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# Macomb Township

# Water Connection

# Water Quality Report 2007

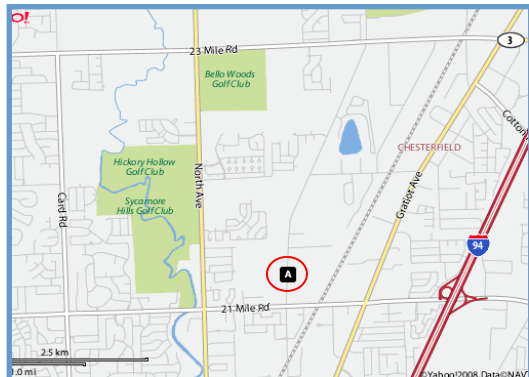
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Department of Water and Sewer  
51650 Card Road, Macomb, MI 48042  
Business (586) 598-0687  
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David Koss Superintendent  
Gerry Wangelin, Asst. Superintendent



Spring 2008 construction of new Fairchild Road Meter Facility.



## A Message from the Superintendent

Macomb Township is honored to provide you the 2007 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 conserve water. Unfortunately, water and sewer rates are increasing every year; we have also provided information to assist you with household money saving ideas. Macomb Township is pleased to show you we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ) for the 2007 calendar year. Please visit our website at [www.macomb-mi.gov/pages/water\\_and\\_sewer.htm](http://www.macomb-mi.gov/pages/water_and_sewer.htm) for additional information.

Macomb Township Water & Sewer Department provides drinking water to approximately 24,500 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 19 professionally certified 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 water.

**Additional information visit: Macomb Township website at [www.macomb-mi.gov](http://www.macomb-mi.gov).**

Sincerely,

**David Koss**, 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 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 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 to determine the susceptibility of potential contamination. The susceptibility rating is on a six-tiered scale from very low to 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.

If you would like to know more about this report please visit the Detroit Water and Sewerage Department’s website at [www.dwsd.org](http://www.dwsd.org) or contact Mary Lynn Semegen, (313) 935-7106, [semegen@dwsd.org](mailto:semegen@dwsd.org).

## 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.***

## Water Restrictions, Memorial Day Through Labor Day

In the summer months, municipal water usage doubles. This is the season when people are outdoors watering lawns and gardens, filling swimming pools and washing cars. Summer peak demand places stress on municipal water systems and increases costs for water users. As water supplies diminish during periods of low rainfall, some municipalities must declare restrictions on lawn and garden watering.

Macomb Township has implemented a voluntary odd/even lawn watering restriction, effective *Memorial Day* through *Labor Day*. Water customers with an address ending in an odd number are to water on odd calendar days and those with an address ending in an even number are to water on even calendar days. In addition, we ask you to refrain from any outside water use between the hours of 6:00 am - 9:00 am and 6:00 pm - 9:00 pm. This will ensure adequate water pressure for potable use and fire protection. If conditions warrant, DWSD in conjunction with Macomb Township will impose mandatory water restrictions. Macomb Township monitors system pressures 24 hours a day, 7 days a week in order to maintain a safe water system. Strict enforcement is required to keep our operating pressures safe.

## Know Your Water Meter!

Like reading the odometer on your car, you read your water meter by recording all numbers from left to right, including any zeros to the right of the movable 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.



## Lawn Irrigation and Outdoor Water Use

Macomb Township **does not** provide a second meter for outdoor water use. Instead, a homeowner is billed (based on consumption) up to a maximum of 40 units of sewer on a quarterly water bill. The costs associated with a second meter will take approximately 20 years to recoup versus the methodology of the 40 unit system. For example, a resident is billed 100 units. The bill will reflect a charge of 40 units of sewer and 100 units of water. This formula has saved residents money and reduced the need of a second meter. If you have any questions, please contact the Department for further information.

## Outdoor Water Conservation

Outdoor uses of water are often high volume; nevertheless, there are ways you can save water. To help conserve water try these helpful tips:

- One deep watering is much better than watering several times lightly. Lawns require about 1 inch of water each week. If the weather is very hot, apply an inch every 3 days. Water to a depth of 4-6 inches encourages deeper, healthier root development and allows longer periods between watering. To measure the water, put an empty tuna can (or cat food can) on the lawn while watering. Stop watering when the can is full or the notice of water running off the lawn, or worse, on the sidewalk or roadway!
- Early morning or night is the best time for watering to reduce evaporation. To help control where your water goes, water when it is not windy.
- Attach a pistol type sprayer to the end of your garden hose. In addition to enabling you to adjust the rate of flow, this device keeps water from continuing to run out during those short periods when you put down the hose without turning it off. (for example, while washing your car).
- Water your lawn when necessary, it takes **660 gallons of water to supply 1,000 square feet of lawn with 1 inch of water.** This is nearly the same amount of water as you use inside your home in an entire week! Water your lawn when it begins to show signs of wilting — when the grass does not spring back when you step on it — rather than on a regular schedule.
- Use Mulch around trees and shrubs and in garden beds. This greatly reduces the amount of water lost through evaporation, therefore reducing the need for watering.
- Avoid watering the lawn. Your lawn may turn brown in the middle of the summer, but this doesn't mean that its dead. Rather the grass is dormant and will re-grow when rain and cooler weather returns.
- Use the water from your roof downspouts for watering your garden and flower beds.

**Source: Michigan State University Extension, Home Maintenance and Repair.**

## *Health Information On The Water You Drink*

“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 (1-800-426-4791).*”

## 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.

Substances that may be in source 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.

