



The Pipeline **2017**

Water Quality Report

Published June 2017



Loving Shelby Township



THE DEPT OF PUBLIC WORKS

The Shelby Township Department of Public Works is located at 6333 23 Mile Road (between Van Dyke and Mound) just west of the Fire Station. We are open from 8:00 a.m. to 4:30 p.m., Monday through Friday.

You may pay your bill at our office or at the Township Treasurer's Office in the Municipal Building at 52700 Van Dyke. Both locations also have 24 hour drop boxes located outside the front entrances.

Water Department policies are set by the Shelby Township Board of Trustees. The Board meets on the first and third Tuesday of each month at 7:00 p.m. at the Township offices. These meetings are open to the public.

The Department of Public Works is here to serve you and answer your questions. If you have any concerns about your water or sewer service, please contact us at (586) 731-5990.

Drinking water regulations require that Shelby Township produce and distribute the information in this report each year because Congress and the EPA want to be sure that you know what is in your drinking water.

Once you have read this booklet, we would appreciate your feedback. Please call us at (586) 731-5990 or e-mail us at dpw@shelbytp.org with your comments and/or suggestions.

Once again, I have the pleasure of presenting to you **"The Pipeline"**, our annual report regarding the safety and quality of your municipal drinking water. Our 2017 edition will include information mandated by the United States Environmental Protection Agency, as well as information regarding responsible water usage, environmental issues and other tips and services I believe you will find interesting and helpful.

I would like to assure all of you that we are exploring every option to reduce costs, as well as making every effort to insure the safety and reliability of our water and sewer systems. Please pay particular attention to the section entitled **"Why Water Isn't Free"**. This article will give you a little insight as to what it takes to get the water from the source to your tap. You will also find information on electronic payment options, the Great Lakes Water Authority, storm water management and changes to the MISS DIG rules.

Please take the time to read this report and keep it for reference throughout the year. If you have any questions or recommendations, feel free to call our office or email us at dpw@shelbytp.org.

David G. Miller
Director of Public Works

Why Water Isn't FREE!

Tap water is one of the better values in Southeast Michigan. For the price paid in a typical water bill, the quality of water in terms of taste, pressure and availability can't be beat. While our source water from Lake Huron is free, costs are incurred for chemicals, treatment, pumping, distribution system operation and maintenance, meter reading, billing and customer support services.

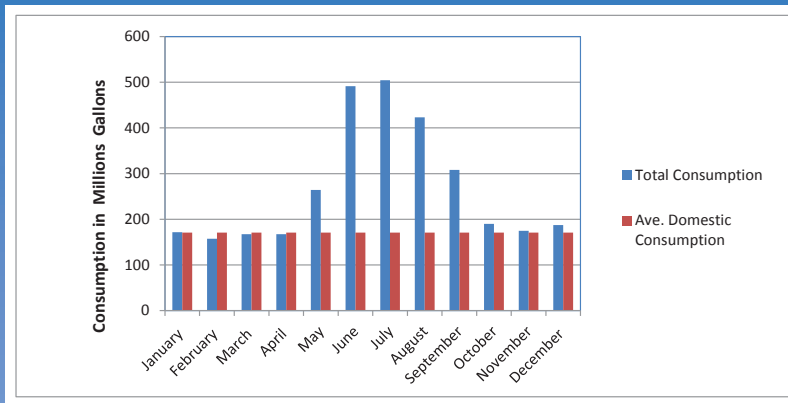
The Great Lakes Water Authority provides potable water to nearly 4 million people in 126 communities. That is approximately 40 percent of the state's population. The system pumps an average of 610 million gallons of drinking water a day, delivering it through 12,500 miles of distribution mains.

Shelby Township's water comes from Lake Huron. Water is produced as needed, in response to demand. The system is designed to treat and deliver water on a continuous basis. A 12-16 hour supply of treated water

is typically kept in the reservoir at the treatment plant to supply potable water. If demand increases, production increases.

Water production by GLWA is a 24/7 operation 365 days a year. The 5 treatment plants, 22 booster pumping stations, 34 reservoirs and transmission mains are always in operation ready to meet demand. To ensure a reliable and adequate water supply, Shelby is connected to the GLWA system by 6 meter pit connections throughout the township.

Once water flows into Shelby, it is entrusted to our Water Department staff of 23 maintenance and administrative employees. This includes 8 licensed distribution system operators who manage 325 miles of water main, 3500 gate valves and 4500 fire hydrants that require routine maintenance. Meter reading, billing and customer service must also be provided for our 27,300 water accounts.



