water on your property or in your home. Drinking water systems may become contaminated through uncontrolled cross-connections or backflows.

What is a Cross-Connection?

A "cross-connection" is any connection between your drinking water and a source of contamination. A cross connection exists when there is a physical connection between drinking water piping and another system. An example is a lawn irrigation system or fire sprinkler system connected to both the public water system and another water source. It is important to eliminate cross-connections to prevent contamination of the water system.

What is a Backflow?

A "backflow" occurs when water in a hose or a water pipe goes backward. This is caused by a change in water pressure. When a backflow occurs, contaminates can end up in your home piping. For example, if while washing your car there is a significant water pressure drop while the hose is submerged in a bucket of soapy water, the water could flow backwards if a proper backflow preventer is not installed. Care should be taken to make sure proper backflow preventers are installed on all fixtures.

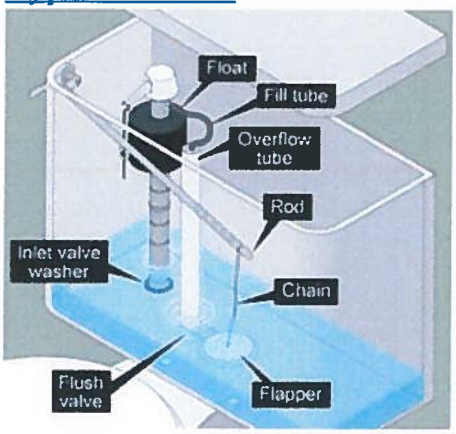
Where can Backflow occur?

Irrigation systems: Irrigation systems make watering your lawn or garden much easier, but if not properly constructed, a backflow can occur. Backflow protection should be provided on all irrigation systems with a reduced pressure zone device (RPZ), or a pressure type anti-siphon vacuum breaker (PVB) which must be inspected and ***serviced annually.***


Vacuum Breaker

- Hose Bibs: The ordinary garden hose is one of the most common ways to contaminate the water supply. This can happen when one end of the hose is attached to an outdoor faucet, and the other end is connected to an aspirator type bottle or submerged in a liquid. Insecticides or other chemicals can be siphoned back into the drinking water supply. You can easily prevent the possibility of this type of contamination by installing a hose bib vacuum breaker. A Vacuum Breaker is a small, inexpensive device that simply attaches to a threaded hose bib. Vacuum breakers are required to be installed on all hose bibs.
- Sinks, Tubs, Tanks: The faucets in your bathroom or kitchen must be located so that the end of the faucet is above the overflow level of the sink or tub. Fill lines to water troughs, pools and tanks must also be physically separated or "air-gapped". If there is no air-gap, the contents can be "back siphoned" into the water line.
- Toilets: Toilets need water to flush the waste materials into the sewer system. The water that flushes the toilet enters into the toilet tank from the small hose or pipe connected to the bottom of the tank. It is essential that the float-valve inside of the tank is the correct type so that the contents of the tank don't get back into the drinking water in your home.

Types of Leaks



While any water fixture can contribute to leaks and high water bills, toilets are typically the worst offenders. In toilets, rubber flappers can wear out, a flapper connected to the flush handle can have an incorrectly sized chain interfering with the seal, or float mechanisms on the flush valve can be set too high causing the water level to go just above the overflow tube.
Showers and sinks can also start leaking at any time. While typically at much lower capacities, these leaks can actually be easier to detect. By monitoring the water consumption in a building and observing hourly usage overnight, you can identify patterns that can quickly indicate a leak, eliminating the need to visually inspect all water fixtures in a building to determine the cause.

va811.com Dig With CARE

If you are planning to dig in your yard, be sure to call Miss Utility at least three days in advance (not counting weekends and holidays) to have your underground utilities marked. You are responsible for damage to underground lines if you do not call Miss Utility before you dig. Simply dial 8-1-1 or 1-800-552-7001.