

# 2016 Peninsula Township Water Quality Report

This report covers the drinking water quality for the Peninsula Township Water System for the calendar year 2016 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 2016. 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.

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 were detected during the 2016 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, 2016 to December 31, 2016. 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 of 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	0.70	N/A	2016	No	Erosion of natural deposits. Water additive that promotes strong teeth.
TTHM - Total Trihalomethanes (ppb)	80	N/A	30	N/A	2016	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	12	N/A	2016	No	Byproduct of drinking water disinfection
Nitrate (ppm)	10	10	0.3	N/A	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage
Chlorine (ppm)	MRDL	MRDLG	0.5	0.2 – 0.8	2016 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)			11.2	N/A	2016	Erosion of natural deposits	
Sulfate (ppm)			27	N/A	2016	Erosion of natural deposits	
Chromium-6 (ppb)			0.27	0.21 – 0.27	2014	Erosion of natural deposits	
Chromium (ppb)			0.51	0.46 – 0.51	2014	Erosion of natural deposits	
Vanadium (ppb)			0.57	0.49 – 0.57	2014	Erosion of natural deposits	
Molybdenum (ppb)			1.0	<1.0 – 1.0	2014	Erosion of natural deposits	
Strontium (ppb)			124	117 – 124	2014	Erosion of natural deposits	
Chlorate (ppb)			113	111 – 113	2014	Byproduct of drinking water disinfection	
Contaminant Subject to AL	Action Level	MCLG	90% of Samples ≤ This Level **		Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0.0	0.0		Summer 2014	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.152		Summer 2014	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.

\*\* Comprehensive results of the Regional Traverse City calculated from combined results of the City of Traverse City, Peninsula, Elmwood and Garfield Townships since the City of Traverse City Water Treatment Plant supplies water to all sampled sites.

**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	Limit	Range Detected	Sample Date	Violation Yes / No	Typical Source of Contaminant
Turbidity (NTU)	TT	≤ 0.1***	0.04 - 0.07	Daily	No	Soil Runoff
Turbidity lowest monthly percentage of samples meeting limit	TT	N/A	100%	Daily	No	Soil Runoff

\*\*\* 95% of samples less than or equal to this level

**Monitoring and Reporting Requirements:** The State and EPA require us to test our water on a regular basis to ensure health safety. We met all the monitoring and reporting requirements for 2016.

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@grandtraverse.org](mailto:jdivozzo@grandtraverse.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/).

**Water Treatment Plant Capital Improvements:** In 2016, the City completed approximately \$1.2 million in capital improvements at the Water Treatment Plant to further protect public health, safety and welfare and also enhance water treatment reliability. These projects included completing the Water Plant Monitoring and Controls Improvement Project, replacing two (2) Flocculation Tank mixing units with new motors and variable frequency drives, and replacing the second pump in the wash water lagoon discharge system.

The Water Plant Monitoring and Controls Improvement Project replaced original (1965) equipment including rate of flow control valves on the three (3) of the five (5) filters, the pressure relief valve (PRV) on the filter back wash pump, high service PRV and related piping as well as replacing the incoming raw water master meter and two (2) finished water master meters. The new water meters provide more accurate baseline flow data leaving the plant. This project also modernized the water plant control and monitoring system by installing a state of the art Supervisory Control and Data Acquisition (SCADA) system and overall greatly increased the reliability of operations and communications between the water plant, two booster pump stations and the two City water storage reservoirs.

The design phase began for a new 2 million gallon water storage reservoir adjacent to the existing Barlow reservoir by an engineering consultant. This project will provide storage redundancy and reliability allowing much needed maintenance and repair of the existing Barlow reservoir. The new 2 million gallon reservoir is scheduled to be completed in late 2017 or early 2018.

Another completed maintenance project included the underwater inspection and cleaning of the raw water intake crib structure.

