

Annual Drinking Water Quality Report

Town of Troutville

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2012 is designed to provide you with valuable information about your drinking water quality. We are committed to providing 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 meets all state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, 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:

Mr. Scott Paderick at (540) 992-4401

GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

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).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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).

SOURCES AND TREATMENT OF YOUR DRINKING WATER

Your drinking water is groundwater obtained from five wells. Water is distributed throughout the system by two booster pumping stations, three storage tanks and distribution piping. Well 1 is located at the elevated storage tank near the center of town. Well 2 is located off Lee Highway northeast of the Town. Well 3 is located east of the Stoney Battery Road railroad crossing. Well 4 is located at Correctional Unit No. 25. Well 5 is located in Simmons Industrial Park off Route 11 south of town.

Treatment is provided for Wells 1, 2, 3, 4, & 5. These wells are equipped with chlorinators to disinfect the water prior to distribution. Wells 4 is currently off line pending installation of treatment.

SOURCE WATER ASSESSMENTS

A source water assessment has been completed by VDH. The assessment determined that all five wells may be susceptible to contamination because they are located in areas that promote migration of contaminants with land use activities of concern. More specific information may be obtained by contacting the number listed above.

QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The tables that follow show the results of our monitoring for the period of January 1st through December 31st, 2012.

Not all of the results in the tables are from testing done in 2012. 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, is more than one year old.

DEFINITIONS

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:

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.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Picocuries per liter (pCi/L) – picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level – 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 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.

Variations and exemptions – state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

WATER QUALITY RESULTS

Microbiological

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
total coliform bacteria	presence or absence	0	presence of coliform bacteria in >1 sample per month	none	no	monthly	naturally present in the environment
E. coliform bacteria	MPN	0	NA	1	no	6/25/12	Human and animal fecal waste

Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and headaches. *Fecal indicators, such as E. coliform bacteria, are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.*

We collected routine raw water samples on June 25, 2012, from our wells that indicated presence of E. coli bacteria. The VDH requires that we collect routine raw water samples quarterly to assess raw water quality. Follow-up raw samples were collected, and these samples were all negative for E. coli bacteria. Additionally, we provide disinfection treatment to your water and we did not collect any coliform positive samples in the distribution system during 2012.

Radiological Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
gross alpha radiation	pCi/l	0	15	--	--	--	erosion of natural deposits
Well 1				1.2	no	2/6/03	
Well 2				4.2	no	3/17/10	
Well 3				6.6	no	3/17/10	
Well 4				13.3	no	3/17/10	
Well 5				6	no	3/17/10	
gross beta radiation	pCi/l	0	50	--	--	--	erosion of natural deposits
Well 1				2.6	no	2/6/03	
Well 2				2.4	no	3/17/10	
Well 3				1.9	no	3/17/10	
Well 4				6.5	no	3/17/10	
Well 5				4.3	no	3/17/10	
combined radium	pCi/l	0	5	--	--	--	erosion of natural deposits
Well 1				0.3	no	2/6/03	
Well 2				1.9	no	3/17/10	
Well 3				2.4	no	3/17/10	
Well 4				3	no	3/17/10	
Well 5				1.6	no	3/17/10	

Analysis frequency for radiologicals is every three years for wells 2 – 5, and six years for well 1 beginning in 2013.

Inorganic Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
nitrate	ppm	10	10	--	--	--	runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Well 1				2.05	no	4/11/12	
Well 2				0.82	no	4/11/12	
Well 3				0.41	no	4/11/12	
Well 4				0.12	no	4/11/12	
Well 5				0.12	no	4/11/12	
fluoride	ppm	4	4	--	--	--	erosion of natural deposits; discharge from fertilizer and aluminum factories.
Well 1				0.72	no	4/11/12	
Well 2				0.59	no	4/11/12	
Well 3				1.94	no	4/11/12	
Well 4				1.62	no	4/11/12	
Well 5				0.25	no	4/11/12	
barium	ppm	2	2	--	--	--	discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Well 1				0.123	no	4/11/12	
Well 2				0.128	no	4/11/12	
Well 3				0.101	no	4/11/12	
Well 4				0.094	no	4/11/12	
Well 5				0.151	no	4/11/12	
chromium	ppm	0.1	0.1	0.01	no	4/11/12	discharge from steel and pulp mills; erosion of natural deposits
Well 1				0.01	no	4/11/12	
Well 2				ND	no	4/11/12	
Well 3				ND	no	4/11/12	
Well 4				ND	no	4/11/12	
Well 5				ND	no	4/11/12	

Analysis frequency for most inorganics is every three years (annually for nitrate).

Volatile Organic Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
1,1,1 Trichlorethane	ppm	0.2	0.2	--	--	--	Discharge from metal degreasing sites and other factories
Well 1				0.0012	no	4/11/12	
				ND	no	6/18/12	
Well 2				ND		4/11/12	
Well 3				ND		4/11/12	
Well 4				ND		4/11/12	
Well 5				ND		4/11/12	

Analysis frequency is every three years.

Unregulated Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date	Typical Source of Contamination
no unregulated contaminants were detected in any well						4/11/12 6/18/12	

Analysis frequency is every three years.

Lead and Copper (Most recent monitoring period – 2010)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	AL Exceeded	Samples > AL	Typical Source of Contamination
lead	ppb	0	AL = 15	5	no	0	corrosion of household plumbing systems; erosion of natural deposits
copper	ppm	1.3	AL = 1.3	0.112	no	0	

Analysis frequency is every three years.

We constantly 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. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Maximum Contaminant Levels (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 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.

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 Troutville 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, 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 of at <http://www.epa.gov/safewater/lead>.

VIOLATION INFORMATION

Water Quality Violations – None

Monitoring and Reporting Violations – None

This Drinking Water Quality Report was prepared by the Town of Troutville with the assistance and approval of the Virginia Department of Health. Please call if you have questions.

Signature: 

Date: 7 - 11 - 2013