Macomb Township

Water Connection

Water Quality Report

2015

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Department of Water and Sewer

51650 Card Road, Macomb, MI 48042
Business (586) 598-0687
Emergency (586) 598-1790

Gerry Wangelin, Superintendent

Ed Koenig, Assistant Superintendent

A Message from the Superintendent

Macomb Township is honored to provide you with the 2015 Annual Water Quality Report known as the "Water Connection". This report reviews the sources of our water, lists the results of our tests, and contains important information about water, health and ways to use water responsibly which will lead to saving money. Unfortunately, water and sewer rates are increasing every year. In an effort to help control these increasing costs, this report will offer many money saving ideas. It should also be noted that on May 13, 2009 the Township Board adopted a summer water use ordinance. The content of this ordinance as well as many helpful idea's are available at all of the Township building's and also on our website at www.macomb-mi.gov and click on Water & Sewer Dept.

Macomb Township is pleased to show you we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (DEQ) for the 2015 calendar year. Macomb Township Water & Sewer Department provides drinking water to approximately 27,643 metered customers in the 36 square mile area. The systems water is drawn from three master meters. Two along 24 Mile Road, the third in the 21 Mile and Fairchild Road area. The water traversing through the master meters is supplied and purchased from the City of Detroit, otherwise known as DWSD. For informational purposes throughout this report, the water supplied to Macomb Township from DWSD is from the Lake Huron Treatment Plant. Macomb Township Water & Sewer Department preserves and maintains the water distribution system with approximately 22 professional, trained, and experienced employees. Weekly bacteriological samples are collected throughout the distribution system and delivered to a certified laboratory at DWSD. Macomb Township Water & Sewer Department will notify you immediately if there is ever any reason for concern about our drinking water supply.

Sincerely,
Gerry Wangelin, Superintendent

Our Primary Source of Water, Lake Huron Treatment Plant

Macomb Township is supplied by the Detroit Water System where the water is produced by the Lake Huron Water Treatment Plant near Port Huron. From this point, the water travels through large water mains to a point where it enters Macomb Township. 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 (DEQ) 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 on a seven-tiered scale 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, DWSD 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. If you would like more information about this report or a complete copy of this report, please visit the Macomb Township W & S website at www.macomb-mi.gov/water or call (586)598-0687.

Our Mission

Macomb Township Water & Sewer Department is dedicated to the Health, Safety and Welfare of the Community. Our goal is to meet and exceed all Federal, State and Local Requirements in providing the highest quality of drinking water, fire protection flows and the most efficient sewage disposal system.

WATERING BASICS 101

WHY DOES MACOMB TOWNSHIP HAVE AN OUTDOOR WATERING ORDINANCE?

On May 13, 2009 the Macomb Township Board passed Ordinance No. 242 which puts limitations on water use. “Chapter 15 of the Code of Ordinances for The Township of Macomb is hereby amended and revised for the purposes of protecting the public health, safety and welfare; providing for decreases in maximum water usage at peak hours in order to achieve a better water rate from the Detroit Water and Sewerage Department; provide for a decrease in peak water usage in order to provide for better water pressure throughout the entire system during peak flows in order to protect the public health, safety and welfare.”

WHAT IS PEAK WATER USAGE?

The Detroit Water & Sewerage Department (DWSD) monitors each communities water usage during **peak periods**. The **peak period** for all communities is from 5 am to 11 pm EST daily .The highest amount of water used during this time period equals a community’s **Peak Usage**.

HOW ARE WATER RATES DETERMINED?

The peak time for water usage is from 5 am to 11pm EST, when the majority of customers are using the most water for activities such as bathing, cooking, lawn sprinkling, etc. In order to provide for this higher usage of water at these specific times, the City of Detroit must design its system to supply the water to the customer for these times. That means larger pumps, larger water mains, and more electricity to operate the water system. All of these things equate into increased costs of operating the water system.

MACOMB TOWNSHIP’S PEAK USAGE HABITS:

Macomb Township has continued to have a higher water demand during peak periods, **especially due to automated irrigation** systems. The consequences of not shifting heavy use from automated irrigation systems to **NON-PEAK HOURS** (11pm to 5am EST) is a higher water supply charge incurred to the Township from DWSD.

HOW CAN MACOMB TOWNSHIP MANAGE WATER RATES?

The only way to manage the rates charged from DWSD is to shift the heavy water use to non-peak hours which are 11pm to 5am EST.

HOW IS THE ORDINANCE ENFORCED?

The Macomb Township W&S Department will be taking a more aggressive approach to enforce the Outdoor Watering Ordinance. Violators will be given a notice of the violation with the following posted on their door.

IMPORTANT

THIS IS A

FINAL NOTICE

YOU ARE CURRENTLY IN

VIOLATION

OF MACOMB TOWNSHIP’S OUTDOOR WATERING ORDINANCE

Please reset your irrigation timers to water between the hours of 11:00 p.m. to 5:00 a.m.

