

**Wellhead Protection Program (WHPP) Update:** We currently are updating our WHPP Plan (2017– 2018).

Wellhead protection is a planning and management approach designed to protect public groundwater supply systems from contamination. The objective is to protect public water supply wells by controlling or managing all potential sources of contamination within a designated area surrounding the well or well field. An active wellhead protection program identifies areas that contribute water to public water supply wells, potential sources of contamination within those areas, and educates residents on developing best management practices that minimize threats to the public water supplies. The primary goal for the WHPP is the formulation and implementation of a set of actions and management practices to protect the water supply from potential sources of contamination. During the 2015 year, new road signs were installed and an informational brochure was published, available at City Hall, DPW office & the Water Plant.



More information at: [www.cityofhowell.org/water](http://www.cityofhowell.org/water). Click on the link: "Well Head protection page" (middle of page).

**Abandoned / Unused Wells - Search & Closure:**

Unplugged, Abandoned / Unused wells can threaten groundwater resources and public health because they are a potential route for vertical movement of contaminants into our source water aquifers. Contaminants such as sewage, fertilizers, pesticides or run off water, can easily move downward through the unsealed, abandoned well casing. These contaminants may end up in your drinking water. In addition large diameter wells, pose the additional threat of being a safety hazard as people & animals can be injured by falling into such a well. The City of Howell together with MHOG Water Authority is asking you to consider capping / sealing such wells and remove the possibility of any contaminants reaching the aquifer.



# HOW CAN YOU GET INVOLVED?



**City of Howell — City Council Meetings:**

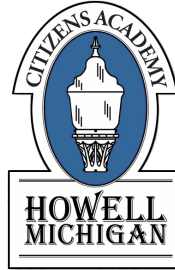
All City Council meetings are held at Howell City Hall, 611 E. Grand River, Howell MI 48843 (517) 546-3502, Council Chambers, Lower Level.

**Meeting Dates:** Go to [cityofhowell.org](http://cityofhowell.org), navigate to the City Services /Elected officials / City Council Meeting Dates to get the current meeting schedule & times.

**Howell Citizens Academy:**

This seven-week program is an exciting way to learn about how our City is governed and to involve residents in community issues.

Participants will visit various departments and facilities and experience local decision-making processes to help create a better understanding



and a stronger partnership with the City. You will experience: Tours & discussion of Public Works, Water & Wastewater Treatment Plants; Tours & discussion of Police and Fire Departments; Zoning, Planning, Building, Code Enforcement, DDA & Community Development; Overview of Local Government; The budget process revenues and expenses, voting process, assessing process and Information Technology.

Questions/ Register by calling the City Managers office at (517) 546-3861 or email: [jcartwright@cityofhowell.org](mailto:jcartwright@cityofhowell.org)

Priority for enrollment will be given to City residents first, and you must be 18 years of age or older to participate.

**As in Previous Years:** The City 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. 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 Jim Webster, Operations Manager — at 517-546-5309.

Copies of this report (and previous years) at: [www.cityofhowell.org/water](http://www.cityofhowell.org/water) or at the Howell Water Plant.

# City of Howell - 2017 Water Quality Report

**This report covers the drinking water quality for the City of Howell for the calendar year of 2017.**

This information is a snapshot of the quality of the water that was provided to you in 2017. Included are details about where your water comes from, what it contains, and how it compares to U.S. Environmental Protection Agency (EPA) and State of Michigan Department of Environmental Quality (MI-DEQ) standards.

The staff at the City of Howell Water Treatment Plant are highly dedicated to bringing you the best drinking water possible. We vigilantly safeguard the water supplies and once again report that your tap water met or exceeded all water quality standards established by federal (EPA) and state (MI-DEQ) 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 70% of the hardness. The softened water is then chlorinated, fluoridated, filtered and stored in reservoirs for distribution to our customers.

**General Health Information:**

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/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 **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 wells. 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 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.

**Additional Information for Lead in Drinking Water:**

The action level for lead in drinking water is 15 parts per billion (ppb) or 0.015 milligrams per liter (mg/l). The EPA requires Water Suppliers to take action to reduce lead levels if the 90<sup>th</sup> percentile sample taken is above the 15 ppb action level. 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 Howell 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 drinking water, you may wish to have your water tested. **NOTE:** The City tests for lead & copper every 3 years, next testing to be summer 2019. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the **Safe Drinking Water Hotline (800-426-4791) <http://epa.gov/safewater/lead>**.

## WATER SYSTEM MAJOR IMPROVEMENTS: 2017

- ◆ **Wellhead Protection:** Successfully submitted and received a DEQ grant to update our protection plan.
- ◆ **Bulk Chemical Delivery:** Switched to a bulk delivery for sulfuric acid, improves employee safety.
- ◆ **DEQ Asset Management Plan:** Completed a new asset management plan, new DEQ requirement.
- ◆ **New front of plant panels:** Following a major windstorm—Replaced the complete front side of plant.
- ◆ **New Lab Equipment:** New Turbidimeter, Spectrophotometer and Balance were purchased.

