

Water Quality Report

Holland Board of Public Works



2023



A LETTER FROM THE SUPERINTENDENT

Dear Neighbor,

At the Holland BPW Water Treatment Plant, we treat and filter water from Lake Michigan. This ensures healthy drinking water for our community and customers. Our skilled water staff provide excellence in water quality and use our water source responsibly.

We are pleased to report another year of our Water Treatment Plant surpassing all federal and state drinking water standards. **Holland BPW's Water Treatment Plant met all monitoring and reporting requirements for 2023.** Our Water Treatment Plant's state-certified laboratory and independent third-party laboratories perform over 60,000 tests per year. These rigorous tests ensure the highest quality water to our customers.



This report details the drinking water quality that we provided to you in the 2023 calendar year. In this report, you'll find details about where your water comes from and what it contains. You'll learn how your water compares to the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes and Energy (EGLE) standards. You'll also learn more about what you can do to conserve water and protect our source, Lake Michigan.

EGLE and the EPA require us to test our water on a regular basis to ensure its safety. We are constantly striving to achieve water quality that is better than what regulations require and have adopted water quality goals that are more stringent than state and federal regulations. While this report contains data on contaminants detected, many other contaminants not listed here were analyzed for and not detected. We update this report annually and will keep you informed of any problems that may occur throughout the year as they happen.

Thank you for taking the time to learn more about your water and what you can do to help us protect this precious resource.

Sincerely,

Nathan Johnson
Water Treatment Plant Superintendent

LEARN MORE

This report is available at hollandbpw.com/water-quality-report and printed copies are also available at our Service Center, 625 Hastings Ave. We invite public participation in decisions that affect drinking water quality.

Your comments and participation are welcome at our public board meetings. Email publiccomment@hollandbpw.com or attend in person at the Holland BPW Service Center, 625 Hastings Ave. Meetings are typically held on the Monday between the first and second Wednesday of each month at 4:00pm.

- We recommend that you call to confirm the meeting time, date and location prior to arriving, or visit our website at hollandbpw.com for details about the meetings.
- For more information about your water or the contents of this report, please contact Holland Water Treatment Plant at (616) 355-1589.
- For more information about safe drinking water from EGLE, visit michigan.gov/egle/about/organization/drinking-water-and-environmental-health/drinking-water.
- For more information about safe drinking water from the US EPA, visit epa.gov/safewater.



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

GET TO KNOW YOUR WATER SOURCE

Your Health

Some people may be more vulnerable to contaminants in drinking water than others. People with weakened immune systems have a higher risk of infection, including but not limited to the following groups:

- People receiving chemotherapy
- Organ transplant recipients
- People with HIV/AIDS or other immune systems disorders
- Some elderly individuals
- Infants

These groups should seek advice from their health care providers about drinking water. The EPA and the Center for Disease Control also have guidelines to lessen your risk of infection by microbial contaminants.

Contaminants

Drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily mean that water poses a health risk.

You can get more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water hotline at (800) 426-4791 or visiting epa.gov/safewater.

Source Water Protections

In 2003, the State of Michigan performed an assessment on our source water. This assessment looked at Lake Michigan's susceptibility or the relative potential of contamination. The susceptibility rating is given on a scale from "very-low" to "very-high," with seven possible ratings. Ratings are based on geologic sensitivity, water chemistry and contamination sources. The State rated the Holland BPW's water intake as "moderately sensitive." It rated the water source itself as having a "moderately high" susceptibility to contamination.



The State identified 364 potential sources of contamination in the 175 square miles of watershed that could impact our water source. Their 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." You can get a copy of Holland BPW's full Source Water Assessment by calling (616) 355-1589.

To continue these efforts, Holland BPW has an award-winning Surface Water Intake Protection Plan (SWIPP) in place. The EPA and EGLE encourage this voluntary effort that outlines community-wide actions and efforts to protect drinking water sources. For more information about Holland BPW's SWIPP, please call the Water Treatment Plant at (616) 355-1589.

Sources of Drinking Water

Drinking water (both from the tap and bottled water) can come from rivers, lakes, streams, ponds, reservoirs, springs or wells.

