

VILLAGE OF WAKEMAN WATER DEPARTMENT

DRINKING WATER CONSUMER CONFIDENCE REPORT FOR 2020

What's the source of your drinking water?

The Village of Wakeman drinking water is supplied by Northern Ohio Rural Water. The last several pages of this report provide information about Northern Ohio Rural Water suppliers, which are also the initial sources of Wakeman's water.

Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the appropriate authorities. Only by working together can we insure an adequate safe supply of water for future generations.

What are the sources of contamination to drinking water?

The sources of drinking water both tap water and bottled water includes 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 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 that limit the amount of certain contaminants in water provided by public water systems. FDA regulation establishes a limit 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 call 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 from infection. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other 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 Wakeman, along with Northern Ohio Rural Water and the Cities of Elyria and Lorain conducted sampling for bacterial, inorganic, radiological, synthetic organic and volatile organic contaminants during the year 2020. Samples were collected to analyze for a variety of different contaminants, most of which were not detected in the Village of Wakeman water supply.

"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 Wakeman 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 <http://www.epa.gov/safewater/lead>."

Definitions of some terms contained within this report are outlined on the last page.

TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Disinfectant and Disinfectant By-Products							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.22	0.85-1.47	No	2020	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	N/A	60	31.9	15.6-27.3	No	2020	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N/A	80	33.23	23.7-44.6	No	2020	By-product of drinking water 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	N/A	2.5 ppb	No	2019	Corrosion of household plumbing systems; erosion of natural deposits	
	0 samples were found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	N/A	0.16 ppm	No	2019	Erosions of natural deposits; leaching from wood preservatives; Corrosions of household plumbing systems	
	0 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

The Village of Wakeman has a current, unconditional license to operate its water system.

How do I participate in decisions concerning my drinking water?

Public participation and comments are encouraged at regular meetings of Village Council, which is held the second Monday of every month at 59 Hyde St. in Wakeman. The meeting time is 7:30 PM.

For more information on your drinking water contact Trish Sommers at 440-669-8773.

The following pages contain source water information as well as a table of detected contaminants from the Cities of Elyria and Lorain Water Departments and the Village of New London, the initial suppliers of Wakeman water.

2020
NORTHERN OHIO RURAL WATER
MAIN DISTRICT
TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	Year	MCLG [MRDLG]	MCL [MRDL]	Level Found	Range of Detection	Typical Source of Contaminants	Violation
Disinfection Byproducts							
Total Trihalomethanes (TTHM) (ppb)	2020	NA	80	58.85	22.9 - 74.3	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA5) (ppb)	2020	NA	60	35.75	16.5 - 38.8	By-product of drinking water chlorination	NO
Total Chlorine (ppm)	2020	[4]	[4]	1.6	1.4 - 1.7	Water additive used to control microbes	NO
Contaminants (Units)	Year	MCLG	MCLG	Individual Results over the AL	90% of test results were less than	Typical Source of Contaminants	Violation
Inorganic Contaminants							
Copper (ppm)	2019	1.3	AL=1.3	0	.134 (90th percentile)	Corrosion of household plumbing systems	NO
0 of 30 samples were found to have copper levels in excess of the copper action level 1.3 ppm.							
Lead (ppb)	2019	0	AL=15	1	<3.0 (90th percentile)	Corrosion of household plumbing systems	NO
1 of 30 samples were found to have lead levels in excess of the lead action level 15 ppb.							

ELYRIA WATER WORKS
TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	Year	MCLG	MCL	Level Found	Range of Detection	Typical Source of Contaminants	Violation
Inorganic Contaminants							
Barium (ppm)	2020	2	2	0.018	0.018	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	NO
Fluoride (ppm)	2020	4	4	1.077	0.83 - 1.21	Erosion of natural deposits; Additive which promotes strong teeth	NO
Nitrates (ppm)	2020	10	10	0.95	<0.1 - 0.95	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
Microbiological Contaminants							
Total Organic Carbon (TOC)	2020	N/A	TT removal >1.0	1.20	1.00 - 1.79	Normally present in the environment	NO
Turbidity (NTU)	2020	N/A	100% <0.3	0.18	0.06 - 0.18	Soil runoff	NO
Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of the 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 Elyria's highest recorded turbidity result for 2020 was 0.18 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.							
Contaminants (Units)	Year	Average Level Found	Range of Detection	Sample Location			
Unregulated Contaminant Monitoring Rule (UCMR4)							
Bromide (ppm)	2020	0.02	0.0207 - 0.026	Source Water			
1-Butanol (ppb)	2020	7.53	7.53	Entry Point			
HAA5 (ppb)	2020	15.84	10.2 - 22.3	Distribution			
HAA6 (ppb)	2020	10.19	8.4 - 12	Distribution			
HAA9 (ppb)	2020	25.04	17.8 - 33.1	Distribution			
Manganese (ppb)	2020	0.74	0.74	Entry Point	Byproduct of drinking water chlorination		

