

Annual Drinking Water Quality Report for 2021
City of Ishpeming WSSN: 03440
March 4th, 2022

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. The City of Ishpeming purchases drinking water from the Negaunee/Ishpeming Water Authority (NIWA). NIWA uses ground water production wells in the North Carp River Aquifer and the Cooper Lake Road Aquifer as the primary sources of our drinking water. NIWA has six wells in the North Carp River Aquifer and three in the Cooper Lake Road Aquifer. Negaunee/Ishpeming Water Authority (NIWA) treats the water through chemical clarification and filtration for the removal of manganese and iron, and adjusts the pH for lead and copper corrosion control. The water treatment plant is operated by certified treatment plant operators employed by NIWA.

NIWA has a source water protection plan, which provides detailed information on groundwater flow and potential sources of contamination. This plan is available for review at the water treatment plant.

I'm pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact **Brad Wootke, Water Operator in Charge at (906) 485-1091 ext. 235**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of NIWA's regularly scheduled meetings. **They are held on the third Wednesday of the month at 4:00 PM at the water treatment plant's conference room located at 1800 North Road, Ishpeming, Michigan.**

The water treatment plant staff routinely monitors for regulated and unregulated contaminants in your drinking water according to Federal and State laws. Unregulated contaminant sampling for NIWA was completed in 2009. (Unregulated contaminant sampling is only required if the Volatile Organic Compounds (VOC) or Synthetic Organic Compounds (SOC) are present in a sample.) A large facility requirement, mandated by the EPA and the Safe Drinking Water Act. The water quality data gathered through the unregulated sampling requirement is used in the development of future drinking water quality standards. Copies of the unregulated sampling test results are available for review at the water plant.

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 can dissolve naturally-occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

The following table shows the results of our regulated monitoring for the period of January 1st to December 31st, 2021.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Not applicable (N/A)

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/L) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) - 1 ug/L = .001 mg/L
One part per billion corresponds to one minute in 2,000 years or one penny in \$10,000,000

Parts per trillion (ppt) or Nanogram per Liter (ng/L) - 1 ng/L = .000 001 mg/L
One part per trillion corresponds to one minute in 2,000,000 years or one penny in \$10,000,000,000

Parts per quadrillion (ppq) or Picogram per Liter (pg/L) - 1 pg/L = .000 000 001 mg/L
One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000

Picocurie per liter (pCi/L)- is a measure of radioactivity in the water.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 Contaminant Level Goal - The "Goal" (MCLG) is 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.

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

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

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. ·

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.

Regulated Contaminant	Violation Yes/No	Level Detected	MCLG MRDLG	MCL TT MRDL	Year Sampled ¹	Likely Source of Contamination
Total Coliform Bacteria (Total number or % of positive samples/month)	No	ND	0	TT	2021	Naturally present in the environment
Fecal coliform and <i>E.coli</i> ²	No	ND	0	TT	2021	Human and animal fecal waste
Barium (ppb)	No	3	0	200	2018	Erosion of natural deposits
Nitrate (as Nitrogen) (ppb)	No	60	1000	1000	2021	Erosion of natural deposits Fertilizer use, leaching from septic tanks, sewage.
Synthetic Organic Chemicals (SOC) (ppm)	No	ND	0	0.0001-0.5	2019	Fertilizers and pesticides
Fluoride (ppb)	No	65	400	400	2021	Erosion of natural deposits; water additive promotes strong teeth; discharge from fertilizer and aluminum factories
Sodium ³ (ppm)	No	74	N/A	N/A	2021	Special diets may require water of low sodium content; All persons on severely restricted sodium diets should consult with their physician regarding continued use of the water supply
TTHM Total Trihalomethanes (ppb)	No	48.5 Avg. (48-49 Range)	N/A	80	2021	Byproduct of drinking water disinfection.
HAA5 Haloacetic Acids (ppb)	No	29Avg. (28-30 Range)	N/A	60	2021	Byproduct of drinking water disinfection.
Per- and Polyfluoroalkyl Substance (PFAS)						
Hexafluoropropylene Oxide Dimer Acid (HFPO_DA) (ppt)	No	ND	0	370	2021	Discharge and Waste from Industrial Facilities Utilizing the Gen X Chemical Process