Holland BPW's drinking water comes from Lake Michigan.

As water travels across land or underground, it dissolves naturally occurring minerals and sometimes radioactive material. Water can also pick up contaminants that come from animal or human activity.

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria. These contaminants may come from wastewater treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals. Some of these occur naturally. Salts and metals can also come from urban storm water runoff, industrial or domestic wastewater, oil and gas production, mining or farming.
- **Pesticides and herbicides**. These may come from a variety of sources including agriculture and residential uses.
- **Radioactive contaminants**. These can be naturally-occurring or the result of oil and gas production and mining activities.
- **Organic chemical contaminants**. These include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. Organic chemical contaminants can also come from gas stations, urban storm water runoff and septic systems.

To ensure that tap water is safe to drink, the EPA limits the levels of certain contaminants in public water systems. Similarly, Federal Food and Drug Administration regulations limit contaminants in bottled water to protect public health.

LEAD & COPPER

Pipes can be made of a variety of materials such as iron or plastic. In the past, some may have been made from galvanized metals or lead. **Holland BPW completed an inventory of water service lines in 2018. This inventory did not identify any service lines made completely out of lead pipe.** This inventory was based on information provided in construction records and plumbing inspections required when service lines were installed or replaced and was verified through visual inspection of a statistically significant number of randomly selected service lines. The inventory is updated any time new records and inspections are obtained.

Most metals disintegrate as they corrode. However, corroding galvanized pipes pick up deposits that the water carries from other pipes in the system. Because these galvanized pipes

were once connected to lead goosenecks, lead deposits may have built up inside the galvanized pipe.

For this reason, Holland BPW has a program in place to replace all remaining galvanized lines in the system by the end of 2038. This time frame aligns with State of Michigan regulations and Holland BPW's asset management plan. This replacement program includes:

1. The public section of the galvanized service lines from the water main to the property line.
2. The private section between the property line and the home, which is usually the responsibility of the homeowner.

Any galvanized piping inside the home is still the responsibility of the homeowner to replace as desired.

Quantity of Service Types in 2023

| Service Description | City of Holland | Holland Township | Laketown Township | Park Township | Fillmore Township | Total |
|---|-----------------|------------------|-------------------|---------------|-------------------|---------------|
| Copper, Plastic, and Other Non-Lead | 7,943 | 4,136 | 1,292 | 667 | 15 | 14,053 |
| Lead Service: Lead Pipe | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Service: Galvanized Pipe with Lead Gooseneck | 1,746 | 0 | 0 | 27 | 0 | 1,773 |
| Lead Service: Galvanized Pipe Previously Connected to Lead Gooseneck | 1,475 | 1 | 0 | 12 | 0 | 1,488 |
| Unknown Material | 176 | 227 | 25 | 18 | 0 | 446 |
| Total | 11,340 | 4,364 | 1,317 | 724 | 15 | 17,760 |

