



JEFFERSON COUNTY WATER AND SEWER DISTRICT

For Service Area J

Drinking Water Consumer Confidence Report

For 2021

Section 2: Introduction

The Jefferson County Water and Sewer District (JCWSD) has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

Section 3: Source Water Information

The JCWSD does not own a water treatment plant. Therefore, it must purchase all the water it delivers to its customers from various suppliers. The vast network of pipelines, storage tanks, and booster pump stations used to distribute water by the JCWSD are divided into different service areas. The table below lists the different service areas and corresponding supplier.

SERVICE AREA	SUPPLIER
B-1, M, PHKE	City of Toronto Water Department
O, Overlook Hills Subdivision	City of Toronto Water Department
<i>J, Sunshine Park, Jefferson Heights Area</i>	<i>Village of Mingo Junction Water Departments City of Steubenville Water Department</i>
A, New Alexandria, CR 19, SR 151 Piney Fork, State Route 152, Smithfield	Brilliant Water and Sewer District
G1 & G2, Rayland Area, SR 150	Village of Tiltonsville Water and Sewer Department

This PWS used water from both Mingo Junction and Steubenville in 2021.

The **Village of Mingo Junction** receives its drinking water from wells which are drilled to a depth of seventy feet. The North Well is located inside the JSW Steel mill complex and the South well is located just west of the marina. EPA had classified the water plant as a surface water plant because of the close proximity to the Ohio River, but in 2004, it was re-classified as a groundwater facility. There is now a permanent connection (on Wilson Avenue near the village corporation limits) through which water is supplied to the Jefferson County "J" water system. Reverse flow (from the county to Mingo) did not occur in 2021.

High Susceptibility PWS Based on High Sensitivity: Ohio EPA had previously completed a study of Mingo Junction's source of drinking water to identify potential contaminant sources and provide guidance on protecting the drinking water source. According to this study, **the aquifer (water-rich zone), which supplies water to the Village of Mingo Junction has a high susceptibility to contamination.** This determination is based on the following:

- Lack of a protective layer of clay/shale/other overlaying the aquifer, and
- Presence of significant potential contaminants in the protection area.



JEFFERSON COUNTY WATER AND SEWER DISTRICT



This susceptibility means that under currently existing conditions, the likelihood of the aquifer becoming contaminated is relatively high. This likelihood can be minimized by implementing appropriate protective measures. In order to prevent contamination, the Village of Mingo Junction has joined the Southern Jefferson County Source water protection team in a joint effort with the surrounding communities to protect water supplies and be able to react to any contamination. More information about the source water assessment or what consumers can do to help protect the aquifer is available by calling the water plant at 740-535-9162.

The **City of Steubenville**'s public water system uses surface water drawn from the Ohio River. The raw water pumping station and intakes are located at mile marker 65.3 of the Ohio River. This is in the northern part of the City near Alikanna.

Surface waters are by their nature susceptible to contamination and numerous contaminant sources along their banks make them more so. The protection areas around the Ohio River include numerous potential contaminant sources including municipal and industrial water discharges, combined sewer overflows, runoff from urban, residential, mining and agricultural areas, transportation spills related to rail and highway crossings, commercial shipping and recreational boating. As a result, the drinking water supplied to the **City of Steubenville's public water supply system is considered to have a high susceptibility to contamination.**

Historically, the Steubenville public water system has effectively treated this water source to meet drinking water quality standards. The potential for adverse water quality impacts can be further decreased by implementing measures to protect the Ohio River. More detailed information is provided in the City of Steubenville Drinking Water Source Assessment Report, which can be obtained by calling the Steubenville Water Department at (740) 283-6041.

The Ohio EPA has conducted a source water assessment for this source. For information on how to obtain a copy of this report, please contact the Jefferson County Water and Sewer District.

Section 4: What are the sources of contamination to drinking water?

The sources of 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: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) 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; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; (E) 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 the public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 water poses health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).



JEFFERSON COUNTY WATER AND SEWER DISTRICT



Section 5: Who needs to take special precautions?

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 for infection. 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Section 6: About your drinking water

The EPA requires regular sampling to ensure drinking water safety. The JCWSD and the City of Toronto Water Department Water Department conducted sampling for bacteria, inorganic and volatile organic contaminants during 2021. Samples were collected for a total of over 50 different contaminants, most of which were not detected in the water supply. The Ohio EPA requires 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.

Section 8A: Tables of Detected Contaminants

Listed below is information on those contaminants that were found in the JCWSD Water System as the result of monitoring by the Village of Mingo Junction Water Department and the JCWSD. (Contaminants sampled by the JCWSD are marked with an *).

