

2014 Water Quality Report City of Parchment, Michigan

This report covers the drinking water quality for the City of Parchment for the calendar year 2014. This information is a snapshot of the quality of the water that we provided to you in 2014. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

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. Immune-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 three (3) wells located in Cooper Township.** 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.

Final Source Water Assessment: By Letter of October 16, 2002 we were informed the Department of Environmental Quality (DEQ) initiated a source water assessment of our community's sources of drinking water. The 1996 amendments to the Federal Safe Drinking Water Act requires each state to develop and implement a source water assessment program (SWAP) to assess the susceptibility to contamination of all public water supply sources. The Michigan SWAP was developed through an advisory committee, approved by the U.S. Environmental Protection Agency in October 1999 and is currently being implemented. This program requires the DEQ to analyze source contaminant sources, determine susceptibility, and assure the public is notified of this determination. Since our community has already addressed many of the SWAP requirements, the DEQ utilized this information to complete a source water assessment of our water supply.

Hydrogeological information from the City of Parchment Wellhead Protection Area (WHPA) delineations or source water areas was reviewed to establish geological sensitivity for the City's public water supply wells. The City of Parchment has three production wells; PW-1, PW-2, PW-3. The well records from each well show the presence of clay or gravel and confining layers. However, the drawdown curves from the hydrogeological report show the effects of some delayed yield, which indicates unconfined conditions. It is possible that the extent of the clay layer is limited and the barrier effect of the river seems to indicate that the confining layer does not extend to the river. The geologic sensitivity for an unconfined aquifer is characterized as "high".

Based on the above sensitivity analysis and listed potential sources within the WHPA, Wells PW-1, PW-2, PW-3 have been determined by the DEQ to be highly susceptible to potential contaminants.

Contaminants that may be present in source water include:

- 1. Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- 2. 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 of farming.
- 3. Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
- 4. Radioactive contaminants**, which are naturally occurring or be the result of oil and gas production and mining activities.
- 5. 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 we detected during the 2014 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, 2014. 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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.

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, **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 Y/N	Typical Source of Contaminant
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Flouride (ppm)	4	4	0.95	09/04/2014	No	Erosion of natural deposits. Discharge from Fertilizer and aluminum factories.
Arsenic (ppm)	.010	0	ND	07/24/2012	No	

Regulated Contaminant	MRDL	MRDLG	Highest Annual Average	Result Range	Violation Y/N	Typical Source of Contaminant
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Chlorine (ppm)	4	4	1.13	0.21-1.34	No	Water additive used to control microbes.
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Special Monitoring And Unregulated Contaminant**	Level Detected	Sample Date	Typical Source of Contaminant
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Sodium (mg/L)	20mg/L	09/04/2014	Erosion of natural deposits
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Distribution Monitoring	MCL	MCLG	Level Detected	Sample Date	Typical Source of Contaminant
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Total Trihalomethanes	80 ppb	NA	20 ppb	06/27/2014	No	By-Product of drinking water chlorination
Haloacetic Acids	60 ppb	NA	9 ppb	06/26/2014	No	By-Product of drinking water disinfection

Distribution Monitoring	Highest Running Annual Average	Range of Detection Low	High	Typical Source of Contaminant
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Chlorine Residuals	0.76 mg/l	0.11mg/l	1.12mg/l	By-Product of drinking water chlorination
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Contaminant Subject to AL	Action Level	90% of Samples ≤ This level	Sample Date	Number of Samples Above AL	Typical Source of Contaminant
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Lead (ppb)	15	5	09/03/2014 09/04/2014	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppb)	1300	1100	09/03/2014 09/04/2014	1	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.

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 Parchment 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 minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or online <http://www.epa.gov/safewater/lead>.

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2014. We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at Parchment City Hall, 650 S. Riverview Drive or on the internet at <http://www.parchment.org>. This report will not be sent to you. **We invite public participation in decisions that affect drinking water quality.** The City Commission of the City of Parchment meets on the 1st and 3rd Mondays of the month at Parchment City Hall, 650 S. Riverview Drive, Parchment, MI 49004. For more information about your water, or the contents of this report, **contact Joe Bonhomme, Director of Public Services at 269-349-3785.** For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

Shannon Stutz, City Clerk
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