

Pere Marquette Township 2021 Annual Water Quality Report

For our Purchased Water System (The portion of our township supplied with water purchased from The City of Ludington)

We are pleased to present this year's Annual Water Quality Report to our valued customers. This report, as required by the United States Environmental Protection Agency (EPA) under the Safe Drinking Water Act re-authorization, is designed to inform the consumer about where your water comes from, what it contains and how it compares to standards set forth by regulatory agencies. Our constant goal is to provide our customers with a safe and dependable drinking water supply. We continually strive to improve the water treatment process and distribution system. We appreciate the confidence our customers have placed in us and continually value your trust.

WHERE DOES YOUR WATER COME FROM?

Water is drawn through (two) intake structures in Lake Michigan to the water treatment plant. The primary intake is a below bottom infiltration bed about an acre in size and is connected to a 36-inch diameter pipe. The secondary intake is a wood crib style that is attached to a 24-inch diameter pipe and is used to supplement the buried intake capacity.

HOW IS YOUR WATER TREATED?

The Ludington Water Treatment Plant is a conventional treatment plant that uses coagulation, flocculation, sedimentation, and filtration for its treatment. Chlorine bleach is added for disinfection and is carefully monitored throughout the distribution piping system to ensure the

microbial safety of your water. In addition, a low dose of fluoride is also added to your drinking water for the prevention of tooth decay.

DRINKING WATER QUALITY RESULTS

The City of Ludington's licensed water treatment operators routinely monitor for contaminants in your drinking water according to Federal and State laws. Results are gathered through their certified lab, as well as other independent laboratories including the State of Michigan Department of Environment, Great Lakes, & Energy (EGLE) lab. It is important to mention that not all contaminants are tested for every year because the concentrations of these contaminants are not expected to vary significantly from year to year as determined by our State regulatory agency (EGLE). Therefore, tests may be taken quarterly, annually, or every third year depending on the type of test and prior test results. **We are proud of the fact that your drinking water met or surpassed all Federal and State water quality and safety standards for 2021.** However, should there ever be an immediate health threat due to a water contaminant problem or violation we would promptly notify you by the best means possible. We perform numerous tests each day to monitor our source water, various water treatment stages and of course, the tap. The table inside this report represents the substances that were detected in Pere Marquette Township's water for the monitoring period of **January 1st to December 31st, 2021.**

It should be noted that Pere Marquette Charter Township buys only a portion of its water from the City of Ludington.

PUBLIC PARTICIPATION

Interested citizens are welcome to attend the Pere Marquette Township Board meetings to hear more about current projects involving the Township's water system. Meetings are held the second and fourth Tuesday of each month at 6:30 p.m. at the Pere Marquette Township Hall, 1699 South Pere Marquette Highway.

QUESTIONS? COMMENTS?

The Township's utility department is on call around the clock to provide quality water to residents and businesses. If you have any questions or comments, or would like to receive more specific information about Township's water system, please feel free to call Andy Larr, Superintendent of Utilities & Public Works, at 231-845-7640 from 6:00 am to 4:30 pm M-Th.

**For More Information,
Please Contact: Andy Larr
Superintendent of Utilities & Public Works
231-845-7640**

HEALTH & SAFETY INFORMATION

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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 & gas production, mining, or farming; **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, septic systems, and urban or agricultural runoff (i.e., pesticides and herbicides); or **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

To ensure that tap water is safe, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Information for Vulnerable Populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons 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 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).

More information on potential health effects of specific contaminants can be obtained by contacting the EPA's Safe Drinking Water Hotline at 1 (800) 426-4791 or their website at <http://www.epa.gov/safewater/dwhealth.html>.

Lead and Drinking Water: 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. Pere Marquette Charter 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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>.

Distribution system material inventory

Pere Marquette Twp is currently working with residents to identify and replace lead service lines per the EGLE Revised Lead and Copper Rule. We have 141 service lines in this distribution system and 11 of those have been identified as unknown material. Township staff are continuously working to determine the material of these 11 unknown service lines

TERMINOLOGY

Parts per million (ppm) and parts per billion (ppb) - One ppm can be equated to a single penny in \$10,000. One ppb is a single penny in \$10,000,000.

Picocuries per Liter (pCi/L) - A measure of radioactivity.

Maximum Contaminant Level (MCL) - The MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible, using the best available treatment technology. MCL's are set at very stringent levels by the State and Federal government. To understand the possible health effects, a person would have to drink about two liters (quarts) of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the associated health effect.

Maximum Contaminant Level Goal (MCLG) - The MCLG is the level of a contaminant in drinking water below, which there is no known or expected health risk. MCLGs provide a margin of safety.

Maximum Residual Disinfection Level (MRDL) - The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Level Goal (MRDLG) - 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.

