



JEFFERSON COUNTY WATER AND SEWER DISTRICT

2016 Drinking Water Consumer Confidence Report *For Service Area J*

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.

License to Operate (LTO) Status

We have a current, unconditional license to operate our water system.

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>City of Steubenville Water Department</i>
A, New Alexandria, CR 19, SR 151	Brilliant Water and Sewer District
PINEY FORK, STATE ROUTE 152, SMITHFIELD	Brilliant Water and Sewer District / Village of Tiltonsville Water and Sewer Department
G1 & G2, Rayland Area, SR 150	Village of Tiltonsville Water and Sewer Department

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.

The Ohio EPA has conducted a source water assessment for this source. For information on how to obtain a copy of this report, please visit Ohio EPA's Source Water Assessment and Protection Program Web page at <http://www.epa.state.oh.us/ddagw/pdu/swap.html> or contact the Jefferson County Water and Sewer District

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).

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).

About your drinking water

The EPA requires regular sampling to ensure drinking water safety. The JCWSD and the City of Steubenville Water Department conducted sampling for; bacteria; inorganic; volatile organic contaminants during 2016. Samples were collected for more than 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.

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 and the JCWSD. (Contaminants sampled by the JCWSD are marked with an *.)

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detection's	Violation	Sample Year	Typical Source of Contaminants
Residual Disinfectant							
Chlorine (ppm)*	MRDLG =4	MRDL =4	1.2	0.75 - 1.63	No	2016	Water additive used to control microbes
Volatile Organic							
Total Trihalomethanes (ppb)	NA	80	76	22.5 – 157	No	2016	By-Product of drinking water chlorination.
Five Haloacetic Acids (ppb)	NA	60	31	14.1 – 56.7	No	2016	By-Product of drinking water chlorination
Inorganic							
Contaminants (Units)	MCLG	MCL	Level Found	Range of Detection's	Violation	Sample Year	Typical Source of Contaminants
Lead (ppb)	0	Action level =15	0	NA	No	2015	Corrosion of household plumbing systems; erosion of natural deposits.
Zero (0) out of ten samples were found to have lead levels in excess of the Action Level of 15 ppb							
Copper (ppb)	1,300	Action level =1,300	0	NA	No	2015	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Zero (0) out of ten samples were found to have copper levels in excess of the Action Level of 1.3 ppm							

Fluoride (ppm)	4	4	1.03	0.44 -1.15	No	2016	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate (ppm)	10	10	1.05	0.59 - 1.05	No	2016	Runoff from fertilizer use; erosion of natural deposits
Barium (ppb)	2,000	2,000	28.4	NA	No	2016	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Treatment Technique							
Turbidity (NTU)	N/A	TT	1.49	0.028-1.49	Yes	2016	Soil runoff
Turbidity (% of samples meeting standards)	N/A	TT	99.9%	99.9 – 100%	No	2016	Soil runoff
Total Organic Carbon	N/A	TT	1.27	1.01 – 1.73	No	2015	Naturally present in the environment

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 2016 was 1.49 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.9%.

Additional information for Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. **The City of Steubenville had the following violation for turbidity due to a faulty air release valve in August of 2016. The city failed to provide adequate filtration during the month of August. Inadequately treated water may contain disease-causing organisms. These include bacteria, viruses and parasites which can cause nausea, cramps, diarrhea and associated headaches. The City of Steubenville Water Department has taken the following steps to correct the violation and prevent future violations: A faulty air-release valve, which caused erroneous turbidity readings, has been rebuilt and a back-up method for removing entrained air has been installed. The violation duration was for fifteen (15) minutes.**

Additional Information for Lead

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. JCWSD 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>.

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.

For help obtaining more information on your drinking water contact Wayne R. Ruckman of the JCWSD at (740)283-8577 or via email at wruckman@jcwatersewer.com.

Definitions of some terms contained within this report.

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 ($\mu\text{g/L}$) 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 known 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.

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

Non-Detects (ND): Laboratory analysis indicated that the contaminant is not present.

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.

P.O. Box 2579
596 State Route 43
Wintersville, Ohio 43953-0579
PHONE: 740-283-8577
FAX: 740-283-8634
e-mail: kteramana@jcwatersewer.com

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