

Additional Monitoring:

Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps the U.S. EPA determine where certain contaminants occur and whether regulation of those contaminants is needed.

Unregulated Contaminant Name	Average Level Detected	Year Sampled
Lithium (ppm)	9.2	2025

(PFAS) Per- and Polyfluoroalkyl Substances: PFAS, sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the United States Environmental Protection Agency (EPA) as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples from the general U.S. population. These chemicals are persistent, which means they do not break down in the environment. They can also bio-accumulate, meaning the amount builds up over time in the blood and organs. Although our understanding of these emerging contaminants is constantly evolving, elevated levels of PFAS have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers. Links to these health effects in humans are supported by epidemiologic studies and by laboratory studies in animal models.

The State of Michigan PFAS MCL's: Michigan adopted drinking water Maximum Contaminant Levels (MCLs) for certain PFAS compounds, applicable to drinking water providers and groundwater cleanups. Compared to other states that have chosen to set their own drinking water standards, Michigan's are some of the lowest levels and cover the greatest number of PFAS compounds. They are also more stringent and involve more PFAS compounds than the EPA's health advisory levels. Measured in nanograms per Liter (ng/L) which is equal to parts per trillion (ppt).

For information on PFOA, PFOS, and other PFCs, including possible health outcomes, you may visit these websites:
<https://www.epa.gov/pfas> <https://www.atsdr.cdc.gov/pfas/> <http://www.michigan.gov/pfasresponse>

In 2025 we tested for **PFAS** at the Plant Tap & Well # 1 — Results for both were **Non-Detected (ND)**



Did you know that the City of Howell and MHOG work cooperatively to protect your drinking water resource?

For more information on our Wellhead Protection Program please go to:
https://www.cityofhowell.org/city_departments/departement_public_works/related_departments/water_2/well_head_protection_program.php

The City of Howell is committed to providing you safe and reliable water. We are pleased to provide you with this information to keep you fully informed about your water. Monitoring & Reporting to MI-EGLE and the EPA require us to test our water on a regular basis to ensure its safety. We will be updating this report annually and will keep you informed of anything that may occur throughout the year. For more information about your water, or the contents of this report, contact Chelsea White, Operations Manager — at 517-546-5309.

Copies of this report (and previous years) at: www.cityofhowell.org/water or at Howell City Hall and the Water Treatment Plant.



The City of Howell 2025 Water Quality Report

This report covers the City of Howell drinking water quality for the 2025 calendar year.

This information is a snapshot of the quality of the water that was provided to you in 2025. Included are details about where your water comes from, what it contains, and how it compares to U.S. Environmental Protection

The staff at the City of Howell Water Treatment Plant are very dedicated to supplying you the best drinking water possible. We once again, report that your tap water met or exceeded all water quality standards established by federal (EPA) and state (MI-EGLE) regulations and have not violated any maximum contaminant levels (MCL).

Water Supply and Treatment:

The City of Howell is a ground water system. Water is drawn from deep rock wells (over 400 feet) taken from the Michigan formation and the deeper Marshall sandstone aquifer. We are a lime softening plant removing about 2/3 of the total hardness. The softened water is then chlorinated, fluoridated, filtered and stored in reservoirs for distribution to our customers.

General Health Information:

All 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)**.

For People with Special Health Concerns:

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 and the Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **EPA's: Safe Drinking Water Hotline (800-426-4791)**.

Why are there contaminants in my Drinking Water?:

The sources of both tap and bottled drinking water include; rivers, lakes, streams, ponds, reservoirs, springs, and wells. The water distributed by the City of Howell comes from deep wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, 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, urban storm water runoff 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 storm water runoff, and septic systems.

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



Left: Brooke and Alex clean out the slaker. The slaker combines lime and water and is the first step in the water softening process.



Below: Stevie (left), Alex (center), and Daniel disassemble the pressure reducing valve for cleaning.

WATER PLANT UPDATES/IMPROVEMENTS: 2025

- A new backwash pump and backwash pit level sensors were installed. This pump empties our backwash tank, ensuring filter washes are given enough time to properly clean the filter. Filters are essential to the water treatment process.
- Operators replaced the flowmeter in the high service building. This meter allows operators to remotely see flow as it goes into our distribution system. The flow can indicate if there are breaks or other draws on the system.
- Our old SCADA (supervisory control and data acquisition) system was replaced.
- The pressure reducing valve (PRV) was replaced. This valve ensures that the pressure coming into the plant is consistent and does not damage any upstream components of the treatment process.

Information About Lead in Drinking Water:

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of Howell is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes 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 and wish to have your water tested, contact the City of Howell Water Treatment Plant at: (517)546-5309 for available resources. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at:

EPA's: Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater/lead.

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

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.

