

The banner features a background of blue water with ripples. The text is prominently displayed in yellow and red. The title 'City of Howell Water Treatment Plant' is in yellow, and '2010 WATER QUALITY REPORT' is in large, bold, red letters with a yellow outline. Contact information and the publication date are also included.

City of Howell
Water Treatment Plant
2010 WATER QUALITY REPORT
Howell Water Treatment Plant, 150 Marion Street, Howell MI 48843
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Published April 2011

This report covers the drinking water quality for the City of Howell for the calendar year of 2010.

This information is a snapshot of the quality of the water that we provided to you in 2010. 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 (MDEQ) standards.

The staff of the City of Howell water treatment plant is highly dedicated to bringing you the best drinking water possible. We vigilantly safeguard the water supplies and once again we report that our system has not violated any maximum contaminant level (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 have a lime softening plant and add sulfuric acid for pH control, fluoride for the prevention of tooth decay, phosphate for corrosion control, and chlorine for disinfection. The City has a wellhead protection plan approved by the State in November 2001. The plan indicates that the ground water is considered to be moderate to low for possible contamination.

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, that 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 stormwater 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

Continued on Next Page

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:

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 you 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, call to add your name for the next testing (summer 2013).

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) or at www.epa.gov/safewater/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 (see definitions in table to right).

WATER SYSTEM MAJOR PROJECTS: 2010

- **Ground Storage Reservoir (GSR) Rehabilitation;** seam re-seal of the interior and exterior of the 70' X 24' storage tank.
- Replacement of the 50+ year old **Raw Water Transmission Line** with 12,000 feet of 20 inch HDPE (High-density polyethylene).
- Replaced **Variable Frequency Drive (VFD)** at Well #6. (no pictures)

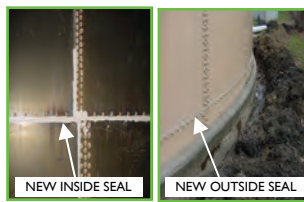
Raw Line Replacement



Directionally drilled & pipe bursting used to install 12,000 feet of 20 inch HDPE from wells to the plant. Pictures (clockwise from top): connecting new line to old pipe at river crossing, installing thrust block, flushing line and installing vault at interstate crossing.



Ground Storage Repairs



Drained & cleaned GSR tank, removed old sealant on floor & side panel seams, installed new sealant inside & outside, cement foundation repair by injecting a polyurethane foam into cement to seal and installed new drainage tile to dewater the foundation.



The water quality data table lists all the drinking water contaminants that we detected during the **2010** 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 between January 1– December 31, 2010. The EPA or 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 is more than one year old.

Terms and abbreviations used in table:

- **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).
- **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)
- **N/A:** Not applicable
- **pCi/L:** picocuries per liter (a measure of radioactivity).
- **ND:** Not detected
- **NR:** Monitoring not required, but recommended.

| Contaminants | Units | MCLG or MRDLG | MCL, TT, or MRDL | Your Water | Range Low | High | Sample Date | Violation | Typical Sources |
|--|-------|---------------|-------------------|------------|------------------------|----------------------------------|----------------------------------|---|--|
| Disinfectants & Disinfection By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.) | | | | | | | | | |
| Chlorine as Cl ₂ | ppm | 4 | 4 | 0.40 | 0.05 | 0.70 | 2010 | NO | Water additive used to control microbes |
| Haloacetic Acids - HAA5 | ppb | 60 | N/A | 1.8 | N/A | N/A | 2010 <i>Next testing 2013</i> | NO | By-product of drinking water disinfection |
| TTHM - Total Trihalomethanes | ppb | 80 | N/A | 14.0 | N/A | N/A | 2010 <i>Next testing 2013</i> | NO | By-product of drinking water disinfection |
| Inorganic contaminants | | | | | | | | | |
| Barium | ppm | 2 | 2 | 0.04 | N/A | N/A | 2006 <i>Next testing 2015</i> | NO | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Fluoride (plant tap) | ppm | 4 | 4 | 0.97 | 0.61 | 1.08 | 2010 | NO | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Sodium (optional) | ppm | N/A | N/A | 49.0 | N/A | N/A | 2010 | NO | Erosion of natural deposits; Leaching |
| Radioactive Contaminants | | | | | | | | | |
| Alpha Emitters | pCi/L | 0 | 15 | 2.8 | N/A | N/A | 2001 <i>Next testing 2014</i> | NO | Erosion of natural deposits. |
| Radium (combined 226/228) | pCi/L | 0 | 5 | 0.3 | N/A | N/A | 2001 <i>Next testing 2014</i> | NO | Erosion of natural deposits. |
| Contaminants | Units | MCLG | Action Level (AL) | Your Water | # Samples Exceeding AL | Sample Date | Exceeds AL | Typical Sources | |
| Inorganic contaminants | | | | | | | | | |
| Copper - Homeowners Taps. | ppm | 1.3 | 1.3 * | 0.020 | 0 | 2010 <i>Next testing 2013</i> | NO | Corrosion of household plumbing systems. Erosion of natural deposits. | |
| Lead - Homeowners Taps. | ppb | 0 | 15 ** | 1.9 | 0 | 2010 <i>Next testing 2013</i> | NO | 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 1.3 ppm. | | | | | | | | | |
| ** Lead Action Level = 90 percentile or 9 out of 10 homes tested must show a concentration equal to or lower than 15 ppb. | | | | | | | | | |