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Inorganic Contaminants							
Nitrate (ppm)	10	10	0.579	NA	No	2020	Runoff from fertilizer use; Erosion of natural deposits
Barium (ppm)	2	2	.0398	NA	No	2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.98	0.86-1.18	No	2020	Water Additive which promotes strong teeth

Disinfection By-Products							
TTHMs (Total Trihalomethanes) (ppb) *	NA	80	64.68	45.5-70.3	No	2021	By-product of drinking water disinfection
HAA5s (Haloacetic Acids) (ppb) *	NA	60	12.43	0 – 40.4	No	2021	By-product of drinking water disinfection
Residual Disinfectants							
Chlorine (as CL ₂) (ppm) *	MRDLG=4	MRDL=4	0.58	0.38-0.1.15	No	2021	Water additive used to control microbes



JEFFERSON COUNTY
WATER AND SEWER DISTRICT



Lead and Copper *

Contaminants (units)	Action Level (AL)	Individual Results over the AL	90% of test levels were less than	Violatio n	Year Sampled	Typical source of Contaminants
Lead (ppb) *	15 ppb	0	NA	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits
	0 out of 10 samples were found to have lead levels in excess of the lead action level of 15 ppb.					
Copper (ppm) *	1.3 ppm	0	NA	No	2020	Corrosion of household plumbing systems; Erosion of natural deposits
	0 out of 10 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.					

Listed below is information on those contaminants that were found in the JCWSD Water System as the result of monitoring by the City of Steubenville Water Department



JEFFERSON COUNTY
WATER AND SEWER DISTRICT



2021 Table of Detected Contaminants
City of Steubenville Water Department

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Year Sampled	Typical Source of Contamination
Bacteriological							
Total Coliform Bacteria	0	1 Positive Sample	1 Positive Sample	0-1	No	2021	Naturally present in the environment.
Residual Disinfectants							
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.99	1.52 – 2.41	No	2021	Water additive used to control microbes.
Inorganic Contaminants							
Lead (ppb)	0	Action Level =15	2.12	0 – 10.2	No	2019	Corrosion of household plumbing systems, erosion of natural deposits.
	0 out of 38 samples were found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm) Distribution	1.3	Action Level =1.3	.102	.0048 - .270	No	2019	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
	0 out of 38 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						
Nitrate (ppm)	10	10	1.15	.66 – 1.15	No	2021	Runoff from fertilizer use; erosion of natural deposits.
Fluoride (ppm)	4	4	1.06	.81 – 1.19	No	2021	Water additive, which promotes strong teeth; erosion of natural deposits.
Barium (ppm)	2	2	.0339	NA	No	2021	Discharge of drilling Waste; discharge from metal refineries; erosion of natural deposits.
Radioactive Contaminants							
Alpha emitters pCi/L	0	15 pCi/L	2.06	NA	No	2021	Erosion of natural deposits.
Combined Radium 226 & 228 pCi/L	0	5 pCi/L	226 - Not sampled 228- .0732	NA	No	2021	Decay of natural and man- made deposits.
Volatile Organic Contaminants							
Total Trihalomethanes (ppb)	NA	80	71.2	13.1 – 76.8	No	2021	By-product of drinking water chlorination.
Five Haloacetic Acids (ppb)	NA	60	33.5	10.1 – 45.9	No	2021	
Treatment Technique							
Turbidity (NTU)	NA	TT	.365	.030 – .365	No	2021	Soil Runoff
Turbidity (% samples meeting standard)	NA	TT	99.4	99.4 – 100	No	2021	
Total Organic Carbon	NA	TT	1.30	.99 – 1.71	No	2021	Naturally present in the environment.



**JEFFERSON COUNTY
WATER AND SEWER DISTRICT**



Section 8C: Table of Operational Water Quality

This table contains water quality parameter data taken by the City of Steubenville's Water Department at the entry point to their system.

Parameter	Sample Year	Average Level Found	Sample Location
pH	2021	7.49	Entry point to distribution system
Total Alkalinity	2021	48	
Total Hardness	2021	96	

Section 9: Turbidity

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the City of Steubenville's highest recorded turbidity result for 2021 was 0.365 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.4%.

Section 10: Violations

The City of Steubenville Water Department had no violations in 2021.

Section 13: Lead Educational Information

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. {Name of 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>

Section 18: License to Operate (LTO) Status Information

The Jefferson County Water and Sewer District's J, Sunshine Park, Jefferson Heights Area Water System has a current, unconditional license to operate our water system.

Section 20: Public Participation and Contact Information

- **How do I participate in decisions concerning my drinking water?**

Public participation and comment are encouraged at regular meetings of the Jefferson County Board of Commissioners which meets every Thursday morning at 9:00 A.M. at 301 Market Street, Steubenville, Ohio 43952.

- **Obtaining more information:**

If you would like more information on your drinking water, you can contact Michael S. Eroshevich of the JCWSD at (740) 283-8577 or via email at meroshevich@jcwatersewer.com.

Section 21: Definitions of some terms contained within this report:



JEFFERSON COUNTY
WATER AND SEWER DISTRICT



- 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 Contaminant levels (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Parts per Million (ppms) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- Parts per Billion (ppbs) or Micrograms per Liter ($\mu\text{g}/\text{L}$) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- 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 (MRDLG): The level of drinking water disinfectant below which there is no know or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- 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.
- The “<” symbol: A symbol which means less than. (A result of < 5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected).
- The “>” symbol: A symbol which means “greater than”.