

Consumer Confidence Report

Village of New Haven 2017

Drinking water quality is important to our community and the region. The Village of New Haven and the Great Lakes Water Authority (GLWA) are committed to meeting state and federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. The Village of New Haven operates the system of water mains that carry this water to your home's service line. This year's Water Quality Report highlights the performance of GLWA and The Village of New Haven water professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communication with the public about our drinking water.

Where does my water come from?

Your source water comes from the lower Lake Huron watershed. The source water is received and treated at Detroit Water and Sewerage's Lake Huron treatment facility and then sent by pipe line to the Village Of New Haven. The watershed includes numerous short, seasonal streams that drain to Lake Huron.

The Village of New Haven also maintains 2 back-up wells for emergency use when DWSD cannot meet the demands of the Village of New Haven, primarily during the summer months during high demand. In 2016 the wells were not used. These wells are located in the northern section of the Village of New Haven. The wells are tested monthly by the Mt. Clemens Water Treatment Plant, from samples provided by the New Haven Department of Public Works, for *E-coli* and total Coliform Bacteria. The wells have not had either of these contaminants in the test samples. The Village of New Haven collects the samples and sends them to the DEQ Lab for analysis for Bacteriological, every 3 years for Volatile Organic Compounds, Arsenic, Pesticides, Herbicides and Carbamates.

Every 9 years they are tested for Metals, Radiological and Radium 226 & 228. Results of these tests can be found in a table included with this publication or a copy is available by contacting the Water Department at (586)749-9399.

Source water assessment and its availability

Your source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is a seven-tiered scale ranging from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

In 2015, GLWA received a grant from the Michigan Department of Environmental Quality to develop a source water protection program for the Lake Huron water treatment plant intake. The program includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential of source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation and education. If you would like to know more information about the Source Water Assessment report please, contact your water department (586)749-9399.

If you would like to know more information about this report or for a complete copy of this report please, contact your water department (586)749-9399.

Warning about the vulnerability of some populations to contaminants in drinking water

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, 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 about drinking water from their health care providers. EPA/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).

How can I get involved?

The Village of New Haven council meets the second Tuesday of every month. Any questions about the water quality can be addressed at the meeting or you can call the water department at (586)749-9399.

Why are there contaminants in my drinking water?

“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 Environmental Protection Agency’s Safe Drinking Water Hotline at (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products 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.

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. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.”

Additional Information for Lead

Safe drinking water is a shared responsibility. The water that GLWA delivers to our community does not contain lead. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines. Corrosion control reduces the risk of lead and copper from leaching into your water. Orthophosphates are added during the treatment process as a corrosion control method to create a protective coating in service pipes throughout the system, including in your home or business. The Village of New Haven performs required lead and copper sampling and testing in our community. Water consumers also have a responsibility to maintain the plumbing in their homes and businesses and can take steps to limit their exposure to lead.

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 Village of New Haven 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 and cooking. 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 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

The Village of New Haven and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us with any questions or concerns about your water.

KEY TO THE DETECTED CONTAMINANTS TABLE

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
LRAA	Locational Running Annual Average	
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant 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.
n/a	not applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
µmhos	Micromhos	Measure of electrical conductance of water
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.

Lake Huron Water Treatment Plant 2017 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
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Inorganic Chemicals – Monitoring at the Plant Finished Water Tap

Contaminant	Test Date	Unit	Health Goal MCLG	Action Level	90 th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Fluoride	May 16 2017	ppm	4	4	0.72	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	May 16 2017	ppm	10	10	0.34	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	May 16 2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

Disinfection By-Products –Monitoring in Distribution System Stage 2

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2017	ppb	n/a	80	30	.50-30	no	By-product of drinking water chlorination
Haloacetic Acids Five (HAA5)	2017	ppb	n/a	60	20	1.0-20	no	By-product of drinking water disinfection

Disinfectant Residuals Monitoring in DWSD Distribution System by Treatment Plant

Regulated Contaminant	Test Date	Unit	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan-Dec 2017	ppm	4	4	0.75	0.65-0.80	no	Water additive used to control microbes

017 Turbidity – Monitored every 4 hours at Plant Finished Water Tap

Highest Single Measurement cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.29 NTU	100%	no	Soil Runoff

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

017 Microbiological Contaminants – Monthly Monitoring in Distribution System

Regulated Contaminant	MCLG	MCL	Highest Number Detected	Violation yes/no	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	0	no	Naturally present in the environment.
E. coli Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E. coli positive.	0	no	Human waste and animal fecal waste.

