2015 Consumers Annual Water Quality Report

Published in 2016

ATTENTION:

THIS IS AN IMPORTANT REPORT ON WATER QUALITY AND SAFETY

The City of Walled Lake wants you to know your tap water is safe to drink and that it meets or surpasses all federal and state standards for quality and safety. We are proud and honored to provide this information to you.

If you would like to know more information about this report or for a complete copy of this report, please contact the City of Walled Lake Water Department at (248) 624-4847.

Este informe contiene informacion sobre la calidad del agua en su comunidad.

Traduzcalo o hable con alguien que lo entiendo bien.

Where Does Our Water Come From?

The City of Walled Lake Water Department provides drinking water to approximately 7,000 residents. In addition to our own community, we also provide drinking water to a limited area of the Village of Wolverine Lake and Commerce Township. The City purchases drinking water wholesale from the City of Detroit Water and Sewerage Department (DWSD). Our system uses surface water drawn from Lake Huron that has been processed at a water treatment plant located in St. Clair County.

More specifically, Walled Lake's 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 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 contaminant 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 or for a complete copy of this report, please call (248) 624-4847.

How Do We Know The Water Is Safe To Drink?

The City of Walled Lake employs two state certified water distribution system operators. The City of Walled Lake Water Department examines the aesthetic quality of our water and routinely processes bacteriological samples, conducts chlorine residual tests, and monitors the water for lead and copper and for disinfection and chlorination by-products. In addition to regular business hours, the Water Department employees are on-call 24 hours a day, 7 days a week, year round for system emergencies.

DWSD treatment facilities operate 24 hours a day, 7 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 call "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.

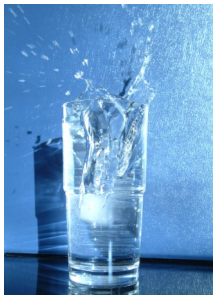
The water then flows through fine sand filters called "beds". These filters remove even more particles and certain microorganisms that are resistant to chlorine. Finally, a small amount of phosphoric acid and chlorine are added to the treated water just before it leaves the treatment plant. The phosphoric acid helps control the 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.

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. 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.

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.

The sources of drinking water (both tap 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants (see table on Page 2). 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.



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.

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 at (800) 426-4791.

In addition to required testing, our water system voluntarily tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of the highest quality.

"A safe and reliable source of drinking water is essential for life."

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.

What Can We Do To Keep Our Water Safe?

A safe and reliable source of drinking water is essential for life. Because our water supply is limited, you can help protect this valuable resource by disposing all household and hazardous waste in a proper and safe manner. Information on the proper disposal of household or hazardous waste (including the schedule of disposal day events) is available on the City of Walled Lake's website at **www.walledlake.com**; at City Hall, DPW Building, and Library; and on RRRASOC's website at **www.rrrasoc.org**. You can also contact the Department of Public Works at (248) 624-4847.

Other activities that can help protect our water include:

- Not dumping garbage, chemicals, oil, yard waste, etc into storm drains
- Not over-fertilizing
- Cleaning up after pets
- Properly storing household and vehicle cleaners, chemicals, and oil
- Preventing cross connections and back siphon-age into the water system

To learn more about how you can help, please visit **www.walledlake.com** or call (248) 624-4847. Information is also available at City Hall, DPW Building, and Library.

Key to Detected Contaminants Tables

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. MRLDGs 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. Picocurie (pCi) means the quantity of radioactive material producing 2.22 nuclear transformations per minute.
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 total.
µmhos	Micromhos	Measure of electrical conductance of water.
°C	Celsius	A scal of temperature in which water freezes at 0° and boils at 100° under standard conditions.