### City of Howell — Lead & Copper Testing History:

The City of Howell has been testing for Lead & Copper throughout our distribution system since 1992. Sampling is conducted within private homes that have the greatest probability of containing lead components based on the age of the home. Initial testing began in 1992 and was done annually until 1995 when testing frequency was reduced to every three years, as results in the city were well under EPA limits. The last testing cycle was completed in 2016.

The City of Howell public water supply meets all EPA safe drinking water standards. Due to many potential sources within private plumbing fixtures and the age and material used, sources of lead may be present within your home. If you have plumbing and fixtures that predate the 1986 EPA “lead ban”, you may have components such as, fixtures, fittings or solder that contain higher levels of lead.

If you have concern of your water quality in your home, you can have your water tested by an MDEQ approved laboratory. Water that stands idle in pipes for long periods (overnight / while people are away) is more likely to absorb materials from the plumbing system. The best way to remove the water that may contain lead is flushing the line. Let the cold-water run until you feel it getting colder. The amount of time this takes will depend on your home – a good rule of thumb is to run the water for at least 1 minute. If concerned about lead service line / solder, you should flush water for an additional 2 to 3 minutes to make sure you are getting fresh water from the water main.



The water you flush does not need to be wasted, use it for watering plants or for cleaning; You may keep a container in your refrigerator for drinking, so you do not need to flush every time you want a drink. For more information on lead visit the U.S. EPA’s website: [www.epa.gov/lead](http://www.epa.gov/lead).



**Unregulated Contaminant Monitoring:** Unregulated contaminant monitoring helps EPA determine where certain contaminants occur and whether they need to regulate those contaminants. In September 1999, EPA revised the Unregulated Contaminant Monitoring Rule (UCMR) as required by the 1996 Amendments to the Safe Drinking Water Act. The data generated by the new UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List, a list of contaminants that EPA is considering for possible new drinking water standards. This will help to ensure that future decisions on drinking water standards are based on sound science.

- The City of Howell participated in this testing in September and December of 2001 and tested again in 2008.
- The EPA is soon expected to set a radon standard for drinking water at 300pCi/L.

\* The City of Howell voluntarily tested for Radon in 2001 and our results were 80 pCi/L.

## Water Quality DATA Information Table:



In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the 2017 calendar year. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

## 2017 WATER QUALITY DATA TABLE

Contaminants	Units	MCLG or	MCL, TT, or MRDL	Your Water	Range Low High	Sample Date	In Compliance	Typical Sources
<b>Disinfectants &amp; Disinfection By-Products</b> (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine as Cl <sub>2</sub>	ppm	4	4	0.38	0.20 0.50	2017	YES	Water additive used to control microbes
Haloacetic Acids - HAA5	ppb	N/A	60	1.7	N/A N/A	2017	YES	By-product of drinking water chlorination.
TTHM - Total Trihalomethanes	ppb	N/A	80	14.0	N/A N/A	2017	YES	By-product of drinking water disinfection.
<b>Inorganic Contaminants</b>								
Arsenic	ppb	0	10	< 1.0	N/A N/A	2015 Next testing 2024	YES	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	ppm	2	2	0.047	N/A N/A	2015 Next testing 2024	YES	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	ppb	100	100	< 1.0	N/A N/A	2015 Next testing 2024	YES	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide	ppb	200	200	< 100	N/A N/A	2016 Next testing 2019	YES	Discharge from plastic/fertilizer factories; Discharge from steel/metal factories.
Fluoride (plant tap)	ppm	4	4	0.69	0.42 0.80	2017	YES	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories.
Total Hardness as CaCO <sub>3</sub>	ppm	N/A	N/A	98.0	54.0 129.0	2017	YES	Natural Deposits
Iron, Total	ppm	N/A	N/A	<0.10	N/A N/A	2017	YES	Natural Deposits
Sodium, Total	ppm	N/A	N/A	81.0	N/A N/A	2017	YES	Erosion of natural deposits; Leaching
<b>Microbiological Contaminants</b>								
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%	2017	YES	Naturally present in the environment.
E. coli (RTCR) - in the distribution system—(positive samples)	samples	0		0	0%	2017	YES	Human and animal fecal waste.
<b>Radioactive Contaminants</b>								
Alpha Emitters	pCi/L	0	15	1.0 ± 0.60	N/A N/A	2014 Next testing 2023	YES	Erosion of natural deposits.
Radium (combined 226/228)	pCi/L	0	5	1.37 ± 0.67	N/A N/A	2014 Next testing 2023	YES	Erosion of natural deposits.
Contaminants	Units	MCLG	Action Level (AL)	Your Water	# Samples Exceeding AL	Sample Date	In Compliance	Typical Sources
<b>Inorganic contaminants</b>								
Copper - Homeowners Taps.	ppb	0	1300 *	37	0	2016 Next testing 2019	YES	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead - Homeowners Taps.	ppb	0	15 **	0	0	2016 Next testing 2019	YES	Corrosion of household plumbing 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 1300 ppb.  
 \*\* Lead Action Level = 90 percentile or 9 out of 10 homes tested must show a concentration equal to or lower than 15 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
- ◆ **pCi/L:** picocuries per liter (a measure of radioactivity).
- ◆ **ND or Not Detected:** Not detected
- ◆ **NR:** Not Required—Monitoring not required, but recommended.