In 2016 Shelby Township residents and businesses used approximately 3.18 Billion Gallons of water. The average use per day is 8.7 million gallons. Every time we turn on a faucet or start up our sprinkler systems we create a demand on the system. Of the total water used, 36% (1.1 Billion Gallons) was used for lawn irrigation.

As lawn irrigation is the largest user during the summer months, the water consumption is drastically impacted by the weather. If the area has ten days of heat and no rain, consumption goes up. Once it rains, consumption drops. As a result, the highest usage occurs during the summer. Maximum day usages along with peak hour demand are things which are taken into consideration for delivery purposes. These are the ultimate conditions under which the Great Lakes Water Authority must be able to deliver water to our community. As part of our contract with GLWA, Shelby Township commits to a peak hour demand usage value that we will not exceed during the year. GLWA, in turn, commits to deliver these flow rates at a specific pressure range and sets its operation and capital improvement budgets around this flow rate.

Many components play a role in meeting the maximum day and peak hour demands. They include capital improvement cost to ensure the water reaches its destination, chemical costs to treat the raw

water, and utility costs to pump the water from the source and transport the treated water to the local communities.

Electrical consumption is significant in the rising costs to meet peak hour demand. As electric rates climb during peak power usage so does demand and the cost to transport water. Similar to DTE Energy's rate plan that gives customers a lower rate during off-peak hours, GLWA's wholesale rate formula allows Shelby Township to balance summer water consumption by increasing use during off-peak hours which reduces our peak hour consumption on the highest demand day. Shelby Township can reduce demand by moving automated water usage to off-peak hours (see Sprinkling Ban Ordinance information). The net effect is to balance the demands on the system and reduce pumping required during peak hours.

While we are surrounded by 21% of the total fresh water on the planet, it is still an enormous task to ensure that a safe water supply is delivered to every residential, commercial and industrial user in the township. We realize how important it is that each person can rely on the quality and availability of this most valuable resource whether it is used for human consumption, domestic or commercial needs, lawn irrigation or fire protection. By utilizing the water wisely we can rest assure that this life sustaining element will be protected for future generations.



THE DEPARTMENT OF PUBLIC WORKS

The Shelby Township Department of Public Works is dedicated to maintaining a safe, potable water supply for domestic use and fire suppression while providing a quality of service above the expectations of our customers.

In doing so, our crew of trained individuals maintains an expansive infrastructure that provides water and sewer service to 27,300 households throughout the township. This includes over 325 miles of water mains and 180 miles of sanitary sewer mains. 3500 gate valves, 4500 fire hydrants, two pressure reducing vaults and a booster pump station.

In addition to maintaining the infrastructure, the department personnel are handling service calls for high and low water bills, final reads, meter testing and replacements, service line inspections, sidewalk concerns, storm sewer and drainage issues.

The DPW reads 30,500 meters quarterly then produces and mails over 120,000 bills and final notices per year. Payments are mailed to the DPW where they are processed and posted to the individual accounts.

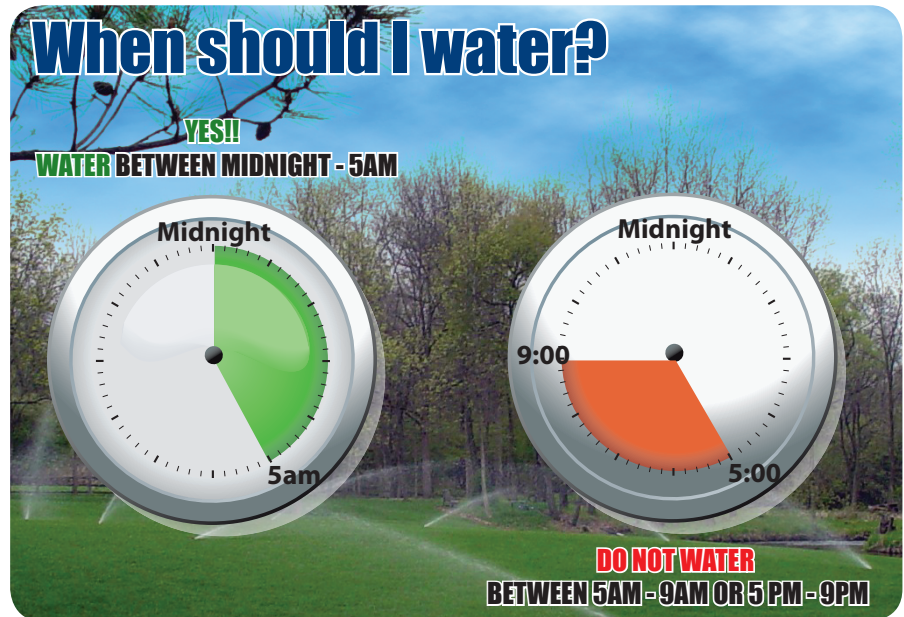
If you have any questions, or if we can help you out in any way, please contact us at (586) 731-5990.