# LEAD AND COPPER RULE TIER SCHEDULE (141.86)

## General Notes

**For any water system with lead service lines (LSL):** 50% of the samples must be from taps served by lead service lines (LSL), and 50% from sites with lead pipe (LP) or copper piping with lead solder (CLS). The highest Tier sites must be used first for example, only after a system has exhausted Tier 1 sites may it complete its sampling pool with Tier 2 sites. Additionally systems with insufficient higher Tier sites must complete its sampling pool with "other" representative sites throughout the distribution system. A representative site is a site in which the plumbing materials used at the site would be commonly found at other sites served by the water system.

## Community Water Systems (CWS)

**Tier 1:** Single Family Structures that have any of the following:

- Copper w/lead solder (CLS) constructed after 1982 ( constructed between 1983-1988)\*;
- lead pipes including lead goosenecks or pigtails (LP);
- or lead service lines (LSL).

Only after a PWS has exhausted Tier 1 sites may it complete its sampling pool with Tier 2 sites.

**Tier 2:** All types of buildings, including multiple family structures that have any of the following:

- Copper w/lead solder (CLS) constructed after 1982 ( constructed between 1983-1988)\*;
- lead pipes including lead goosenecks or pigtails (LP);
- or lead service lines (LSL).

Only after a PWS has exhausted Tier 1 and Tier 2 sites may it complete its sampling pool with Tier 3 sites.

**Tier 3:** Single Family Structures that have:

- Copper w/lead solder (CLS) constructed before 1983.

Only after a PWS has exhausted Tier 1, Tier 2, and Tier 3 sites may it complete its sampling pool with other sites that are representative of the distribution system.

**Tier "Other":**

- All other structures where plumbing material is commonly found in the distribution system. Encourage sites with copper plumbing installed after 1988.

## Non-Transient Non-Community Water Systems (NTNC)

**Tier 1:** Buildings that have any of the following:

- Copper w/lead solder (CLS) constructed after 1982 ( constructed between 1983-1988)\*;
- lead pipes including lead goosenecks or pigtails (LP);
- or lead service lines (LSL).

**Tier 2:** Buildings that have:

- Copper w/lead solder (CLS) constructed before 1983.

Only after a PWS has exhausted Tier 1 and Tier 2 sites may it complete its sampling pool with other sites that are representative of the distribution system.

## LEAD AND COPPER RULE TIER SCHEDULE (141.86)

**Tier "Other":**

- All other structures, where plumbing material is commonly found in the distribution system. Encourage sites with copper plumbing, installed after 1988.

**Note:** Construction dates of homes and buildings can be verified by searching the address, real estate sites will list the age of the house.

\* Section 141.86 of the LCR gives a construction date of "after 1982", guidance from EPA Region 8 is between 1983 and 1988. In 1988 rules for lead solder were changed requiring less lead in lead solder, and plumbing fixtures not "lead-free" were banned from sale. Thus it is unlikely that those systems will contribute to lead exposure. Accordingly, Region 8 has adjusted the dates in keeping with the spirit of the rule which aims to capture those structures with the highest possibility of lead exposure to citizens.

<b>Table 1-3 Tier Structure</b>	
<b>If you are a CWS</b>	<b>If you are a NTNCWS</b>
<p><b>Tier 1</b> sampling sites are single family structures:</p> <ul style="list-style-type: none"> <li>• with copper pipes with lead solder installed between 1983 and 1988, or</li> <li>• contain lead pipes; and/or</li> <li>• served by a lead service line.</li> </ul> <p>(Note: If multiple-family residences comprise at least 20% of the structures served by a water system, they can be counted as Tier 1 sites)</p> <p><b>Tier 2</b> sampling sites consist of buildings (i.e. apartment buildings, schools, hospitals):</p> <ul style="list-style-type: none"> <li>• with copper pipes with lead solder installed between 1983 and 1988, or</li> <li>• contain lead pipes; and/or</li> <li>• served by a lead service line.</li> </ul> <p><b>Tier 3</b> sampling sites are single family structures with copper pipes having lead solder installed before 1983.</p>	<p><b>Tier 1</b> sampling sites consist of buildings:</p> <ul style="list-style-type: none"> <li>• with copper pipes with lead solder installed between 1983 and 1988, or</li> <li>• contain lead pipes; and/or</li> <li>• served by a lead service line.</li> </ul> <p><b>Tier 2</b> sampling sites consist of buildings with copper pipes with lead solder installed before 1983. If additional sites are needed the system shall use representative sites throughout the distribution system. A representative site is a site in which the plumbing materials used at the site would be commonly found at other sites served by the water system.</p> <p>A non-transient noncommunity public water system with insufficient Tier 1 and Tier 2 sites must complete its sampling pool with "other" representative sites throughout the distribution system. A representative site is a site in which the plumbing materials used at the site would be commonly found at other sites served by the water system.</p>
<p><b>Note:</b> The use of Lead solder was banned in all homes and buildings connected to a public water system in June 1988</p>	

