

CITY OF DEARBORN

WATER & SEWERAGE DIVISION 2015 CONSUMER ANNUAL REPORT ON WATER QUALITY

The City of Dearborn handles the distribution of water that is purchased from the Great Lakes Water Authority (GLWA). We want you to know that your tap water is safe to drink and that it meets or surpasses all federal and state standards for quality and safety. This Consumer's Annual Report on Water Quality shows the sources of our water, lists the results of testing, and contains important information about water and health. GLWA provides drinking water for approximately 4.2 million people in 126 southeastern Michigan communities. The City of Dearborn receives water from Detroit's Springwells plant and the Southwest treatment plant in Allen Park. GLWA has supplied us with tables (see inside) and test results that are highlighted in this report. We are pleased to show you that they have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ). The Dearborn Water & Sewerage Division will notify you immediately if there is ever any reason for concern about our water.

How Do We Know The Water Is SAFE TO DRINK?

GLWA treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the source water with chlorine to kill harmful microorganisms that can cause illness. Next, a chemical called Alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom. Fluoride is also added to protect our teeth from cavities and decay. 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 treatment plant. The phosphoric acid helps control lead that may dissolve in water from household plumbing systems. The chlorine keeps the water disinfected as it travels through water mains to reach your home or business.

In addition to this carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during the various stages of treatment and throughout the distribution system. Hundreds of samples are tested each week in certified laboratories by highly qualified trained staff. Detroit water not only meets safety and health standards but also ranks among the top 10 in the country for quality and value.

ABOUT OUR SYSTEM?

The City of Dearborn receives water from the Springwells plant located on Warren Ave. and from the Southwest plant located in Allen Park. We are connected to these plants by large transmission mains that range from 24" to 72" in diameter and assure us of an adequate supply of filtered water throughout the year.

The history of filtered water supply for the City of Dearborn began about 1915 when Henry Ford built Dearborn's first filtration plant and sold water to his neighbors. This building is still standing on Michigan Avenue and was known as the George Washington Carver Laboratory, now owned by Oakwood Hospital. The treatment system operated for twelve years until 1927, when it was found to be inadequate. At that time, Mr. Ford contracted with the City of Detroit for the supply of water to his Rouge Plant. He re-pumped a portion of the water and sold it to the people of Dearborn. In 1929, the City of Dearborn signed an agreement with the City of Detroit to receive all of its water through Detroit's Springwells Pumping station. The water was, and still is, taken from Lake St. Clair at the head of Belle Isle. It is piped through a tunnel for a distance of about twelve miles, to the Springwells plant where it is filtered, treated and pumped to our residents.

As of June 1, 2015, the total number of metered accounts in Dearborn was 32,600. Our distribution system consists of 370 miles of water mains ranging in size from 4" to 54" in diameter. This network of water mains is controlled by approximately 4,350 shut-off valves placed at intervals of 300 to 500 feet. The system also contains 2,900 fire hydrants throughout the City.

