



CITY OF WARREN

2015 ANNUAL WATER QUALITY REPORT



JAMES R. FOUTS, MAYOR

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Elected Officials

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Mayor

Paul Wojno
City Clerk

Lorie Barnwell
City Treasurer

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Asst. Council Secretary

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Scott C. Stevens
Councilman

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Councilman

Comments or
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Attention: Important Information on Water Quality and Safety

The City of Warren wants you to know that your tap water is safe to drink and that it meets or surpasses all 2015 Federal and State monitoring and reporting standards for quality and safety. This report will show you the source of our water; list water test results; and it also contains important information about water and health.

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 Environmental Protection Agency's Safe Drinking Water Hotline (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 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 can also come from 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 (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

"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)."

Your 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. 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.

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The program 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 the City of Warren Water Division at (586) 759-9200 or Mary Lynn Semegen of the Detroit Water and Sewerage Department at (313) 926-8102.

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://www.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.

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.

Detected Contaminant Tables:

The following tables list all the drinking water contaminants that were detected during the 2015 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 these tables are from testing completed between January 1 and December 31, 2015. The state allows the City of Warren 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
>	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 a 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. MRDLGs 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.

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	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.

Disinfectant By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Trihalomethane (TTHM)	2015	ppb	n/a	80	30.3	18 to 43	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2015	ppb	n/a	60	11.2	8.7 to 15	No	By-product of drinking water disinfection.

Disinfectant Residual – Monitoring in Distribution System

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2015	ppm	MRDGL 4	MRDL 4	0.75	0.62 - 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

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.

2014 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	2014	ppb	0	15	.48	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	.051	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.

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

CITY OF WARREN WATER DIVISION

Save Time and Costly Penalties — Please Read



JAMES R. FOUTS, MAYOR

Leaks Cause 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.

A Convenient Way to Pay Water Bills or Taxes

It is now **FREE** to pay your water bill and taxes using your checking or savings account! You can pay online or by phone through our Easy Pay service. To pay and for more details, visit www.cityofwarren.org and click the Treasurer's web page or call 877-264-5744. Looking forward to finding even more ways to save you, the Warren residents, time and money!

Warren Treasurer Lorie Barnwell

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 \$70.00 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.**

WARNING MESSAGE — Tampering with City of Warren Water and Sewer System Property

The city's new water meter reading system is reporting alarms for tampering with the city's new water meters and meter reading systems. Recent repairs by authorized representatives for the city have found such items as missing meters, cut wires, chewed wires, damaged registers, backward meters, missing Meter Transmission Unit (MTU), etc. These problems are due to unauthorized individuals tampering with their water meters who are ignoring the tampering notices that are attached to their new meters and meter reading equipment.

Unauthorized individuals are illegally operating fire hydrants, stop boxes and other parts of the City's Water and Sewer System. These violations are punishable under the City's Code of Ordinances, Chapter 41.

Any water services discontinued due to delinquent water bills can only be restored by a city's authorized representative. Any unauthorized service restoration for unpaid water bills will be subject to fees and prosecution under the City's Code of Ordinances, Chapter 41.

Any of the above unauthorized tampering with the City's Water and Sewer Systems will result in restitution of fees to correct the problem and/or prosecution under City of Warren's Ordinances Chapter 41 Water and Sewers along with any other sanctions so authorized and approved by Warren's City Council.

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 City 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.**