

The Village of Orwell
Drinking Water Consumer Confidence Report
For 2024

Introduction

The Village of Orwell 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.

Source Water Information

The Village of Orwell receives its drinking water from groundwater wells located east of the village.

The state performed the following assessment of the Village of Orwell's source water:

The susceptibility of the aquifer (source of drinking water) to contamination was determined by evaluating: (1) available site-specific and regional information (i.e., aquifer material, topography, soils, rate of ground water recharge, etc.), (2) pollution potential rating of the drinking water source protection area, (3) available ground water quality data, and (4) potential contaminant sources that were identified within the drinking water source protection area. The results of this evaluation indicate that the aquifer within the protection area has a high susceptibility because of the following reasons:

- According to well log information from the facility, a significant thickness of low permeability protective layer between the aquifer and the ground surface is not present at all well locations.
- The depths of the aquifer and water table, respectively at 10 feet and as little as one foot below ground surface, are shallow; indicating a short pathway for potential contamination; and
- Potential significant contamination sources exist within the protection area.

A high susceptibility rating of the aquifer does not imply that the wellfield will become contaminated. It only means that the existing/known aquifer conditions are such that ground water within the aquifer could become impacted if the potential contaminant sources are not appropriately managed.

Copies of the source water assessment report for Orwell Village are available by contacting village hall at 440-437-6459.

What are sources of contamination to drinking water?

The sources of drinking water (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, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by 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 a health risk. More information about contaminants and potential health effects can be obtained by calling the Federal 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 from 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 Village of Orwell conducted sampling for bacteria; inorganic contaminants; lead, copper; and disinfection by-products in 2024. Samples were collected for a number of different contaminants for which samples were collected, different contaminants most of which were not detected in the Village of Orwell 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, are more than one year old.

Monitoring & Reporting Violations & Enforcement Actions

There were no monitoring & reporting violations or enforcement actions during 2024.

Table of Detected Contaminants

Listed below is information on those contaminants that were found in the Village of Orwell' s drinking water.

TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Radioactive Contaminants							
Gross alpha excluding radon and uranium pCi/L	0	15	1.56	1.56-1.56	NO	2020	Erosion of natural deposits.
Inorganic Contaminants							
Barium ppm	2	2	.131	.131-.131	NO	2023	Discharge from drilling wastes, and from metal refineries. Erosion of natural deposits
Flouride ppm	4	4.0	.225	.225-.225	NO	2023	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Synthetic Organic Contaminants including Pesticides and Herbicides							
Residual Disinfectants							
Total Chlorine ppm	MRDLG =4	MRDL =4	0.74	0.4-1	NO	2024	
Disinfection Byproducts							
Haloacetic Acids (HAA5) ppb	No Goal for the total	60	13.8	10.3-13.8	NO	2024	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) ppb	No Goal for the total	80	71	46 - 71	NO	2024	By-product of drinking water disinfection

Lead and Copper							
Contaminant (units)	Action Level (AL)	MCLG	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical source of Contaminants
Lead (ppb)	15 ppb	0 ppb	0	8.27	NO	2024	Erosion of natural deposits; Corrosion of household plumbing systems.
	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	1.3 ppm	0	.265	NO	2024	Erosion of natural deposits; leaching from wood preservatives; Corrosion of household plumbing systems.
	0 out of 10 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

Violations

The Village of Orwell had no violations for 2024.

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. The Village of Orwell 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>.

Ground Water Rule

We were informed by the Ohio EPA that a significant deficiency had been identified on February 25, 2022. This significant deficiency is regarding the Downtown (Mustang) water tower. A 2015 inspection indicated that interior and exterior coatings had failed and were no longer functioning to protect the steel. We completed the corrective action plan which was to demolish the existing tower and install three pressure reducing valves by the end of year 2024 as prescribed by the Ohio EPA. The work has been completed.

RTCR VIOLATIONS:

The Village of Orwell had no RTCR violations.

License to Operate (LTO) Status Information

In 2024 the Village of Orwell had an unconditioned license to operate our water system.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of Orwell Village Council which meets the second and third Tuesday of every month at 4:30 p.m. at village hall. For more information on your drinking water contact John Sency at 440-536-6405.

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 level (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.
- **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 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.
- **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.
- **Contact Time (CT)** means the mathematical product of a “residual disinfectant concentration” (C), which is determined before or at the first customer, and the corresponding “disinfectant contact time” (T).
- **Microcystins:** Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.

- **Cyanobacteria:** Photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.
- **Cyanotoxin:** Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as “algal toxin”.
- **Level 1 Assessment** is a study of the water system to identify the potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **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.
- **PFAS:** Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals applied to many industrial, commercial and consumer products to make them waterproof, stain resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) which are used mainly on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.
- **Master Meter (MM):** A master meter is one that connects a wholesale public water system to consecutive public water system(s). This type of meter monitors the amount of water being sent to the consecutive system(s) and can also be used to determine the quality of water being delivered to the consecutive system(s).
- **Parts per Million (ppm) 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 (ppb) or Micrograms per Liter (µg/L)** are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- **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.
- **Picocuries per liter (pCi/L):** A common measure of radioactivity.