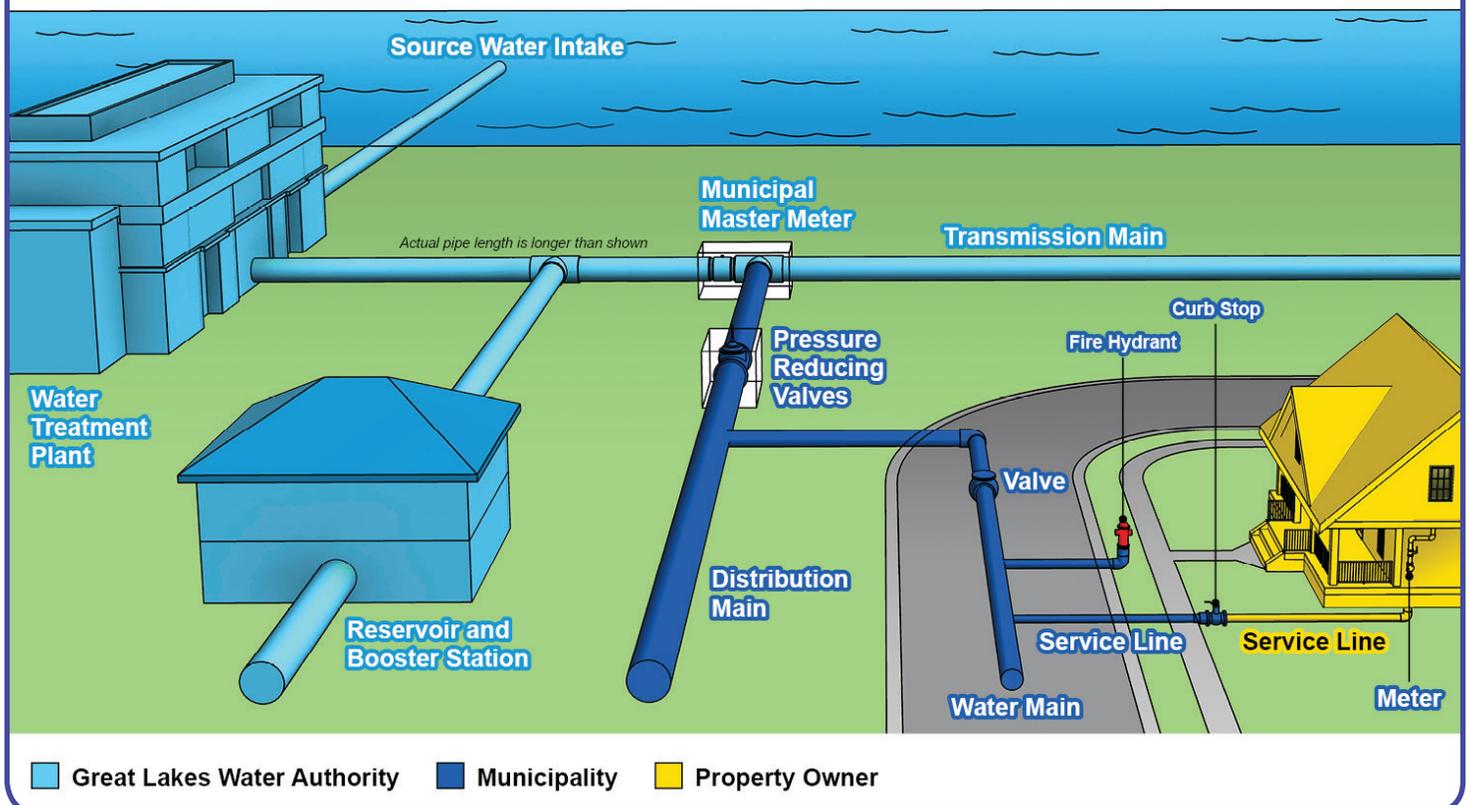
Safe Drinking Water Is A Shared Responsibility!

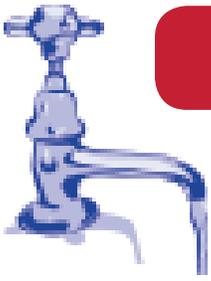
Drinking water quality is important to our community and the region. The City of Dearborn and the Great Lakes Water Authority (GLWA) are committed to meeting state and federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. The City of Dearborn operates the system of water mains that carry this water to your home's service line. This year's Water Quality Report highlights the performance of GLWA and the City of Dearborn water professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

IMPORTANT HEALTH INFORMATION

Lead - If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Dearborn 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

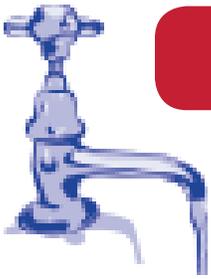
Our water system is a shared responsibility.