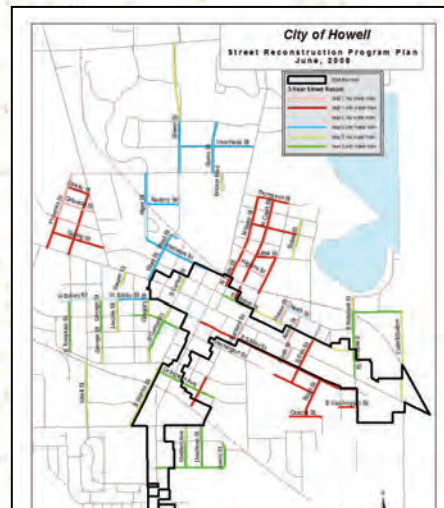


FOR YOUR INFORMATION



Multi-Year Street Program: 2009—2012

The Howell City Council has approved a three-year program that will reconstruct approximately 10.805 miles of the City's 36 miles of streets. **Year One** streets included Oceola, Bush, E. Washington (500 block and higher), S. Elm, South St., Almon, Hesse and North Street. **Year Two** streets included Bower (Riddle north), Boston Blvd, Burns, Alger, Factory, West and Wetmore. **Year Three (next year, 2012)** will affect streets; **Bower (Caledonia to M59), East Clinton, S. National, Cattrell, Sutton, Pulford, Hadden, Dearborn, Jones, Fleming, Livingston, S. Walnut, Isbell (Mason to RR), S. Tompkins, Swann Court and portions of: George, Gregory, W. Washington & Lincoln.** The project not only reconstructs the road, but also replaces aging sewer and water lines and making storm sewer improvements. The streets within the program are a mixture of local and major streets that have not undergone any significant rehabilitation within the last twenty years. More information is available at the City of Howell street program website: howellstreets.com



This street map is available on the howellstreets.com website

Water System Improvements: 2009—2012

The City has identified approximately \$3.5 million of Water Treatment improvements that are planned over the next three years. In 2009 the water tower & water plant improvements were completed. In 2010 the raw water transmission line will be replaced at a cost of \$1,576,595. These projects are being administered through a low interest loan program for municipal water systems called the Drinking Water Revolving Fund (DWRf). The MDNRE oversees the DWRf program.

How can I 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. Note: All City Council meetings will begin at 7:00 p.m.

2011 Meeting Dates = January 10 & 24; February 14 & 28; March 14 & 28; April 11 & 25; May 9 & 23; June 13 & 27; July 11 & 25; August 8 & 22; September 12 & 26; October 10 & 24; November 7 & 21; December 5 & 19.

Howell Citizens' Academy To sign up for Citizens' Academy = Contact Howell City Hall.

The 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 and discussion of Public Works, Water & Wastewater Treatment Plants; Tours and 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 & to register for **NEXT** citizen's academy call the **City Manager's office at (517) 546-3861** or email: thecity@ci.howell.mi.us. 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:

We are committed to providing you safe, reliable, and healthy 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 also 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.

Get Copies of this report (and previous years) at: www.cityofhowell.org/watertreatment or at Water Plant.