ANOTHER VIOLATION MAY RESULT IN A CITATION

Macomb Township enacted this ordinance for the purpose of shifting heavy use from automated irrigation systems to NON-PEAK HOURS. In addition, the shift in peak usage will assist in managing water rates.

To review this ordinance, go to
www.macomb-mi.gov
and click on the *Water & Sewer page*
or call the *Water & Sewer Dept.*
586-598-0687
Mon-Fri 8:00 a.m. - 4:30 p.m.

DATE: _____ TIME: _____

ADDRESS: _____

EMPLOYEE: _____

MACOMB TOWNSHIP
CENTER OF THE COUNTY · HEART OF THE WORLD

WATER CONSERVATION DOES NOT AFFECT WATER RATES?

Despite what may be happening in other parts of the country, water conservation does not have an affect on water rates in our area. Michigan is fortunate to have an abundance of water available in the Great Lakes for use as drinking water. The City of Detroit has designed their water system and rate structure so that customers may use as much water as they need. It is the extra cost of supplying water during peak times that drives water rates higher.

Public water systems are similar to the road system in that a water system must be designed to handle its “rush hour traffic’” 5am to 11pm EST. If Macomb Township took part of this traffic (water demand) and moved it to early morning 11pm to 5am EST, when most people are sleeping, Detroit would spend less to provide the same amount of water. This cost saving would help keep water rates lower for all Township customers.

KNOW YOUR WATER METER!

Like reading the odometer on your car, you can read your water meter by recording all numbers from left to right, including any zero's to the right of the moveable numbers. Write down this reading along with the date. Take a second reading later and subtract the first reading from the second reading. This will give you the total water usage (to the nearest ten gallons) over the period between the readings. The sweep hand on the meter makes one complete revolution for every 7.5 gallons of water used. (Note the tens digit advance with each sweep.) If you have any questions about reading your meter, please give us a call 586-598-0687.

Substances That Might Be in Drinking Water

In order to ensure that tap water is safe to drink, The Environmental Protection Agency (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.
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 the water poses a health risk.
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.

People with Special Health Concerns

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 disorder, 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** (1-800-426-4791).

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (1-800-426-4791)

Lake Huron Water Treatment Plant
2015 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at the Plant Finished Water Tap								
Fluoride	05/11/2015	ppm	4	4	0.43	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	05/11/2015	ppm	10	10	0.30	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products								
Total Trihalomethanes (TTHM)	2015	ppb	n/a	80	44	17-58	no	By-product of drinking water chlorination
Haloacetic Acids Five (HAA5)	2015	ppb	n/a	60	11	3-15	no	By-product of drinking water disinfection

Regulated Contaminant	Test Date	Units	Health Goal MRDGL	Allowed Level MRDL	Highest RAA	Quarterly-Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Disinfectant Residuals Monitoring in DWSD Distribution System by Treatment Plant								
Total Chlorine Residual	Jan-Dec 2015	ppm	4	4	0.82	0.71-0.91	no	Water additive used to control microbes

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 month and because the level was low, there is no requirement for TOC removal	Erosion of natural deposits

2015 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
0.2 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.

2015 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	in one month/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.	entire year/0	no	Human waste and animal fecal waste.

Water Analysis for 2015

State and Federal laws require Macomb Township and the City of Detroit to routinely monitor for contaminants in your drinking water. We are providing you with the results of the contaminants that were detected in our water. The table above and on the next page denotes the monitoring period from January 1, 2015 through December 31, 2015.

Lake Huron Water Treatment Plant 2015 Regulated Detected Contaminates Tables

2014 Lead and Copper Monitoring at Customers' Tap

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2014	ppb	0	15	0 ppb	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppb	1.3	1.3	15.4 ppb	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.

2014 Radionuclides

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 & 228	5/13/14	pCi/L	0	5	0.86 + or - 0.55	no	Erosion of natural deposits

2015 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.00	Erosion of natural deposits

Collection, sampling result information and table provided by GLWA Water Quality Division, ML Semegen

Lead was not detected in Macomb Township's Water Sources

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. Macomb Township 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 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 at 1-800-426-4791 or on the web at http://www.epa.gov/safewater/lead.

Detected Contaminants Definitions

MCLG—(Maximum Contaminant Level Goal) - The level of contaminant in drinking water below which there is no known or expected risk to health.

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.

MRDLG — (Maximum Residual Disinfectant 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.

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.

pCi/L— Picocuries Per Liter. A measure of radioactivity.

µmhos– Micromhos—Measure of electrical conductance of water.

NTU — (Nephelometric Turbidity Units)- Measures the cloudiness of water.

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.

HAA5 — (Haloacetic acids)- HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.

TTHM — (Total Trihalomethanes) - Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

LRAA— Locational Running Annual Average

ºC—Celsius A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions

> - Greater than; ***n/a — (Not applicable); ND—Non detected; RAA—Running Annual Average***

Eliminate FOG's (Fats, Oils, and Grease) from our Sanitary Sewers

Where Does Grease Come From?

Most of us know grease as a by product of cooking. Grease is found in meat fats, lard, cooking oil, shortening, butter or margarine, food scraps, baked goods, sauces and dairy products.

