

This report covers the drinking water quality for the Harbor Beach Water Treatment Plant for the calendar year **2017**. This information is a snapshot of the quality of the water provided to you in 2017. Included are details about where the water comes from, what it contains, and how it compares to EPA and State standards.

The Harbor Beach Water Treatment Plant (HBWTP) obtains water from Lake Huron, one of the highest quality sources of fresh water in the world. The State performed an assessment of our source water in 2003. The source water area for the Harbor Beach intake includes 17 potential contaminant sources. These contaminant sources, combined with the highly sensitive intake, leads to a highly susceptible determination for the Harbor Beach water supply intake. The final assessment report is available for review at the water plant.

- **Contaminants and their presence in water:** Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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)**

- **Vulnerability of sub-populations:** Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons who have undergone organ transplants, undergoing chemotherapy, 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 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.

- **Sources of Drinking Water:** The sources of drinking water (Both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As previously stated, our water comes from Lake Huron. 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 humans.

- **Contaminants that may be present in source water include:**
 - **Microbial:** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
 - **Inorganic:** such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming
 - **Pesticides and herbicides:** which may come from a variety of sources such as agriculture and residential use
 - **Radioactive:** which can be naturally occurring or be the result of oil and gas production and mining activities
 - **Organic chemicals:** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can come from gas station, urban storm water runoff, septic systems

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 regulations establish limits for contaminants in bottled water which provide the same protection for public health.

The table below lists all the drinking water contaminants that we detected during the 2017 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2017. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some may be more than one year old.

Terms and abbreviations used below:

- 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 a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology
- Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contamination.
- 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
- N/A: Not Applicable ND: Not Detectable at testing limit ppb: parts per billion ppm: parts per million or milligrams per liter pCi/l: picocuries per liter (measure of radioactivity)
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow
- Treatment Techniques (TT): A treatment technique is a required process intended to reduce the level of a contaminant in drinking water
- Nephelometric Turbidity Unit (NTU): nephelometric turbidity unit is a measure of the clarity of water. Turbidity of 0.5 NTU is just noticeable to the average person visually

Samples Collected at the WTP

Regulated Chemical Contaminants	MCL	MCLG, MRDL	Our Water	Sample Date	Violation Yes/No	Typical source of contaminants
Nitrate (ppm)	10	0	ND	6/20/2017	NO	Erosion of natural deposits
Nitrite (ppm)	1	0	ND	6/20/2017	NO	Discharge of drilling wastes; Erosion of natural deposits
Fluoride (ppm)	4	4	0.47	6/20/2017	NO	Erosion of natural deposits
Arsenic (ppm)	10		ND	8/23/2011	NO	Erosion of natural deposits
Cyanide (ppm)	0.2		ND	5/22/2017	NO	Erosion of natural deposits

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Individual Community Free Chlorine Residuals						
Community	MCL	MCLG, MRDL	Our Water	Sample Date	Violation Yes/No	Typical source of contaminants
City of Harbor Beach		4.0	0.13-1.22 highest running avg 0.62	Daily	No	Disinfection added to control Microbes
Sand Beach Township		4.0	0.53-1.10 highest running avg 0.93	Monthly	No	Disinfection added to control Microbes
Huron Township		4.0	0.02-0.23 highest running avg 0.13	Monthly	No	Disinfection added to control Microbes
Village of Forestville		4.0	0.56-1.38 highest running avg 1.12	Monthly	No	Disinfection added to control Microbes
Port Hope Gore-Rubicon Utilities Authority		4.0	0.07-1.08 highest running avg 0.58	Monthly	No	Disinfection added to control Microbes
Forester Township		4.0	0.25-1.60 highest running avg. 1.31	Monthly	No	Disinfection added to control Microbes

Unregulated Chemical Contaminants*	Our Water	Sample Date	Violation Yes/No	Typical Source of Contaminants
Sodium (ppm)	ND	6/21/2017	No	Erosion of natural deposits

* Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants

	Violations	Range (NTU)	MCL	MCLG	Typical Source of Contaminants
Turbidity	No	0.057-.195	.300	n/a	Organic and inorganic matter suspended in water

Turbidity is a measure of the cloudiness of water and serves as an indication of the effectiveness of filtration.

Microbial Contaminants	MCL	M C L G	Positive Samples	Violation Yes/No	Typical Source of Contaminants
City of Harbor Beach					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and <i>E. coli</i>	Routine and repeat samples are total coliform positive, and one is also fecal or E coli positive	0	0	No	Human and animal waste.
Sand Beach Township					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and <i>E. coli</i>	Routine and repeat samples are total coliform positive, and one is also fecal or E coli positive	0	0	No	Human and animal waste.

