



Grand Blanc Township
Public Works
P.O. Box 1833
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Grand Blanc, MI 48480-0057



Water Quality Report

Dear Grand Blanc Township Residents:

Drinking water quality is important to our community and the region. Grand Blanc Township and the Great Lake 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. Grand Blanc Township 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 Grand Blanc Township 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.

Please review this report and feel confident that Grand Blanc Township has the utmost concern for your health and safety and delivers to you a safe, clean and pleasant drinking water supply.

Should you have any questions about your drinking water, please contact our offices at (810) 424-2600 or visit our web site at: www.twp.grand-blanc.mi.us.

Best Regards,

Jeffrey Sears – Director of Public Works
David Hobson – Assistant Director of Public Works
Scott Bennett – Township Supervisor

Opportunities for Public Participation

We encourage public interest and participation in our community's decisions affecting drinking water. Regular Board Meetings occur on the second Thursday of every month, at 5371 South Saginaw Street, Grand Blanc, Michigan at 7:00 P.M. The public is welcome.

website: www.twp.grand-blanc.mi.us.

2014 Special Monitoring - UCMR3 - Unregulated Contaminants

Contaminant	Test Date	Result	Reference Concentration	Units	Major Sources in Drinking Water
Chromium (total)	Feb.-Aug. 2014	0.256	100	ug/L	Erosion of natural deposits; discharge from industrial activities.
Chromium-6	Feb.-Aug. 2014	0.111	N/A	ug/L	Erosion of natural deposits; discharge from industrial activities.
Strontium	Feb.-Aug. 2014	102.083	1500	ug/L	Soil runoff; runoff from fertilizer.
Vanadium	Feb.-Aug. 2014	0.236	21	ug/L	Naturally present in the environment.

Unregulated contaminants are those that don't yet have a drinking water standard by US Environmental Protection Agency. The purpose of monitoring for these contaminants is to help US EPA decide whether the contaminants should have a standard.

Important Health Information - Lead

Since 1992, with the cooperation of many residents, Grand Blanc Township has been testing homes with plumbing systems that may contribute lead to the household water supply. 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. Grand Blanc Township 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>.

Lead Message

Safe drinking water is a shared responsibility. The water that GLWA delivers to our 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. Grand Blanc Township 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.

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 who are 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 for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Communicable Disease Center) 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).

Lake Huron Plant Source Water Assessment

Your 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.

GLWA voluntarily developed and received approval in 2016 for a source water protection program (SWIPP) for the Lake Huron Water Treatment Plant intake. 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 and education. If you would like to know more information about the Source Water Assessment or the SWIPP please, contact your water department (810) 424-2640.

This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.

Water Source

Grand Blanc Township is supplied water from GCDC-WWS, who is supplied water by the Detroit Water and Sewerage Department, which draws its water from Lake Huron.

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 (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:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) 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.
- (C) Pesticides and herbicides, which may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.
- (D) 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.
- (E) Radioactive contaminants, which can be naturally occurring or 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.)

How Do I Read This Chart?

It's easy! Our water is tested to assure that it is safe and healthy. These tables are based on tests conducted by Grand Blanc Township, GCDC-WWS and the City of Detroit within the last five (5) calendar years. We conduct many tests throughout the year, however, only tests that show the presence of a contaminant are shown here. The table on this page is a key to the terms used in the following tables. The column marked Highest Detected Level shows the highest test results during the year. Sources of Contaminant show where this substance usually originates.

2016 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.
mg/L	Milligrams per liter	A milligram = 1/1000 gram 1 milligrams per liter is equal to 1 ppm
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	
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
RAA	Running Annual Average	The average of analytical results for all samples during the previous four quarters.
ug/L	Micrograms per liter	A microgram per liter is equal to 0.001 ppm 1mg/L = 1000 ug/L
umhos	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.

Lake Huron Water Treatment Plant • 2016 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
Inorganic Chemicals - Annual Monitoring at Plant Finished Water Tap								
Fluoride	5/10/2016	ppm	4	4	0.50	n/a	No	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate	5/10/2016	ppm	10	10	0.46	n/a	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

2016 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
0.28 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.				

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.

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.00	Erosion of natural deposits

2014 Radionuclides							
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 & 228	5/13/14	pCi/L	0	5	0.86 + or - 0.55	no	Erosion of natural deposits.

Grand Blanc Township Monitoring					
2016 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	in one month - 0	No	Naturally present in the environment.
<i>E.coli</i> or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive.	entire year - 0	No	Human waste and animal fecal waste.

Lead and Copper Monitoring at Customer's Tap								
Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2016	ppb	0	15	1	0	No	Corrosion of household plumbing system; erosion of natural deposits.
Copper	2016	ppb	1300	1300	120	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.								

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Disinfectant Residuals and Disinfection By-Products - Stage 2 Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Jan-Dec. 2016	ppb	n/a	80	LRAA 28.3	15.2-32.3	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	Jan-Dec. 2016	ppb	n/a	60	LRAA 10.8	8.0-14.0	No	By-product of drinking water disinfection.
Disinfectant (Total Chlorine residual)	Jan-Dec. 2016	ppm	MRDGL 4	MRDL 4	RAA 0.67	0.08-1.03	No	Water additive used to control microbes.