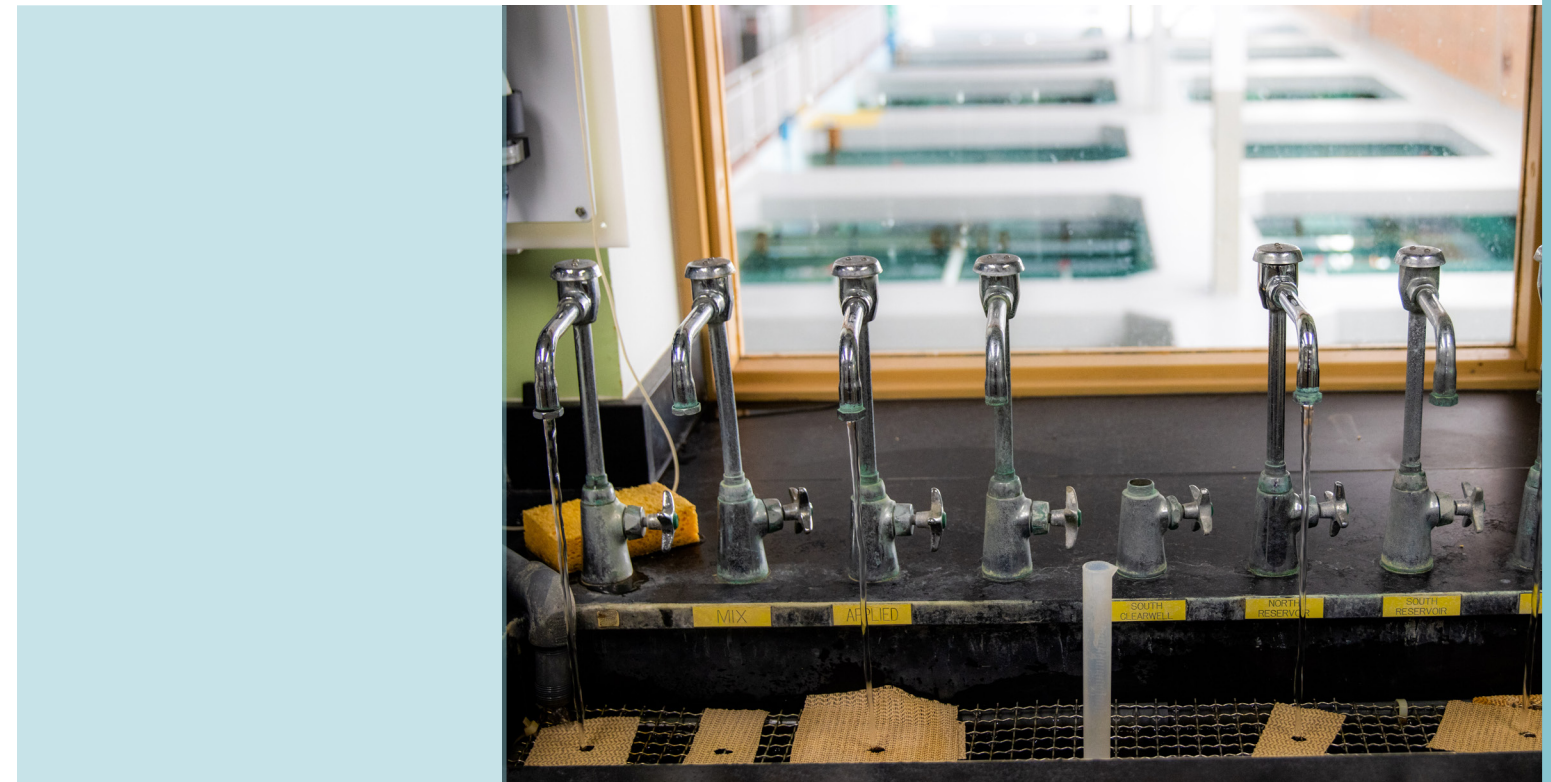
Lead

Infants and children who drink water containing lead 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.

Holland BPW is responsible for providing high quality drinking water but cannot control the variety of materials used in household plumbing components. When water has been sitting in your home's pipes 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 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 epa.gov/safewater/lead.



Copper

Copper is an essential nutrient. However, drinking water with copper levels higher than the action level in a short amount of time could cause gastrointestinal distress. Some people who drink water with copper levels higher than the action level over many years could suffer liver or kidney damage. People with Wilson's Disease or other conditions that limit the body's ability to remove excess copper should talk to their health care provider.

PFAS

Per- and polyfluoroalkyl substances (PFAS), sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. The U.S. EPA has named PFAS as an emerging contaminant. For decades, PFAS have been used in industrial applications and consumer products and are still used today. Products with PFAS include carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. PFAS have also been found at low levels in both the environment and blood samples from the general U.S. population.

These chemicals are persistent, which means they do not break down in the environment. PFAS chemicals also bioaccumulate, meaning the amount of the chemical in a person's body builds up over time in their blood and organs.

Why Was Holland BPW's Source Water Tested for PFAS?

