

# *Annual Drinking Water Quality Report*

## *City of Covington*

### **INTRODUCTION**

This Annual Drinking Water Quality Report for calendar year 2020 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. John Riley or Mr. Tim Green at (540) 965-6329

### **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 storm water 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 surface water obtained from the Jackson River. Complete treatment of the water is provided at the Jackson River Water Treatment Plant. Treatment includes coagulation, sedimentation, filtration, chlorination and fluoridation. Water is distributed throughout the system by booster pumping stations, storage tanks and distribution piping.

## SOURCE WATER ASSESSMENTS

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 1<sup>st</sup> through December 31<sup>st</sup>, 2020. Most of the results in the table are from testing done in 2020. 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:

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

**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.

**Maximum Contaminant Level (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 (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 (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.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a 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 contamination.

**Nephelometric Turbidity Unit (NTU) -** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Non-detects (ND):** Lab analysis indicates that the contaminant is not present

**Parts per billion (ppb) or Micrograms per liter (µg/L):** One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.



**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.

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

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

**Variations and exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

## WATER QUALITY RESULTS

**Microbiological** – At least seven bacteriological samples are collected from the distribution system each month.

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(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

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 waterworks.

### Inorganic & Metal Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)	Typical Source of Contamination
<sup>1</sup> Turbidity							
a) highest single measurement	NTU	NA	TT	0.09	no	12/22/20	soil runoff
b) lowest monthly % meeting 0.3 NTU limits	percent	NA	TT	100 %	no	NA	
Nitrate	ppm	10	10	0.2	no	8/26/20	runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	ppm	4	4	0.08 - 0.89	no	daily	water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Barium	ppm	2	2	0.03	no	8/26/20	erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Sodium	ppm	NA	NA	2.68	no	8/26/20	erosion of natural deposits; de-icing salt runoff; water softeners

<sup>1</sup>*Turbidity* – Turbidity is a measure of the cloudiness of the water, a good indicator of the effectiveness of our filtration system. Inorganics, Metals, and Nitrates are analyzed annually.

### Radiological Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample(s)	Typical Source of Contamination
Gross Alpha Radiation	pCi/L	0	15	< 0.32	no	5/2/17	erosion of natural deposits
Gross Beta Radiation	pCi/L	0	50*	0.9	no	5/2/17	erosion of natural deposits
Combined Radium	pCi/L	0	5	1.4	no	5/2/17	erosion of natural deposits

Analyses frequency is every six years.

\* The MCL for beta particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for beta particles.

### Total Organic Carbon (TOC)

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 present in the environment

### Disinfection Byproduct Contaminants

Contaminant	Unit of Measurement	MCLG	MCL	Highest Average (Range of Results)	Violation	Date of Sample(s)	Typical Source of Contamination
Total Trihalomethanes	ppb	0	80	38 (12.8-54.4)	no	1/8/20 4/7/20 7/7/20	by-product of drinking water chlorination
Total Haloacetic Acids	ppb	0	60	47 (19.7-62.2)	no	10/13/20	by-product of drinking water chlorination

Analyses required every quarter per Stage 2 DBP Rule.

### Lead and Copper – Most recent monitoring period 2018.

Contaminant	Unit of Measurement	MCLG	MCL	Level Found	AL Exceeded	Samples > AL	Typical Source of Contamination
Lead	ppb	0	AL = 15	1.8	no	0	corrosion of household plumbing systems; erosion of natural deposits
Copper	ppm	1.3	AL = 1.3	0.24	no	0	

Analysis frequency is every three years; twenty samples are collected from the distribution system.

### Disinfection Residual

Contaminant	MRDLG	MRDL	Average Level Found (Range)	Unit Measurement	Violation	Date of Sample	Typical Source of Contamination
Chlorine	4	4	0.85 (0.73 – 1.01)	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 City of Covington 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>.

Sodium - There is presently no established standard for sodium in drinking water. An EPA advisory recommends water containing 30 to 60 mg/L should not be used as drinking water due to esthetics such as taste and color. Water containing more than 20 mg/L should not be used by persons whose physician has placed them on severely restricted sodium diets.

#### **VIOLATION INFORMATION**

**Water Quality Violations – None**

**Monitoring and Reporting Violations – None**

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

Signature: Jim Green

Date: 4/30/21