Our water supply has 7 lead service lines and 1,458 service lines of unknown material out of a total of 2,911 service lines. If you would like to know more about this report, please contact: The City of Howell Water Plant at (517)546-5309. Or visit our website at: cityofhowell.org/water

Monitoring and Reporting to the Department of Environment, Great Lakes, and Energy (EGLE) Requirements: The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2024.



City of Howell — City Council Meetings:

All City Council meetings are open to the public & are held at Howell City Hall Council Chambers at 611 E. Grand River, Howell MI 48843, (517) 546-3502

Meeting Dates: Get the current meeting schedule & times at: www.cityofhowell.org, place cursor over “City Services”, click on “City Council Meeting Dates”.

Water Quality DATA Information Table: ➡➡➡

The table on the following page lists all the drinking water contaminants that we detected during the 2025 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 through December 31, 2025. 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 the data is representative of the water quality, but some are more than one year old.

2025 Water Quality Data Table

Contaminants	Units	MCLG, MRDLG	MCL, TT, or MRDL	Your Water	Range Low High		Sample Date	In Compliance	Typical Sources
Disinfectants & Disinfection By-Products (There is considerable evidence that addition of a disinfectant is necessary for control of microbial contaminants.)									
Chlorine as Cl ₂	ppm	4	4	0.53	0.10	1.10	2025	YES	Water additive used to control microbes
Haloacetic Acids - HAA5	ppb	N/A	60	3	N/A	N/A	2025	YES	By-product of drinking water chlorination.
TTHM - Total Trihalomethanes	ppb	N/A	80	21.8	N/A	N/A	2025	YES	By-product of drinking water disinfection.
Inorganic Contaminants									
Arsenic	ppb	0	10	ND	N/A	N/A	2025	YES	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	ppm	2	2	0.02	N/A	N/A	2025	YES	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	ppb	100	100	ND	N/A	N/A	2025	YES	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide	ppb	200	200	ND	N/A	N/A	2025	YES	Discharge from plastic/fertilizer factories; Discharge from steel/metal factories.
Fluoride (plant tap)	ppm	4	4	0.67	0.51	0.83	2025	YES	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories.
Nitrate (NO ³) (plant tap)	ppm	10	10	ND	N/A	N/A	2025	YES	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium, Total	ppm	N/A	N/A	64.0	N/A	N/A	2023 Next Testing 2026	YES	Erosion of natural deposits; Leaching
Microbiological Contaminants									
Contaminants	Units	MCLG	MCL	Your Water	Highest Detected Level	Sample Date	In Compliance	Typical Sources	
Total Coliform (RTCR) (% positive samples/month)	samples	N/A	Routine & repeat samples are total coliform positive and either is E. coli—positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli.	N/A	0%	2025	YES	Naturally present in the environment.	
E. coli (RTCR) - distribution system—(positive samples)	samples	0		0	0%	2025	YES	Human and animal fecal waste.	
Radioactive Contaminants									
Alpha Emitters	pCi/L	0	15	ND	N/A	N/A	2023	YES	Erosion of natural deposits.
Radium (combined 226/228)	pCi/L	0	5	0.620	N/A	N/A	2023	YES	Erosion of natural deposits.
Contaminants	Units	MCLG	Action Level (AL)	Your Water	# of Sites above AL	Range of Individual Sites	Sample Date	In Compliance	Typical Sources
Inorganic contaminants									
Copper Homeowners Taps.	ppm	1.3	1.3 *	0 ppm	0	0.0 -0.1 ppm	2025	YES	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead Homeowners Taps.	ppb	0	12**	0 ppb	0	0-13 ppb	2025	YES	Lead service lines, corrosion of household plumbing including fittings and fixtures; systems. Erosion of natural deposits.
* Copper Action Level = 90 percentile or 9 out of 10 homes tested must show a concentration equal to or lower than 1.3 ppm. ** Lead Action Level = 90 percentile or 9 out of 10 homes tested must show a concentration equal to or lower than 12 ppb.									

- **MCLG = Maximum Contaminant Level Goal:** 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.
 - **MCL = Maximum Contaminant level:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.
 - **TT = Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
 - **AL = Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
 - **ppb:** parts per billion, same as micrograms per liter (µg/L).
 - **ppm:** parts per million, same as milligrams per liter (mg/L).
- **RTCR:** Revised Total Coliform Rule.
 - **MRDLG = Maximum Residual Disinfection Level Goal:** 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.
 - **MRDL = Maximum Residual Disinfectant Level:** 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.
 - **MPL = Maximum Permissible Level:** State assigned level (example = Sodium)
 - **MNR** = Monitored Not Regulated
 - **N/A:** Not applicable

The 2025 PFAS testing results are found on the back page of this report.