LEAD MESSAGE

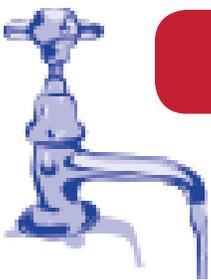
Safe drinking water is a shared responsibility. The water that the GLWA delivers to your community does not contain lead. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines. Corrosion control reduces the risk of lead and copper from leaching into your water. Orthophosphates are added during the treatment process as a corrosion control method to create a protective coating in service pipes throughout the system, including in your home or business. The City of Dearborn performs required lead and copper sampling and testing in our community. Water consumers also have a responsibility to maintain the plumbing in their homes and businesses, and can take steps to limit their exposure to lead.



ADDITIONAL INFORMATION

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-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 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. Radioactive 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.



PEOPLE WITH SPECIAL HEALTH CONCERNS

Some people may be more vulnerable to contaminants in drinking water than 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).

SOUTHWEST Water Treatment Plant

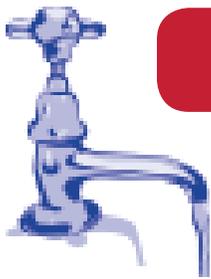
2015 Regulated Detected Contaminants Tables

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	05/11/2015	ppm	4	4	0.54	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	05/11/2015	ppm	10	10	0.43	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								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2015	ppb	n/a	80	57	13 - 57	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2015	ppb	n/a	60	17	5 - 17	no	By-product of drinking water disinfection.
Disinfection – Monitoring in Distribution System by Treatment Plant								
Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan.-Dec. 2015	ppm	4	4	0.67	0.56-0.79	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
0.14 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			Highest Number Detected	Violation yes/no	Major Sources in Drinking Water	
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples			0	no	Naturally present in the environment.	
<i>E. coli</i> Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive.			0	no	Human waste and animal fecal waste.	
Regulated Contaminant	Treatment Technique						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 quarter and because the level was low, there is no requirement for TOC removal.						Erosion of natural deposits	
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Level Detected	Violation yes/no	Major Sources in Drinking Water	
Combined Radium Radium 226 and 228	5/13/2014	pCi/L	0	5	0.65 + or - 0.54	no	Erosion of natural deposits	
2015 Special Monitoring								
Contaminant	MCLG	MCL	Level Detected			Source of Contamination		
Sodium (ppm)	n/a	n/a	5.41			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.

SPRINGWELLS 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	05/11/2015	ppm	4	4	0.45	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	05/11/2015	ppm	10	10	0.33	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								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2015	ppb	n/a	80	57	13 – 57	no	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2015	ppb	n/a	60	17	5 – 17	no	By-product of drinking water disinfection
Disinfectant Residuals – Monitoring in Distribution System by Treatment Plant								
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan.-Dec. 2015	ppm	4	4	0.74	0.66-0.79	no	Water additive used to control microbes
2015 Turbidity – Monitored every 4 hours at Plant Finished Water								
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	
0.18 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		Highest Number Detected	Violation yes/no	Major Sources in Drinking Water		
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples		0	no	Naturally present in the environment.		
<i>E.coli</i> Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive.		0	no	Human waste and animal fecal waste.		
Regulated Contaminant	Treatment Technique						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 quarter and because the level was low, there is no TOC removal requirement.						Erosion of natural deposits	
2015 Special Monitoring								
Contaminant	MCLG	MCL	Level Detected			Source of Contamination		
Sodium (ppm)	n/a	n/a	4.74			Erosion of natural deposits		
Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality, ML Semegen								



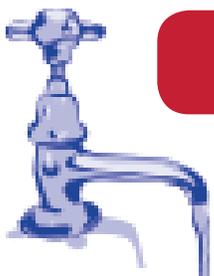
About Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Before EPA regulates a contaminant, it considers adverse health effects, the occurrence of the contaminant in drinking water, and whether the regulation would reduce health risk. The City of Dearborn began monitoring for unregulated contaminants in 2014. The following table lists the unregulated substances detected during the calendar year 2015.