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Huron Township					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and E. Coli	Routine and repeat samples are total Coliform positive, and one is also fecal or E. Coli positive	0	0	No	Human and animal fecal waste.
Village of Forestville					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples are positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and E. Coli	Routine and repeat samples are total Coliform positive, and one is also fecal or E. Coli positive	0	0	No	Human and animal fecal waste.
Port Hope-Gore-Rubicon Utilities Authority					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples are positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and E. Coli	Routine and repeat samples are total Coliform positive, and one is also fecal or E. Coli positive	0	0	No	Human and animal fecal waste.
Forester Township					
Total Coliform Bacteria	1 positive monthly sample (5% of monthly samples are positive)	0	0	No	Naturally present in the environment.
Fecal Coliform and E. Coli	Routine and repeat samples are total Coliform positive, and one is also fecal or E. Coli positive	0	0	No	Human and animal fecal waste.

Individual Community Regulated Lead and Copper Testing (samples at individual taps)

Regulated Chemical Contaminants	MCL	MCLG	Our Water Numbers are the 90 th percentile.	Number of Samples Above MCL	Sample Date
City of Harbor Beach					
Lead (ppb)	15	0	2	0	8/3/2017
Copper (ppb)	1300	1300	0	0	8/3/2017
Sand Beach Township					
Lead (ppb)	15	0	1	0	7/25/2017
Copper (ppb)	1300	1300	400	0	7/25/2017
Village of Forestville					
Lead (ppb)	15	0	5	0	9/12/2017
Copper (ppb)	1300	1300	500	0	9/12/2017
Huron Township					
Lead (ppb)	15	0	1	0	9/9/2016
Copper (ppb)	1300	1300	80	0	9/9/2016
Port Hope-Gore-Rubicon Utilities Authority					
Lead (ppb)	15	0	5	1	7/11/2017

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Copper (ppb)	1300	1300	0	0	7/11/2017
Forester Township					
Lead (ppb)	15	0	3	0	6/8/2016
Copper (ppb)	1300	1300	460	0	6/8/2016

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Harbor Beach Water Treatment Plant 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Stage 2 Disinfectants/Disinfection Byproducts Rule

City of Harbor Beach

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	8/14/2017		
	MCL	80		
	Sample Result	45	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	8/14/2017		
	MCL	60		
	Sample Result	10	Byproduct of drinking water disinfection	NO

Huron Township

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	8/7/2017		
	MCL	80		
	Sample Result	57	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	8/7/2017		
	MCL	60		

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	Sample Result	18	Byproduct of drinking water disinfection	NO
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Port Hope-Gore-Rubicon Utilities Authority

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	11/7/2017		
	MCL	80		
	Sample Result	Range (33 – 60 ppb) 51	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	11/7/2017		
	MCL	60		
	Sample Result	Range (6-11 ppb) 9	Byproduct of drinking water disinfection	NO

Forester Township

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	8/2/2017		
	MCL	80		
	Sample Result	59	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	8/2/2017		
	MCL	60		
	Sample Result	16	Byproduct of drinking water disinfection	NO

Village of Forestville

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	9/13/2017		
	MCL	80		
	Sample Result	40	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	9/13/2017		
	MCL	60		

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	Sample Result	16	Byproduct of drinking water disinfection	NO
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Sand Beach Township

Site ID	Data Type	Total Trihalomethane (TTHM) (ppb)	Typical source of contaminants	Violation Yes/No
SM-1	Sample Date	8/2/2017		
	MCL	80		
	Sample Result	40	Byproduct of drinking water disinfection	NO
Site ID	Data Type	Haloacetic Acid 5 (HAA5) (ppb)		
SM-1	Sample Date	8/2/2017		
	MCL	60		
	Sample Result	17	Byproduct of drinking water disinfection	NO

** ND – Non-detect

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2017 except one lake water sample for Total Organic Carbon which was omitted and reported as a violation.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at the Harbor Beach Water Treatment Plant, 101 Richie Drive, Harbor Beach, your township officials, or at the Harbor Beach website www.harborbeach.com anytime.

For more information about your water, or the content of this report, contact Clark Cregeur at 989-479-9510. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/lead.

For more information about individual distribution system water quality, please call one of the following contacts for each system:

- Port Hope: Todd Maschke – 989-551-3913
- Huron Township: Paul Kanaski – 989-553-3498
- Sand Beach Township: Ryan Weber – 989-553-3159
- Village of Forestville: Nick Roggenbuck – 989-553-3402
- Forester Township: Tom Prange – 989-415-3588