

## 2019 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 #22 March 2020

Available online at: [www.WashingtonTownship.org/CCR](http://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 Washington Township Department of Public Works (586) 786-0010 ext 2002.

### Warning about the vulnerability of some populations to contaminants in drinking water. (§151.154(a)).

"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)."



Washington Township DPW (586) 786-0010 ext 2002

VISIT OUR WEBSITE

[www.WashingtonTownship.org](http://www.WashingtonTownship.org)

Current water and sewer rates - Summer watering restrictions

Cross Connections - View and pay your water bill

**Become part of our annual water testing program**

| 2019 Regulated Detected Contaminants Tables  |   |       |  |                      |                        |                              |                    |   |
|--|---|-------|--|----------------------|------------------------|------------------------------|--------------------|---|
| 2019 Inorganic Chemicals – Monitoring at the Plant Finished Water Tap  |   |       |  |                      |                        |                              |                    |   |
| Regulated Contaminant  | Test Date   | Unit  | Health Goal or MCLG  | Allowed Level of MCL | Highest Level Detected | Range of Detection           | Violation Yes/No   | Typical Source of Contaminant   |
| Fluoride   | 6-11-19   | ppm   | 4  | 4                    | 0.61                   | N/A                          | NO                 | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate  | 6-11-19   | ppm   | 10   | 10                   | 0.46                   | N/A                          | NO                 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                                 |
| Barium   | 5-16-17   | ppm   | 2  | 2                    | 0.1                    | N/A                          | NO                 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                  |
| 2019 Disinfection By-Products – Monitoring in Distribution System, Stage 2 Disinfection By-Products  |   |       |  |                      |                        |                              |                    |   |
| Regulated Contaminant  | Test Date   | Unit  | Health Goal MCL  | Allowed Level MCL    | Highest LRAA           | Range of Detection           | Violation Yes/No   | Major Sources in Drinking water   |
| Total Trihalo-methanes TTHM  | 2019  | ppb   | N/A  | 80                   | 30                     | 16-30                        | NO                 | By-product of drinking water chlorination   |
| Haloacetic Acids HAA5  | 2019  | ppb   | N/A  | 60                   | 25                     | 12-25                        | NO                 | By-product of drinking water disinfection   |
| Regulated Contaminant  | Test Date   | Unit  | Health Goal MCL  | Allowed Level MCL    | Highest LRAA           | Quarterly Range of Detection | Violation Yes/No   | Major Sources in Drinking water   |
| Total Chlorine Residual  | Jan-Dec 2019  | ppm   | 4  | 4                    | 0.84                   | 0.65 - 0.92                  | 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   |
| 0.14 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  |   |       |  |                      |                        |                              |                    |   |
| Regulated Contaminant  | Test Date   | Unit  | Health Goal MCL  | Action Level AL      | 90th Percentile Value* | Number of Samples over AL    | Violation Yes/No   | Major Sources in Drinking water   |
| Lead   | 2019  | ppb   | 0  | 15                   | 2.58                   | 1                            | NO                 | Corrosion of household plumbing system; Erosion of natural deposits   |
| Copper   | 2019  | ppm   | 1.3  | 1.3                  | 0.112                  | 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 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 TOC removal requirement |       |  |                      |                        |                              |                    | Erosion of natural deposits   |
| Radionuclides 2014   |   |       |  |                      |                        |                              |                    |   |
| Regulated contaminant  | Test date   | Unit  | Health Goal MCLG   | Allowed Level        | Detected Level         |                              | Violation Yes / No | Major sources in Drinking water   |
| Combined Radium 226 and 228  | 5-13-14   | pCi/L | 0  | 5                    | 0.86 + or -0.55        |                              | NO                 | Erosion of natural deposits   |
| Contaminant  | MCLG  |       | MCL  | Level Detected 2019  |                        | Source of Contamination      |                    |   |
| Sodium (ppm)   | N/A   |       | N/A  | 4.74                 |                        | Erosion of natural deposits  |                    |   |
| These tables are based on tests conducted by GLWA and Washington Township 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. Test results older than a year present the most recent testing done in accordance with drinking water regulations. |   |       |  |                      |                        |                              |                    |   |

**Unregulated Detected Contaminants Tables**

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.

This table includes Washington Township’s detected unregulated contaminant results which must be reported annually for five years. Results of monitoring are available upon request.

