



THE CITY OF PORT HURON - CALENDAR YEAR 2011

# Annual Drinking Water Quality

## Report

Port Huron Water Treatment Plant § Port Huron, MI 48060 § 810.984.9780

### **ARIGHT TO KNOW@ RULE PASSED**

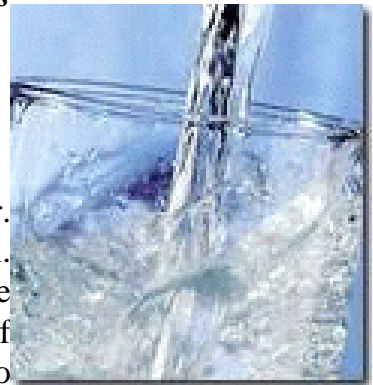
In 1998, a new Federal rule was passed to ensure that consumers of community water supplies receive annual documentation of drinking water quality. The City of Port Huron provides your drinking water and is pleased to present you with this annual water quality report. Our goal is to provide you with a safe and dependable drinking water supply. This report will illustrate that we are achieving this goal.

### **DRINKING WATER QUALITY RESULTS**

The City of Port Huron routinely monitors your drinking water according to Federal and State laws. The table on the inside of this report shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2011, unless otherwise noted. *The test results show that your drinking water meets all Federal and State requirements.*

### **WHERE DOES YOUR WATER COME FROM?**

Since 1873, the City of Port Huron's water has originated from the St. Clair River. This means that the water you drink comes from a surface water supply, not a well. Today, raw water is collected by two 36-inch-diameter intakes. After treatment the water is pumped into the distribution system which has approximately 170 miles of water main and approximately 1,394 fire hydrants. The City of Port Huron also provides water to the townships of Port Huron, Fort Gratiot, Kimball and Clyde, serving approximately 60,000 customers. Total system storage capacity of 8,250,000 gallons.



### **SOURCE WATER ASSESSMENT**

The state performed an assessment of our source water in 2004 to determine the susceptibility of the potential for contamination. The susceptibility rating is on a six-tiered scale from 'very low' to 'high' based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is 'highly susceptible' given the land uses and potential contaminant sources within the source water area. A copy of the full report is available by calling the Port Huron Water Filtration Plant at 810-984-9780.

## HEALTH AND SAFETY INFORMATION

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily pose a health risk. More information can be obtained by calling EPA's Safe Drinking Water Hotline, 800.426.4791.

The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive materials, and can also pick up substances resulting from animal or human activity.

Contaminants that may be present in source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**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.

**Pesticides, and Herbicides**, which may come from a variety of sources such as agriculture and residential uses.

**Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

**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.

**More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline at 800.426.4791**

**All of these contaminants were below the level of concern in Port Huron's water.**

To ensure that tap water is safe, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which must provide the same protection for public health.

### Health & Safety Facts:

In 1900, there were 36 deaths from typhoid per 100,000. By 1950 the typhoid rate dropped to 0.1 per 100,000 due to treatment advances including the use of chlorine for disinfection

## Information for Vulnerable Populations:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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 about drinking water from their health care providers. Federal guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are also available from EPA's Safe Drinking Water Hotline, 800.426.4791.

## INFORMATION ABOUT LEAD

If present, elevated levels of lead can cause serious health problems in pregnant women and young children. Lead in drinking water is primarily associated with service lines and home plumbing. The City of Port Huron 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 drinking water you may wish to have it tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from **Safe Drinking Water Hotline** or at <http://www.epa.gov/safewater/lead>.

## DEFINITIONS:

**Parts per million (ppm) and parts per billion (ppb)** - ppm = Parts per million, or milligrams per liter (mg/l). ppb = Parts per billion, or micrograms per liter ( $\mu\text{g/l}$ ). One ppm can be equated to a single penny in \$10,000. One ppb is a single penny in \$10,000,000.

**Maximum Contaminant Level Goal (MCLG)** - The MCLG is the level of a contaminant at which there would be no risk to human health. The goal is not always economically feasible, and the goal is not legally enforceable.

**Maximum Contaminant Level (MCL)** - The MCL is the highest level of a contaminant that the EPA allows in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology. MCLs are set at very stringent levels by the State and Federal government.

**Maximum Residual Disinfectant Level (MRDL)** - Means 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)** - Means 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 contaminants.

**Turbidity** - The cloudy appearance of water caused by the presence of tiny particles. High levels of turbidity may interfere with proper water treatment and monitoring.

**Nephelometric Turbidity Unit (ntu)** - measures clarity.

**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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**90<sup>th</sup> Percentile** - This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. For example, if 10 samples are taken, the 90<sup>th</sup> percentile is determined by disregarding the highest result, which represents 10 percent of the samples.

**ND** - not detected    **na** - not applicable/available.

Here are the contaminants that were detected in our water. ALL ARE BELOW ALLOWED LEVELS.

**Not listed are the hundreds of contaminants tested for, but not found in our water.**

## TEST RESULTS FOR 2011

Regulated Contaminant	MCL	MCLG	Level Detected	Range of Detection	Sample Dates	Violation Yes / No	Typical source of contamination
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### **Regulated Inorganic Parameters (monitored at the plant tap)**

Fluoride (ppm)	4	4	1.00	0.35 to 1.18	08-04-11	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.32	na	08-04-11	No	Decomposition of organic matter and surface water runoff
Barium (ppm)	2	2	0.014	na	08-04-11	No	Discharge from drilling wastes; Discharge from metal refineries; erosion of natural deposits and discharge from mines
Selenium (ppm)	50	50	ND	na	08-04-11	No	

### **Regulated Parameter (monitored at the plant tap)**

Turbidity (ntu)	TT	na	0.05	0.05 to 0.05	Daily	No	Soil runoff, suspended matter in river water. Indicator of effective filtration system
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### **Regulated Organic Parameters (monitored at the plant tap)**

Total Organic Carbon	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured quarterly and because the level was low, there is no requirement for TOC removal.					No	Naturally Present in the Environment
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**Regulated Inorganic Parameters (monitored in the distribution system)**

Regulated Contaminant	MCL	MCLG	Running Annual Average	Monthly Ratio Range	Sampling Frequency	Violation Yes / No	Typical source of contamination
Chlorine (ppm)	(MRDL) 4	(MRDLG) 4	1.02	0.81 to 1.24	Daily	No	Water additive for disinfection

**Regulated Organic Parameters (monitored in the distribution system)**

TTHM (ppb) Total Trihalomethanes	80	na	41.5	20 to 63	Quarterly in 2011	No	By-products of drinking water chlorination
HAA5 (ppb) Haloacetic Acids	60	na	16.0	9.4 to 18.0	Quarterly in 2011	No	By-products of drinking water chlorination

**Lead and Copper Testing (monitored in the distribution system at individual taps)**

Contaminant Subject to A.L.	Action Level	90 <sup>th</sup> Percentile	Sample Date(s)	# of Samples above AL	
Copper (ppm)	1.3	0.038	07-19-11 through 08-04-11	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	15	1.6		0	Corrosion of household plumbing systems; erosion of natural deposits

**Special Monitoring and Unregulated Parameters (monitored at the plant tap)**

Unregulated Contaminant	MCL	MCLG	Level Detected	Date(s)	Typical source of contamination
Sodium (ppm)	na	na	8.0	08-04-11	Erosion of natural deposits

\*Unless otherwise noted, the data presented in this table is from testing done January 1 - December 31, 2011. 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 are more than one year old.