2017 Lead and Copper Monitoring at Customers' Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2017	ppb	0	15	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2017	ppb	1300	1300	100	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides 2014

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Level Detected	Violation yes/no	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	5/13/2014	pCi/L	0	5	0.86 + or - 0.55	no	Erosion of natural deposits

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.46	Erosion of natural deposits

2017 REGULATED CONTAMINANTS TABLE FOR NEW HAVEN BACKUP WELL #3

Parameters	Qualifier	Result Units	Dilution Factor	Reporting Limit	Result Min	Qualifier Max	Analyzed	By
Individual Parameters								
Analytical Method: EPA 300.0								
Nitrate Nitrogen, as N (NO3-N)		<0.050 mg/L	1	0.050		10	7/17/2017 15:29	MKK
Nitrite Nitrogen, as N (NO2-N)		<0.050 mg/L	1	0.050		1	7/17/2017 15:29	MKK
Analytical Method: EPA 300.0								
Chloride		31 mg/L	1	5.0		250	7/17/2017 15:29	MKK
Fluoride		0.37 mg/L	1	0.10		4	7/17/2017 15:29	MKK
Sulfate		67 mg/L	1	5.0		250	7/17/2017 15:29	MKK
Analytical Method: SM 2340 B								
Hardness, Total as CaCO3		330 mg/L	1	1.0			7/21/2017 14:30	MKK
Metals								
Analytical Method: EPA 200.7								
Iron, Total	H	1.3 mg/L	1	0.10		0.3	7/21/2017 14:30	MKK
Analytical Method: EPA 200.7								
Sodium, Total		15 mg/L	1	0.50			7/21/2017 14:30	MKK

2017 REGULATED CONTAMINANTS TABLE FOR NEW HAVEN BACKUP WELL #4

Parameters	Qualifier	Result Units	Dilution Factor	Reporting Limit	Result Min	Qualifier Max	Analyzed	By
Individual Parameters								
Analytical Method: EPA 300.0								
Nitrate Nitrogen, as N (NO3-N)		<0.050 mg/L	1	0.050		10	7/17/2017 15:43	MKK
Nitrite Nitrogen, as N (NO2-N)		<0.050 mg/L	1	0.050		1	7/17/2017 15:43	MKK
Analytical Method: EPA 300.0								
Chloride		31 mg/L	1	5.0		250	7/17/2017 15:43	MKK
Fluoride		0.39 mg/L	1	0.10		4	7/17/2017 15:43	MKK
Sulfate		65 mg/L	1	5.0		250	7/17/2017 15:43	MKK
Analytical Method: SM 2340 B								
Hardness, Total as CaCO3		320 mg/L	1	1.0			7/21/2017 14:30	MKK
Metals								
Analytical Method: EPA 200.7								
Iron, Total	H	1.5 mg/L	1	0.10		0.3	7/21/2017 14:30	MKK
Analytical Method: EPA 200.7								
Sodium, Total		13 mg/L	1	0.50			7/21/2017 14:30	MKK

1. Help keep pollution out of storm drains

Storm drains lead to our lakes and streams. So, any oil, pet waste, leaves, or dirty water from washing your car that enters a storm drain gets into our lakes and streams. With almost 5 million people living in Southeast Michigan, we all need to be aware of what goes in our storm drains.

Remember, only rain in the drain!

2. Fertilize carefully

Did you know that healthy lawn care is a good way to protect lakes and rivers? Proper fertilization is important for a healthy lawn. When fertilizer is put down at the right time and in the right way, it strengthens lawns. A healthy lawn protects water by holding soil and pollutants and minimizing the need for pesticides.

Improper fertilization (e.g., leaving fertilizer on paved surfaces, using improper type, applying on frozen ground) harms our water. Improper fertilization causes it to get into storm drains in streets, which empty into lakes and rivers. Fertilizer in lakes and rivers causes algae to grow, which uses oxygen that fish need. Remember . . . “keep it on the lawn!”

3. Carefully store and dispose of household cleaners, chemicals, and oil

Antifreeze, household cleaners, gasoline, pesticides, oil paints, solvents, and motor oil are just some of the common household products that enter our storm drains. You can help keep these out of our lakes and streams . . . instead of putting these items in the trash, down the storm drain, or on the ground, **take them to a local hazardous waste center or collection day.**

4. Clean up after your pet

Most of us pick up after our pets to be a good neighbor and keep our yard clean. But there's another important reason. Pet waste contains bacteria that is harmful to us and our water. Leaving it on the sidewalk or lawn means harmful bacteria will be transported into the storm drains and then into our lakes and streams. So what can you do to help? Simple. Whether on a walk or in your yard, **dispose of your pet's waste promptly in the toilet or trash.**

5. Practice good car care

Did you know that just four quarts of oil from your car's engine can form an eight-acre oil slick if spilled or dumped down a storm drain? There are over 4 million cars in Southeast Michigan, so even small leaks matter.

Keep your car tuned and fix leaks promptly.

Not only will this make your car run better and last longer, it will be good for our lakes, streams, and air. When washing your car, keep the polluted water from going into the street and storm drain. **Consider taking your car to the carwash or washing your car on the grass.** Your lawn will gladly soak up the excess water.

6. Choose earth-friendly landscaping

When landscaping your yard you can protect your kids, pets, and the environment from harm. **Use pesticides sparingly.** Put mulch around trees and plants. Water your lawn only when it needs it (1-2 times a week is usually sufficient) and **choose plants native to Michigan.** Once established, these plants tolerate dry weather and resist disease.

7. Save water

Did you know that individually we use about 77 gallons of water each day? When we overwater our lawns, it can easily carry pollution to the storm drains and to our lakes and streams. **Consider using a broom instead of a hose** to clean sidewalks and driveways. Direct hoses and sprinklers on the lawn, not the driveway. Water when necessary instead of on a fixed schedule. Remember, saving water also saves you money.

We might not be able to see the lake or stream from our window, but it's there. It might be a small stream or ditch or even the storm drain in the street. All of these lead to our lakes and streams. So, what we do at home affects our rivers and lakes!

