

This report covers the drinking water quality for the City of Harbor Beach Water Treatment Plant for the calendar year **2019**. This information is a snapshot of the quality of the water provided to you in 2019. 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 2019 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, 2019. 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

WTP Samples

| Regulated Chemical Contaminants | MC L | MCLG, MRDL | Our Water | Sample Date | Violation Yes/No | Typical Source of contaminants |
|---------------------------------|------|------------|-----------|-------------|------------------|--|
| Nitrate (ppm) | 10 | 0 | 0.78 | 5/8/19 | NO | Erosion of natural deposits |
| Nitrite (ppm) | 1 | 0 | <0.020 | 5/8/19 | NO | Erosion of natural deposits; Discharge of drilling wastes |
| Fluoride (ppm) | 4 | 4 | 0.51 | 5/8/19 | NO | Erosion of natural deposits |
| Arsenic (ppm) | 10 | | ND** | 8/23/11 | NO | Erosion of natural deposits |
| Cyanide (ppm) | 0.2 | | <0.20 | 5/8/19 | NO | Erosion of natural deposits |

Individual Community Free Chlorine Samples

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| Community | MCLG, MRDL | Low/high Month Concentration | Highest Running Average | Sample Frequency | Violation Yes/No | Typical Source of contaminants |
|--------------------------------|------------|------------------------------|-------------------------|------------------|------------------|--------------------------------|
| City of Harbor Beach | 4.0 | 0.58 - 1.00 ppm | 0.62 ppm | Monthly | NO | Disinfection added to microbes |
| Sand Beach Township | 4.0 | 0.66 - 1.15 ppm | 0.86 ppm | Monthly | NO | Disinfection added to microbes |
| Huron Township | 4.0 | 0.04 - 0.15 ppm | 0.08 ppm | Monthly | NO | Disinfection added to microbes |
| Village of Forestville | 4.0 | 0.97 - 1.18 ppm | 1.06 ppm | Monthly | NO | Disinfection added to microbes |
| Port Hope Gore-Rubicon Utility | 4.0 | 0.17 - .72 ppm | 0.48 ppm | Monthly | NO | Disinfection added to microbes |
| Forester Township | 4.0 | 0.71 - 0.92 ppm | 0.83 ppm | Monthly | NO | Disinfection added to microbes |

WTP Samples

| Unregulated Chemical Contaminants | Our Water | Sample Date | Violation Yes/No | Typical Source of contaminants |
|-----------------------------------|-----------|-------------|------------------|--------------------------------|
| Sodium (ppm) | 5.7 | 5/8/19 | 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

WTP Samples

| Regulated Parameter | Violations | Range NTU | MCL NTU | MCLG NTU | Typical Source of contaminants |
|---------------------|------------|---------------|---------|----------|---|
| Turbidity | NO | 0.065 - 0.270 | 3.0 NTU | 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.

Individual Community Microbial Contaminant Samples

2019 Water Quality Report for Harbor Beach Water Treatment Plant

| Microbial Contaminants | MCL | MCLG | 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 is also fecal or <i>E. coli</i> 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 is also fecal or <i>E. coli</i> positive | 0 | 0 | NO | Human and animal waste |

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 <i>E. coli</i> | Routine and repeat samples are total coliform positive, and is also fecal or <i>E. coli</i> positive | 0 | 0 | NO | Human and animal waste |

Village of Forestville

| | | | | | |
|-----------------------------------|--|---|---|----|--------------------------------------|
| 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 is also fecal or <i>E. coli</i> positive | 0 | 0 | NO | Human and animal waste |

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Port Hope-Gore-Rubicon Utilities Authority

| | | | | | |
|--|---|----------|----------|-----------|---|
| 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 is also fecal or <i>E. coli</i> positive | 0 | 0 | NO | Human and animal waste |

Forester 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 is also fecal or <i>E. coli</i> positive | 0 | 0 | NO | Human and animal waste |

Individual Community Regulated Lead and Copper Testing (Samples at Individual Taps)

| Regulated Chemical Contaminants | Action Level | MCLG | Range | 90th Percentile | Number of Samples Above Action Level | Sample Date |
|--|---------------------|-------------|--------------|------------------------|---|--------------------|
|--|---------------------|-------------|--------------|------------------------|---|--------------------|

