

City of Warren

Annual Water Quality Report 2012



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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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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*Water Operations
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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.

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).

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, petroleum production and gas stations, and urban storm water 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 tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Our water is treated according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The state and EPA require the City of Warren Division of Water Supply and the Detroit Water Department to test our water on a regular basis to ensure its safety. We have met all the monitoring and reporting requirements for 2012.

Your water comes from the Detroit Water & Sewerage Department Northeast Water Plant located on Eight Mile Road in Detroit. The source water comes from the Detroit River, situated within 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. Water Plants treat the water to remove several contaminants. They also add disinfectant to protect you against microbial contaminants. 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. If you would like more

information or for a complete copy of the report, please contact Mary Lynn Semegen of the Detroit Water and Sewerage Department at (313) 926-8102.

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. Beginning in July of 2008 – April 2009, the Detroit Water and Sewerage Department (DWSD) began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2 (UCMR2). All the UCMR2 contaminants monitored on List 1 and List 2 in 2008 - 2009 were undetected.

Information about lead:

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. The City of Warren 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://water.epa.gov/safewater/lead>.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/. For more information about your water, questions or comments on the contents of this report, or dates and times of public meetings regarding drinking water quality, please call (586) 759-9200 and ask for David Koss, Deputy Superintendent, Water Division.

The table below and on the next page list all the drinking water contaminants that were detected during the 2012 calendar year. The presence of these contaminants in the water does not necessarily indicate the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done between January 1 and December 31, 2012. 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 1 year old.

Key to Detected Contaminants Tables		
Symbol	Abbreviation for	Definition/Explanation
MCLG	Maximum Contaminant Level Goal	The level of 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 Units	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.
pCi/l	picocuries per liter	a measure of radioactivity
n/a	Not applicable	
>	Greater than	

2012 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation Yes / No	Major Sources in Drinking Water
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Inorganic Chemicals – Monitoring at Plant Finished Water Tap

Fluoride	8/14/2012	ppm	4	4	0.76	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/14/2012	ppm	10	10	0.43	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	1.0	n/a	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Disinfectant By-Products – Stage 1, 1st Quarter Monitoring in Distribution System

Total Trihalomethane (TTHM)	Feb 2012	ppb	n/a	80	22.2	5.8	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	Feb 2012	ppb	n/a	60	16.3	4.3	No	By-product of drinking water disinfection.

Disinfectant By-Products – Stage 2, 2nd - 4th Quarters Monitoring in Distribution System

Total Trihalomethane (TTHM)	2012	ppb	n/a	80	n/a	20 - 38	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2012	ppb	n/a	60	n/a	6.7 - 19	No	By-product of drinking water disinfection.

Disinfectant Residual – Monitoring in Distribution System

Disinfectant (Total Chlorine) Residual	Jan-Dec 2012	ppm	MRDGL 4	MRDL 4	0.71	0.61 - 0.81	No	Water additive used to control microbes.
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2012 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
0.19 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.

2012 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.	0 in one month	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.	0 in entire year	No	Human waste and animal fecal waste.

2011 Lead and Copper Monitoring at Customers' Tap

Regulated 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	2011	ppb	0	15	3	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	.093	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.

2012 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.21	Erosion of natural deposits.

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



JAMES R. FOUTS, MAYOR

City of Warren Water Division

Help Reduce City Water Rates By Using Water Between 11 pm and 5 am

As warmer weather approaches, watering demands increase. While watering and maintaining your landscaping, gardens, swimming pools are important to enhancing the attractiveness and the value of your property, what you may not know is that the time of day you use this water has a direct impact on our water rates. The City of Warren purchases wholesale water from the City of Detroit Water and Sewer Department.

The cost of buying water is based on peak rate demand which occurs during the hours of 5 am to 11 pm. The more water we use during this time period from May 15 through October 15 has significant impact on what DWSD charges Warren for its water.

Minimize your outdoor water usage between (5 am to 11 pm) for your irrigation systems and outdoor usage. Lawn irrigation systems are the main contributor to our peak hour demand. If we can shift when we water our lawns into the non-peak hours (11 pm to 5 am), we will be able to reduce rate increases. **Reduce our peak rate water usage by shifting your irrigation and other outdoor water consumption to the hours of 11 pm to 5 am.**

Protect Your Drinking Water — You Can Help!

The City of Warren is updating the City Code for the Cross Connection Control Program. This program is mandated by the Federal government through the Environmental Protection Agency (EPA) and the Safe Water Drinking Act. This is a comprehensive program for the elimination and prevention of cross connection and back flow. Back flow due to cross connection is a serious plumbing issue. It can cause sickness and even death. However, back flow or back siphonage can be avoided by the use of proper plumbing protection devices. Every water spigot at your premises should have a hose bibb vacuum breaker installed. This is a simple, inexpensive device which can be purchased at a local plumbing supply or hardware store.

High Water Bills

The single biggest cause of high water bills is leaking or running toilets. A leaking or running toilet can cause up to several hundred gallons of water usage per day. It is not uncommon to experience water bills in excess of several hundred dollars in a month due to a leaking toilet. Too often the water division encounters irate homeowners who ignored leaking toilets or other leaks and then complain to the city about high water bills. You can check for leaks by looking for the small triangular leak indicator on the face of your water meter. If it is spinning when no water is running, you have a leak. Another method of checking for leaks is to take a meter reading at night and another in the morning. If no water was used overnight, then the reading should remain the same. Eliminating these common sources of water leaks will save many dollars on your monthly water bills. 1.) Repair dripping faucets. 2.) Replace worn out or fix leaking hot water tanks. 3.) Repair leaking or running toilets. 4.) Check for and repair furnace humidifier leaks. 5.) Check for and repair leaking water lines and leaking shut-off valves. **Avoiding high water bills is your responsibility and not your City's water utility operation.**

Delinquent Water Bills

The City of Warren will be stepping up collections of unpaid water or sewage bills. Delinquent water bills not paid within thirty (30) days after they become due may result in water and sewer services being shut-off at the property for non-payment. If your water and /or sewer service is discontinued for non-payment, you will be charged a \$40.00 service fee in addition to any other unpaid fees including penalties per city ordinance, section 41-182. –Late payment; penalty. Water and sewer services shall remain discontinued until such bill has been paid or proper payment arrangements have been made for payment. To inquire about or to set up a payment arrangement plan, you must call water customer service operation at 586-759-9200 between the hours of 8:30 AM to 5:00 PM Monday through Friday. The City cannot continue to function and provide quality services to the citizens or businesses without adequate funding. It is unfair for those who do not pay for these services to place the burden on those who do. **Please pay your water bills on time.**

When will I accrue late charges?

Failure to pay the balance due on an account by the stated date will subject the entire outstanding balance to a 3% penalty. Each April, accounts that have a balance due extending back to the prior December will receive special notices on their utility billing that the amount due as of the previous December 31 must be paid in full by the end of April. Any amount unpaid within that time frame will be transferred to the tax roll and collected as a property lien. A collection fee of 17% will be added to any amounts transferred to the tax roll.

Minimum Monthly Fees

Minimum monthly fees or sometimes referred to as “readiness to serve fees” apply when any account falls below the prescribed minimum monthly water and sewage charges for the meter service size provided for the account. These fees are described under City Ordinance Chapter 41. - Water and Sewers, Article IV. – Rates and Charges; Section 41-181- Schedule. Should you have any questions about these fees, contact the city's water customer service operation at 586-759-9200 between the hours of 8:30 AM to 5:00 PM Monday through Friday.