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

Nephelometric Turbidity Unit (ntu) - Measurement of water clarity.

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

(NA) - Not Applicable

(ND) - Not Detected at testing limits.

2021 Water Quality Results Table

Regulated Monitoring at the Treatment Plant								
Contaminate	Units	Range Detected	Level Detected	MCL, TT, or MRDL	MCLG	Violations	Year Sampled	Possible Sources of Contaminate
Antimony	ppm	ND	ND	0.006	0.006	No	2021	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	ppm	ND	ND	0.010	0	No	2021	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
Barium	ppm	0.02	0.02	2	2	No	2021	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	ppm	ND	ND	0.004	0.004	No	2021	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	ppm	ND	ND	0.005	0.005	No	2021	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	ppm	ND	ND	0.1	0.1	No	2021	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide	ppm	ND	ND	0.2	0.2	No	2021	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Glyphosate	ppm	ND	ND	0.7	0.7	No	2021	Runoff from herbicide use
Gross Alpha	pCi/L	1.93	1.93	15	0	No	2018	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Mercury	ppm	ND	ND	0.002	0.002	No	2021	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate	ppm	0.31	0.31	10	10	No	2021	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Nitrite	ppm	ND	ND	1	1	No	2021	
Perfluorooctane sulfonic acid (PFOS)	ppt	2.3 - 2.6	2.6	16	NA	No	2021	Fire suppression foam; household products
Radium 226 & 228 (combined)	pCi/L	0.74	0.74	5	0	No	2018	Erosion of natural deposits
Selenium	ppm	ND	ND	0.05	0.05	No	2021	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
SOC	ppt	ND	ND	Multiple	Multiple	No	2021	Industrial discharge, Agricultural chemicals
Thallium	ppm	ND	ND	0.002	0.0005	No	2021	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Total Organic Carbon [2]	ppm	1.4 - 1.6	1.5	TT	NA	No	2021	Naturally present in the environment
Total Xylenes	ppm	ND	ND	10	10	No	2021	Leaks and spills from gasoline and petroleum storage tanks
Turbidity [1]	ntu	0.02 - 0.07	0.02	TT=1	NA	No	2021	Soil run-off, suspended matter in lake water
Regulated Monitoring in the Distribution System								
Contaminate	Units	Range Detected	Level Detected	MCL	MCLG	Violations	Year Sampled	Possible Sources of Contaminate
Fluoride	ppm	0.67 - 0.76	0.72	4	4	No	2021	Water additive which promotes strong teeth
Free Chlorine Residual [4]	ppm	0.83 - 1.64	1.22	MRDL=4	MRDLG=4	No	2021	Used to disinfect drinking water
Haloacetic Acids [3]	ppb	0 - 16.0	16.0	60	0	No	2021	Formed when chlorine is added to water with naturally occurring organic material
Total Trihalomethane [3]	ppb	0 - 36.2	36.2	80	0	No	2021	
Contaminate	Units	Range Detected	90th Percentile	AL	MCLG	Violations	Year Sampled	Possible Sources of Contaminate
Copper [5]	ppm	ND	ND	1.3	1.3	No	2020	Corrosion of household plumbing system
Lead [5]	ppb	ND	ND	15.0	0	No	2020	Corrosion of household plumbing system
Unregulated Monitoring								
Contaminate	Units	Range Detected	Avg. Level Detected	MCL	MCLG	Violations	Year Sampled	Possible Sources of Contaminate
Calcium	ppm	35.0	35.0	NA	NA	No	2021	Erosion of natural deposits
Chloride	ppm	12 - 30	17.3	NA	NA	No	2021	Erosion of natural deposits and run-off
Iron	ppm	ND	ND	NA	NA	No	2021	Erosion of natural deposits
Magnesium	ppm	12.0	12.0	NA	NA	No	2021	Erosion of natural deposits
Nickel	ppm	ND	ND	NA	NA	No	2021	Erosion of natural deposits, household plumbing
Sodium	ppm	9.8	9.8	NA	NA	No	2021	Erosion of natural deposits
Sulfate	ppm	24 - 30	26.6	NA	NA	No	2021	Erosion of natural deposits

Footnotes [x]:

- Turbidity is a measurement of water clarity. We monitor turbidity because it is a good indicator of our filtration process. The turbidity measurements must be less than or equal to 0.3 ntu in 95% of all samples taken each month and shall never exceed 1 ntu at any time.
- The level detected shown for Total Organic Carbon (TOC) is the running annual average calculated quarterly.
- The level detected shown for Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) is the running annual average calculated quarterly.
- The level detected shown for Free Chlorine Residual was calculated using a running annual average.
- Collected from homes that met the EGLE Tier 1 Site criteria (single family residence with lead service line).