

VILLAGE OF WAKEMAN WATER DEPARTMENT

DRINKING WATER CONSUMER CONFIDENCE REPORT FOR 2018

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 2018. 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.

The following table of contaminants are the results of sampling performed by the Village of Wakeman

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)	MRDL = 4	MRL = 4	1.3325	1.12-1.74	No	2018	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	26.9	17.1-28.7	No	2018	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	NA	80	46.35	26.2-64.1	No	2018	By-product of drinking water disinfection
Lead and Copper							
Contaminants (units)	Action Level (AL)	Individual Results over the AL	90% of test levels were	Violation	Year Sampled	Typical source of Contaminants	
Lead (ppb)	15 ppb	0	<4.0	No	2016	Corosion 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	0.08-0.103	No	2016	Erosions of natural deposits; leaching from wood preservatives; Corrosions 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.						

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 Steve Matus 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.

**2018
NORTHERN OHIO RURAL WATER
MAIN DISTRICT**

TABLE OF DETECTED CONTAMINANTS

CONTAMINANTS	YEAR TESTED	UNITS	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y	
<u>Volatile Organic Contaminants</u>									
TTHM's (Total Trihalomethanes)	2018	ppb	80	0	57.8	22.3 - 62.6	By-product of drinking water chlorination	N	
HAA5 (Haloacetic Acids)	2018	ppb	60	0	35.4	15.3 - 35.0	By-product of drinking water chlorination	N	
<u>Inorganic Contaminants</u>									
¹ Copper	90%	2015	ppb	AL=1300	0	128.0	3.5 - 311	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives	N
Lead	90%	2015	ppb	AL=15	0	<3.0	<3.0 - 20.5	Corrosion of household plumbing fixtures, erosion of natural deposits	N
CONTAMINANTS	YEAR TESTED	UNITS	MRDL	MRDLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y	
Total Chlorine	2018	ppm	4	4	1.5	0.6 - 2.2	Water additive used to control microbes	N	

ELYRIA WATER WORKS

TABLE OF DETECTED CONTAMINANTS

CONTAMINANTS	YEAR TESTED	UNITS	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y
<u>Inorganic Contaminants</u>								
Barium	2018	ppm	2	2	0.019	0.019	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	N
Fluoride	2018	ppm	4	4	1.19	0.81 - 1.19	Erosion of natural resources; Water additive which promotes strong teeth	N
Nitrates	2018	ppm	10	10	1.16	0.12 - 1.16	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	N
<u>Microbiological Contaminants</u>								
Turbidity	2018	NTU	<0.3	NA	0.20 & 100%	0.04 - 0.20	Soil runoff	N
% meeting standard			100%					
Total Organic Carbon	2018	none	TT	TT removal > 1.0	1.3	1.0 - 2.0	Naturally present in the environment	N

LORAIN WATER DEPARTMENT

TABLE OF DETECTED CONTAMINANTS

CONTAMINANTS	YEAR TESTED	UNITS	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y
<u>Inorganic Contaminants</u>								
Barium	2018	ppm	2	2	0.04	NA	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	N
Fluoride	2018	ppm	4	4	1.02	0.56 - 1.23	Erosion of natural deposits; Water additive which promotes strong teeth	N
Nitrate	2018	ppm	10	10	1.14	ND - 1.14	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	N
<u>Microbiological Contaminants</u>								
Turbidity	2018	NTU	<0.3	NA	0.16	0.04 - 0.16	Soil runoff	N
% meeting standard			100%		100.0%			
Total Organic Carbon	2018		TT	NA	1.20	1.0 - 2.1	Naturally present in the environment	N
Microcystin	2018	ppb	0.3	NA	0.43	<0.3 - 0.43	Toxins produced by harmful algal blooms	N

(LORAIN WATER DEPARTMENT continued)

CONTAMINANTS	YEAR TESTED	UNITS	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y
Unregulated Substance						
BrCl2CH	2018	ppb	6.0	4.1 - 8.6		N
Cl3CH	2018	ppb	43.8	11 - 43.8		N
Br2ClCH	2018	ppb	2.9	1.3 - 6.0		N
Cl2 Acetic Acid	2018	ppb	8.7	2.9 - 17.7	The US EPA is having water systems monitor certain unregulated contaminants that do not have an MCL.	N
Cl3 Acetic Acid	2018	ppb	10.8	3.1 - 24.3		N
Br2 Acetic Acid	2018	ppb	0.3	NA		N
Ortho	2018	ppm	0.89	0.58 - 0.82		N
HAA5	2018	ppb	24.24	19.5 - 31.8		N
HAA6Br	2018	ppb	8.67	6.86 - 14.00		N
HAA9	2018	ppb	32.60	27.19 - 39.15		N

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

CONTAMINANTS	YEAR TESTED	UNITS	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y
Inorganic Contaminants								
Nitrate	2018	ppm	10	10	1.4	0.0 - 1.4	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	N
Fluoride	2018	ppm	4	4	0.9	0.1 - 1.1	Erosion of natural deposits; Water additive which promotes strong teeth	N
Barium	2018	ppm	2.0	2.0	0.016	N/A	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	N
Microbiological Contaminant								
Turbidity %meeting standard	2018	NTU	0.3	<0.10	0.23 100%	0.03 - 0.23	Soil runoff	N
Total Organic Carbon	2018	ratio	N/A	TT removal >1	1.3	1.1 - 2.3	Naturally present in the environment	N

