



Fruitport Township

Annual Water Quality Report 2021



System Overview

The Muskegon Water Filtration Plant is a conventional drinking water treatment plant with a treatment capacity of 40 million gallons per day. Our customers include the City of Muskegon, Fruitport Township, Muskegon County Northside, Muskegon Township, the City of North Muskegon, the City of Norton Shores, and the City of Roosevelt Park.

Our water source is surface water from Lake Michigan. The state performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tiered scale from very low to high based primarily on geologic sensitivity, water chemistry, and contaminant sources. The susceptibility of our source water is moderately high.

**The Muskegon
Water Filtration
Plant treated
over 4 BILLION
gallons of water
in 2021.**

Water Quality Exceeds Mark!

We are pleased to report that the water we treat has never had a violation of a contaminant level or of any other water quality standard.

This report contains a summary of the quality of the water provided to you during 2021 and details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. The personnel of the Muskegon Water Filtration Plant are committed to providing you with a safe and reliable water supply. Informed customers are our best allies in maintaining safe drinking water.

Our state-certified laboratory runs over 8,000 tests a year, including collecting water samples at various stages of the treatment process as well as throughout the distribution system. These samples are analyzed for many different chemical and microbiological parameters.

Our sophisticated laboratory equipment can detect substances at very minute levels. 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 our water poses a health risk. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 1-800-426-4791.



Get Involved! CUSTOMER VIEWS WELCOME!

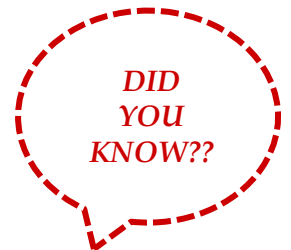
Meetings that deal with decisions about our source water are conducted through the Muskegon Conservation District at (231) 773-0008.

Consult our website at www.fruitporttownship-mi.gov or contact Steve Biesiada, Fruitport Township Utilities Director at (231) 868-3158.

For further information, see U.S. Environmental Protection Agency (EPA) water information at www.epa.gov/safewater.

Vulnerability of Sub-populations

Some people may be more vulnerable to contaminants in drinking water than 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 (1-800-426-4791).



FOUR gallons of water cost about one penny, delivered to you 24 hours a day, seven days a week!

Fruitport Township Treated Water Quality Chart

The table below lists all the drinking water contaminants that we detected in 2021. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2021. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All the data is representative of the water quality, but some are more than one year old.

Regulated at the Treatment Plant

| Substance | MCL | MCLG | Level Detected | Range | Year | Violation | Typical Source |
|-----------------------------------|--------|------|----------------------------|----------------|------|-----------|---------------------------------------------------------------------------------------------------------------------------|
| Barium (ppm) | 2 | 2 | 0.02 | N/A | 2017 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride (ppm) ¹ | 4.0 | 4.0 | 0.75 | 0.68-0.81 | 2021 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate (ppm) | 10 | 10 | 0.52 | 0.24-0.52 | 2021 | No | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| PFOS (ppt) ¹ | 16 | N/A | 2.2 | 2.0-2.5 | 2021 | No | Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial waste |
| Total Organic Carbon ¹ | TT | N/A | 23% removal (23% required) | 11-32% removal | 2021 | No | Naturally present in the environment |
| Turbidity (ntu) ² | 1 (TT) | N/A | 0.06 | N/A | 2021 | No | Soil runoff |

¹The level detected for this substance is reported as the maximum running annual average (RAA).

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity must also be ≤0.3 ntu for ≥95% of measurements each month. 100% of the samples were ≤0.3 ntu each month.

Regulated in the Distribution System

| Substance | MRDL or MCL | MRDLG or MCLG | Level Detected | Range | Year | Violation | Typical Source |
|-------------------------------------|-----------------------|---------------|--------------------|-----------|------|-----------|------------------------------------------|
| Chlorine (ppm) ³ | 4.0 | 4 | .82 | .05-1.54 | 2021 | No | Water additive used to control microbes |
| Trihalomethanes (ppb) ³ | 80 | N/A | 43.3 | 29.0-51.5 | 2021 | No | Byproduct of drinking water disinfection |
| Haloacetic acids (ppb) ³ | 60 | N/A | 24.6 | 14.3-31.3 | 2021 | No | Byproduct of drinking water disinfection |
| <i>E. coli</i> | See note ⁴ | 0 | 0 positive samples | N/A | 2021 | No | Human or animal fecal waste |

³The level detected for this substance is reported as the maximum running annual average (RAA).

⁴*E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) the supply fails to analyze total coliform-positive repeat sample for *E. coli*.

Regulated at the Customer's Tap

| Substance | AL | MCLG | Level Detected ⁵ | Range | Year | Samples Above AL | Typical Source |
|--------------|-----|------|-----------------------------|------------|------|------------------|------------------------------------------------------------------------------------------------------------------|
| Lead (ppb) | 15 | 0 | 2.17 | <0.1– 17.1 | 2019 | 0 | Lead service lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits |
| Copper (ppm) | 1.3 | 1.3 | .0877 | .0136-1.23 | 2019 | 0 | Corrosion of household plumbing systems; erosion of natural deposits |

⁵One of the 21 sites tested exceeded the action level (AL) for lead. ZERO of the 21 sites tested exceeded the action level (AL) for copper. **Tested June 2019.**

Our water supply has zero lead service lines out of a total of 4,280 service lines.

Microbiological Contaminants

| Substance | MCL | MCLG | Level Detected | Range | Year | Violation | Typical Source |
|-----------------------------|-----|------|--------------------|-------|------|-----------|--------------------------------------|
| Total Coliform ⁶ | TT | N/A | 2 positive samples | N/A | 2021 | No | Naturally present in the environment |

⁶During the past year we were required to conduct 1 Level 1 Assessment. 1 Level 1 Assessment was completed. In addition, we were required to take 1 corrective action and we completed 1 of these actions. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in the water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments.

Additional Monitoring

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.

| Substance | Level Detected | Range | Year | Typical Source |
|-----------------|----------------|---------|------|--------------------------------------|
| Calcium | 38 | 35-44 | 2021 | Naturally present in the environment |
| Magnesium (ppm) | 13 | 12-15 | 2021 | Naturally present in the environment |
| Hardness (ppm) | 148 | 140-170 | 2021 | Naturally present in the environment |
| Sodium (ppm) | 12 | 10-15 | 2021 | Naturally present in the environment |
| Sulfate (ppm) | 34 | 30-37 | 2021 | Naturally present in the environment |

Drinking Water Contaminants

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 EPA's Safe drinking Water Hotline (1-800-426-4791).

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:

- 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 organic chemicals, 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.

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. 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. The City of Muskegon 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Terms and Abbreviations

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): 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.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

N/A: Not applicable

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter

ppb: parts per billion or micrograms per liter

ppt: parts per trillion or nanograms per liter

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

ntu: nephelometric turbidity units