2024 Consumer Confidence Drinking Water Quality Report
Town of South Hill PWSID No. 5117800

Introduction:

This Annual Consumer Confidence Drinking Water Quality Report is for the calendar year 2024 and 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 any questions about this report, or if you want additional information about any aspects of your drinking water or would like to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Allen Elliott, Operator in Responsible Charge, at: (434) 447-3191
Town of South Hill Council Meetings are held on the second Monday of each month.

Educational Information:

All 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 the water poses a health risk. More information about contaminates and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune compromised persons such as a person 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. Those persons should seek the 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 also available by contacting the Safe Drinking Water Hotline at (800-426-4791).

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: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (2) 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. (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. (4) 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. (5) 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.

Lead Service Line Inventory

A lead service line inventory was conducted by The Town of South Hill in calendar year 2024. The inventory for the service line inventory is available by request. No lead service lines were found during this inventory.

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 Town of South Hill** is responsible for providing high quality drinking water and removing lead pipes, but 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, contact B&B Labs and (434)372-3393. 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.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

SOURCE OF YOUR DRINKING WATER

The source of your drinking water is classified as surface water and the raw water intake is located on **Lake Gaston on the Roanoke River treated at the Roanoke River Service Authority's water treatment plant**. Treatment of the raw water consists of chemical addition, coagulation,

flocculation, settling (superpulsator), filtration, fluoridation, and chlorination. All of these processes work together to remove or adjust the physical, chemical, and biological contaminants to make water safe for drinking.

A Source Water Assessment of the system has been conducted by the Virginia Department of Health. The lake/river was determined to be of high susceptibility to contamination using the criteria developed by the State in its approved 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. Additional information is available by contacting your water system representative at the phone number and address given elsewhere in this drinking quality water report.

DEFINITIONS:

Contaminants in your drinking water are routinely monitored according to Federal and State Regulations. The table on the following two pages shows the results of our monitoring for calendar year 2024, unless noted otherwise. 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.

Non detects (ND) Lab analysis indicates that the contaminant is not present within the detection limits of the instrument used.

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(ug/l)- Is one part per billion and 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 radioactivity in water.

Nephelometric Turbidity Unit (NTU) – Nephelometric turbidity is a measure of the cloudiness of the water. Turbidity in excess of 5.0 NTU is just noticeable to the average person.

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. MCLG's allow for a margin of safety.

Maximum Contaminant Level, or (MCL) - the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

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.

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.

TABLE 1 ROANOKE RIVER SERVICE AUTHORITY Testing Results

Results of Water Quality Analysis

N/A= Not Applicable TT=Treatment Technique ND= Non Detects

Contaminant & Unit of measurement	MCLG	MCL	Level Detected And / or Range	Violation	Testing Frequency or Sample Date	Sources of Substances or Compound
Turbidity-(NTU) ***See footnote #1**	N/A	TT = 1 NTU max	0.10 Max. Range: 0.05–0.10	No	Tested continuously at RRSA plant	Soil Runoff
		TT = at least 95% of the monthly samples <0.3 NTU	100%		Tested continuously at RRSA plant	
Fluoride - (ppm)	4	4	Highest: 0.87 Range: 0.61 – 0.87	No	Tested daily on finished water at the RRSA plant once per shift.	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories: desired range 0.6-0.9
Gross Alpha (pCi/L)	0	15	1.1	No	07/12/21 Every 6 Years	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	1.1	No	07/12/21 Every 6 Years	Erosion of natural deposits

Contaminant & Unit of measurement	MCLG	MCL	Level Detected And / or Range	Violation	Testing Frequency or Sample Date	Sources of Substances or Compound
Total Organic Carbon (TOC) ***see footnote #2**	N/A	TT = Based on the % of TOC removed during the treatment process; ratio must be greater than or equal to 1.00	Lowest Running Qtr. Avg. 1.82 Range: 1.62 – 2.20	No	Tested monthly on raw and treated water.	Naturally present in environment.
Nitrate – Nitrite (ppm)	10	10	0.12	No	January 2024 Annually	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Barium (ppm)	2	2	0.020	No	Tested Annually July 2024	Erosion of natural deposits.

Table 2 Town of South Hill Testing Results

Results of Water Quality Analysis

N/A= Not Applicable TT=Treatment Technique ND= Non Detects

Contaminant & Unit of measurement	MCLG	MCL	Level Detected And / or Range	Violation	Testing Frequency or Sample Date	Sources of Substances or Compound
Copper (ppm)	1.3	AL=1.3	90th %= 0.3 Range <0.02-0.362 0 of 20 samples exceeded the action level	No	September 2024 Tested every three years at 20 locations in our service area.	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead - (ppb)	0	AL = 15	90th % = <2ug/l Range ND-20.2 1 of 20 samples exceeded the action level	No	September 2024 Tested every three years at 20 locations in our service area.	Corrosion of household plumbing systems; erosion of natural deposits.
TTHM's (Total Trihalomethanes) (ppb)	NA	80	Max 4 Qtr. Avg. 59 Range: 18-108	No	Tested quarterly	By-product of drinking water chlorination.
Haloacetic acids (HAA)-(ppb)	NA	60	Max 4 qtr. Avg. 30 Range: 4.5-43	No	Tested quarterly at two locations in our service area	By-product of drinking water chlorination.
Chlorine – (ppm)	MRDL = 4	MRDLG = 4	Average Result:1.40 Range: .51 – 1.93	No	Tested monthly at a minimum of 5 locations in our service area.	Water additive used to control microbes.

*footnote #1: *Turbidity* is a measure of the cloudiness of the water and is used because it is a good indicator of how well the filtration system is functioning at the Water Treatment Plant. Turbidity sample results were taken at the Water Treatment Plant.

*footnote #2: Total organic carbon (TOC) has no health effect. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous systems effects, and may lead to an increased risk of getting cancer.

We regularly monitor for various contaminants in the water supply to meet all regulatory requirements. The table above 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. Most of the results in the table are from testing done in the year 2024. However, the State allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently.

Sodium

The sodium concentration of 16.3 mg/l collected in July 2024 in the treated water at the RRSA plant is below the EPA-recommended optimal level of less than 20 mg/l of sodium in drinking water. This level is established for those individuals on a "strict" sodium intake diet.

MCL's are set at very stringent levels by the U.S. Environment 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. The EPA generally sets MCL's at levels that will result in no adverse health effect for some contaminants or a one-in-ten thousand to one-in-a-million chance of having the described health effect for other contaminants.

MCL Violation Information: The **Town of South Hill** had no violations for the year 2024.

ADDITIONAL INFORMATION:

System Improvements for 2024

The Town continued to replace two-inch water lines with six-inch water lines and fire hydrants. The total of pipe that was replaced during 2024 was 7800 feet. The Town's goal is to continue to replace pipe within the system and eventually remove all two-inch lines.

The Town of South Hill serves 2,919 water connections that serve 4600 customers in the Towns of South Hill and surrounding areas. During the calendar year 2024 RRSA supplied the Town of South Hill a total of 262,170,900 gallons of drinking water.

For a copy of this report in pdf form visit the Town's website, https://www.southhillva.org/images/documents/2024_CCR.pdf

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