**VILLAGE OF NEW LONDON
TABLE OF DETECTED CONTAMINANTS**

CONTAMINANTS	YEAR TESTED	UNITS	MCL	MCLG	LEVEL FOUND	RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANTS	VIOLATION N/Y
Inorganic Contaminants								
Barium	2018	ppm	2	2	.0285		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	N
Fluoride	2018	ppm	4	4	1.04	0.460 - 1.30	Erosion of natural deposits; Water additive which promotes strong teeth	N
Nitrate	2018	ppm	10	10	0.70	<0.10 - 0.70	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	N
Microbiological Contaminants								
Turbidity (NTU) % meeting standard	2018	NTU	<0.3 100%	NA	0.20 100%	0.04 - 0.20	Soil runoff	N
Total Organic Carbon	2018		TT	NA	1.01	1.00 - 1.37	Naturally present in the environment	N

FOOTNOTES

*Copper Zero out of thirty samples was found to have copper levels in excess of the AL of 1300 ppb.

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 close to MCLGs as feasible using the best available 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 a 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 contamination.
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, or exactly a single penny in \$10,000,000.00. or exactly a single penny in \$10,000.00.
Total Organic Carbon	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 that could be detected was .5 and the contaminant in that sample was not detected.
90th Percentile	90% of samples are equal to or less than the number in the chart.

The state requires Northern Ohio Rural Water to monitor for some contaminants less often than once per year because the concentrations do not change frequently.

Source Water Assessment Report

City of Elyria – Our water system uses surface water drawn from two intakes in Lake Erie. For the purpose of source water assessments, in Ohio all surface water are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel time from source to intake.

In order to ensure that tap water is safe to drink, USEPA prescribes regulation which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottle water which must provide the same protection for public health. Although the City of Elyria's surface water intake are located offshore in Lake Erie, the proximity of Beaver Creek and Martin's Run increases the susceptibility of the source water to contamination. The City of Elyria's drinking water source protection area is susceptible to contamination from municipal wastewater treatment discharges, air contamination deposition, runoff from residential, agricultural and urban areas, oil and gas production and transportation, leaking underground storage tanks and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping and recreational boating.

The City of Elyria's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie, Beaver Creek, and Martin's Run. More detailed information is provided in the City of Elyria's Drinking Water Source Assessment report, which can be obtained by calling Elyria Water Works, 440-324-7669.

City of Lorain - Although the City of Lorain's surface water intake is located offshore in Lake Erie, the proximity of the Black River increases the susceptibility of the source water to contamination. The City of Lorain's drinking water source protection area contains a moderate number of potential contaminant sources. These include accidental spills, releases associated with commercial shipping and recreational boating, air contaminant deposition, contaminants from industries and agricultural runoff, contaminants associated with oil and gas production and transportation, sediments from river dredging and disposal operations, natural erosional processes, contaminated storm water runoff from urban areas, municipal and home sewerage treatment system discharges, and combined sewer overflows.

The City of Lorain's Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. Implementing measures to protect Lake Erie and the Black River can further decrease the potential for negative impacts on water quality. More detailed information is provided in the City of Lorain's Drinking Water Source Assessment report, which can be obtained by calling Lorain Water Purification Plant, 440-204-2280.

The City of Sandusky- Public Water System uses surface water drawn from two intakes, a main intake located in Lake Erie and an emergency backup intake located in Sandusky Bay. For the purpose of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to intake.

Although the water system's main intake is located offshore in Lake Erie, the proximity of several onshore sources increases the susceptibility of the source water to contamination. The City of Sandusky Public Water System's drinking water source protection area is susceptible to contamination from municipal sewage treatment plants, industrial wastewater, combined sewer overflows, home sewage disposal system discharges, open water dredge disposal operations, and accidental release and spills, especially from commercial shipping operations and recreational boating.

The City of Sandusky Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided in the City of Sandusky Public Water System's Drinking Water Source Assessment report, which can be obtained by calling the (419) 627-5805 or by visiting the Ohio EPA'S Source Water Assessment and Protection Program web page at <http://www.epa.state.oh.us/ddagw/pdu/swap.html>.

The Village of New London – The Village of New London's public water system uses surface water drawn from an intake on Buck Creek. The Village's drinking water source protection area is susceptible to agricultural runoff, confined animal feedlots, pasture, silage, pesticide/ fertilizer / petroleum storage, above ground storage tanks, industrial storm water, gas line rupture, gas station runoff, home construction runoff, feed lot runoff, marina boat docks, furniture repair and refinishing, unsewered areas, and truck fleet terminals.

The Village of New London's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Buck Creek. More detailed information is provided in the Village of New London's Drinking Water Source Assessment report, which can be obtained by calling the Village of New London, 419-929-4091.