*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)*

## Water Analysis for 2007

*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 tables below and on the next page denotes the monitoring period from January 1, through December 31, 2007.*

### 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.

**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.

**n/a — ( Not applicable )**

**> — ( Greater than )**

2007 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
<b>Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap</b>								
Fluoride	8/8/2007	ppm	4	4	1.23	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/8/2007	ppm	10	10	0.28	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System</b>								
Total Trihalomethanes (TTHM)	Feb-Nov 2007	ppb	n/a	80	17.4	9.3-40.3	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb- Nov 2007	ppb	n/a	60	11.0	2.6-15.2	No	By-product of drinking water disinfection
Disinfectant (Total Chlorine residual)	Jan-Dec 2007	ppm	MRDGL 4	MRDL 4	0.70	0.56-0.83	No	Water additive used to control microbes

<b>2007 Turbidity – Monitored every 4 hours at Plant Finished Water Tap</b>			
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
0.11 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.			

<b>2007 Microbiological Contaminants – Monthly Monitoring in Distribution System</b>					
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	No	Naturally present in the environment.
<i>E.coli</i> or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E.coli</i> positive.	entire year	No	Human waste and animal fecal waste.

<b>2005 Lead and Copper Monitoring at Customers' Tap</b>								
Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 <sup>th</sup> Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2005	ppb	0	15	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2005	ppm	1.3	1.3	.080	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	Running annual average	Monthly Ratio Range	Violation Yes/No	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

2007 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.81	Erosion of natural deposits

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Treatment Technique							
Regulated Contaminant	MCL	Treatment Technique (TT) Standard	Treatment Technique (TT) Violation yes/no	Reason for violation	Action Taken	Major Sources in Drinking Water	Health Effects
Lead	TT	No more than (9) days in a six (6) month period below the established minimum.	Yes	During a 14-day period in January and February, phosphate pump malfunctions resulted in below optimal dosages. Phosphate was added to the water, but at a dosage below the state designated minimum. Despite this lower than acceptable dosage, phosphate residual concentrations in water leaving the plant and entering the distribution system were maintained above the established minimum.	The chemical feed pumps have all been repaired.	Corrosion of household plumbing system; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Copper	TT	No more than (9) days in a six (6) month period below the established minimum	Yes	During a 14-day period in January and February, phosphate pump malfunctions resulted in below optimal dosages. Phosphate was added to the water, but at a dosage below the state designated minimum. Despite this lower than acceptable dosage, phosphate residual concentrations in water leaving the plant and entering the distribution system were maintained above the established minimum.	The chemical feed pumps have all been repaired.	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.	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.

For more information, please contact Macomb Township Water and Sewer Department at 586.598.0687

## Repair Your Leaks

There are many ways to conserve water. You should watch for leaks in your home system. These leaks can add as much as a dollar per day and hundreds of dollars per year to your water bill. Leaky faucets, faulty toilets, over watering of lawns and faulty water activated sump pumps are some examples of fixtures that can produce exorbitant bills. If you think you have a leak in your home, you should find the leak as quickly as possible and contact a plumbing agency to have the leak repaired. Macomb Township cannot adjust your water bill for water that was wasted by unfortunate water leaks. Knowing how to read your water meter is important. This will tell you exactly the amount of water you use.

## 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, or in the exercise of reasonable diligence, should have been 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.

## Sanitary Sewer System Maintenance

The Department over the past several years has experienced increased maintenance of the sanitary sewer system which means increased cost to the consumer. Many cleaning materials are now being distributed in a disposable type of cloth. The majority of these disposable cloths are non-biodegradable and should be disposed of in a waste container and **not** in the toilet or sanitary sewer system. These cleaning cloths can also plug your own internal system, which can cause backup of sewage in your home. If there is any doubt, please dispose **all** disposable cloths in waste containers. These materials are plugging our sewer pump stations on a regular basis which is adding cost to the maintenance of the sewer system. The end result is an increase of your water and sewer bill.



## 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 foot 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.

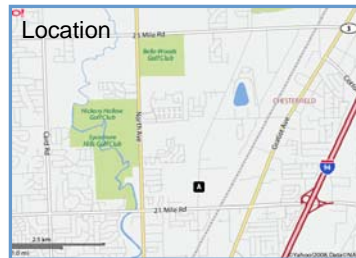
## New Construction

Macomb Township is proud to introduce two new major projects to the Water and Sewer Distribution System.

### Fairchild Road Meter Facility

The Department is finalizing a new master meter facility in the southeast corner of the distribution system. This meter facility is an additional connection to Detroit Water System and will provide additional water to the Townships water system and help alleviate some of the pressure problems experience in recent years. The project is located on Fairchild north of 21 Mile Road with an estimated project cost of \$900,000 Dollars.

This facility should be in service in July of 2008.



### Sanitary Pump Station #7

The Department is also in the process of finalizing the new upgraded Pump station #7 located on 23 Mile Road east of Romeo Plank. Due to the large growth demand over the past several years to the sanitary sewer system, the existing pump station has exceeded its capacity. The new facility will service a large area of the distribution system in the North east section of the Township. Construction project cost of \$3 Million Dollars.

We anticipate to have the this station in service in late August 2008.



## Public Participation

The Macomb Township Board of Trustees conducts regularly scheduled **b u s i n e s s** 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 8:30 am to 5:00 pm or the website at [www.waterandsewer@macomb-mi.gov](http://www.waterandsewer@macomb-mi.gov)

## Macomb Township Board of Trustees

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**Michael D. Koehs**, Clerk

**Marie Malburg**, Treasurer

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**Janet Dunn**

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### 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 carefully 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.** Overwatering 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.semco.org](http://www.semco.org) or [www.macomb-mi.gov/pages/water\\_and\\_sewer.htm](http://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  
Water & Sewer Department  
54111 Broughton Road  
Macomb Township, MI 48042  
(586) 598-0687

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