
Village of Orwell
Public Water System

Consumer Confidence Report



Title

Village of Orwell Drinking Water Consumer Confidence Report For 2020

Introduction

The following paragraph is not required. Other preferred wording may be used. It is recommended that information concerning improvements to treatment or distribution that have been made in the past year, information of future improvements or public service information be added.

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. Our goal is to provide you with a safe and dependable supply of drinking water.

Source Water Information

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

The state performed an assessment of our source water. it was determined that the aquifer supplying drinking water to Orwell has a high susceptibility to contamination. This conclusion is based on the 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 the water table are shallow; indicating a short pathway for potential contamination. Potential significant contaminant sources exist within the protection area. This does not imply that the wellfield will become contaminated. It only means existing/known aquifer conditions are such that ground water within the aquifer could become impacted if the potential contaminant sources are not properly managed. Copies of the source water assessment report prepared 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; radiological; synthetic organic; volatile organic*** during **2020**. Samples were collected for a number of different contaminants most of which were not detected, for a list of test results contact the **Village of Orwell** water dept at 440.437.6459. 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.

In 2020 our PWS was sampled as part of the State of Ohio’s Drinking Water Per-and Pollyfluoroalkyl substances (PFAS) sampling initiative. Six PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS, please visit pfas.ohio.gov.

Table of Detected Contaminants

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

TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Bacteriological							

Radioactive Contaminants							
Gross alpha		4	1.56pci/l		no	2020	
Inorganic Contaminants							
Barium ppm	2	2	.129	0	No	2020	Discharge from drilling,erosion of natural deposits
Selenium ppb	0	0	1.52UG/L	0	NO	2020	
Nitrate ppm	10	10	0	0	no	2020	Runoff from fertilizer, erosion of natural deposits
Synthetic Organic Contaminants including Pesticides and Herbicides							
Volatile Organic Contaminants							
Arsenic ppb	0	0	1.23UG/L	0	NO	2020	Natural deposits
Fluoride ppm	0	0	.324	0	no	2020	Natural deposits
Residual Disinfectants							
Total chlorine [ppm]	MRDL=4	MRDL4	.46	.34-.6	No	2020	Water additive used to control microbes
Haloacetic acid ppb [HAA5]	n/a	60	4.82	0-8.1	No	2020	Byproduct of disinfection
Trihalomethanes ppb	n/a	80	45.8	8089-67.4	no	2020	Byproduct of disinfection
Lead and Copper							
Contaminants (units)	Action Level (AL)	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical source of Contaminants	
Lead (ppb)	15 ppb	0	3.11	NO	2018	Corrosion of household plumbing	
	___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	.0824	no	2018	Corrosion, natural deposits, leaching from wood preservatives
	__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 2020.

Nitrate Educational Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Arsenic Educational Information

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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>.

Radon

The Village of Orwell monitored for radon in the finished water during 2020. One sample was collected, and the radon level was **1.56 pCi/L**. Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Major sources of radon gas are soil and cigarettes. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, call 1-800-SOS-RADON.

Ground Water Rule

Contaminant (Units)	MCLG	MCL	Value	Range of Detections	Violation	Year Sampled	Typical Source of Contaminants
FECAL INDICATOR (E. COLI)	NA	TT	POSITIVE (E. COLI)	0	NO	2020	HUMAN AND ANIMAL FECAL WASTE

Revised Total Coliform Rule (RTCR) Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the PWS.

RTCR VIOLATIONS: the Village of Orwell had none.

License to Operate (LTO) Status Information

In 2020 we had an unconditioned license to operate our water system."

Public Notice ; None.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of *the Village of Orwell* which meets on the second Tuesday of every month at the village hall at 4:00 P.M. For more information on your drinking water contact *the village hall at 440.437.8398*

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.
- **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.