Most often grease is washed down into the plumbing system, usually through the kitchen sink. Grease sticks to the inside of the sewer pipes (both on your property and the Township sewer system). Over time, the grease can build and block the entire piping system.

Garbage disposals do not keep grease out of the plumbing system. These units only shred solid material into smaller pieces and do not prevent grease from going down the sewer system. Commercial additives, including detergents that claim to dissolve grease, may pass grease down the line and cause problems in other areas.

THE RESULTS CAN BE:

- **Raw Sewage overflowing in your home or neighbor's home**
- **An expensive & unpleasant cleanup at the cost of homeowner**
- **Increase in operation & maintenance costs for Township sewer department which results in higher sewer bills for customers**

HOW CAN THIS BE PREVENTED:

- **Never pour grease down sink drains or into toilets**
- **Scrape grease & food scraps from dishes, pots, pans, utensils, grills, and cooking surfaces into the trash for disposal**
- **Do not put grease down garbage disposals. Use strainers in sink drains to catch food scraps & other solids and empty into trash.**

Did you Know?

Fats, oil and grease are not just bad for your arteries and your waistline: they are bad for sewers too!

Overflow or Backup of Sewage Water or Storm Water System

Under the guidelines of ***Public Act 222***, any resident or business owner having experienced an overflow or backup of a sewage disposal system or storm water system, please contact the Macomb Township Water & Sewer Department **immediately** at (586) 598-0687 or after hours at (586) 598-1790.
You must file a written claim with Macomb Township within 45 days after the overflow or back up is discovered. To receive a Notice of Claim Form, please contact the Macomb Township Water & Sewer Department at (586) 598-0687 or by mail at 54111 Broughton Road, Macomb, MI 48042. Failure to provide the required notice will prevent recovery of damages.

Public Participation

The Macomb Township Board of Trustees conducts regularly scheduled business meetings on the second and fourth Wednesday of each month. These meetings allow the general public an opportunity to address significant concerns to the Board.
The Board of Trustees oversees the operations of the Water and Sewer Department. These meetings in particular do not discuss water quality but will address all purchases, functional activities and concerns that may arise. The office of the Water & Sewer Department welcomes your comments and opinions about this report and will be happy to answer any questions you may have by contacting our department representatives at (586) 598-0687, Monday thru Friday from 8:00 am to 4:30 pm or the website at www.waterandsewer@macomb-mi.gov

Before you dig, call MISS DIG at 1-800-482-7171

Before you put that shovel or spade in the ground in your yard or make any major improvements on your property, you must know where all your utilities are located. Utilities can be buried from 2 inches to more than 10 feet in depth and can be located anywhere on your property. There is an agency called ***MISS DIG*** which is a toll free phone call and provides you a free service to locate these utilities. We ask that you call MISS DIG before you dig. It will save costly repairs for the utilities and may save your life.

Cleaner Safer Environment, We Can All Pitch In !

Did you know that over three million people depend on our lakes and streams for their drinking water? And that in Southeast Michigan there are over 300,000 registered boaters and 3.5 million people visit a local park each year?

With this many people depending on our lakes and streams for drinking water and recreation, we need to be careful how we treat our water. You might not be able to see the stream or lake from your house, but it's there! It might be a small stream or ditch or even a storm drain in the street. All of these lead directly to our lakes and streams. So, what we do at home affects our water!

Here are seven simple steps you can take in your home and yard to protect our lakes and streams.

- **Help keep pollution out of storm drains.** Storm drains lead directly to our lakes and streams. So, never dump oil, pet waste, leaves, dirty water, or anything down a storm drain. Remember, only rain in the drain.
- **Fertilize caringly and sparingly.** Excess fertilizer that gets into storm drains pollutes our lakes by causing large algae blooms and using up oxygen fish need to survive. Sweep excess fertilizer back onto your lawn, use a low or no phosphorus fertilizer, and have your soil tested to see what, if any, fertilizer is needed.
- **Carefully store and dispose of household cleaners, chemicals, and oil.** Instead of putting hazardous products like antifreeze, motor oil, and pesticides in the trash, down the storm drain, or on the ground, take them to a local hazardous waste collection day.
- **Clean up after your pet.** Whether on a walk or in your yard, promptly clean up after your pet. Not only will you be a good neighbor, you will also protect our water from harmful bacteria.
- **Practice good car care.** Consider taking your car to a car wash or washing your car on the grass.
- **Choose earth friendly landscaping.** Protect your pets, kids, and the environment by using pesticides sparingly. Also, water your lawn only when it needs it and choose plants native to Michigan.
- **Save water.** Over watering our lawns 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. This will help save our lakes and streams and save you money.

For more easy steps on protecting our lakes and streams, visit www.semcog.org or www.macomb-mi.gov/pages/water_and_sewer.htm and visit the Storm Water Links. Remember, our water is our future – and it's ours to protect!

If you suspect or are aware of a water pollution issue, please contact the Macomb County Water Pollution Hotline at (877) 679-4337.

Macomb Township Board of Trustees

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