

# 2018 Greilickville Water Quality Report

This report covers the drinking water quality for the Elmwood Township Greilickville Water System for the calendar year 2018 as well as an update on recent Water Treatment Plant capital improvements. This information is a snapshot of the quality of the water that we provided to you in 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 is surface water and comes from the East arm of Grand Traverse Bay. The State performed an assessment of our source water in 2004. A determination of sensitivity and susceptibility to contamination was made by reviewing our source water geology, intake location, water chemistry, and potential contaminant sources within the source water area. The State has determined that our source water has a moderate geologic sensitivity with a moderate susceptibility to contamination. A copy of this report; [Source Water Assessment Report for the City of Traverse City Water Supply April 2004](#) may be reviewed on the City of Traverse City website [www.traversecitymi.gov](http://www.traversecitymi.gov) or by contacting the Traverse City Utility Accounting Office at the Governmental Center located at 400 Boardman Avenue, Traverse City, MI 49684.

- **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 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).
- **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 Lake Michigan. 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 can be 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.

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 were 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 performed January 1, 2018 to December 31, 2018. The State allows monitoring 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 Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Fluoride (ppm)	4	4	0.83	N/A	2018	No	Erosion of natural deposits. Water additive that promotes strong teeth.
TTHM - Total Trihalomethanes (ppb)	80	N/A	26.6	N/A	2018	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	14	N/A	2018	No	Byproduct of drinking water disinfection
Nitrate (ppm)	10	10	0.23	N/A	2018	No	Runoff from fertilizer use; leaching from septic tanks, sewage
Chlorine (ppm)	<b>MRDL</b>	<b>MRDLG</b>	0.49	0.2-0.7	2018 Weekly	No	Water additive used to control microbes
	4	4					
Special Monitoring and Unregulated Contaminant *			Level Detected	Range	Year Sampled	Typical Source of Contaminant	
Sodium (ppm)			8.2	N/A	2018	Erosion of natural deposits	
Sulfate (ppm)			27	N/A	2018	Erosion of natural deposits	
Chloride			15	N/A	2018	Erosion of natural deposits	
Chromium-6 (ppb)			0.20	N/A	2015	Erosion of natural deposits	
Chromium (ppb)			0.44	N/A	2015	Erosion of natural deposits	
Vanadium (ppb)			0.59	0.53-0.64	2015	Erosion of natural deposits	
Strontium (ppb)			117	116-117	2015	Erosion of natural deposits	
Chlorate (ppm)			0.066	0.065-0.066	2015	Byproduct of drinking water disinfection	
Contaminant Subject to AL	Action Level	MCLG	90% of Samples ≤ This Level **	Range	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0.0	3	ND-3	R1 (Jan-Jun) 2018	0	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	15	0.0	4	ND-8	R2 (Jul-Dec) 2018	0	
Copper (ppm)	1.3	1.3	200	60-280	R1 (Jan-Jun) 2018	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Copper (ppm)	1.3	1.3	90	ND-140	R2 (Jul-Dec) 2018	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

\* 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.

**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 Traverse City Water Plant 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 <http://www.epa.gov/safewater/lead>.

**Terms and abbreviations used in previous table:**

- **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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **N/A:** Not Applicable
- **ppb:** parts per billion or micrograms per liter
- **ppm:** parts per million or milligrams per liter
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Terms and abbreviations used below:**

- **Nephelometric Turbidity Units (NTU):** The measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Samples collected at the Water Plant**

Regulated Substance	MCL/MCLG	Turbidity lowest monthly % of samples meeting limit of 0.3 NTU (minimum of 95%)	Range Detected	Sample Date	Violation Yes / No	Typical Source of Contaminant
Turbidity (NTU)	TT	100%	0.06-0.18	Daily	No	Soil Runoff

Regulated Substance	MCL/MCLG	MCL/MCLG	Violation Yes / No	Typical Source of Contaminant
4-Hour CFE Turbidity (NTU)	TT	Daily-(4) four-hour intervals	No	Soil Runoff

**Water Treatment Plant Capital Improvements:** In 2018, the City completed approximately \$3.43 million in capital improvements to the Water Treatment Plant and Distribution System. These improvements help protect public health, safety and welfare and serves to enhance water reliability. 2018 projects included:

- **Water plant facilities roof repairs:** Approximately \$30,000 in roof repairs were made last year at the water treatment plant and low service station pump.
- **Water treatment plant security gate:** Approximately \$56,000 was invested in phase 1 of a new security gate at the water treatment plant.
- **High and low service pump repairs/upgrades:** provides for the replacement/rewinding of motors and for the installation of variable frequency drives (VFDs) on the pumps. VFDs allow significant energy savings and versatile operation to meet a wider range of flows to meet varying water demands. \$38,000 was invested for a VFD on a high service pump in 2018.
- **Construction of new storage reservoir:** The construction phase began for a new 2 million-gallon water storage reservoir adjacent to the existing Barlow reservoir. This project will provide storage redundancy

and reliability allowing much needed maintenance and repair of the existing Barlow reservoir. The new \$2.7 million reservoir will be completed in 2019.

- **Rehabilitation and replacement of distribution mains:** This provides for continued systemic annual water main rehabilitation and replacement of aging infrastructure. \$500,000 of new 24-inch water main was invested in 2018 for the Lake Avenue Streetscape project and \$110,000 was invested for looping a water main off Woodmere Avenue.

We will update this report annually and will keep you informed of any problems occurring throughout the year, as required. Copies are available at the Department of Public Works located at 2650 LaFranier Road in Traverse City.

We invite public participation in decisions that affect drinking water quality. The Board of Public Works meetings are conducted on the second Thursday of each month at the Garfield Township Hall located at 3848 Veterans Drive, public comment is welcome.

For more information about your water, or the contents of this report, contact John Divozzo/Director of Public Works at (231) 995-6039 or email at [jdivozzo@gandtraverse.org](mailto:jdivozzo@gandtraverse.org). For more information about safe drinking water, visit the U.S. Environmental Protection Agency at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).