

Key to Detected Contaminants Tables

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 MCLs as feasible using the best available treatment technology.

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.

MCLG - Maximum Contaminant Level Goal - The level of contaminant in drinking water below which there is no known or expected risk to health.

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.

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 National 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, dibromo-chloromethane, and bromoform. Compliance is based on the total.

μhos - 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.

n/a - not applicable

ND - Not Detected

> - Greater than

City of Westland

Water Quality - Test Results 2019 -

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
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2019 Inorganic Chemicals - Monitoring at the Plant Finished Water Tap

Fluoride	6/11/2019	ppm	4	4	0.66	n/a	No	Erosion of natural deposits; Water Additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	6/11/2019	ppm	10	10	0.48	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5/16/2017	ppm	2	2	0.01	n/a	No	Discharge of drilling wastes; Discharges from metal refineries, Erosion of natural deposits

2019 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 Yes/No	Major Sources in Drinking Water
Total Trihalomethane (TTHM)	2019	ppb	n/a	80	43.5	17-78	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2019	ppb	n/a	60	19.75	5.5-27	No	By-product of drinking water disinfection

2019 Disinfectant Residuals - Monitoring in Distribution System by Treatment Plant

Regulated Contaminant	Test Date	Units	Health Goal MRDLG	Allowed Level MRDL	Highest LRAA	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Total Chlorine Residual	Jan.-Dec. 2019	ppm	4	4	0.68	0.57-0.72	No	Water additive used to control microbes

2019 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
0.26 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

2019 Lead and Copper Monitoring at Customers Tap

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Numbers of Samples Over AL	Violation Yes/No	Major Sources in Drinking Water
Lead	2019	ppb	0	15	5 ppb	0	No	Corrosion of household plumbing system; Erosion of natural deposits
Copper	2019	ppm	1.3	1.3	0.1 ppm	0	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives

*The 90th percentile value means 90 percent of 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 2019				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 requirement.				Erosion of natural deposits.

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	6.37	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2019 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables.



WESTLAND
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2019 Water Quality Report

Westland is proud of the fine drinking water it receives from the Great Lakes Water Authority, and that we supply to our residents. This report will list the source of our water, the results of the tests performed on the water, and additional information about water and health questions. State and federal requirements mandate that a Water Quality Report be available to Westland's water customers on an annual basis.

Please visit our website at www.CityofWestland.com for more information.

Written Notice Requirement:

Furthermore, compliance with Public Act 222 of 2001, an amendment to Michigan's Governmental Immunity Statute 1964 PA 170, as amended MCL 691.1401 to 691.1419, requires that a claimant who wishes to seek compensation for property damage or physical injury resulting from a sewage disposal system event notify the City of Westland, Water and Sewer Superintendent, **in writing, within 45 days after the date the damage or physical injury was discovered, or in the exercise of reasonable diligence should have been discovered**. The written notice shall contain the claimant's name, address and telephone number, the address of the affected property, the date of discovery of any property damages or physical injuries, and a brief description of the claim. Failure to comply with the notice requirements may prevent the recovery of damages and bar any claim that a claimant may have.

CONSUMER CONFIDENCE REPORT

THIS IS YOUR ANNUAL REPORT ON DRINKING WATER QUALITY

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 and petroleum production, and can also come from gas stations, 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 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 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)."



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).

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. Great Lakes Water Authority (GLWA) 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>.

Water Source

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 GLWA, 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 GLWA water treatment plants that use source water from 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. If you would like to know more information about this report or a complete copy of this report please, contact your water department (734) 728-1770.

Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Below is the report of unregulated contaminants detected during quarterly sampling and analysis performed during 2018.

Unregulated Contaminant	Test Date	Units	Level Detected	Minimum Reporting Limit	Use or Environmental Source
Anatoxin-a	2018	ug/L	<0.03	0.03	Naturally occurring, from Cyanobacteria. Cyanobacteria, formerly referred to as blue-green algae, are found naturally in lakes, rivers, and ponds.
Cylindrospermopsin	2018	ug/L	<0.09	0.09	Naturally occurring, from Cyanobacteria. Cyanobacteria, formerly referred to as blue-green algae, are found naturally in lakes, rivers, and ponds.
Microcystin	2018	ug/L	<0.30	0.30	Naturally occurring, from Cyanobacteria. Cyanobacteria, formerly referred to as blue-green algae, are found naturally in lakes, rivers, and ponds.

The City of Westland maintains over 325 miles of water main, over 5300 hydrants and over 6500 valves in our system. We have flushed the water mains in numerous areas of the city this year to remove buildup from the water main and improve pressure and quality of the water you receive. We will be doing other sections of the City of Westland in 2020 as the weather permits, working through the city on a continual basis. We are also operating and repairing the valves for isolating the water throughout the city to insure proper operation of the valves in an emergency. In 2019, the valve maintenance program focused in the south west area of the City.