Holland BPW follows the EGLE standard compliance monitoring schedule for PFAS Maximum Contaminant Levels (MCLs). In 2020, EGLE developed MCLs for seven PFAS compounds in Michigan. Even before EGLE developed PFAS MCLs, Holland BPW participated in EGLE-coordinated voluntary sampling in 2019. With health and safety at the core of our values, we saw this initiative as a chance to learn about our source water.

How Can PFAS Affect People's Health?

Although our understanding of these emerging contaminants constantly changes, higher levels of PFAS have the potential to cause negative health effects.

These include increased cholesterol, changes in hormones and the immune system, decreased fertility, and increased risk of some cancers. Epidemiological and laboratory studies in animal models support these links to health effects in humans.

If you are concerned about exposure to PFAS in your drinking water, please contact:

- Michigan Department of Health and Human Services Toxicology hotline at (800) 648-6942.
- Center for Disease Control and Prevention/ATSDR at [cdc.gov/cdc-info](https://www.cdc.gov/cdc-info) or (800) 232-4636.

Scientists are still learning about the health effects of exposure to PFAS, including exposure to mixtures.

What Other Ways Could I Be Exposed to PFOA, PFOS and Other PFAS Compounds?

PFAS are used in many consumer products, including:

- Food packaging such as fast-food wrappers and microwave popcorn bags
- Waterproof and stain-resistant fabrics such as outdoor clothing, upholstery, and carpeting
- Nonstick coatings on cookware
- Cleaning supplies including some soaps and shampoos

Exposure to PFAS can come from house dust, indoor and outdoor air, food, and drinking water. More research is needed to understand how people can be exposed to PFAS.

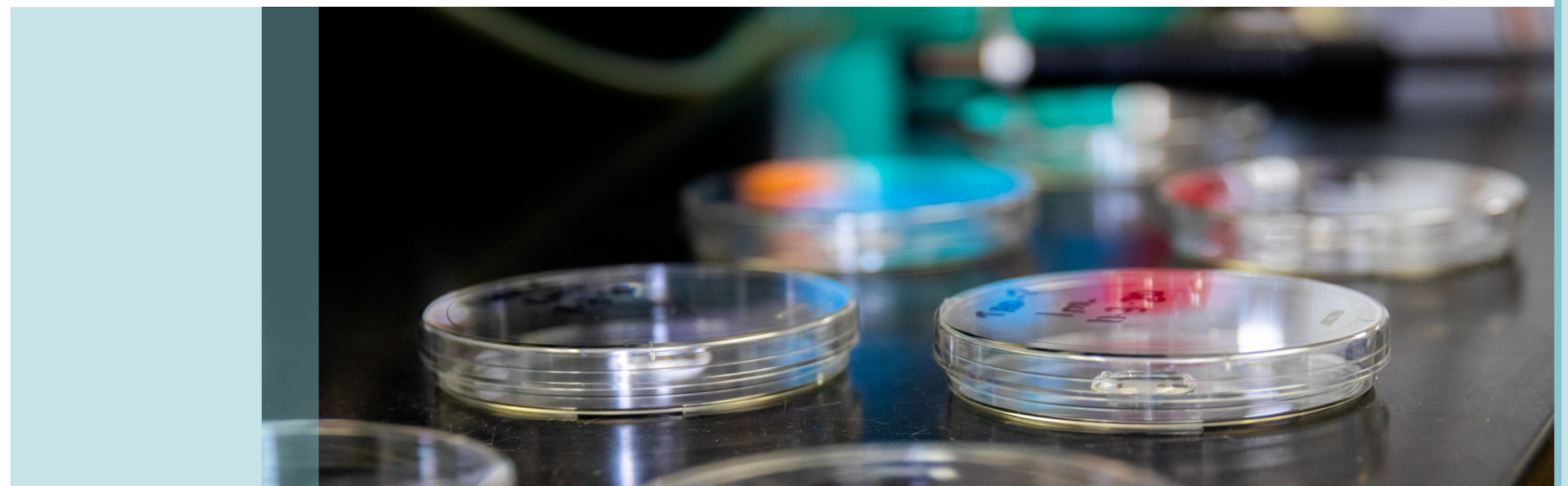
Who Can I Call if I Have Questions About PFAS in My Drinking Water?