Viewing Your Water Bill

VIEWING BILLS/ ACCOUNT INFORMATION ONLINE

You can view your past and present water bills in the following manner:

- Go to www.shelbytwp.org
- Click on “DPW “ under Departments
- Click on “Bill Payment”
- Click on the esuites link under “Check your Water Bill”
- The account number needs to be put in exactly as it appears on the bill
- The last name needs to be put in exactly as it appears on the bill (primary customer only)



Water 101

Did you know that lawn irrigation is the largest residential water use, utilizing over 2 times what we use for domestic consumption? It is also a major contributor to those larger water bills we receive during the warmer months. What can be done to reduce these costs?

First, the Shelby Township Board of Trustees recognized the potential savings to customers with the adoption of the voluntary Odd/Even sprinkling ban ordinance. Homeowners with addresses ending in an even number should water on even number dates and homeowners with addresses ending in an odd number should water on odd numbered dates.

Second, we suggest that anyone who has water and sanitary sewer service to his or her home purchase

an Area Maintenance Meter. This eliminates sanitary sewer charges for lawn irrigation, which results in a cost savings to the homeowner.

Finally, most lawn irrigation is done between the hours of 5:00 a.m. – 9:00 a.m. and 5:00 p.m. – 9:00 p.m. This concentrated use of water causes a peak demand up to 5 times greater than the normal usage. This peak is a primary factor in the determination of future water rates.

As part of our contract with the Great Lakes Water Authority, water used between the hours of 12:00 midnight and 5:00 a.m. will not be factored in the calculation of peak demands. Therefore, if we can shift the majority of our lawn irrigation to this period, we can minimize future rate increases.

Should you invest in a second water meter? *IF YOU ARE CONNECTED TO THE WATER & SEWER SYSTEM, IT COULD MEAN A SIGNIFICANT SAVINGS*

Shelby Township offers a second meter to those customers who are connected to both water and sanitary sewer. The use of this area maintenance meter eliminates sanitary sewer charges for lawn irrigation, which means a cost savings to the homeowner.

Please call the department at (586) 731-5990 for information regarding cost.

Paying Your Water Bill

ON LINE PAYMENTS

– SHELBY TOWNSHIP WEBSITE

You may now pay your water bill through Shelby's online service with Chase Bank's Pay Connexion™. Payments accepted are eChecks, Visa, Mastercard and Discover. The convenience fee for eChecks is \$1.00 and the fee for credit/debit cards is 2 ½% of the payment. Visit the DPW Department at www.shelbytwp.org to begin!

Official Payments also accepts online payments at www.officialpayments.com. Use Jurisdiction Code 7006. There is a fee of \$6.50 per every \$500.00 in payments.

ON LINE PAYMENTS

– CUSTOMER'S BANK

• Enter your account number **exactly** as shown on your bill for electronic payment (see your bank for details).

PAYMENTS BY MAIL

- Mail the bill stub containing the bar code with your payment
- Fill your check out completely, sign it and include the account number on your check and mail to:
Shelby Township DPW
6333 23 Mile
Shelby Township MI 48316

DROPBOX

- A 24- hour drop box is available at our circle driveway at 6333 23 Mile Rd and at the Township main offices at 52700 Van Dyke (the 24 Mile entrance)
- Do not deposit cash in the drop box.

IN PERSON

- Cash/check/money orders can be paid at the DPW at 6333 23 Mile and at the

Treasurer's Department at 52700 Van Dyke

- Credit card/debit card payment can be made at the DPW using our countertop computer.

AUTOMATIC BILL PAYMENTS

- Customers can authorize payments to be withdrawn automatically from their checking or savings accounts.
- Enrollment forms are available at our office or online at www.shelbytwp.org on the DPW page.
- There is a one-time \$2.00 enrollment fee as well as a charge of \$.35 per quarter transaction.
- A statement indicating the date on which payment will be withdrawn, and a notation "Do Not Pay" will be sent.
- Any changes to banking information need to be submitted in writing.

VIA PHONE

- Credit card payments (Visa, Discover, American Express) can be made by calling Official Payments at (800) 272-9829. Use Jurisdiction Code 7006.
- A convenience fee of \$6.50 per every \$500.00 must be paid to Official Payments for this service.
- Chase bank also offers payments via phone. Call (844)-701-5085.
- A convenience fee of 2 1/2% of the amount of the payment must be paid to Chase for this service.

