CITY OF HARPER WOODS
WATER DEPARTMENT

2016 CONSUMER'S ANNUAL REPORT ON DRINKING WATER QUALITY

This is an Important Report on Your Drinking Water Quality

The City of Harper Woods wants you to know that your tap water meets or exceeds all federal and state standards for quality and safety.

If your home has a lead service line or piping that has lead soldered joints you can take the following precautions to minimize your exposure to lead that may have leached into your drinking water from your pipes:

- Run your water for 30 to 60 seconds, or until it feels cold. This practice would be followed anytime your water has not been used for more than 6 hours.
- Always use cold water for drinking, cooking or making baby formula.
- Use faucets and plumbing materials that are either lead free or will not leach unsafe levels of lead into your water.

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 monitoring and reporting requirements for 2015. 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 Harper Woods Library, City Hall and the Department of Public Works.

For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

We welcome your comments and opinions regarding this report. We will be happy to answer any questions you may have. Please direct your comments or questions to the Department of Public Works at 313.343.2570 or the City Manager's Office at 313.343.2505.

William J. Snyder,
Superintendent of Public Works

Randolph Skotarczyk
City Manager

Warning about the vulnerability of some populations to contaminants in drinking water. (§151.154(a)).

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).

Educational information about lead if more than 5% and up to and including 10% of homes sampled exceed 15 ppb AL 1[If your systems samples fewer than 20 sites and has even one sample above the AL, you'll need to include the standard explanation for an AL exceedance]

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
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.
LRAA	Locational Running Annual Average	
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.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity
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.
RAA	Running Annual Average	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromoochloromethane and bromoform. Compliance is based on the total.
µmhos	Micromhos	Measure of electrical conductance of water
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.

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. Detroit Water and Sewerage Department 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.

Detroit River Intakes

Your source water comes from 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. 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 from "very 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. 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. In 2015, DWSD received a grant from The Michigan Department of Environmental Quality to develop a source water protection program for the Detroit River intakes. The programs includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential of source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation. If you would like to know more information about the Source Water Assessment report or a complete copy of this report please, contact your water department (313) 343-2570.

Dear Residents and Customers of the City of Harper Woods Water Department:

The United States Environmental Protection Agency (EPA) issued new federal regulations requiring water utilities to annually issue a "Consumer Confidence Report" to all of its customers. This report is provided to customers of the Harper Woods water system. Future reports will be issued in July of each year.

As you likely know, the City of Harper Woods purchases its water from the City of Detroit for distribution to all of our homes and businesses. Detroit provides water to approximately 4.2 million people (nearly one-half of Michigan's population) in 126 Michigan communities. The system uses water drawn from two intakes in the Detroit River, one to the north near the mouth of Lake St. Clair and one to the south near Lake Erie. The water is directed to four large water treatment plants for processing, one of which services Harper Woods; the Northeast Treatment Plant.

The City of Detroit's treatment facilities operate 24 hours a day, seven days a week. They are staffed by licensed operators and technicians. In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment and throughout the distribution system including Harper Woods.

The City of Detroit routinely takes samples of water from our system. These samples are tested in their certified laboratories by highly qualified, trained staff.

They are required to follow guidelines set forth by the EPA and the Michigan Department of Environmental Quality (MDEQ).

Test results of water samples taken in Harper Woods are provided to us on a regular basis. Detroit water not only meets or exceeds all safety and health standards, but also ranks among the top ten systems in the country for quality and value.

The rest of what follows in this report is language that is mandated by the U.S. Environmental Protection Agency. As well, the chart included with this report is required information that show contaminant rest results for the Northeast Water Treatment Plant. You will note that there are no violations at the treatment facility.

From MDEQ's Consumer Confidence Report and Review Checklist

Mandatory language regarding contaminants reasonably expected to be found in drinking water.

(§141.153(h)(1)(i) through (iv)).

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 the land or through the ground, it dissolves naturally-occuring 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 and result from urban stormwater 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 stormwater 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 stormwater runoff and septic systems.
- **Radio active contaminants**, which can be naturally occurring or be 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 bottled water, which must provide the same protection for public health.

Northeast Water Treatment Plant
2015 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	5/11/2015	ppm	4	4	0.46	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	5/11/2015	ppm	10	10	0.28	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products								
Total Trihalomethanes (TTHM)	2015	ppb	n/a	80	0.021 mg/L	0.0097-0.037 mg/L	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2015	ppb	n/a	60	0.004 mg/L	0.003-0.006 mg/L	no	By-product of drinking water disinfection
Disinfectant Residual – Monitoring in Distribution System by Treatment Plant								
Total Chlorine residual	Jan-Dec 2015	ppm	4	4	0.75	0.65-0.82	no	Water additive used to control microbes

2015 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
0.17 NTU	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.			

2015 Microbiological Contaminants – Monthly Monitoring in Distribution System				
Regulated Contaminant	MCLG	MCL	Violation yes/no	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples.	no	Naturally present in the environment.
E.coli Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or *E.coli* positive.	no	Human waste and animal fecal waste.

2014 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2014	ppb	0	15	1 ppb	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.040	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	Highest Number Detected	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.	0 in one month 0 entire year	Erosion of natural deposits

2015 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.96	Erosion of natural deposits

Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.