

Annual Drinking Water Quality Report for the Year 2018

Town of Clarendon

P.O. BOX 47

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www.townofclarendon.org

INTRODUCTION

To comply with State regulations, Town of Clarendon, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Larry Swanger, Clarendon Water Superintendent at 585-638-8547. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town of Clarendon board meetings. The meetings are held at the Town Hall, 16385 Church Street, Clarendon, NY on the 3rd Tuesday of every month at 7:00 pm.

WHERE DOES OUR WATER COME FROM?

In general, 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves approximately 2460 people through 832 service connections in 11 water districts. Our water source is surface water drawn from Lake Ontario, pumped, filtered and treated by the Monroe County Water Authority at the Shoremont Water Treatment Plant, in the Town of Greece prior to distribution. All water is purchased from Monroe County Water Authority and enters the town through a 12" transmission main on Jackson Road. The Town of Clarendon Water Department also adds additional chlorine as necessary to assure a free chlorine residual at all times prior to the water entering our 150,000 gallon elevated storage tank located on RT31A west of the hamlet.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 EPA's Safe Drinking Water Hotline (800-426-4791) or the Orleans County Health Department at (585)589-3252.

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. None of the compounds we analyzed for were detected in your drinking water.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

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 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 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.

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.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

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

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion - ppq).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Millirems per year (mrem/yr): A measure of radiation absorbed by the body.

Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table on back page, our system had **no** violations of contaminants. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2018 our system was in compliance with applicable State drinking water operating, and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immune-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 infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the Monroe county water authority before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal level of 0.7 mg/L. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that Monroe county water authority monitor fluoride levels on a daily basis. During 2018, monitoring showed fluoride levels in your water were in the optimal range 98% of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride. The highest monitoring result was 1.03 mg/L well below the 2.2 mg/L MCL for fluoride.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office at 585-638-8547 if you have questions.

TOWN OF CLARENDON
TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avt/MAX) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT oral)	Likely Source of Contamination
NON ORGANIC CONTAMINANTS							
Lead (1)	No	2018 sept	0.013	mg/L	0	AL=.015	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (1)	No	2018 sept	0.17	mg/L	1.3	AL=1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
DISINFECTION BY PRODUCTS							
Trihalomethanes (TTHMs)	No	1/4 ly	45.8 34-67	ug/L	NA	80	By-product of drinking water chlorination needed to kill harmful organisms.
Haloacetic Acids (HAAs)	No	1/4 ly	17 7 thur 30	ug/L	NA	60	By-product of drinking water chlorination.
Chlorine	No	(Varies)	0.35	mg/l	NA	MDRL	Added to drinking water to destroy pathogenic organisms and protect water supply from bacterial contamination

1. The level presented represents the 90th percentile of the ten sites tested. A percentile is a value on the scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system. In this case, ten samples were collected at various sites in the distribution system and the 90th percentile value was the ninth highest value. Testing is performed every three years as required by the New York Sstate Department of Health.

