



CHARTER TOWNSHIP OF HARRISON-CALENDAR YEAR 2007
38151 L'Anse Creuse Harrison Township, MI 48045
Annual Drinking Water Quality Report
May 2008 WQR No. 10

Source Water Assessment

“Right 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. Harrison Township provides your drinking water and is proud to announce that the water quality surpasses standards mandated by the Environmental Protection Agency (EPA) and State of Michigan Department of Environmental Quality (MDEQ). The Harrison Township Water Department will notify you immediately if there is ever any reason for concern about our water.

System Back Ground

The Harrison Township Water Department provides drinking water to approximately 27,000 people. The Township delivers approximately 2.5 million gallons per day. Harrison Township is supplied with water from the Lake Huron Water Plant and Northeast Water Treatment Plant, which are operated and owned by the City of Detroit (DWSD); it should be noted that approximately 80 customers are supplied by the City of Mt. Clemens Water Treatment Plant located in Harrison Township.

How Do We Know The Water Is Safe To Drink?

All three plants operate 24 hours a day, seven days a week. The treatment process begins with disinfection to kill harmful microorganisms that cause illness. A chemical called alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Fluoride is also added to protect our teeth from cavities. The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to chlorine. Finally a small amount of phosphoric acid and chlorine are added to the treated water just before it leaves the plants. The phosphoric acid helps control the lead that may dissolve in water from household plumbing systems. The chlorine keeps the water disinfected as it travels through a water distribution system to reach your home. In addition to a carefully controlled and monitored treatment process our water is tested for a variety of substances before treatment, and throughout the distribution system. Hundreds of samples are tested weekly in certified laboratories by highly qualified staff. Our water not only meets safety and health standards but also ranks among the top 10 in the country for quality and value.

Your source water comes from either the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, in the U.S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada or from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron.

The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale from moderately low to very high based primarily on geologic sensitivity, water chemistry, and contaminant sources. The susceptibility of our Detroit River source water intakes were determined to be highly susceptible to potential contamination. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources.

However, all four Detroit water treatment plants that use source water from Detroit River and the Lake Huron water treatment plant have historically provided satisfactory treatment of this source water to meet drinking water standards. If you would like to know more about this report or need a complete copy of this report please contact your water department at (586) 466-1426.

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 calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791)

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 land or through the ground, it dissolves naturally - occurring minerals and in some cases, radioactive materials, can pick up substances resulting from the presence of animals or from 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, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organics 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.

Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottle water, which must provide the same protection for the public health.” All of these contaminants were below the level of concern in Harrison Township water. “Some people may be more vulnerable to contaminants in drinking water than is 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 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 (800-426-4791).

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. DWSD 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 drinking 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 or at www.epa.gov/safewater/lead.

In the following tables you will find many terms and abbreviations that might be unfamiliar to you. To help you better understand these terms we've provided the following definitions:

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

Maximum Contaminant Level Goal (MCLG) - The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health.

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

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 contaminants.

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.

N/A - Not applicable or available.

Nephelometric Turbidity Unit (NTU) - measures clarity.

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

Parts Per Million (ppm) & Parts Per Billion (ppb) - One ppm can be equated to a single penny in \$10,000. One ppb is a single penny in \$10,000.00

Picocuries per liter (pci/L) - Picocuries per liter is a measure of the radioactivity in water.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Haloacetic acids (HAA5) HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

Total Trihalomethanes (TTHM) - A family of four (4) halogenated organic chemicals. Reporting is based on running annual average.

(>) Greater Than

Lake Huron & Northeast Water Treatment Plant 2007 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals - Annual Monitoring at Plant Finished Water Tap								
Fluoride	8/8/2007	ppm	4	4	1.23	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/8/2007	ppm	10	10	0.28	n/a	No	Runoff from fertilizer use; Leaching from septic tanks sewage; Erosion of natural deposits.

Disinfectant Residuals and Disinfection By-Products-Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Feb-Nov 2007	ppb	n/a	80	18.4	7.6-40.3	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb-Nov 2007	ppb	n/a	60	11	2.6-17.5	No	By-product of drinking water disinfection
Disinfectant (Total Chlorine residual)	Jan-Dec 2007	ppm	MRDLG 4	MRDL 4	0.70	0.49-0.83	No	Water additive used to control microbes

Radioactive Contaminants-Plant Finished Water Tap								
Alpha Emitters	11/16/2001	pCi/l	0	15	3.19	n/a	No	Erosion of natural deposits.

2007 Turbidity- Monitored every 4 hours at Plant Finished Water Tap								
Highest Single Measurement Cannot exceed 1 NTU			Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3NTU (minimum 95%)			Violation yes / no	Major Sources in Drinking Water	
0.3			100%			No	Soil Runoff	

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

2007 Microbiological Contaminants - Monthly Monitoring in Distribution System								
Contaminant	MCLG	MCL			Highest Number Detected	Violation yes/no	Major Sources in Drinking Water	
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples			in one month 0	No	Naturally present in the environment.	
E.coli or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.			entire year 0	No	Human waste and animal fecal waste.	

2005 Lead and Copper Monitoring at Customers' Tap

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2005	ppb	0	15	0 ppb	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2005	ppm	1.3	1.3	0.071 ppm	0	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Running Annual Average	Monthly Ratio Range	Violation yes/no	Typical Source of Contaminant
Total Organic Carbon (ppm)	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 each month and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits.

2007 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.91	Erosion of natural deposits

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

Treatment Technique

Regulated Contaminant	MCL	Treatment Technique (TT) Standard	Treatment Technique (TT) Violation yes/no	Reason for violation	Action Taken	Major Sources In Drinking Water	Health Effects
Lead	TT	No more than (9) days in a six (6) month period below the established minimum.	Yes	During a 14-day period in January and February, phosphate pump malfunctions resulted in below optimal dosages. Phosphate was added to the water, but at a dosage below the state designated minimum. Despite this lower than acceptable dosage, phosphate residual concentrations in water leaving the plant and entering the distribution system were maintained above the established minimum	The chemical feed pumps have all been repaired.	Corrosion of household plumbing system Erosion of natural deposits.	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
Copper	TT	No more than (9) days in a six (6) month period below the established minimum.	Yes	During a 14-day period in January and February, phosphate pump malfunctions resulted in below optimal dosages. Phosphate was added to the water, but at a dosage below the state designated minimum. Despite this lower than acceptable dosage, phosphate residual concentrations in water leaving the plant and entering the distribution system were maintained above the established minimum	The chemical feed pumps have all been repaired.	Corrosion of household plumbing system Erosion of natural deposits; Leaching from wood preservatives.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

For more information, please contact Harrison Township Water Department at 586-466-1425

PUBLIC PARTICIPATION

Interested citizens are welcome to attend board meetings held on the second and fourth Monday's of the month in the Township Hall. The Harrison Township Water Department is open daily between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. **All offices are closed for lunch between 12:30 pm to 1:30 pm.** Visit us on the web at: www.harrison-township.org

QUESTION? COMMENTS?

In addition to mandatory testing, we perform other tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of the highest quality. If you are interested in a more detailed report or have comments, contact the Water Department at (586) 466-1425.

CHARTER TOWNSHIP OF HARRISON
38151 L'Anse Creuse
Harrison Township MI 48045

**IMPORTANT INFORMATION ENCLOSED:
2008 WATER QUALITY REPORT**

Presorted Standard
U.S Postage
Paid
Mt. Clemens MI
Permit No. 430

ECRWSS

POSTAL PATRON

