Annual Drinking Water Quality Report

Town of Richlands Regional Water Treatment Facility PWSID No. 1185695

INTRODUCTION

This Annual Drinking Water Quality Report for the 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).

If you have questions about this report, please contact: Eric Johnson, Chief Water Treatment Operator (276) 964-2578

If you 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: Eric Johnson, Chief Water Treatment Operator (276) 964-2578, Office of Drinking Water - Virginia Department of Health (276) 676-5650

The times and location of regularly scheduled board meetings are as follows:
Town of Richlands - The second Tuesday of every month at 6:00PM
Richlands Town Hall
200 Washington Square
Richlands, Virginia 24641

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. Contaminants that may be present in source water include: (i) microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; (ii) 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; (iii) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; (iv) 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; (v) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, EPA prescribes regulations that limit the number of certain contaminants in water provided by public water systems. FDA 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 who are 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).

SOURCE(S) and TREATMENT OF YOUR DRINKING WATER
The source(s) of your drinking water is (X) surface water ( ) groundwater under the direct influence of surface water ( ) groundwater as described below:

Is there any treatment of your drinking water supply? (X) Yes ( ) No

The Virginia Department of Health conducted a source water assessment of our system during 2019. The Clinch River was 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. The report is available by contacting 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. The table on the next page shows the results of our monitoring for the period of January 1st to December 31st, 2024. In the table 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:

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.

Maximum Residual Disinfectant Level Goal or MRDLG: the level of 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.

Maximum Residual Disinfectant Level or 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.

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.

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.

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.

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

Level 1 assessment - a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 assessment - a very detailed study of the waterworks to identify potential problems and determine (if possible) why an *E. coli* PMCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.

WATER QUALITY RESULTS

Microbiological Contaminants

Contaminant	MCLG	MCL	No. of Samples Indicating Presence of Bacteria	Violation (Y/N)	Month of Sampling	Typical Source of Contamination
E. coli	0	1 routine sample and a repeat sample are total coliform positive, and 1 is also *E. coli* positive	0	N	Monthly	Human and animal fecal waste
Cryptosporidium	0	Treatment Technique (See Below)	0	N		Human and animal fecal waste

- For Cryptosporidium, EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to
  1. Disinfect their water, and
  2. Filter their water

- The Town of Richlands will no longer be adding fluoride to your drinking water.

Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected Richlands	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Nitrate (ppm)	10	10	1.070	N	1.070. - 1.070	1st Quarter	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	Not Detected	N	Not Detected	Quarterly	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium (ppm)	2	2	0.058	N	0.058 - 0.058	3rd Quarter	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Alpha Emitters (pCi/l)	0	15	Not Detected	N	N/A	2020	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	0.781	N	0.781	2020	Erosion of Natural Deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.52	N	0.50 - 2.20	Monthly	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥1	1.70	N	1.4 – 2.1	Quarterly	Naturally present in the environment
Haloacetic Acids (ppb)	NA	60	Richlands - 31 ppb Richlands - 30 ppb	N N	21 - 46 ppb 17 - 49 ppb	Quarterly	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	NA	80	Richlands - 29 ppb Richlands - 32 ppb	N N	19 – 39 ppb 17 - 51 ppb	Quarterly	By-product of drinking water disinfection

Turbidity (NTU)	NA	TT,1 NTU Max	0.064	N	0.031 - 0.090	Daily	Soil runoff
		TT, ≤ 0.3 NTU 95% of the time	100%				

Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	90th Percentile	Date of Sampling	# of Sampling Sites Exceeding Action Level	Typical Source of Contamination
Lead (ppb)	0	AL = 15	Richlands - 2.73	3rd Quarter	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	AL = 1.3	Richlands - 0.093	3rd Quarter	0	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING*			
Unregulated Contaminant (Units)	REPORTED LEVEL	RANGE	
		LOW	HIGH

*Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Monitoring Results for Sodium (Unregulated-No Limits Designated)			
Level Detected (unit)	Sample Date	Typical Source	Guidance
14.1 (mg/L) Range: 14.1 mg/L – 14.1mg/L	08/13/2024	Naturally Occuring; Addition of treatment chemicals/processes	For individuals on a very low sodium diet (500 mg/day), EPA recommends that drinking-water sodium not exceed 20 mg/L. Should you have a health concern, contact your health care provider.

Lead Service Line Inventory

The Town of Richlands completed the required Lead Service Line Inventory and submitted the results to the Virginia Department of Health Office of Drinking Water. Based on customer self-identification, historical records and field investigation, we have determined that there are 2857 non-lead service lines in the system, 0 Galvanized Service Lines needing replacement and 0 unknown materials in the system. We thank you for your help and cooperation. The hard copy full inventory is available at the Town of Richlands Town Hall.