**LORAIN WATER DEPARTMENT
TABLE OF DETECTED CONTAMINANTS**

Contaminants (Units)	Year	MCLG	MCL	Level Found	Range of Detection	Typical Source of Contaminants	Violation
Inorganic Contaminants							
Barium (ppm)	2020	2	2	0.016	N/A	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	NO
Fluoride (ppm)	2020	4	4	1.01	0.9 - 1.08	Erosion of natural deposits; Water additive which promotes strong teeth	NO
Nitrate (ppm)	2020	10	10	0.99	0.0 - 0.99	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
Microbiological Contaminants							
Turbidity (NTU) % meeting standard	2020	N/A	TT	0.14 100%	0.01 - 0.14	Soil runoff	NO
Turbidity: Turbidity is a measure of the cloudiness of the water and is an indication of the effectiveness of the 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 Lorain's highest recorded turbidity result for 2020 was 0.14 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.							
Total Organic Carbon (TOC)	2020	N/A	TT	1.34	1.00 - 2.14	Naturally present in the environment	NO

**CITY OF SANDUSKY PUBLIC WATER WORKS
TABLE OF DETECTED CONTAMINANTS**

Contaminants (Units)	Year	MCLG	MCL	Level Found	Range of Detection	Typical Source of Contaminants	Violation
Inorganic Contaminants							
¹ Nitrate (ppm)	2020	10	10	1.0	0.0 - 0.98	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
² Fluoride (ppm)	2020	4	4	0.9	0.8 - 1.1	Erosion of natural deposits; Water additive which promotes strong teeth	NO
Barium (ppm)	2020	2.0	2.0	0.017	0.017	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	NO
¹ Nitrate: Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. ² Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones; children may get mottled teeth. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, occurs only in developing teeth before they erupt from the gums.							
Microbiological Contaminants							
³ Turbidity (NTU) %meeting standard	2020	<0.10 N/A	0.3 TT	0.12 100%	0.02 - 0.12	Soil runoff	NO
³ Turbidity: Turbidity is a measure of the cloudiness of the water and is an indication of the effectiveness of the 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.							
Total Organic Carbon (TOC)	2020	N/A	TT	1.4	1.1 - 1.9	Naturally present in the environment	NO
Unregulated Contaminants							
Manganese (ppb)	2020	N/A	SMCL=50	0.05	0 - 4.2	Erosion of natural deposits	NO
Unregulated Contaminant Monitoring Rule (UCMR4)							
Haloacetic Acids HAA5 (ppb)	2020	N/A	N/A	7.9	17.9 - 37.8	By-products of drinking water chlorination	NO
Haloacetic Acids HAA6Br (ppb)	2020	N/A	N/A	3.8	9.0 - 14.4		NO
Haloacetic Acids HAA9 (ppb)	2020	N/A	N/A	11.2	24.5 - 49.8		NO

VILLAGE OF NEW LONDON
TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	Year	MCLG	MCL	Level Found	Range of Detection	Typical Source of Contaminants	Violation
Inorganic Contaminants							
Fluoride (ppm)	2020	4.0	4.0	0.71	0.71 - 1.22	Erosion of natural deposits; Water additive, which promotes strong teeth Discharge from fertilizer and aluminum factories	NO
Barium (ppm)	2020	2.0	2.0	0.0284	0.0284 - 0.0309	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	NO
Nitrate (ppm)	2020	10	10	0.69	<0.50 - .69	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural sewage	NO
Microbiological Contaminants							
Turbidity (% meeting standard)	2020	N/A	TT	0.27	0.04 - 0.27	Soil runoff	NO
				100%	100%		
Total Organic Carbon (TOC)	2020	N/A	TT	N/A	N/A	Naturally present in the environment	NO
<p>Turbidity: Turbidity is a measure of the cloudiness of water and is an indication of our effectiveness of the filtration system. Turbidity has no health effects, however, turbidity can interfere with disinfection and provide 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 can be associated with headaches. The turbidity limit set by the EPA is 0.3 in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above the Village of New London's highest recorded turbidity result for 2020 was 0.27 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.</p> <p>Total organic carbon (TOC) has no health effects, however, it does provide a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THM) and haloacetic acids (HAA5's). Some people who drink water containing THM's in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.</p> <p>Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.</p>							

DEFINITIONS

- AL Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or the requirements which a water system must follow.
- MCL Maximum Contaminant Level: The highest level of contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.
- MCLG Maximum Contaminant Level Goal: 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.
- MRDL Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG Maximum Residual Disinfectant Level Goal: 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.
- Microcystin Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of cyanotoxin microcystin.
- N/A Not applicable
- ND Not detected
- NTU Nephelometric Turbidity Unit: A measure of the clarity of water.
- pCi/l Picocuries per liter: A common measure of radioactivity.

- ppb or ug/l Parts Per Billion/micrograms per liter: One part per billion corresponds to about one minute in 2,000 years,
- ppm Parts per Million are units of measure for concentration of a contaminant. A part per million corresponds to a one second in approximately over 11.5 days.
- ppb Part per Billion are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- Total Organic Carbon (TOC) The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.
- TT Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- "<" The "<" symbol: A symbol that means 'less than'. A result of "<.5" means that the lowest level detected was 5 and the contaminant in that sample was not detected.

(DEFINITIONS continued)