2018 Water Quality Report for City of Norway

This report covers the drinking water quality for the City of Norway for the calendar year 2018. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

Your water comes from three groundwater production wells located about one mile west of Loretto and .5 mile south of Highway U.S.2. All three wells deliver water to a 24' x 40' pumphouse located on the well field where they then converge to a single 14" transmission main that transports water the distribution system. Before entering the distribution system the water is injected with fluoride at a rate of 1.1 parts per million (ppm). The water is sampled every day of the year.

The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility is moderate for well #1 & #3 and moderately low for #2.

For more information about this report, contact Mr. Dave Bal at the City of Norway Water Department, 400 Tenth Avenue, Norway, MI 49870.

- **Contaminants and their presence in water:** 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 (800-426-4791)**.

- **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 systems 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).

- **Sources of drinking water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 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 and residential uses.
  - **Radioactive contaminants**, which are naturally occurring or be the result of oil and gas production and mining activities.
  - **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.

STATEMENT 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. Norway 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.

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

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2018 calendar year. 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 – December 31, 2018. 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 of the data is representative of the water quality, but some are more than one year old.

Terms and abbreviations used below:

- 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.
- N/A: Not applicable ND: not detectable at testing limit ppb: parts per billion or micrograms per liter ppm: parts per million or milligrams per liter pCi/l: picocuries per liter (a measure of radioactivity).
- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Yes / No	Typical Source of Contaminant
Fluoride (ppm)	4	4	0.04	2018	No	Erosion of natural deposits.
Nitrate (ppm)	10	0	0.28	2018	No	Erosion of natural deposit; leaching from septic tanks; fertilizer runoff.
Radioactive Contaminant						
Alpha emitters (pCi/L)	15	0	0.88	2015	No	Erosion of natural deposits.
Combined Ra226/228 (pCi/L)	5	0	0.07	2015	No	Erosion of natural deposits.

Unregulated Contaminant *	Level Detected	Sample Date	Typical Source of Contaminant
Sodium (ppm)	14	2018	Erosion of natural deposits.

Contaminant Subject to AL	Action Level	90% of Samples ≤ This Level	Sample Date	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	4	9/16	0	Corrosion of household plumbing systems.
Copper (ppb)	1300	160	9/16	0	Corrosion of household plumbing systems.

*Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

We invite public participation in decisions that affect drinking water quality. For more information about your water, or the contents of this report, contact Mr. Dave Bal at the City of Norway Water Department, water@norwaymi.gov. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

Special Sampling	EPA Lifetime Health Advisory (LHA) for PFOA +PFOS Parts Per Trillion (PPT)*	PFOA+PFOS Parts Per Trillion (PPT)	Total Tested PFAS	Sample Date	Typical Source of Contaminant
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)	70	Not Detected	Not Detected	8/22/2018	Fire fighting foam, stain repellants, nonstick cookware, waterproof clothing, food packaging, and other household products.

*The U.S. Environmental Protection Agency (EPA) has set a lifetime health advisory (LHA) level for two PFAS in drinking water: perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). The PFOA and PFOS LHA is the level, or amount, below which no harm is expected from these chemicals. The LHA level is 70 parts per trillion (ppt) for PFOA and PFOS individually or combined. The LHA is protective of everyone, especially pregnant women, young children, and the elderly. Currently the EPA has not set health advisory levels for the other PFAS chemicals.

For more information on PFAS chemicals, please visit the State of Michigan website https://www.michigan.gov/pfasresponse