DELINQUENT WATER BILLS

Unpaid balances which are six months delinquent as of October 31st will be added to the owner's current year's tax roll.



MOVING?

**Please contact the
Shelby Township DPW at
586-731-5990 Ext. 1853
or finalread@shelbytwp.org**

for a final bill. If our office is obtaining the read, we request 24-48 hours to obtain the read (from the outside of the home) and prepare a final read bill.

If a read is provided to us, the process can be expedited. The read needs to be the 6- digit read off the face of the meter (located in the home). Once the read is obtained, we will prepare a final bill that can be emailed, mailed, faxed, or picked up in our office at 6333 23 Mile.

If you are a new resident moving into Shelby Township, please contact us to place your name on the account and to verify that a final read was completed by the previous owner.

If you are moving in or out of an apartment or mobile home, please handle any final reads through your main office. If you are moving out of a condominium, please note that your meter may be located in another unit, therefore, we will obtain the read for you.

For additional information regarding final reads, please visit our Department of Public Works page at www.shelbytwp.org.



**PLEASE ALLOW ENOUGH TIME
FOR YOUR PAYMENT TO
REACH OUR OFFICE
BY THE DUE DATE.**

Electronics Recycling

ELECTRONICS

RECYCLING - \$5.00/CAR

Shelby Township, in conjunction with Green Tech Recyclers, continues to offer electronics recycling the last Saturday of each month, except December. The program is open to all communities and takes place from 9:00 a.m. to 1:00 p.m. at the Shelby Township Municipal Grounds, 52700 Van Dyke (24 Mile Road & Van Dyke). Please go to shelbytwp.org/recycling for a list of the items that can be recycled through this program and more information.

There is a \$5.00 fee per car to drop off any electronics (one CRT TV or monitor is included in this fee). A charge of \$10.00 will apply for each additional CRT. One dollar of the fee will go to the volunteer group working the event.

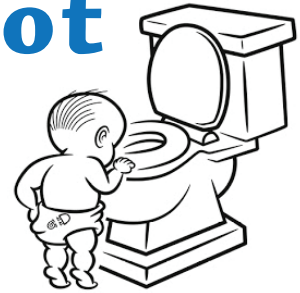
SIMPLE RECYCLING

Shelby residents can recycle reusable clothing, shoes, and housewares with free, curbside pick-up on their regular recycling collection day. Simply place your orange bags provided by Simple Recycling beside your recycling bin before 7:30 AM and they will take care of the rest, leaving behind replacement bags for your continued convenience. For a list of acceptable items, you can visit their website at www.simplerecycling.com

To request additional bags you can email Simple Recycling at info@simplerecycling.com, visit their website at www.simplerecycling.com/supplies or you can reach Simple Recycling at 1-866-835-5068. Bags can also be picked up in the DPW office.



Please Do Not Use Your Toilet As A Trash Can!



Flushing inappropriate items can cause plumbing problems and harm the environment.

Things NOT to flush:

- Medications, vitamins
- Plastic bags & bottles
- Condoms
- Hypodermic needles
- Chemicals, solvents
- Diapers
- Cloth, rags, towels
- Grease
- Cigar tips, cigarette butts
- Dental floss
- Baby wipes
- Paper towels
- Feminine products
- Fats, cooking oil
- Butane lighters

Did you know that the water you flush goes through the pipes and sewers, to our wastewater treatment plants, and then into our lake and river? **Protect our environment.** Please dispose of diapers, paper towels, and other non-flushable items in the waste bins, not in the toilets. For more information go to: https://outreach.gwater.org/homer/news/ocw_flushables_1/tabid/211/default.aspx

Household Hazardous Waste Day



Shelby Township in conjunction with GFL has an annual household hazardous waste day in April. Please watch the website for the date.

Macomb County Health Department holds a regularly scheduled household hazard waste event. Please call 586-466-7923 for dates or visit www.health.macombgov.org/Health-Home

NIXLE

Nixle is a free community information service which allows messages to be delivered to subscribers instantly via cell phone text message and/or e-mail.

Get information regarding:

- Siren Testing
- Local Traffic Alerts (accidents, road closures)
- Police Emergencies
- Water/Sewer Emergencies



There is no spam and no hidden costs. Standard text messaging rates do apply. There is no charge for e-mail. Please use the link on the homepage of the Township website (www.shelbytwp.org) to subscribe.

YOUR TRASH IS IMPORTANT TO US!

