

Results of Water Quality Analysis

Table 1 Roanoke River Service Authority Results

Contaminant	MCLG	MCL	Level Found	Range	Violation	Sample Date	Typical Source of Contamination
Turbidity (NTU) See Footnote #1	NA	TT=1NTU MAX	0.10/ 100.0%	0.07-0.10	No	continuous RRSA Plant	Soil Runoff
Fluoride (ppm)	4	4	avg= 1.04	0.46-1.55	No	daily RRSA	Additive which promotes strong teeth
Gross Alpha (pCi/L)	0	15	0.2	NA	No	3/10/2004 every 8 yrs	Erosion of natural deposits
Radium-combined (pCi/L)	0	5	0.8	NA	No	3/10/2004 every 8 yrs	Erosion of natural deposits
TOC -Total (ppm) Organic Carbon	NA	TT>1.0	Lowest Running Avg= 1.82	1.82-1.90	No	monthly on raw & treated water	Naturally present in environment See footnote #2
Nitrate (ppb)	10	10	0.28	NA	No	2/12 annually RRSA Plant	Runoff from fertilizer use leaching from septic tanks; sewage
Barium (ppm)	2	2	0.021	NA	No	Tested Annually	Erosion of natural deposits

Table 2 South Hill System Results

Copper (mg/L) See Footnote #3	1.3	AL=1.3	0.1	ND-0.25	No	9/13/2011 every 3 yrs	Corrosion of household plumbing Erosion of natural deposits
TTHM (ppb) Trihalomethanes	NA	80	56 90th Percentile 4 Qtr. Avg.	38-71	No	Quarterly 1 sites	By-product of drinking water chlorination
HAA5 (ppb) Haloacetic Acids	NA	60	22 4 Qtr. Avg.	10 25	No	Quarterly 1 sites	By-product of drinking water chlorination
Chlorine (ppm)	MRDL= 4	4	1.39	0.37-2.20	No	7 sites monthly	Water additive used to control microbes.
Total Coliform Bacteria	0	1 Positive	0	NA	No	7 sites monthly	Naturally present in environment

AL= Action Level N/A= Not Applicable TT= Treatment Technique ND= Non Detect > Symbol = Greater Than

Note # 1: Treatment Technique (TT) requires that at least 95% of the monthly samples must be below 0.30 NTU.

Note # 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 (HAA5s). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver and kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

Note #3: None of the 20 sites tested for lead and copper exceeded the action level.

MCLs are set at a very stringent level by the U.S. Environmental Protection Agency. In developing the standards the EPA assumes that the average adult drinks 2 liters of water each day throughout a 70 year life span. The EPA generally sets MCLs at levels that will result in adverse health affect 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: We are pleased to report that the Town of South Hill's water system had no violations and that your water meets all Federal and State drinking water standards.

Proposed System Improvements; for 2013: Water main upgrades on Radio Road area, Replacement of main on Highway 47 from Ferguson Dr. to Old water plant. .

Want to learn more about drinking water, go to www.drinktap.org presented by AWWA.

We are proud members of The American Water Works Association (AWWA)



**TOWN OF SOUTH HILL
PWSID No. 5117800**

**2012
CONSUMER
CONFIDENCE
DRINKING WATER
QUALITY REPORT**



Our goal is to provide you with a safe and dependable supply of drinking water.

If you have any questions about this report or want additional information about any aspects of your drinking water, Please contact:

**Mark A. Novsak
Responsible Operator In Charge
434-447-3191 ext. 244
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Introduction:

This Annual Consumer Confidence Drinking Water Report is for the calendar year 2012 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)**.

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.

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 for 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 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 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. 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. The Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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. The Town of South Hill 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature before using water for drinking or cooking. If you are concerned about lead in your water, testing methods and steps you can take to minimize exposure are available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

SOURCE OF YOUR DRINKING WATER

The source of your drinking water is surface water as described below.

The Town of South Hill purchases water from the Roanoke River Service Authority (RRSA). The water source is located on **Lake Gaston on the Roanoke River**. Treatment of the raw water consists of chemical addition, coagulation, flocculation, settling (superpulsator), filtration, and chlorination. All of these processes work together to remove physical, chemical, and biological contaminants to make water safe for drinking.

A Source Water Assessment of our water source has been

conducted by the Virginia Department of Health. The Lake/River was determined to be of **high susceptibility** to contamination using 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 the RRSA (434-689-7772).

DEFINITIONS:

Contaminants in your drinking water are routinely monitored according to Federal and State Regulations. The tables on the back shows the results of monitoring conducted for calendar year 2012. 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.

Action Level (AL)- The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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)- One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

Picouries per liter (pCi/L)- Picouries per liter is a measure of radioactivity in water.

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

Maximum Contaminant Level Goal (MCLG)- Is the level

of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL)- Is 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 Residual Disinfection Level Goal (MRDLG)- The level of drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not affect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfection Level (MRDL)-

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.

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. Samples for Turbidity are taken at the Water Treatment Plant.

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

Environmental Protection Agency (EPA)
Center for Disease Control (CDC)