



Charter Township of Harrison – Calendar Year 2009

Annual Drinking Water Quality Report

Charter Township of Harrison – 38151 L'Anse Creuse – Harrison Township, MI 48045 – www.harrison-township.org

Right to Know Rule

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. Our goal is to provide you with a safe and dependable drinking water supply. This report will illustrate that we are achieving this goal.

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. 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.

Source Water Assessment

Your source water comes 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 in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminate sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards. If you would like to know more information about this report or completed copy of this report please, contact Harrison Township Water Department at (586) 466-1425.

However, all four Detroit water treatment plants that use source water from Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards. DWSD has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. DWSD participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan.

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 material, and 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, 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. Harrison Township 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 or at <http://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:

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

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 feasible using the best available treatment technology.

MRDLG Maximum Residual Disinfectant Level Goal – 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.

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.

ppb parts per billion (one in one billion) The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.

ppm parts per million (one in one million) The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.

NTU Nephelometric Turbidity Unit – Measures the cloudiness of water.

ND Not Detected

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

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

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

TTHM Total Trihalomethanes - Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

n/a not applicable

> Greater Than

**Lake Huron & Northeast Water Treatment Plant
2009 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	8/31/2009	ppm	4	4	1.26	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/31/2009	ppm	10	10	0.29	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium	6/9/2008	ppm	2	2	0.01	n/a	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Selenium	6/9/2008	ppb	50	50	1	n/a	no	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Feb-Nov 2008	ppb	n/a	80	23.4	13.1-40.9	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb- Nov 2008	ppb	n/a	60	13.1	1.2-19.3	No	By-product of drinking water disinfection
Disinfectant (Total Chlorine residual)	Jan-Dec 2008	ppm	MRDGL 4	MRDL 4	.83	0.68-0.85	No	Water additive used to control microbes

2009 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 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.20NTU	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.			

2009 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.
<i>E.coli</i> or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or Ecoli positive.	Entire Year 0	No	Human waste and animal fecal waste.

2008 Lead and Copper Monitoring at Customers' Tap								
Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2008	ppb	0	15	1.3 ppb	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2008	ppm	1.3	1.3	0.119 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

2009 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.22	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. " 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."

TRASH PICK-UP AND BILLING

Tringali Sanitation, Inc. has been granted the residential trash collection. This includes: houses, duplexes, apartments and condominiums that have curbside pick-up. All properties with buildings on the property are included, even if the water is off at the street. There is no opt-out provision or reduction for snowbirds, vacant houses or senior citizens. If a resident claims hardship, they must go in front of a committee that the Township has appointed. They will decide if the resident is eligible for help.

Residents can **not** pay a year in advance for trash collection. Trash billing will be placed on the water bills. Residents can not specify how they want their payment divided on the bill. Payments will be applied to all categories on the bill.

Please be advised that any questions regarding trash collections should be directed to: Tringali Sanitation, Inc. at: (877) 927-8319 or (248) 585-9120. All billing questions should be directed to the Harrison Township Water & Sewer Department at (586) 466-1429 or (586) 466-1428.

OUTSIDE SPRINKLER USE

Setting your automatic lawn sprinkler system to operate between the hours of 12 midnight and 5:00 a.m., will allow more pressure and can reduce the Township's overall demand for water during the peak hours. This helps to lower our water rates with the City of Detroit. This in turn can help to keep the Township's water rates down.

Charter Township of Harrison
38151 L'Anse Creuse
Harrison Township MI 48045

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IMPORTANT INFORMATION ENCLOSED
2010 WATER QUALITY REPORT

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