**2019 Additional Monitoring—Stage 4**

| Unregulated Contaminant Name                   | Minimum Reporting Level | Average Level Detected | Range       |
|--|-------------------------|------------------------|-------------|
| Monochloroacetic Acid [2C] (ug/L)              | 2.00                    | 4.96                   | <2.00 –5.15 |
| Monobromoacetic Acid (ug/L)                    | 0.300                   | 0.46                   | 0.44 - 0.49 |
| Dichloroacetic acid [2C] (ug/L)                | 0.200                   | 6.21                   | 4.39 - 8.03 |
| Trichloroacetic acid (ug/L)                    | 0.500                   | 6.82                   | 5.42 - 8.23 |
| Bromochloroacetic acid (ug/L)                  | 0.300                   | 2.74                   | 2.35 - 3.17 |
| Dibromoacetic acid (ug/L)                      | 0.300                   | 0.59                   | 0.54 - 0.66 |
| Bromodichloroacetic acid [2C] (ug/L)           | 0.500                   | 4.33                   | 4.28 - 4.45 |
| Chlorodibromoacetic acid [2C] (ug/L)           | 0.300                   | 0.91                   | 0.86 - 0.96 |
| Tribromoacetic acid (ug/L)                     | 2.00                    | <2.00                  | <2.00       |
| Surrogate: 2-Bromobutanoic acid % Rec          | Limit: 70-130           | 99.87                  | 97.1 - 102  |
| Surrogate: 2-Bromobutanoic acid [2C] % Rec     | Limit: 70-130           | 99.97                  | 96.8 - 103  |
| Quinoline (ug/L)                               | 0.0200                  | <0.0200                | <0.0200     |
| Surrogate: Quinoline-d7 (% Rec)                | Limit: 70-130           | 84.55                  | 77.7 - 91.4 |
| Surrogate: o-Toluidine-d9 (% Rec)              | Limit: 70-130           | 73.35                  | 71.9 - 74.8 |
| 2-Propen-1-ol (ug/L)                           | 0.500                   | <0.500                 | <0.500      |
| Surrogate: 1-Butanol-d10 (% Rec)               | Limit: 70-130           | 87.25                  | 83.6 - 90.9 |
| alpha-BHC (alpha-Hexachlorocyclohexane) (ug/L) | 0.010                   | <0.010                 | <0.010      |
| Tribufos (ug/L)                                | 0.067                   | <0.067                 | <0.067      |
| Surrogate: Benzo(a)Pyrene-d12 (% Rec)          | Limit: 70-130           | 84.4                   | 80.1 - 88.7 |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene (% Rec) | Limit: 70-130           | 72.55                  | 70.1 - 75   |
| Surrogate: Triphenyl phosphate (% Rec)         | Limit: 70-130           | 121.5                  | 121 - 122   |

**2018 Additional Monitoring—Stage 4**

| Unregulated Contaminant Name                   | Minimum Reporting Level | Average Level Detected | Range         |
|--|-------------------------|------------------------|---------------|
| Monochloroacetic Acid (ug/L)                   | 2.00                    | 2.97                   | <2.00 –8.48   |
| 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    |
| Quinoline (ug/L)                               | 0.0200                  | <0.0200                | <0.0200       |
| Surrogate: Quinoline-d7 (% Rec)                | Limit: 70-130           | 86.3                   | 86.3          |
| Surrogate: o-Toluidine-d9 (% Rec)              | Limit: 70-130           | 72.7                   | 72.7          |
| 2-Propen-1-ol (ug/L)                           | 0.500                   | <0.500                 | <0.500        |
| Surrogate: 1-Butanol-d10 (% Rec)               | Limit: 70-130           | 85.8                   | 85.8          |
| Tribufos (ug/L)                                | 0.070                   | <0.070                 | <0.070        |
| Surrogate: Benzo(a)Pyrene-d12 (% Rec)          | Limit: 70-130           | 77.2                   | 77.2          |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene (% Rec) | Limit: 70-130           | 73                     | 73            |
| Surrogate: Triphenyl phosphate (% Rec)         | Limit: 70-130           | 89.2                   | 89.2          |

**2015 Monitoring in Distribution System Stage 3**

| Unregulated Contaminant Name | Highest RAA | Range       |
|------------------------------|-------------|-------------|
| Strontium (ppb)              | 97.6        | 97.2 - 97.6 |
| Chromium (ppb)               | 0.25        | 0.2 - 0.25  |

| DEFINITIONS |  |   |
|-------------|--|---|
| Symbol      | Abbreviation                             | Definition/Explanation  |
| <           |  | Less than   |
| AL          | Action Level                             | The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.   |
| 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 a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.  |
| 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.  |
| 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.<br>A microgram = 1/1000 milligram.   |
| ppm         | Parts Per Million (one in one million)   | The ppm is equivalent to milligrams per liter.<br>A milligram = 1/1000 gram.  |
| RAA         | Running Annual Average                   | The average of analytical results for all samples during the previous four quarters.  |
| TT          | Treatment Technique                      | A required process intended to reduce the level of a contaminant in drinking water  |

## Required Language 2019

"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."

## 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. Washington 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>.