If you have additional questions regarding this issue, you can reach the State of Michigan Environmental Assistance Center at (800) 662-9278.

Where Can I Learn More About PFAS?

For information on PFOA, PFOS, and other PFAS, including possible health outcomes, please visit the following websites:

- [epa.gov/pfas](https://www.epa.gov/pfas)
- [atsdr.cdc.gov/pfas](https://www.atsdr.cdc.gov/pfas)
- [michigan.gov/pfasresponse](https://www.michigan.gov/pfasresponse)



TERMS & ABBREVIATIONS USED

| | |
|--|--|
| 90th Percentile 90 percent of the samples taken were below the number listed. | AL Action Level. Samples with concentrations higher than an action level of a contaminant require treatment or other procedures a water system must follow. |
| Highest Local Running Average The highest average of a specific contaminant over the annual sampling period from a single sampling point. This measure is used in reporting TTHM and HAA5. | LHA Lifetime Health Advisory. Refers to a concentration that is not expected to cause negative health effects over a lifetime of consistent daily exposure at that level. This level is based on a 154 pound adult consuming two liters of water each day. LHAs are not enforceable standards, but are based on scientific studies and meant to serve as a guide. |
| MCL Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water. MCLs are set above, but as close to an MCLG as possible. | MCLG Maximum Contaminant Level Goal. Below this level of a contaminant there is no known or expected risk to health. |
| MRDL Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. Added disinfectant helps to control microbial contaminants. | MRDLG Maximum Residual Disinfectant Level Goal. Below this level of disinfectant there is no known or expected risk to health. MRDLGs do not negate the benefits of using disinfectants to control microbial contaminants. |
| N/A Not applicable. | NTU Nephelometric Turbidity Unit. A measure of water cloudiness. |
| ppb Parts per billion or micrograms per liter. | ppm Parts per million or milligrams per liter. |
| ppt Parts per trillion or nanograms per liter. | TT Treatment Technique. A required process intended to reduce contaminant levels in drinking water. |
| Unregulated Contaminants Contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act (SDWA). | |

WATER QUALITY DATA

The tables below list 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. The data presented in this table is from testing done January 1 - December 31, 2023.

Holland Water Treatment Plant Data for 2023 (WSSN 3190)

| Regulated at Water Treatment Plant | | | | | | |
|------------------------------------|-----------|-----------------|--|------------|--------------------|---|
| Substance (units) | EPA's MCL | EPA's MCLG | Highest Level Detected | Violations | Range of Detection | Typical Source of Contaminant |
| Fluoride (ppm) | 4.00 | 4.00 | 0.79 | None | 0.28 - 0.79 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate (ppm) | 10 | 10 | 0.552 | None | 0.552 - 0.552 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Turbidity (NTU) | 1.0 | N/A | 0.108 | None | 0.018 - 0.108 | Cloudiness of water; Good indicator of the effectiveness of our filtration system |
| PFOS (ppt) | 16 | N/A | 2.5 | None | 2.3 - 2.5 | Food packaging, waterproof fabric, non-stick coating, etc. |
| PFAS (ppt) | N/A | EGLE MCL Varies | All other PFAS chemical results not listed in this report were less than the EGLE minimum reporting limit or not detected. | | | |

| Regulated at Customer's Tap - 2022 Results, Not Sampled 2023 | | | | | | |
|--|----------|------------|--------------------------|------------|--------------------|---|
| Substance (units) | EPA's AL | EPA's MCLG | 90th Percentile Detected | Violations | Range of Detection | Typical Source of Contaminant |
| Copper (ppm) | 1.3 | 1.3 | 0 | None | 0.0 - 0.1 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 15 | 0 | 1 | None | 0 - 2 | Lead service line, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits |

Regulated in Distribution System (WSSN 3190)

| Substance (units) | EPA's MCL | EPA's MCLG | Highest Level Detected | Highest Local Running Average | Violations | Range of Detection | Typical Source of Contaminant |
|------------------------------------|-----------|------------|------------------------|-------------------------------|------------|--------------------|--|
| Chlorine [Cl2] (ppm) | 4.0 MRDL | 4.0 MRDLG | 1.57 | 1.21 | None | 0.02 - 1.57 | Water additive used to control microbes |
| Total Trihalomethanes [TTHM] (ppb) | 80 | 0 | 58.1 | 47.1 | None | 23.8 - 58.1 | Byproduct of drinking water disinfection |
| Haloacetic Acids [HAA5] (ppb) | 60 | 0 | 50.2 | 23.4 | None | 10.2 - 50.2 | Byproduct of drinking water disinfection |
| Total Coliform Bacteria | <5% | 0 | 0 | N/A | None | 0 - 0 | Naturally present in the environment |



Laketown Township

Regulated in Distribution System (WSSN 3747)

| Substance (units) | EPA's MCL, TT | EPA's MCLG | Highest Level Detected | Highest Local Running Average | Violations | Range of Detection | Typical Source of Contaminant |
|------------------------------------|---------------|------------|------------------------|-------------------------------|------------|--------------------|--|
| Chlorine [Cl2] (ppm) | 4.0 MRDL | 4.0 MRDLG | 1.48 | 1.24 | None | 0.94 - 1.48 | Water additive used to control microbes |
| Total Trihalomethanes [TTHM] (ppb) | 80 | 0 | 63.2 | 47.1 | None | 38.0 - 63.2 | Byproduct of drinking water disinfection |
| Haloacetic Acids [HAA5] (ppb) | 60 | 0 | 57.3 | 26.4 | None | 15.6 - 57.3 | Byproduct of drinking water disinfection |
| Total Coliform Bacteria | TT | 0 | 1 | N/A | None | 0 - 1 | Naturally present in the environment |

Regulated at Customer's Tap

| Substance (units) | EPA's AL | EPA's MCLG | 90th Percentile Detected | Violations | Range of Detection | Typical Source of Contaminant |
|-------------------|----------|------------|--------------------------|------------|--------------------|---|
| Copper (ppm) | 1.3 | 1.3 | 0.0 | None | 0.0 - 0.0 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 15 | 0 | 0 | None | 0 - 1 | Lead service line, corrosion of household plumbing including fittings & fixtures; Erosion of natural deposits |



Unregulated Contaminants

| Substance (units) | EPA's MCL | EPA's MCLG | Highest Level Detected | Violations | Range of Detection | Typical Source of Contaminant |
|-------------------|-----------|------------|------------------------|------------|--------------------|---|
| Sodium (ppm) | N/A | N/A | 11.8 | None | 11.8 - 11.8 | Erosion of natural deposits |
| NEtFOSAA (ppt) | N/A | N/A | 2.5 | None | < 2.0 - 2.5 | Food packaging, waterproof fabric, etc. |

These are contaminants for which the EPA has not established drinking water standards. The purpose of the unregulated contaminants monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water. Holland BPW performed additional testing for other unregulated contaminants; no detections were found. Results of these tests are available by contacting the Water Treatment Plant at (616) 355-1589.

Park Township

Regulated in Distribution System (WSSN 5203)

| Substance (units) | EPA's MCL, TT | EPA's MCLG | Highest Level Detected | Highest Local Running Average | Violations | Range of Detection | Typical Source of Contaminant |
|------------------------------------|---------------|------------|------------------------|-------------------------------|------------|--------------------|--|
| Chlorine [Cl ₂] (ppm) | 4.0 MRDL | 4.0 MRDLG | 1.62 | 0.80 | None | 0.20 - 1.62 | Water additive used to control microbes |
| Total Trihalomethanes [TTHM] (ppb) | 80 | 0 | 60.4 | 42.5 | None | 24.0 - 60.4 | Byproduct of drinking water disinfection |
| Haloacetic Acids [HAA5] (ppb) | 60 | 0 | 49.7 | 22.3 | None | 10.3 - 49.7 | Byproduct of drinking water disinfection |
| Total Coliform Bacteria | TT | 0 | 0 | N/A | None | 0 - 0 | Naturally present in the environment |

