

Holland Board of Public Works

WATER QUALITY REPORT 2017



This report covers the drinking water quality for the Holland Board of Public Works Water Treatment Plant for the 2017 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2017. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

The State performed an assessment of our source water, Lake Michigan, in 2003, to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from “very-low” to “very-high” based on geologic sensitivity, water chemistry and contamination sources. The State rated the HBPW’s intake as “moderately sensitive” and the source water as having a “moderately high” susceptibility to contamination. The State identified 364 potential sources of contamination within the total watershed of 175 square miles that could impact our water source. The report further states, “Historically, the Holland Board of Public Works Water Treatment Plant has effectively treated this water source to meet drinking water standards. There have been no detections of synthetic or volatile organic contaminants in the system’s raw water.” A copy of the full report can be obtained by calling HBPW at 616.355.1500.

Este inform contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.



- **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. Federal law requires that the highest level of any contaminates detected in our water be reported to you.
- 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 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 we detected during the 2017 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, 2017. 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

(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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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 (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Inorganic Contaminants							
Nitrate (ppm)	10	10	0.60	0.00-0.60	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.97	0.06-0.97	2017	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium ¹ (ppm)	N/A	N/A	13	9-13	2017	No	Erosion of natural deposits
Disinfectants & Disinfection By-Products							
TTHM ² - Total Trihalomethanes (ppb)	80	N/A	60 ²	37-75	2017	No	Byproduct of drinking water disinfection
HAA ⁵ - Haloacetic Acids (ppb)	60	N/A	29 ²	18-40	2017	No	Byproduct of drinking water disinfection
Chlorine ³ (ppm)	4	4	0.73	0.03-1.52	2017	No	Water additive used to control microbes
Inorganic Contaminant Subject to AL	AL	MCLG	Your Water	Year Sampled	# of Samples Above AL	Does System Exceed AL? Yes/No	Typical Source of Contaminant
Lead ⁴ (ppb)	15	0	0 ⁴	2016	1	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.30	1.30	0.03	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

¹ Sodium is not a regulated contaminant

² Highest Local Annual Running Average - TTHM & HAA5

³ The chlorine "Level Detected" was calculated using a running annual average.

⁴ 90 percent of the samples collected were at or below the level reported for our water.

Microbiological Contaminants							
Total Coliform (total number or % of positive samples/ month)	TT	N/A	N/A	N/A	2017	No	Naturally present in the environment.

Total Organic Carbon (TOC)				
• TT Violation	Explanation of TT Violation	Length of Violation	Steps Taken to Correct Violation	Health Effect Language
Failure to remove required amount of total organic carbon (TOC) (DBPP)	TOC removal is calculated as the ratio between the actual TOC removal and the TOC removal requirements. Our TOC removal ratio during the fourth quarter of 2017 was 0.96, slightly less than the standard Safe Drinking Water Act requirement of 1.00.	1 Quarter	We are investigating the reason for the increased TOC in our source water and steps we can take to increase the removal efficiency of our treatment process. We are also working with the Michigan Department of Environmental Quality to determine how best to resolve this issue. This will include bench tests to determine the effects of any changes we make. We will resolve the issue as soon as possible.	<p>Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. These by-products include trihalo-methanes (TTHMs) and haloacetic acids (HAA5s). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p> <p>All drinking water standards for disinfection by-products in the water delivered to our customers have been met.</p>

Unregulated Contaminants-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. (Results of monitoring are available upon request.)					
Name	Unit	Date Tested	Average Level Detected	Low	High
Chromium (total)	ppb	2013	0.45	0.41	.47
Molybdenum	ppb	2013	1.0	1.0	1.1
Strontium	ppb	2013	129	114	131
Vanadium	ppb	2013	0.22	ND	0.29
Chromium-6	ppb	2013	0.18	0.15	0.19
Chlorate	ppb	2013	135	<20	151

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. HBPW 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>.

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.

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.

Monitoring and Reporting Requirements: The DEQ and EPA require us to test our water on a regular basis to ensure its safety.

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 Holland BPW 625 Hastings Ave, Holland MI 49423.

We welcome your comments and participation at our public board meetings at the HBPW Service Center, 625 Hastings Avenue, on the Monday (between the first and second Wednesday) of each month at 4:00 p.m. We recommend that you call to confirm the meeting time and date prior to attending or visit our website at hollandbpw.com for the exact date and time of the meetings. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

HOLLAND WATER TREATMENT PLANT

46 N. Lakeshore Drive
Holland, Michigan 49424
Telephone: 616.355.1589

To report a water emergency, call: 616.355.1500

To arrange a tour of facilities, call: 616.355.1607

For information on water conservation, visit : www.hollandbpw.com

For the EPA's Safe Drinking Water Hotline: 800.426.4791, www.epa.gov/safewater/

American Water Works Association: 800.926.7337, www.awwa.org

Federal Emergency Management Agency: www.fema.gov