City of Harbor Beach

| | | | | | | |
|---------------------|-------------|-------------|---------------|----------|----------|---------------|
| Lead (ppb) | 15 | 0 | 0 - 3 | 2 | 0 | 8/3/17 |
| Copper (ppb) | 1300 | 1300 | 0 - 80 | 0 | 0 | 8/3/17 |

Sand Beach Township

| | | | | | | |
|---------------------|-------------|-------------|-----------------|------------|----------|----------------|
| Lead (ppb) | 15 | 0 | 0 - 2 | 1 | 0 | 7/25/17 |
| Copper (ppb) | 1300 | 1300 | 50 - 770 | 400 | 0 | 7/25/17 |

Village of Forestville

| | | | | | | |
|---------------------|-------------|-------------|----------------|------------|----------|----------------|
| Lead (ppb) | 15 | 0 | 0 - 7 | 5 | 0 | 9/12/17 |
| Copper (ppb) | 1300 | 1300 | 0 - 580 | 500 | 0 | 9/12/17 |

Huron Township

| | | | | | | |
|---------------------|-------------|-------------|----------------|------------|----------|-------------------|
| Lead (ppb) | 15 | 0 | 0 - 2 | 1 | 0 | 7/23,24,19 |
| Copper (ppb) | 1300 | 1300 | 0 - 220 | 140 | 0 | 7/23,24,19 |

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Port Hope-Gore- Rubicon Utilities Authority

| | | | | | | |
|---------------------|-------------|-------------|---------------|----------|----------|----------------|
| Lead (ppb) | 15 | 0 | 0 - 39 | 5 | 1 | 7/11/17 |
| Copper (ppb) | 1300 | 1300 | 0 - 60 | 0 | 0 | 7/11/17 |

Forester Township

| | | | | | | |
|---------------------|-------------|-------------|----------------|------------|----------|-------------------------|
| Lead (ppb) | 15 | 0 | 0 - 6 | 6 | 0 | 8/1 - 8/7/19 |
| Copper (ppb) | 1300 | 1300 | 0 - 620 | 170 | 0 | 8/1 - 8/7/19 |

| |
|---|
| Typical Source of Lead Contaminant: Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits |
| Typical Source of Copper Contaminant: Corrosion of household plumbing systems; Erosion of natural deposits |

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 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

Individual Community Disinfectants/Disinfection Byproduct Rule Samples

City of Harbor Beach

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|--------|-----|----------------------------|------------------|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/9/19 | 80 | 19 | NO | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/9/19 | 60 | 12 | NO | Byproduct of drinking water disinfection |

Huron Township

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|--------|-----|----------------------------|------------------|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/7/19 | 80 | 59 | NO | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/7/19 | 60 | 17 | NO | Byproduct of drinking water disinfection |

2019 Water Quality Report for Harbor Beach Water Treatment Plant

Port Hope-Gore-Rubicon Utilities Authority

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|---------|-----|----------------------------|------------------|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 11/8/19 | 80 | 48 | NO | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 11/8/19 | 60 | 12.2 | NO | Byproduct of drinking water disinfection |

Forester Township

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|---------|-----|----------------------------|---|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/19/19 | 80 | 56 | YES sample did not meet ph requirement. | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/19/19 | 60 | 31 | NO | Byproduct of drinking water disinfection |

2019 Water Quality Report for Harbor Beach Water Treatment Plant

Village of Forestville

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|---------|-----|----------------------------|------------------|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 9/26/19 | 80 | 43 | NO | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 9/26/19 | 60 | 15 | NO | Byproduct of drinking water disinfection |

Sand Beach Township

| Total Trihalomethane (TTHM) (ppb) | | | | | |
|-----------------------------------|--------|-----|----------------------------|------------------|--|
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/6/19 | 80 | 40 | NO | Byproduct of drinking water disinfection |
| Haloacetic Acid 5 (HAA5) (ppb) | | | | | |
| Site ID | Date | MCL | Sample Concentration (ppb) | Violation Yes/No | Typical Source of Contamination |
| SM-1 | 8/6/19 | 60 | 24 | NO | Byproduct of drinking water disinfection |

** 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 have met all the monitoring and reporting requirements for 2019.

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 contents of this report, contact the City of Harbor Beach Water Treatment Plant at 989-479-9510, and for more information about safe drinking water please 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