Regulated at Customer's Tap (Park Township) 2022 Results, Not Sampled 2023

| Substance (units) | EPA's AL | EPA's MCLG | 90th Percentile Detected | Violations | Range of Detection | Typical Source of Contaminant |
|-------------------|----------|------------|--------------------------|------------|--------------------|---|
| Copper (ppm) | 1.3 | 1.3 | 0.0 | None | 0.0 - 0.1 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 15 | 0 | 0 | None | 0 - 5 | Lead service line, corrosion of household plumbing including fittings & fixtures; Erosion of natural deposits |

Unregulated Contaminants

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years the EPA must issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems.

The fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 required monitoring for 30 chemical

contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health.

For more information about UCMR4 visit epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule.

Unregulated Contaminant Monitoring Rule 4 (UCMR4) 2020

| Contaminant (ppb) | Min | Max | Average |
|----------------------------|-------|-------|---------|
| HAA5 | 34.30 | 37.00 | 35.65 |
| HAA6Br | 13.40 | 13.90 | 13.65 |
| HAA9 | 46.80 | 49.90 | 48.33 |
| Chlorodibromoacetic | 1.20 | 1.20 | 1.20 |
| Dibromoacetic Acid | 0.66 | 0.67 | 0.67 |
| Dichloroacetic Acid | 14.70 | 15.50 | 15.10 |
| Trichloroacetic | 18.90 | 20.50 | 19.70 |
| Bromochloroacetic Acid | 4.60 | 4.60 | 4.60 |
| Bromodichloroacetic Acid | 6.90 | 7.30 | 7.15 |
| Manganese | 0.26 | 0.26 | 0.26 |
| Total Organic Carbon (TOC) | 600 | 600 | 600 |



WATER CONSERVATION

Lake Michigan is a precious resource. We share this great resource with plants, animals, fish, and each other. Just as we share in the benefits of this Great Lake, we share in the responsibility of protecting and conserving our water source.

The following pages detail some easy ways you can conserve and protect our clean water.

Protect the Source

Protecting Lake Michigan starts with **protecting the watershed that feeds it.** A watershed refers to the entire system of natural water sources including rain and snowfall, groundwater, streams, rivers, lakes and oceans. When it rains, rainwater enters the ground. Groundwater flows into streams and rivers that feed lakes. Smaller bodies of water feed larger bodies of water.

Unnatural substances can also enter the watershed through the ground. Anything you spray or pour on the ground at home can reach Lake Michigan, our source of drinking water. **What you put on the ground matters.**

Follow these tips to help keep Lake Michigan clean:

- **Don't overuse** pesticides and fertilizers.
- **Don't dump** hazardous waste on the ground.
- Wash your car in a **commercial car wash** to reduce detergents and contaminants in storm water.
- **Pick up after your pet** on walks and in your backyard.
- Use **organic mulch** and **natural pesticides.**
- Keep your **grass cut longer** to reduce water runoff.

Conserving Water

Using less water and using water more efficiently also protects our water source and infrastructure. Our Water Treatment Plant can treat 38.5 MGD (million gallons per day) of water. Our annual average daily treatment rate is 15 MGD. During the winter months, we treat around 10 MGD, while **in the summer during hot, dry spells we can reach dangerously close to our capacity.**

On top of our commitment to providing reliable utility services, there are regulatory requirements that will force us to expand the Water Treatment Plant when we reach capacity, even if that only occurs during a very brief stretch of the year.

Expanding the Water Treatment Plant when the extra capacity is only needed a few days out of the year would be very costly. If we were forced to expand the Water Treatment Plant, our water rates would need to increase. **Collectively, our customers have the power to avert costly upgrades to our Water Treatment Plant by doing their part to conserve water.**

The Water Treatment Plant experiences those peak treatment capacities on dry, hot days where people are inclined to heavily sprinkle their lawns to keep them lush and green. Smart irrigation practices by the community will help preserve the life of the Water Treatment Plant's capacity.

