Annual Drinking Water Quality Report
Pounding Mill

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2016 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. Gary Hepler, Assistant Director of Public Works, at (540) 863-6650

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. 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 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 supplied by water purchased from the City of Covington. The City of Covington drinking water is surface water obtained from the Jackson River. Complete treatment of the water is provided at the Jackson River Water Treatment Plant. This treatment plant includes coagulation, sedimentation, filtration, chlorination and fluoridation. The intake for the plant is located upstream of Westvaco. Water is distributed throughout the system by booster pumping stations, storage tanks and distribution piping.

Groundwater may be obtained from a local spring during emergencies. Should it be necessary to draw water from the spring, chlorine disinfection will be used for treatment. After treatment, the water will be pumped into the system up to two atmospheric storage tanks and then distributed.

SOURCE WATER ASSESSMENTS

A source water assessment of the spring has been completed by VDH. The assessment determined that the spring may be susceptible to contamination because it is located in an area that promotes migration of contaminants from land use

activities of concern. More specific information may be obtained by contacting the water system representative listed above.

A source water assessment for the Jackson River Water Treatment Plant was completed by the VDH. This assessment determined that the water source (Jackson River) may be susceptible to contamination. All surface water sources (rivers, reservoirs) are exposed to a wide array of contaminants of varying concentrations and changing hydrologic, hydraulic, and atmospheric conditions that promote migration of contaminants from land use activities of concern within the assessment area. More specific information may be obtained by contacting the water system representative 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, 2016.

Most of the results in the table are from testing done in 2016. However, 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.

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

Level 1 Assessment – A Level 1 assessment is 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 Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

WATER QUALITY RESULTS

Microbiological (Pounding Mill)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date(s)	Typical Source of Contamination
Total Coliform bacteria	presence or absence	0	presence of coliform bacteria in >1 sample per month	0	no	monthly	naturally present in the environment

Total coliform bacteria are analyzed every month. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.

Inorganic Contaminants (Spring)

The spring was not used in 2016; however, the spring is maintained as an emergency source and samples are kept current.

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date*	Typical Source of Contamination
Nitrate	ppm	10	10	0.17	no	2/22/16	runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	ppm	4	4	< 0.2	no	2/12/15	erosion of natural deposits; discharge from fertilizer and aluminum factories
Barium	ppm	2	2	0.027	no	2/12/15	discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

*Most inorganic contaminants are analyzed every three years (nitrate is analyzed every year).

Radiological Contaminants (Spring)

Contaminant	Unit of Measurement	MCLG	MCL	Level found	Violation	Sample Date*	Typical Source of Contamination
Gross Alpha Radiation	pCi/l	0	15	<0.45	no	10/19/16	erosion of natural deposits
Gross Beta Radiation	pCi/l	0	50	1.1	no	10/19/16	erosion of natural deposits
Radium - 228	pCi/l	0	5	<0.6	no	10/19/16	erosion of natural deposits

*Radiological contaminants are analyzed every six years.

Volatile Organic Contaminants (Spring)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date*	Typical Source of Contamination
No VOCs detected	ppb					2/12/15	Discharge from petroleum factories or leaking petroleum storage tanks

*Volatile organic contaminants are analyzed every three years.

Lead and Copper – (Pounding Mill System) 2015 monitoring period

Contaminant	Unit of Measurement	MCLG	MCL	90% Level	AL Exceeded	Samples > AL	Typical Source of Contamination
Lead	ppb	0	AL = 15	7.9	no	0	corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	1.3	AL = 1.3	0.29	no	0	

Lead and copper are analyzed every three years.

Volatile Organic Contaminants (Covington Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Sample Date*	Typical Source of Contamination
no other regulated VOCs detected						8/2/16	

*Volatile organic contaminants are analyzed annually.

Radiological Contaminants (Covington Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)*	Typical Source of Contamination
gross alpha radiation	pCi/l	0	15	< 0.5	no	4/2/14	erosion of natural deposits
gross beta radiation	pCi/l	0	50	< 1.1	no	4/2/14	erosion of natural deposits
radium - 228	pCi/l	0	5	< 0.6	no	4/2/14	erosion of natural deposits

*Analyses frequency is every three years.

Inorganics & Metal Contaminants (Covington Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)	Typical Source of Contamination
[1]turbidity a) highest single measurement	TU	NA	TT	0.15	no	9/30/16	soil runoff
b) lowest monthly percentage meeting 0.3 NTU limits	percent	NA	TT	100 %	no	NA	
nitrates	ppm	10	10	0.18	no	8/2/16	runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
fluoride	ppm	4	4	range 0.47 to 0.89	no	Daily	water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
barium	ppm	2	2	0.033	no	8/2/16	erosion of natural deposits; discharge of drilling wastes; discharge form metal refineries

[1]*Turbidity* – Turbidity is a measure of the cloudiness of the water, a good indicator of the effectiveness of our filtration system.

Synthetic Organic Contaminants (Covington Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)*	Typical Source of Contamination
No synthetic organic contaminants detected	ppb	0		none		4/2/14 7/8/14	

*Analyses frequency is every three years.

Total Organic Carbon (Covington Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)	Typical Source of Contamination
total organic carbon	NA - ratio	NA	TT 1.00 annual average removal ratio	all removal ratios 1.00 or above	no	monthly	naturally occurring

Disinfection Byproduct Contaminants (Pounding Mill - 2016 Data)

Contaminant	Unit of Measurement	MCLG	MCL	Level Found Range	Violation	Date of Sample(s)	Typical Source of Contamination
Total Trihalomethanes	ppm	0	80	26-62	no	Quarterly	by-product of drinking water chlorination
Total Haloacetic Acids	ppm	0	60	26-33	no	Quarterly	by-product of drinking water chlorination

*Organic contaminants are analyzed every three years.

Disinfection Residual

Contaminant	MRDLG	MRDL	Level Found Average & Range	Unit Measurement	Violation	Date of Sample	Typical Source of Contamination
Chlorine	4	4	0.51 range 0.24 – 0.87	mg/l	no	monthly	Water additive used to control microbes

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 Pounding Mill Water System 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 2 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 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 Alleghany County Department of Public Works with the assistance and approval of the Virginia Department of Health. Please call if you have questions.

Signature: Gary A. Hepler

Date: 3.23.17