2015 Unregulated Contaminants – EPTDS								
Contaminant	Test Date	Unit	Highest Level Detected	Range of Detection	Health Advisory	MCLG	MCL	Source of Contaminant
Strontium	Jul – Sep 2015	ppb	100	99 - 100	4000	n/a	n/a	Erosion of natural deposits
Chromium - 6	Mar 2015	ppb	0.12	0 – 0.12	n/a	n/a	n/a	Erosion of natural deposits or industrial activities
Vanadium	Jul - Sep 2015	ppb	0.63	0.61-0.63	n/a	n/a	n/a	Erosion of natural deposits
Chromium	Jul - Sep 2015	Ppb	0.27	0.26	n/a	n/a	n/a	Erosion of natural deposits or industrial activities

2015 Unregulated Contaminants - DSMRT								
Contaminant	Test Date	Unit	Highest Level Detected	Range of Detection	Health Advisory	MCLG	MCL	Source of Contaminant
Strontium	Jul – Sep 2015	ppb	120	100-120	4000	n/a	n/a	Erosion of natural deposits
Chromium - 6	Mar 2015	ppb	0.15	0 – 0.15	n/a	n/a	n/a	Erosion of natural deposits or industrial activities
Vanadium	Jul – Sep 2015	ppb	0.82	0.63-0.82	n/a	n/a	n/a	Erosion of natural deposits
Chromium	Jul – Sep 2015	Ppb	0.42	0.29-0.42	n/a	n/a	n/a	Erosion of natural deposits or industrial activities



City of Dearborn Lead and Copper Results

Contaminants	Test Date	Units	Number of Samples Collected	Number of Samples Exceeded AL	Action Level AL	90th Percentile Value	Violation YES / NO	Major Source in Drinking Water
Lead	2014	ppb	18	0	15.0	0.4	NO	Corrosion of household plumbing. Erosion of natural deposits.
Copper	2014	ppb	18	0	1300	81.2	NO	

*THE 90TH PERCENTILE VALUE MEANS 90% 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.

Symbol Abbreviation for

Ppb Parts per billion
The ppb is equivalent to microgram per liter.
A microgram = 1/1000 milligram.

Ppm Parts per million
The ppm is equivalent to milligram per liter.
A milligram = 1/1000 gram.

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. MRDLG'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, dibromochloromethane 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.



Cryptosporidium - Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Cryptosporidium was detected once during a twelve-month period at our Detroit River intake plants. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause Cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

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 the Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards. GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA 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 more information or a complete copy of this report please contact Sheila Kreza at (313) 943-2308.

Other Monitoring

In addition to testing we are required to perform, GLWA voluntarily 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, contact the GLWA Water Quality Division at (313) 926-8102.

Opportunities for Public Participation

The GLWA Board of Water Commissioners meets each month. There are also hearings and meetings open to the public. To confirm dates and times, or for information on other activities of the department, please contact GLWA Public Affairs Group at (313) 964-9491

For information on when the Dearborn City Council meets please contact the Council Office at (313) 943-2025. We welcome your comments and questions about this report. The Water Division may be reached at (313) 943-2308.

مدینه دیربورن تریڈ اعلیٰ بان میاء الشرب فیہا آمنه وصالحه للشرب وهی علی الأقل إن لم تضاهی کافه المقایس الی تضعها الولاية أو الحكومة الفدرالیة من حیث الجودة والنوعیه لمیاء الشرب. هذا التقرير یتضمن معلومات هامة عن نوعیه وجوده المیاء فی منطقتنا. الرجاء الاتصال علی الأرقام التالیة للحصول علی قائمه أشخاص بإمكانهم ترجمه هذا التقرير لك. أداره المیاء ت ۲۳۰۸-۹۴۳ او مكتب رئیس البلدیة ت ۲۳۰۰-۹۴۳.

Closing

The City of Dearborn and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us with any questions or concerns about your water.