

2018 Consumer Confidence Report for Charter Township of Washington

An annual Water Quality Report of the public water supply in the Charter Township of Michigan.

Report #21 March 2019

Available online at: www.WashingtonTownship.org/CCR

**The Great Lakes Water Authority (GLWA)
consistently delivers safe drinking water to our community.**

This year's Water Quality Report highlights the performance of GLWA and the Charter Township of Washington's water professionals in delivering some of the nation's best drinking water.

The Charter Township of Washington operates the system of water mains that carry this water to your service line.

The Charter Township of Washington and the Great Lakes Water Authority (GLWA) are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health.

Please contact us with any questions or concerns about your water.

Department of Public Works

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Source water protection Lake Huron intake

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.

In 2015, GLWA received a grant from the Michigan Department of Environmental Quality to develop a source water protection program 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 report please, contact your water department (586) 786-0010.



Become part of our water testing program

Summer 2019 Lead and Copper Testing

Washington Township DPW (586) 786-0010 ext 2002

VISIT OUR WEBSITE

www.WashingtonTownship.org

- ◇ Current water and sewer rates
- ◇ Summer watering restrictions
- ◇ Cross Connections
- ◇ Your water/sewer account information

2018 Regulated Detected Contaminants Tables						
Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Violation Yes/No	Typical Source of Contaminant
Barium (ppm)	2	2	0.01	N/A	NO	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	0.33	N/A	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.76	N/A	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A	N/A	5.21	N/A	NO	Erosion of natural deposits
Sodium is not a regulated contaminant.						
Regulated Contaminant	Health Goal MCL	Allowed Level MCL	Highest LRAA	Range	Violation Yes/No	Major Sources in Drinking water
THM Total Trihalomethanes (ppb)	80	N/A	22.50	11-32	NO	Byproduct of drinking water disinfection
Regulated Contaminant	Health Goal MCL	Allowed Level MRDL	Highest RAA	Range	Violation Yes/No	Major Sources in Drinking water
HAA5 Haloacetic Acids (ppb)	60	N/A	14.75	0-14	NO	Byproduct of drinking water disinfection
Total Chlorine Residual (ppm)	4	4	0.83	0.79 - 0.87	NO	Water additive used to control microbes
2017 Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	90th Percentile Value*	Number of Samples Above AL	Typical Source of Contaminant	
Lead (ppb)	15	0	0.0	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits	
Copper (ppm)	1.3	1.3	0.2	0	Corrosion of household plumbing systems; Erosion of natural deposits	
*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.						
2018 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	
0.17 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.						
Regulated Contaminant	Treatment Technique 2018					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 TOC removal requirement					Erosion of natural deposits
Radionuclides 2014						
Regulated contaminant	Test date	Health Goal MCLG	Allowed Level	Detected Level	Violation Yes / No	Major sources in Drinking water
Combined Radium 226 and 228 (pCi/L)	5-13-14	0	5	0.86 + or -0.55	NO	Erosion of natural deposits

2018 Additional Monitoring— Stage 4				
Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps the U.S. EPA determine where certain contaminants occur and whether regulation of those contaminants is needed.				
Unregulated Contaminant Name	Minimum Reporting Level	Average Level Detected	Range	Comments
Monochloroacetic Acid (ug/L)	2.00	2.97	<2.00 –8.48	Results of monitoring are available upon request
Monobromoacetic Acid (ug/L)	0.300	<0.300	<0.300	
Dichloroacetic acid [2C] (ug/L)	0.200	6.572	4.64 - 8.94	
Trichloroacetic acid (ug/L)	0.500	7.047	5.75 - 8.82	
Bromochloroacetic acid (ug/L)	0.300	2.955	2.49 - 3.41	
Dibromoacetic acid (ug/L)	0.300	0.760	0.678 - 0.869	
Bromodichloroacetic acid [2C] (ug/L)	0.500	4.170	4.11 - 4.21	
Chlorodibromoacetic acid [2C] (ug/L)	0.300	0.861	0.752 - 0.967	
Tribromoacetic acid (ug/L)	2.00	<2.00	<2.00	
Surrogate: 2-Bromobutanoic acid % Rec	Limit: 70-130	105	104 - 107	
Surrogate: 2-Bromobutanoic acid [2C] % Rec	Limit: 70-130	100	95.5 - 107	
Unregulated Contaminant Name	Minimum Reporting Level	Result	Comments	
Germanium (ug/L)	0.300	<0.300	Results of monitoring are available upon request	
Manganese (ug/L)	0.400	<0.400		
BHA (ug/L)	0.0300	<0.0300		
o-Toluidine (ug/L)	0.00700	<0.00700		
Quinoline (ug/L)	0.0200	<0.0200		
Surrogate: Quinoline-d7 (% Rec)	Limit: 70-130	86.3		
Surrogate: o-Toluidine-d9 (% Rec)	Limit: 70-130	72.7		
1-Butanol (ug/L)	2.00	<2.00		
2-Methoxyethanol (ug/L)	0.400	<0.400		
2-Propen-1-ol (ug/L)	0.500	<0.500		
Surrogate: 1-Butanol-d10 (% Rec)	Limit: 70-130	85.8		
alpha-BHC (alpha-Hexachlorocyclohexane) (ug/L)	0.010	<0.010		
Chlorpyrifos (ug/L)	0.030	<0.030		
Dimethipin (ug/L)	0.200	<0.200		
Ethoprop (ug/L)	0.030	<0.030		
Oxyfluorfen (ug/L)	0.050	<0.050		
Profenofos (ug/L)	0.300	<0.300		
Tebuconazole (ug/L)	0.200	<0.200		
Permethrin (total) (ug/L)	0.040	<0.040		
Tribufos (ug/L)	0.070	<0.070		
Surrogate: Benzo(a)Pyrene-d12 (% Rec)	Limit: 70-130	77.2		
Surrogate: 1,3-Dimethyl-2-nitrobenzene (% Rec)	Limit: 70-130	73		
Surrogate: Triphenyl phosphate (% Rec)	Limit: 70-130	89.2		
2015 Monitoring in Distribution System Stage 3				
Unregulated Contaminant Name	Highest RAA	Range	Comments	
Strontium (ppb)	97.6	97.2 - 97.6	Results of monitoring are available upon request	
Chromium (ppb)	0.25	0.2 - 0.25		

Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
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	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRL	Minimum Reporting Level	The minimum concentration that may be reported by a laboratory as a quantified value for a method analyte following analysis. The MRLs were established based on the capability of the analytical method, not based on a level established as "significant" or "harmful."
N/A	Not applicable	
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	The average of analytical results for all samples during the previous four quarters.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.

Required Language 2018

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 at (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 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.

Warning about the vulnerability of some populations to contaminants in drinking water

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immunocompromised 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).

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. Charter Township of Washington 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>.