2023 Annual Zeeland

WATER QUALITY REPORT

ZEELAND
Board of Public Works

Published May 2024

ENSURING SAFE WATER FOR A THRIVING ZEELAND COMMUNITY

We appreciate your careful review of the 2023 Water Quality Report. It is our pleasure to provide complete information about the water we deliver to our customers. We are particularly proud of how the quality compares with the stringent standards established by the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

In order to ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations established limits for contaminants in bottled water, which must provide the same protection for public health.

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 Safe Drinking Water Information Hotline at 800.426.4791.

Questions?

If you would like to discuss any portion of this report, please call Mike Levandoski, Water Operations Manager at 616.772.6212.

LEADERSHIP

Management Oversight

The Board of Commissioners for the Zeeland BPW is appointed by the City Council. The Board of Commissioners oversee the management of and set policy for our water system. Board meetings are open to the public and are normally held the second Tuesday of each month at 3:30 p.m. at the conference room of the BPW offices located at 330 E. Washington Avenue.

The BPW Board of Commissioners

- Linda Boerman, Chair
- Mark Cooney, Vice Chair
- Ann Query
- Brian Dykstra
- Jonathan Walters

Water Department Staff

- Andrew Boatright, General Manager
- Mike Levandoski, Water Operations Manager
- Lloyd Vanslooten, Lead Water Service Technician
- Greg Sheldon, Water Service Technician
- Jason Postma, Water Service Technician
- Scott Freers, Water Service Technician
- Brian Sybesma, Water Service Worker
- Ryan Drenten, Meter Reader
- Lezlyn Villa, Customer Relationship Specialist
- Corey Veldheer, Customer Relationship Specialist
- Marlene Mejia, Customer Relationship Specialist
- Kerri Vlietstra, Utility Billing Specialist

WATER QUALITY INFORMATION

Only Tap Water Delivers Public Health

In the operation of a municipal water system, public health has the highest priority. The water delivered to our customers is tested more than 50,000 times a year at the Holland Board of Public Works filtration plant. In addition, Zeeland BPW personnel conduct numerous tests of the water in the mains of our distribution system and at individual customers' taps.

Water Source

Our water source is Lake Michigan, a surface water supply. The water is treated and filtered at the Holland Board of Public Works (HBPW) Water Treatment Plant. After treatment, filtration, and disinfection, the water is pumped to the Zeeland BPW distribution system, and our staff is responsible from that point on.

Source Water Assessment

The State of Michigan performed a Source Water Assessment of the HBPW's water source in 2003 to determine the susceptibility or relative potential for contamination. The susceptibility rating is on a six-tiered scale from "very-low" to "high" based primarily on geologic sensitivity, water chemistry and contamination sources. The State rated the HBPW's intake as "moderately sensitive" and the source of 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 has been no detection of synthetic or volatile contaminants in the system's raw water."

WATER TESTING

Each month, the HBPW voluntarily tests the water coming into the treatment plant for the presence of Cryptosporidium. This testing is not required by the state or federal authorities but is done to ensure that our drinking water is the highest quality possible. Cryptosporidium is a protozoan parasite that is too small to be seen without a microscope. It is sometimes found in surface waters, especially during periods of storm water runoff. Those who are infected with this parasite may experience gastrointestinal illness. In the year 2023 the HBPW did not detect any Cryptosporidium in the water supply.

Contaminants That May Be in Untreated Water

The sources of drinking water - both tap and bottled water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land and 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.

A copy of the full report can be obtained by contacting Mike Levandoski, Water Operations Manager at the Zeeland Board of Public Works, phone **616. 772.6212.**

Contaminants That Might Be Expected to Be in Source Water-Untreated 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 discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Immuno-Compromised Persons

Some people may be more vulnerable to contaminants. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplant, 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 from their health care providers. EPA/ CDC guidelines on appropriate means to lessen the risk of infection from Cryptosporidium and other microbial contaminants are available from the EPA Safe Drinking Information Water Hotline 800.426.4791.

Required Consumer Confidence Report (CCR) Statement Addressing Lead in Drinking Water:

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. Zeeland BPW 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 have a lead service line, it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. If you are concerned about lead in your water, you may elect 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 EPA Safe Drinking Water Information Hotline at **800-426-4791** or at **www.epa.gov.**

2023 WATER QUALITY TEST RESULTS

THE STATE OF MICHIGAN AND THE EPA REQUIRE US TO TEST OUR WATER ON A REGULAR BASIS TO ENSURE SAFETY. ZEELAND BPW HAS MET ALL THE MONTORING AND REPORTING REQUIREMENTS FOR 2023.