MCWA Water Quality Summary Table									
Detected Substances				2018 results except as noted					
Supply				Shoremont & Webster WTPs	Corfu WTP	Purchased Water			Water Quality Violation
Source (Source Type)				Lake Ontario (Surface Water)	Well Field (Groundwater)	Hemlock Lake (Surface Water)	Lake Erie (Surface Water)		
Substances	Units	MCLG	MCL	Range of detected values				Likely Source	Yes or No
Arsenic	µg/L	0	10	ND - 2.6	ND	ND	ND	Erosion of natural deposits	No
Barium	mg/L	2	2	0.018 - 0.024	0.007 - 0.014	0.014 - 0.018	0.022 - 0.023	Erosion of natural deposits	No
Chloride	mg/L	NA	250	25 - 30	35 - 78	36 - 38	21 - 24	Naturally occurring	No
Combined Radium (226+228)	pCi/L	0	5	ND (2012)	ND (2012)	1.08	1.15 - 1.25 (2013)	Erosion of natural deposits	No
Fluoride	mg/L	NA	2.2	0.13 - 1.03	0.11 - 0.33	0.1 - 1.05	0.61 - 0.78	Natural and additive - promotes strong teeth	No
Nitrate	mg/L	10	10	0.18 - 0.34	ND	ND - 0.22	ND - 0.23	Erosion of natural deposits	No
Sodium	mg/L	NA	NS	13 - 17	56 - 94*	20 - 21*	10 - 14	Naturally occurring	No
Sulfate	mg/L	NA	250	25 - 27	41 - 50	12 - 13	20 - 21	Naturally occurring	No
Turbidity - Turbidity is a measure of cloudiness of the water. Turbidity has no health effects. MCWA monitors turbidity because it is a good indicator of the effectiveness of our filtration systems and water quality. State regulations require that turbidity must always be below 1 NTU in the combined filter effluent. The regulations also require that 95% of samples collected from the entry point have measurements below 0.3 NTU and the monthly average for distribution system samples be below 5 NTU. Averages, ranges and lowest monthly percentages are listed.									
Turbidity - Entry Point	NTU	NA	TT	0.05 (0.01 - 0.12) 100% < 0.3 NTU	NR	0.05 (0.03 - 0.26) 100% < 0.3 NTU	0.1 (0.05 - 0.23) 100% < 0.3 NTU	Soil Runoff	No
Turbidity - Distribution	NTU	NA	5	3.51 - March	2.99 - August	3.51 - March	2.99 - August	Soil Runoff	No
Microbiological - No more than 5% of monthly samples can be positive. The highest monthly % positive and number of samples is listed. Since we had 2 total coliform positive samples in September in the town of Richmond, we triggered a Level 1 assessment. This assessment is to assess the coliform contamination and take corrective action against defects in the water system.									
Total Coliform Bacteria	NA	0	TT	1.2% - September 4 samples	ND	1.2% - September 4 samples	ND	Naturally occurring	No
Disinfectant and Disinfectant By-products (DBPs) - Chlorine has a MRDL (Maximum Residual Disinfectant Level) and MRDLG (MRDL Goal) rather than an MCL and MCLG (Averages and ranges are listed). For the DBPs (Total Trihalomethanes and Haloacetic Acids) the annual system average, range for all locations, and highest locational running annual average for all locations are listed.									
Chlorine Residual - Entry Point	mg/L	NA	MRDL = 4	1.17 (0.9 - 1.42) 0.76 (0.53 - 1.39)	0.8 (0.45 - 1.49)	0.89 (0.7 - 1.75)	1.40 (0.53 - 1.98)	Additive for control of microbes	No
Chlorine Residual - Distribution	mg/L	NA	MRDL = 4	0.55 (ND - 2.09)	0.45 (ND - 1.4)	0.55 (ND - 2.09)	0.45 (ND - 1.4)	Additive for control of microbes	No
Total Trihalomethanes (TTHMs)	µg/L	NA	80	38.6 (16 - 73) Max. LRAA = 50.8	42.6 (19 - 62) Max. LRAA = 47.8	38.6 (16 - 73) Max. LRAA = 50.8	42.6 (19 - 62) Max. LRAA = 47.8	Byproduct of water chlorination	No
Haloacetic Acids (HAAs)	µg/L	NA	60	12.8 (ND - 30) Max. LRAA = 21.3	9.1 (ND - 20) Max. LRAA = 13.3	12.8 (ND - 30) Max. LRAA = 21.3	9.8 (ND - 20) Max. LRAA = 13.3	Byproduct of water chlorination	No
Lead and Copper - 90% of samples must be less than the Action Level (AL). The 90th Percentile, the number of samples exceeding the AL, and the range of results are listed.									
Copper - Customer Tap Samples	mg/L	1.3	AL = 1.3	0.160 (None) 0.005 - 0.200	0.110 (None) 0.005 - 0.240	0.160 (None) 0.005 - 0.200	0.110 (None) 0.005 - 0.240	Corrosion of household plumbing	No
Lead - Customer Tap Samples	µg/L	0	AL = 15	7.2 (Two) ND - 29	3.0 (One) ND - 76	7.2 (Two) ND - 29	3.0 (One) ND - 76	Corrosion of household plumbing	No
*There is no MCL set for sodium in water. However, EPA has recommended that water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.									
Unregulated Contaminant Monitoring (UCMR4) - Every few years the USEPA issues a new list of up to 30 unregulated contaminants for which public water systems must monitor. This provides baseline occurrence data that the EPA combines with toxicological research to make decisions about future drinking water regulations. MCWA began monitoring for the fourth list (UCMR 4) in 2019. For more information on this process go to https://drinktap.org/Water-info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR .									
Alcohols, Indicators, Metals, Pesticides, SVOCs, and Cyantoxins	Entry Points			Lake Ontario Supply		Purchased Water Supplies		Groundwater Supply	Water Quality Violation
	Units	MCL		Shoremont WTP	Webster WTP	Hemlock Lake	Lake Erie	Corfu WTP	Yes or No
Manganese	µg/L	NA		ND	ND	ND	2.0 (2.0)	10 (10)	NA
Bromide	µg/L	NA		37 (37)	37 (37)	22 (22)	ND (ND)	NR	NA
Total Organic Carbon	mg/L	NA		2.4 (2.4)	2.2 (2.2)	2.6 (2.6)	2.0 (2.0)	NR	NA
HAA Groups	Distribution System			Combined System Summary					
Total HAA (5)	µg/L	60		9.5 (3.2 - 15)					
Total HAA (6) Br	µg/L	NA		0.49 (0.54 - 7.4)					
Total HAA (9)	µg/L	NA		14.04 (3.8 - 19)					
Bromochloroacetic acid	µg/L	NA		1.43 (0.54 - 2.3)					
Bromodichloroacetic acid	µg/L	NA		2.25 (ND - 3.2)					
Chlorodibromoacetic acid	µg/L	NA		0.8 (ND - 1.4)					
Dibromoacetic acid	µg/L	NA		0.42 (ND - 1.3)					
Dichloroacetic acid	µg/L	NA		3.6 (2.1 - 5.1)					
Trichloroacetic acid	µg/L	NA		5.52 (0.95 - 10)					