Record ID	PWS ID Number	Lead Service Line Classification	Reported Date	Current No.
1	VA1185695	Lead SL	11/7/2024	0
2	VA1185695	Galvanized Requiring Replacement SL	11/7/2024	0
3	VA1185695	Lead Status Unknown SL	11/7/2024	0
4	VA1185695	Non-lead SL	11/7/2024	2857

PFAS, Per- and polyfluoroalkyl substances (PFAS)

In June of 2023 our waterworks participated in a voluntary sampling program performed by the Office of Drinking Water for Per- and polyfluoroalkyl substances (PFAS). At this point, this sampling is not required, and all values were found to be below the EPA Reporting Limit. These chemicals are a large, complex group of man-made synthetic chemicals that include PFOA, PFOS, Gen X, and many other chemicals that have been used in consumer products around the world since about the 1950's. They are ingredients in various everyday products. Examples of where PFAS can be found include cleaners, textiles, leather, paper and paints, fire-fighting foams, and wire insulation.

TEST RESULTS - Semi volatile Organics - PFAS - PIA (Unregulated Contaminant)								
Contaminant	Violation (Y/N)	Result	Unit	Qualifier	MRL	MDL	Typical Source of Contamination	Analyzed
PFBA	NO	1.8	ng/L	J	2.0	0	Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include PFOA, PFOS, Gen X, and many other chemicals. Examples of where PFAS can be found include cleaners, textiles, leather, paper and paints, fire-fighting foams, and wire insulation.	6/14/2023
PFMPA	NO	<0.4	ng/L		2.0	0	See Above Explanation	6/14/2023
PFPeA	NO	<1.1	ng/L		2.0	0	See Above Explanation	6/14/2023
PFBS	NO	0.5	ng/L	J	2.0	0	See Above Explanation	6/14/2023
PFMBA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
PFEESA	NO	<0.09	ng/L		2.0	0	See Above Explanation	6/14/2023
HFPO-DA	NO	<0.4	ng/L		2.0	0	See Above Explanation	6/14/2023
NFDHA	NO	<0.4	ng/L		2.0	0	See Above Explanation	6/14/2023
4:2 FTS	NO	<0.4	ng/L		2.0	0	See Above Explanation	6/14/2023
PFHxS	NO	<0.3	ng/L		2.0	0	See Above Explanation	6/14/2023
PFHpA	NO	0.2	ng/L	J	2.0	0	See Above Explanation	6/14/2023
PFHxA	NO	0.4	ng/L	J	2.0	0	See Above Explanation	6/14/2023
ADONA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
PFPeS	NO	<0.3	ng/L		2.0	0	See Above Explanation	6/14/2023

6:2 FTS	NO	<0.7	ng/L		2.0	0	See Above Explanation	6/14/2023
PFOA	NO	0.4	ng/L	J	2.0	0	See Above Explanation	6/14/2023
PFHpS	NO	<0.4	ng/L		2.0	0	See Above Explanation	6/14/2023
PFOS	NO	0.7	ng/L	J	2.0	0	See Above Explanation	6/14/2023
PFNA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
9Cl-PF3ONS	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
8:2 FTS	NO	<0.5	ng/L		2.0	0	See Above Explanation	6/14/2023
PFDA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
PFUnA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
11Cl-PF3OUDS	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023
PFDoA	NO	<0.2	ng/L		2.0	0	See Above Explanation	6/14/2023

The state allows us to monitor some contaminants less than once per year because the concentration of these contaminants does not change frequently. Some of our data presented in the above tables, though accurate, is more than one year old.

MCL's 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.

VIOLATION INFORMATION – Did any PMCL or TT violation occur during the year? ( ) Yes (X) No

VIOLATION INFORMATION – Did any monitoring, reporting, or other violations occur during the year? ( ) Yes (X) No

ASSESSMENT INFORMATION

Coliforms are bacteria that are naturally 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.

ADDITIONAL HEALTH INFORMATION

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. Town of Richlands Regional Water Treatment Facility 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 two 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 (800-426-4791).

In 2019, the Town of Richlands Regional Water Treatment Facility monitored for Cryptosporidium in the source water (before treatment) as required by EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Cryptosporidium is a microscopic parasite found in surface water throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Under the LT2ESWTR, the average Cryptosporidium concentration determines if additional treatment measures are needed. Twenty-four samples are required for analysis over a two-year period. During 2019, the average Cryptosporidium concentration was 0.00 oocysts per liter for the 6 samples collected. While our monitoring indicates the presence of these organisms in our source water (before treatment), the current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Based on the Cryptosporidium monitoring results so far and the current performance of the treatment plant, we anticipate meeting the future treatment requirements of the LT2ESWTR.