Annual Drinking Water Quality Report for 2024
Consumer Confidence Report

Patrick County PSA PWSID 5141551

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2024 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). This report is also available online at: https://co.patrick.va.us/180/Public-Service-Authority

If you have questions about this report or 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:

Mark Vernon, Executive Director
(276) 693-2101

The time and location of the regularly scheduled PSA Board Meetings is as follows:

Quarterly Meetings, 4th Tuesday @ 6:00 PM in January, April, July, October.
Meeting schedules and special called meetings are advertised on our PSA webpage:
https://co.patrick.va.us/180/Public-Service-Authority

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 from human activity. 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 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 and 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.

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).

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 C*ryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

SOURCE(S) AND TREATMENT OF YOUR DRINKING WATER

The PSA obtains all of its treated water from an interconnection with the Town of Stuart's water distribution system. The Town of Stuart obtains its raw water for treatment from surface water and its primary raw water source is the South Mayo River. An auxiliary source of water is also available from Carter Mountain Reservoirs.

Treatment by the Town of Stuart of the surface water consists of chemical addition, coagulation, flocculation, settling, filtration, fluoridation and chlorination. All of these processes work together to remove the physical, chemical and biological contaminants to make the water safe for drinking.

A source water assessment of the Town's system was conducted in 2001 by the Virginia Department of Health. The river source was determined to be of high susceptibility to contamination while the reservoir sources were determined to be of moderate susceptibility to contamination. These determinations were based upon 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 five years. The report is available by contacting us at (276) 693-2101.

SOURCE WATER PROTECTION TIPS

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.

WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute. Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to federal and state regulations. The Water Quality Results Tables on the next pages show the results of this monitoring for the period of January 1st through December 31st, 2024. In the tables and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
% positive samples/month	% positive samples/month: Percent of samples taken monthly that were positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
positive samples	positive samples/yr: The number of positive samples taken that year

Important Drinking Water Definitions	
Term	**Definition**
MCLG	MCLG: Maximum Contaminant Level Goal: 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.
MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. 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.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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-a-million chance of having the described health effect for other contaminants.

WATER QUALITY RESULTS TABLE (PATRICK COUNTY PSA)

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	22	14	37	2024	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	30	24	51	2024	No	By-product of drinking water disinfection
Microbiological Contaminants								
E. coli (RTCR) - in the distribution system (positive samples)	0	Routine and repeat samples are total coliform positive and either is E. coli - positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli.	0	NA	NA	2024	No	Human and animal fecal waste
Total Coliform (RTCR) (% positive samples/month)	NA	TT	NA	NA	NA	2024	No	Naturally present in the environment

Contaminants	MCLG	AL	Your Water	Range		# Samples Exceeding AL	Sample Date	Exceeds AL	Typical Source
				Low	High				
Inorganic Contaminants									
Copper - action level at consumer taps (ppm)	1.3	1.3	.02	0	.002	0	January to June 2024	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper - action level at consumer taps (ppm)	1.3	1.3	.02	0	.002	0	July to December 2024	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	2	0	14.9	0	January to June 2024	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	2.6	0	2.69	0	July to December 2024	No	Corrosion of household plumbing systems; Erosion of natural deposits

WATER QUALITY RESULTS TABLE (TOWN OF STUART, SOURCE WATER)

The Town of Stuart routinely monitors for various contaminants in the water supply to meet all regulatory requirements. 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.

TEST RESULTS						
Contaminant / unit of measurement	Violation Y/N	Level Detected/**Range**	Sample Date	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants (ND)						
Turbidity / NTU	N	0.090(highest level) 100 % < 0.3	Daily	NA	1.0 Max TT 0.3 in 95 % of monthly samples	Soil runoff
Inorganic Contaminants						
Nitrate + Nitrite (ppm)	N	<0.05 ppm	November 2024	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride (ppm) (Split Samples)	N	Average= 0.69 Range = 0.56 – .87	Monthly 2024	4	4	Water additive which promotes strong teeth
Fluoride (ppm) (Entry Point)	N	Average= 0.73 Range= 0.66 – 0.78	November 2024	4	4	Erosion of natural deposits; Water additive which promotes strong teeth
Disinfection Byproducts						
Chlorine (ppm)	N	Average=1.1 Range: 0.5 -1.4	Monthly at two sample sites	4	4	Chlorine is added to insure that water is disinfected
TOC range = ppm TOC Removal ratio Total Organic Carbon	N	Range 1.0 to 1.0 Removal Ratio: = 1	Quarterly 2024	NA	TT- TOC Removal Ratio greater than or equal to 1	Naturally present in the source water
radium was detected within previous 5 years						
Combined radium (pCi/L)	N	0.2	December 2019	0	5	Erosion of natural deposits

ADDITIONAL INFORMATION

In accordance with 40 CFR §141.84(a), the Patrick County PSA performed a Lead Service Line Inventory for all connections to our public water system. We are pleased to report that NO LEAD SERVICE LINES are present in our system.

Additional information on Lead:

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. The PSA is responsible for providing high quality drinking water and removing any lead containing material in our system and service lines, but we cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, please contact the PSA at (276) 693-2101 and we can assist you. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

Cross Connection Control Survey:

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter our distribution system. We are responsible for enforcing cross-connection control regulations and ensuring that no contaminants can, under any flow conditions, enter our distribution system. **If you have any of the devices listed below, please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it as necessary.**

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional or auxiliary source(s) of water on the property (wells)(springs)
- Decorative pond
- Watering trough
- Fire protection/sprinkler systems
- Frost-proof yard hydrants

VIOLATIONS

The Patrick County PSA had no violations in 2024.

This Drinking Water Quality Report was prepared and presented by:

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