Key Terms and Abbreviations used

MCL = Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as possible.

MCLG = Maximum Contaminant Level Goal - The level of a contaminant 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 a 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. MCLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

LRAA = Locational Running Annual Average - The annual average contaminant concentration at a monitoring site.

pCi/L = picoCuries per liter.

TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Level 1 Assessment = A level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

AL = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ND = Not Detected - Absent or present at less than testing method detection level. All testing methods are EPA approved with detection limits much less than the MCL.

NA = Not applicable. **NR** = Not required. **NS** = No standard.

mg/L = milligram (1/1,000 of a gram) per liter = ppm = parts per million.

µg/L = microgram (1/1,000,000 of a gram) per liter = ppb = parts per billion.

ng/L = nanogram (1/1,000,000,000 of a gram) per liter = ppt = parts per trillion.

NTU = Nephelometric Turbidity Unit - A measurement of water clarity.

Compounds Tested For But Not Detected

Benzene	Methyl Tert-butyl ether (MTBE)	Butachlor	Nitrite
Bromobenzene	Ethylbenzene	Chlordane	Selenium
Bromochloromethane	Hexachlorobutadiene	Di(2-Ethylhexyl) Adipate	Silver
Bromomethane	p-Isopropyltoluene	Dieldrin	Thallium
n-Butylbenzene	Methyl Tert-butyl ether (MTBE)	Endrin	Zinc
sec-Butylbenzene	Methylene Chloride (Dichloromethane)	Heptachlor	Surfactants (Foaming Agents)
tert-Butylbenzene	n-Propylbenzene	Heptachlor Epoxide	Gross Alpha
Carbon Tetrachloride	Styrene	Hexachlorobenzene	Total Uranium
Chlorobenzene	1,1,1,2-Tetrachloroethane	Hexachlorocyclopentadiene	Germanium
Chloroethane	1,1,2,2-Tetrachloroethane	Isophorone	alpha-Hexachlorocyclohexane
Chloromethane	Tetrachloroethene	Lindane (gamma-BHC)	Chlorpyrifos
2-Chlorotoluene	Toluene	Methoxychlor	Dimethipin
4-Chlorotoluene	1,2,3-Trichlorobenzene	Metolachlor	Ethoprop
Dibromomethane	1,2,4-Trichlorobenzene	Metribuzin	Oxyfluoren
1,2-Dichlorobenzene	1,1,1-Trichloroethane	p,p' DDD	Profenofos
1,3-Dichlorobenzene	1,1,2-Trichloroethane	p,p' DDE	Tebuconazole
1,4-Dichlorobenzene	Trichloroethene	p,p' DDT	Permethrin, cis & trans
Dichlorodifluoromethane	Trichlorofluoromethane	PCB's Total	Tribufos
1,1 Dichloroethane	1,2,3-Trichloropropane	Pentachlorophenol	Butylated hydroxyanisole
1,2-Dichloroethane	1,2,4-Trimethylbenzene	Propachlor	o-Toluidene
1,1-Dichloroethene	1,3,5-Trimethylbenzene	Simazine	Quinoline
cis-1,2-Dichloroethene	Vinyl Chloride	Total Chlordane	1-Butanol
trans-1,2-Dichloroethene	o-Xylene	Toxaphane	2-Methoxyethanol
1,2-Dichloropropane	m, p-Xylene	Antimony	2-Propen-1-ol
1,3-Dichloropropane	Total Xylene	Beryllium	Monobromoacetic acid
2,2-Dichloropropane	Aldrin	Chromium	Monochloroacetic acid
1,1-Dichloropropene	Atrazine	Cyanide	Tribromoacetic acid
1,3-Dichloropropene(Cis)	Benzo(a)pyrene	Mercury	
1,3-Dichloropropene(Trans)	Bis(2-Ethylhexyl)Phthalate	Nickel	

For more information on MCWA's water quality monitoring program call Customer Service at 585-442-7200 or visit our website at www.mcwa.com