## DRINKING WATER LEAD AND COPPER SAMPLING INSTRUCTIONS

Dear Resident:

Thank you for helping to monitor for lead and copper in your drinking water. This sampling is required by the federal and state Safe Drinking Water Acts, and is being accomplished with the cooperation of homeowners, residents, and water system customers.

It is important that you follow these instructions so we obtain an accurate measurement of the lead and copper in your drinking water. This sample should represent the water you would typically drink and the faucet from where you drink the water. Call your water supplier if you have questions.

1. Water must sit idle in the pipes for an extended length of time before sampling. Therefore, do not use any water in the house for at least 6 hours before sampling. The best times to sample are early morning or after returning from work.
2. Select an unfiltered/untreated faucet in the **KITCHEN** or **BATHROOM** that is commonly used for drinking. **DO NOT** sample from a laundry sink or a hose spigot as these samples cannot be used for compliance. **DO NOT** use a faucet that has a filter attached to it unless you bypass the filter. **DO NOT** use a faucet that is connected to a home water treatment device (like a water softener, iron filter, reverse osmosis) unless you bypass the home water treatment device.
3. Place the open sample bottle below the faucet and gently open the **COLD** water tap. If you have a single handle faucet, turn it fully to the **COLD** side. Fill the sample bottle to the neck with the "first draw" of **COLD** water.
4. Tightly cap the sample bottle and place in the sample kit provided. Review the sample kit label to ensure all information contained on the label is complete and correct.
5. Answer the questions on the back of this form and sign the form.
6. Attach this form to the bottle and leave it outside your front door for pick-up.
7. Thank you again for your help. We will send you your individual results within 30 days of receiving them from the laboratory. A summary of information on this year's lead and copper monitoring will be printed in the annual water quality report that will be made available by July 1 of next year. Contact your water supplier if you have questions.

If you have questions, please call:

Grand Traverse County DPW

DPW Contact: Jacob Paddock; Lead Operator

Phone: (231) 590-2659

Or Contact:

Michigan Department of Environmental Quality

DEQ Contact: Amy Vail; Analyst

Phone: (231) 876-4481

**TO BE COMPLETED BY RESIDENT/CUSTOMER**

A. Which faucet did you use to fill the bottle?

Kitchen     Main bathroom     Other

If OTHER, please describe: \_\_\_\_\_  
\_\_\_\_\_

B. When was the faucet last used before sampling?

DATE \_\_\_\_\_ TIME \_\_\_\_\_ AM/PM

C. When did you fill the bottle?

DATE \_\_\_\_\_ TIME \_\_\_\_\_ AM/PM

D. Is there a faucet mount filter?     YES     NO

If YES, was it bypassed?     YES     NO

E. Is this faucet connected to a home treatment device such as a water softener, a filter, a reverse osmosis unit, an iron removal device OR any other kind of treatment?

YES     NO

If YES, please describe: \_\_\_\_\_  
\_\_\_\_\_

F. If any plumbing repairs or replacement has been done in the home since the previous sampling event, please note this information here:

If YES, please describe: \_\_\_\_\_  
\_\_\_\_\_

I have read the Drinking Water Lead and Copper Sampling Instructions and have taken a tap sample in accordance with these directions.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date