Here are a few ways you can make a difference as a responsible steward of our water resources:

- **Fix leaks** to avoid water waste
- **Turn off the tap** when you brush your teeth.
- Run dishwashers and washing machines **with full loads.**
- Water the lawn in the **early morning** to reduce the amount of evaporated water.
- Use **rain gardens and native landscaping** in place of a traditional lawn.
- Choose **Water Sense and Energy Star products** when replacing plumbing fixtures and appliances. These labels make it easy to identify products that are certifiably efficient.



PROTECTING OUR WATER RESOURCES

Reducing Summer Demand

The greatest increase that our water utility sees in demand is the result of lawn irrigation in the summer months. Grass lawns often have shallow roots and need greater amounts of water to keep them from going brown and dormant in the hot summer. One of the best ways to save water and money on your utility bill is to reduce your summer lawn sprinkling.

Water conservation helps customers save money in multiple ways. In addition to lowering monthly bills by using less, efficiently using water today helps prevent increased costs in the future by postponing infrastructure expansions that would need to be funded through rates.

The Water Treatment Plant is sized appropriately to serve its customers. However, during hot dry spells in the summer, increased lawn sprinkling is a challenge for the plant's capacity. Water conservation efforts during the hottest days of the year will extend the value of the WTP, helping

to keep Holland BPW's rates stable, which are currently among the lowest in Michigan.

The best way to conserve water when you have a lawn is to **reduce the size of the area that needs to be watered**. Less lawn means less water usage. For some, reducing the size of their lawn could mean utilizing mulch, rock, or other plants that have deeper root systems instead of grass. Lawns require large amounts of not only water but often pesticides to keep them pristine. By replacing grasses with native plants, water use decreases and water quality increases. Native plants have naturally deeper roots that filter water while slowing stormwater runoff, reducing soil erosion by holding soil in place, and absorbing excess nutrients in the soil that could otherwise end up in the waterways.

Pesticides and stormwater runoff in and around the City of Holland drain into Lake Macatawa. The cleanliness and quality of water draining into our watershed directly impacts the quality of not only inland bodies of water or streams but also Lake Michigan.

Reducing Lawn Size

- Saves money on water bills
- Reduced pesticide use
- Reduces emissions from mowing
- Provides opportunities for planting deeper-rooted native species that slow storm water runoff and soil erosion



Reducing Irrigated Surfaces

Holland BPW has worked to reap the benefits of converting traditional lawns to native landscapes at three of our main facilities: the Service Center, Holland Energy Park, and the Water Treatment Plant.

Holland Energy Park has about 11 acres of sustainable landscaping. Outdoor Discovery Center (ODC) Network maintains this acreage, pulling invasive species where necessary and overplanting to keep the landscaping maintained. ODC Network has installed several rain gardens and native landscape beds around the property along with deep-rooted native plants. Native plants can include swamp milkweed, blazing star, purple coneflower, butterfly milkweed, and more.

Last spring, ODC Network also planted another 5 acres of dry native prairie mix seeds at the Water Treatment Plant similar to those at Holland Energy Park. ODC Network planted deep-rooted species that were purposely chosen to withstand dry conditions without the need for watering while beautifying the landscape with a variety of blooms to last the entire growing season.

Holland BPW's latest initiative is at the Service Center on Hastings Ave, where work began in the fall of 2023 for a 1.5-acre lawn-to-native prairie conversion. Next year, there are plans to undertake another 2.5-acre meadow near the retention pond as well.

Reaping the Benefits of Sustainable Landscaping

When sustainable landscaping becomes fully established and mature after a couple of growing seasons, it requires very little maintenance, saving additional time, emissions from mowing, as well as maintenance costs of lawn mowers. Reduced emissions from mowing add to potential carbon sequestration from plants, which filter out pollutants from our air and water.

Green spaces provide opportunities for natural habitats to flourish. For local flora and fauna, these landscapes create a habitat for pollinators and wildlife that are native to our community. These restored habitats also allow Holland BPW to educate visitors on not only water conservation but also environmental stewardship.



Holland Water Quality Report 2023

Holland Water Treatment Plant
46 N Lakeshore Dr
Holland, MI 49424
(616) 355-1589