Important Health Information (*See Table on Page 3)

Since 1992, with the cooperation of many Walled Lake residents, the Department of Public Works has been testing homes with plumbing systems that may contribute lead to the household water supply. Our latest round of testing shows **none** of the homes tested have lead levels above the action level. 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 Walled Lake 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.**

Detected Contaminants Tables

These tables are based on tests conducted by DWSD in the year 2015. **We conduct many tests throughout the year; however, only tests that show the presence of a contaminant are shown here**.

Lake Huron Water Treatment Plant
2015 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Inorganic Chemicals—Monitoring at the Plant Finished Water Tap								
Fluoride	5/13/2014	ppm	4	4	0.43	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	0.30	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	8	32.6	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2015	ppb	n/a	60	15.7	11.0	No	By-product of drinking water disinfection.
Disinfectant Residuals Monitoring in DWSD 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	0.82	0.71-0.91	No	Water additive used to control microbes.

Regulated Contaminant	Treatment Technique	Typical Source of Contamination
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 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**
0.2 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 Special Monitoring				
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Source of Contamination**
Sodium (ppm)	n/a	n/a	4.00	Erosion of natural deposits.

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.	In one month 0	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.	Entire year 0	No	Human waste and animal fecal waste.

City of Walled Lake Lead and Copper Results—Lead and Copper Monitoring at Customers' Tap

Contaminant	Test Date	Units	Health Goal	Action Level (AL)	90th Percentile Value *	Number of Samples	Violation Yes/No	Major Sources in Drinking Water
Lead	2014	ppb	0	15	0	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.0443	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.

Water Quality Report

City of Walled Lake
1499 E. West Maple Road
Walled Lake, MI 48390

Phone: 248-624-4847
Fax: 248-624-1616
E-mail:
publicservices@walledlake.com

Report also available on the web!

www.walledlake.com

The City of Walled Lake

Water Department

is available

24 hours a day, 7 days a week

In Case of a Water Emergency:

(248) 624-4847

Monday—Friday

8:00 a.m.—5:00 p.m.

(248) 624-3120

After Hours, Holidays, and Weekends

CITY COUNCIL
Linda S. Ackley, Mayor
Casey Ambrose, Mayor Pro-Tem
Robert Robertson
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Tamra L. Loch
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ATTENTION:

THIS IS AN IMPORTANT REPORT ON WATER QUALITY AND SAFETY

The State and EPA require us to test our water on a regular basis to ensure its safety. The City of Walled Lake wants you to know that your tap water is safe to drink and that it meets or surpasses all federal and state standards for water quality and safety for the year 2015.

The City of Walled Lake will update this report annually and will keep you informed of any problems that may occur throughout the year as they happen. Hard copies are available at Walled Lake City Hall, Department of Public Works, and the Walled Lake City Library.

Reduce High Water Bills

Small leaks can cause high water bills. Eliminating these common sources of water leaks will save YOU money:

- Repair dripping faucets
- Replace worn out or repair leaking hot water tanks
- Repair leaking or running toilets
- Check for and repair furnace humidifier leaks
- Check for and repair leaking water lines and shut-off valves

Public Participation

The City of Walled Lake Council meets every month. Public hearings and meetings are also available to attend. To confirm dates and times, or for information on other activities happening in the department, please contact Walled Lake City Hall or visit **www.walledlake.com**. We welcome comments and opinions about this report, and will be happy to answer any questions you may have. For more information about safe drinking water, visit the U.S. Environmental Protection Agency website at **http://www.epa.gov/safewater/**

Help Us Lower Our Water Rate!

As mentioned before, the City of Walled Lake purchases water from DWSD. The factors that determine the rates charged by DWSD are:

- **Distance** from the water treatment plant
- **Elevation** (higher costs to pump to higher elevations)
- **Annual Water Usage**
- **Maximum Day Demand** (water usage in a 24 hour period during summer)
- **Peak Hour Demand** (water usage over a one hour period during summer)

To learn more on how you can help reduce our costs, and ultimately yours, please call the City of Walled Lake at 248-624-4847 or visit **www.walledlake.com**.