The table below lists all the drinking water contaminants that we detected during the 2023 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, 2023. 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.

Regulated Contaminant	MCL,TT or MDRL	MCLG or MRDLG	Highest Level Detected	Level Detected Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Inorganic Contaminants							
Nitrate (ppm)	10	10	0.552	0.552-0.552	2023	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Fluoride (ppm)	4	4	0.79	0.28-0.79	2023	NO	Erosion of natural deposits; Water additive while promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium (ppm)[1]	N/A	N/A	11.8	11.8-11.8	2023	NO	Erosion of natural deposits.
Disinfectants & Disinfection By-Products							
TTHM Trihalomethanes[2] (ppb)	80	N/A	57.10	27.00-57.10	2023	NO	Byproduct of drinking water disinfection.
HAA5 HAAS Haloacetic Acids[2] (ppb)	60	N/A	50.40	13.00-50.40	2023	NO	Byproduct of drinking water disinfection.
Chlorine[3]	4	4	1.26	.74-1.26	2023	NO	Water additive used to control microbes.
Microbiological Contaminants							
Total Coliform (total number of positive samples/month)	TT	N/A	N/A	N/A	2023	NO	Naturally present in environment.
PFAS (ppt) - All PFAS compounds were less than 2 ppt or not detected							
PFOS (ppt)[4]	EGLE MCL: 16	N/A	2.5	2.3-2.5	2023	NO	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
NEtFOSAA (ppt)	N/A	N/A	2.5	<2.0-2.5	2023	NO	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Inorganic Contaminant Subject to AL	**AL**	**MCGL**	**Your Water**	**Year Sampled**	**Range of Results**	**Violation Yes/No**	
Lead[5]	15	0	0	2022	0ppb-2ppb	NO	Lead service lines, corrosion of household plumbing including fittings and fixtures; eriosion of natural deposits.
Copper[5]	1.3	1.3	0	2022	0.0ppm-0.1ppm	NO	Corrosion of household plumbing systems; Erosion of natural deposits

1 Sodium is not a regulated contaminant.

2 Local Annual Running Average — TTHM & HAAS

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

4 HBPW identified the presence of PFOS in the source water during EGLE Regulatory sampling. Conversely, samples obtained from the EPA UCMR5 sampling process yielded non-detectable levels of PFOS/PFAS within the ZBPW water distribution system.

5 90th percentile of the samples collected were at or below the level reported for our water.

Estimated Number of Service Connections by Service Line Material

A service line includes any section of pipe from the water main to the building plumbing at the first shut-off valve inside the building, or 18 inches inside the building, whichever is shorter.

Any Portion Contains Lead*	Contains Galv Previously Connected to Lead	Likely Contains Lead	Likely Does NOT Contain Lead	Material(s) Unknown	Contains Neither Lead nor Galv	Total**
29	353	0	3	0	2060	2445

*If a galvanized line is still connected to lead, it is a lead service line and must be counted in the first column.

**The total number is equal to the total number of potable water service lines in the Zeeland BPW water distribution system (residential, commercial, industrial, other).

DEFINITIONS OF TERMS & SYMBOLS USED IN THE TABLES

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

ppm: Parts per million is equal to one ounce in 7,350 gallons of water. The average home swimming pool holds 20,000 gallons. One part per million is about 2.75 ounces in a pool.

ppb: Parts per billion is equal to one ounce in 7,350,000 gallons of water. That's a lot of water!

ppt: Parts per trillion is a single drop from an eyedropper of water into the volume of water held in 35 Junior size Olympic pools, or 10,000,000 gallons (that is ten million gallons).

ND: Not detected

<: Less than the number following

>: More than the number following

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

Turbidity: A measure of the cloudiness of water. The HBPW staff monitors it because it is a good indicator of the effectiveness of the filtration system.

Nephelometric Turbidity Unit (NTU): A measure of particles in the water.

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

MRDL: Maximum Residual Disinfection Level. The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfection Level Goal. The level of drinking water disinfection 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.

ZEELAND
Board of Public Works

ENSURING SAFE WATER FOR A THRIVING ZEELAND FOR GENERATIONS TO COME.

OUR VISION

The Zeeland Board of Public Works will be a key contributor to the community's quality of life and long-term success.

OUR MISSION

The Zeeland Board of Public Works will deliver customer-focused, superior electric and water utility services that are reliable, safe, responsible, and cost competitive.

OUR VALUES

- Safety
- Family-Oriented Workplace Culture
- Integrity
- Continuous Improvement
- Service and Stewardship

ZEELAND
Board of Public Works

350 E Washington Ave., Zeeland, MI 49464
(616) 772-6212 | info@zeelandbpw.com