Regulated Contaminant	Violation Yes/No	Level Detected	MCLG MRDLG	MCL TT MRDL	Year Sampled ¹	Likely Source of Contamination
Perfluorobutane Sulfonic Acid (PFBS) (ppt)	No	ND	0	420	2021	Discharge and Waste from Industrial Facilities; Stain Resistant Treatments
Perfluorohexane Sulfonic Acid (PFHxS) (ppt)	No	ND	0	51	2021	Firefighting Foam; Discharge and Waste from Industrial Facilities
Perfluorohexanoic Acid (PFHxA) (ppt)	No	ND	0	400000	2021	Firefighting Foam; Discharge and Waste from Industrial Facilities
Perfluorononanoic Acid (PFNA) (ppt)	No	ND	0	6	2021	Discharge and Waste from Industrial Facilities; Breakdown of Precursor Compounds
Perfluorooctane Sulfonic Acid (PFOS) (ppt)	No	ND	0	16	2021	Firefighting Foam; Discharge from Electroplating Facilities; Discharge and Waste from Industrial Facilities
Perfluorooctanoic Acid (PFOA) (ppt)	No	ND	0	8	2021	Discharge and Waste from Industrial Facilities; Stain Resistant Treatments
Dioxins⁴						
2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD) (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
1,2,3,7,8 - Pentachlorodibenzo-P-dioxin (PCDD) (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides

Regulated Contaminant	Violation Yes/No	Level Detected	MCLG MRDLG	MCL TT MRDL	Year Sampled ¹	Likely Source of Contamination
Total TCDD (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total PeCDD (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total HxCDD (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total HpCDD (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total TCDF (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total PeCDF (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total HxCDF (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides
Total HpCDF (ppq)	No	ND	0	30	2021	Combustion of fossil fuels and wood; Incineration of municipal and industrial wastes processes; Manufacturing of some herbicides and pesticides

¹ The data presented in the report are from the most recent testing done in accordance with drinking water regulations.

² *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*.

³ Sodium is not a regulated contaminant.

⁴ Dioxin sampling was conducted regarding an updated sampling survey to evaluate whether certain contaminants are emerging as a concern. AECOM conducted sampling

Inorganic Contaminant Subject to ALs	AL	MCLG	Your Water ¹	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	3.2	0.13-26	2021	1	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.66	0.08-0.98	2021	0	Corrosion of household plumbing systems; Erosion of natural deposits

Our water supply has 0 known lead service lines and 2,047 unknown likely does not contain lead out of 2,950 service lines.

*Infants and children who drink water containing lead could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

*Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

¹ Ninety (90) percent of the samples collected were at or below the level reported for our water.

We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water is SAFE at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. 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).

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 discharge, 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 organic chemicals, 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 the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply that meets Federally Mandated Safe Drinking Water Act requirements, we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as a rate structure adjustment.

Some people may be more vulnerable to contaminants in drinking water than the general

population. Immuno-compromised persons such as person with cancer undergoing chemotherapy, persons who have undergone organ transplants, people 8 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).

Contaminants	Susceptible Vulnerable Subpopulation	Level of Concern
Fecal Coliform/E. Coli	Infants, young children, and people with severely compromised immune systems	Confirmed presence (any confirmed detect)
Copper	People with Wilson's Disease	130 ug/L (ppb)
Fluoride	Children	4 mg/L (ppm)
*Lead	Infants and children	15 ug/L (ppb)
Nitrate	Infants below the age of 6 months.	10 mg/L (ppm)
Nitrite	Infants below the age of 6 months	1 mg/L (ppm)
Barium	People with high blood pressure	2 mg/L (ppm)

* 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 Ishpeming 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 or at <http://www.epa.gov/safewater/lead>.

The City of Ishpeming with it's staff of certified water distribution operators work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Individual copies of this report will NOT be mailed. Individual copies may be obtained from Ishpeming City Hall at 100 E. Division Street, Ishpeming, Michigan; 906-485-1091. The Annual Drinking Water Report is also available online at <https://ishpemingcity.org/departments/public-works/>