

# WATER QUALITY REPORT FOR - City of Petoskey (Posted October 1999)

This report covers the drinking water quality for City of Petoskey for the calendar year 1998. This information is a snapshot of the quality of the water that the city provided to you in 1998. Included are details about where the city's water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

The Michigan Department of Environmental Quality will be performing an assessment of the city's source water by 2003. The city will inform you on how to get a copy of the assessment report when it becomes available.

- **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 **U.S. 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. U.S. 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. The City of Petoskey's 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 storm water 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.
- **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.

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



## Water System Information

The City of Petoskey's water comes from five groundwater wells located within the City limits. At any given time, four wells are ready to serve; the fifth well is used in the event of an emergency only. The four regularly used wells range in depth from 258 to 405 feet in depth. Water is stored in two above ground towers and one under ground storage tank. The operation of the water system is computerized. The water system is monitored with an alarm system notifying the city's department of public work staff of any potential problems before our consumers are inconvenienced. The city goal is to provide a safe dependable supply of drinking water. The City of Petoskey performs all water quality testing that is required by the Federal Government and State of Michigan.

## Water Quality Data

The table below lists all the drinking water contaminants that the city staff detected during the 1998 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, 1998. The State allows the city 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. Not listed are the hundreds of other contaminants for which were tested for, and were not detected. Neither herbicides nor pesticides were detected in the drinking water.

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

Water Data

Parameter	Violation	Level Detected	Unit of Measurement	MCL	MCLG	Source
Location	Yes/No		Detection Level	Unit		
Alkalinity (as CaCo3)						Naturally present
Well #1	No	140	mg/L	---		
Well #2	No	200	20 mg/L	mg/L		
Well #3	No	240				
Well #4	No	220				
Well #5	No	210				

Hardness (as CaCo3)						Naturally present
Well #1	No	170	mg/L	---		
Well #3	No	290	2.0 mg/L	mg/L		
Well #4	No	210				
Well #5	No	270				
pH						
Well #1	No	7.5	SU	6.5-8.5		
Well #2	Yes	5.5		SU		
Well #3	No	7.5				
Well #4	No	7.2				
Well #5	No	7.2				
Total Dissolved Solids						
Well #1	No	200	mg/L	mg/L		
Well #2	No	300	500 mg/L			
Well #3	No	340				
Well #4	No	250				
Well #5	No	300				

Turbidity						Soil runoff
Well #1	No	0.2	NTU	1.0		
Well #2	No	0.5	0.1 NTU	NTU		
Well #3	Yes	32				
Well #4	Yes	3.8				
Well # 5	No	0.3				
Color						
Well #1	No	2	3.0	15		
Well #3	Yes	25				
Well #4	No	10				
Corrosively				LI		
Well #1	No	-0.11				
Well #2	No	-1.8				
Well #3	No	0.32				
Well #4	No	-0.18				
Well #5	No	-0.07				
Chloride						Salt, naturally present
Well #1	No	9.6	mg/L	250		
Well #2	No	28	1.0 mg/L	mg/L		
Well #3	No	5.7				
Well #4	No	1.7				
Well #5	No	6.9				

Sulfate			mg/L	250		Naturally present
Well #1	No	22	5.0 mg/L	mg/L		
Well #2	No	22				
Well #3	No	55				
Well #4	No	14				
Well #5	No	52				
Fluoride						Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories
Well #1	No	.06		4	4	
Well #2	No	1.3	mg/L			
Well #3	No	1.4				
Well #5	No	1.6				
Barium						Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Well #3	No	.170	mg/L	2	2	
Well #5	No	.016				
Gross alpha		6.0(Alpha emitters)				Decay of natural and man-made deposits. Erosion of natural deposits
Well #2	No	6.0(Beta/photon emitters)	pCi/1	0	15	
Well #3	No		pCi/1	4.0	50	

- \* Indicates either the MCL (Maximum Contaminant Level) or an established guideline has been exceeded for this contaminant.
- The City of Petoskey tested for many other required water quality parameter. The results of those tested parameters were ND, which means this contaminant was not detected at or above our stated detection limit.

## Unregulated Contaminant

Unregulated contaminant monitoring helps U.S. EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Parameter	Violation	Level Detected	Unit of Measurement	MCL	MCLG	Source
Location	Yes/No			Unit		
Nitrate(as Nitrogen)						Runoff from fertilizer use, leaching from septic tanks, sewage; erosion of natural deposits
Well #1	No	0.048	mg/L	10	1	
Well #2	No	0.13				

**Nitrate:** Nitrate in drinking water at levels above 10 PPM is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

**Arsenic:** U.S. EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations.

Microbial Contaminants	MCL	MCLG	Number of Detections	Violation Y / N	Typical Source of Contaminant
Total Coliform Bacteria	Bacteria in 5 % of monthly samples	0	0	No	Naturally

Fecal coliforms and *E. coli* are bacteria whose presence indicated that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.

Contaminant	Action Level	Our Water *	Number of Samples Over Action Level
Lead	15 ppb	1.2	1
Copper	1.3 ppm	.4053	1

\* 90 percent of samples at or below this level

Samples taken for copper and lead testing were taken from individual homes. These results do not necessarily reflect the level of copper and lead in the city's water system. The City of Petoskey's drinking water supply water was sampled and found to be below the level of lead and copper for health risk, if you are concerned you may reduce lead exposure by:

- Flushing home plumbing if water has been standing in pipes for more than six hours. Run the water until it is cold (about 30 to 60 seconds).
- Use only cold water for cooking, drinking and making baby formula.
- Use only lead-free solder when making plumbing repairs.
- If you replace plumbing, use lead-free faucets and plumbing components. The U.S. Safe Drinking Act requires faucets and plumbing components sold after August 6, 1998 to be "lead-free". For more information about faucets, call NSF International, telephone 800-NSF-MARK, internet <http://www.nsf.org>

Infants and children who drink water containing lead in excess of the action level 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. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your homes plumbing. Additional information is available from the Safe Drinking Water Hotline at 800-426-4791.

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.

**Is our water system meeting other rules that govern our operations?** The Michigan Department of Environmental Quality and U.S. EPA require the city to test our water on a regular basis to ensure its safety.

The City of Petoskey met all the monitoring and reporting requirements for 1998. The city is committed to providing its residents and customers safe, reliable, and healthy water. The city is pleased to provide you with this information to keep them fully informed about your water. The city will be updating this report annually, and will also keep its customers informed of any problems that might occur throughout the year, as they happen.

The City invites public participation in decisions that affect drinking water quality.

For more information about the City of Petoskey drinking water, or the contents of this report, contact the City Manager, 101 East Lake Street, Petoskey, Michigan 49770 or telephone 231.347.2500  
By *\_email at* [Water Quality@cityofpetoskeyservices.com](mailto:WaterQuality@cityofpetoskeyservices.com)