Green for Life - GFL (formerly Rizzo) continues as Shelby Township's single hauler for trash, yard waste, and recycling collection for single-family residential customers. GFL bills customers directly so contact them at 866-772-8900 to set up billing or for any trash, yard waste or recycling issues.

- Rates will remain the same through July 31, 2025 at \$16.50/mo. (A 10% discount is available for seniors 60 years of age and older.)
- If a customer prepays for the entire year, he/she receives 1 month free. To be eligible for the incentive, GFL must receive advance payment for the eleven month period by the due date of July 1st.
- Please place trash, yard waste, bulk waste, and recycling at the curb by 7:00 am.
- Yard waste collection begins the first Monday in April and ends the second week of December. It must contain only organic materials - no bricks, stones, plastic, etc. Extra yard waste can be placed in paper bags (not plastic).
- Please label your carts with your address in permanent marker. Place a sign indicating the purpose on your cart if being used for a different purpose than originally labeled. The DPW has "Compost" stickers if needed.
- When a holiday falls on a weekday, your scheduled service day will be delayed by one day. GFL observes these holidays: New Year's Day - Memorial Day - Independence Day - Labor Day - Thanksgiving - Christmas Day.

What do I do with...

To answer questions on how to dispose of certain items, please access the Shelby Township website www.Shelbytp.org/recycling and type "what do I do with" in the search engine. Some of the items addressed on this list are propane cylinders, carpet, car batteries, electronics, fire extinguishers, furniture, gasoline cans, household batteries, latex paint, etc.

Shred Day

The Shelby Township Police Department is hosting a shred day on Saturday, October 14, 2017 from 9:00 am to 1:00 pm at the Shelby Township Municipal Building. This is open to all residential and business customers. Business customers are urged to bring no more than two boxes to be shredded.

In compliance with Public Act 222 of 2001, please be advised of the following:

Please contact the Shelby Township Department of Public Works at (586) 731-5990 immediately upon discovery of an overflow or backup. After normal business hours, contact the Shelby Township Police Department at (586) 731-2121. If you experience an overflow or backup of a sewage disposal system or storm water system, you must file a written claim with the Shelby Township Department of Public Works within 45 days after the overflow or backup was discovered. Failure to do so will prevent the recovery of any damages that may be due to you under the provisions of Act 222. To receive a Notice of Claim form, contact the DPW at (586) 731-5990, ext. 1850.

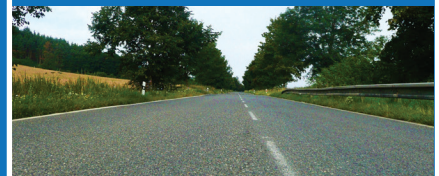
STREETLIGHTS



If you are a Detroit Edison residential or business customer, you can now report a streetlight problem online at dteenergy.com/streetlight. With the new online system, reporting an outage and getting it fixed is easier and faster than ever. Simply fill in the address of the outage and your contact information -- it only takes a minute but can make a big difference in getting repairs done quickly.

In addition, customers can report streetlight problems by calling Detroit Edison toll free at (800) 477-4747. If you are unable to make the report using these methods, the Shelby Township DPW, as always, will be happy to assist you. Please call Ext. 1855 or 1850 at (586) 731-5990 and we will report the problem to DTE on your behalf. Please provide us with the address where the light in question is located, or the nearest intersection. There is a tag on each light post with a streetlight number -- it will be very helpful if you can provide that number as well.

MACOMB COUNTY ROADS



All public roads and road right-of-ways within Shelby Township fall under the jurisdiction of the Macomb County Department of Roads. This department is responsible for issues regarding road repairs, ditches, snow plowing, street signs, etc. To request a replacement street sign, issues regarding snowplowing and/or road maintenance, contact the Department of Roads at (586) 463-8671 or email geninfo@rcmcweb.org.

OVER THE LAST DECADE WE HAVE BECOME MORE AWARE OF OUR WORLD, THE ENVIRONMENT AND OUR IMPACT ON IT. THERE ARE SMALL CHANGES WE CAN MAKE IN OUR EVERYDAY ACTIVITIES THAT WILL HELP ENSURE WE ARE DOING OUR PART TO CONSERVE OUR BEAUTIFUL TOWNSHIP AND THE RESOURCES WE ALL ENJOY IN IT.

Eco-friendly Tips Can Help Save Our Environment

We reside in the Clinton River watershed. A watershed is an area of land that drains into a common body of water. The area of southeastern Michigan which flows into the Clinton River, and eventually into Lake St. Clair, covers 760 square miles including over 1,000 miles of streams as well as the 80 mile long main branch.

Storm water runoff, which is the water that enters the storm drains from your property and street, is the largest source of pollution in our watershed.

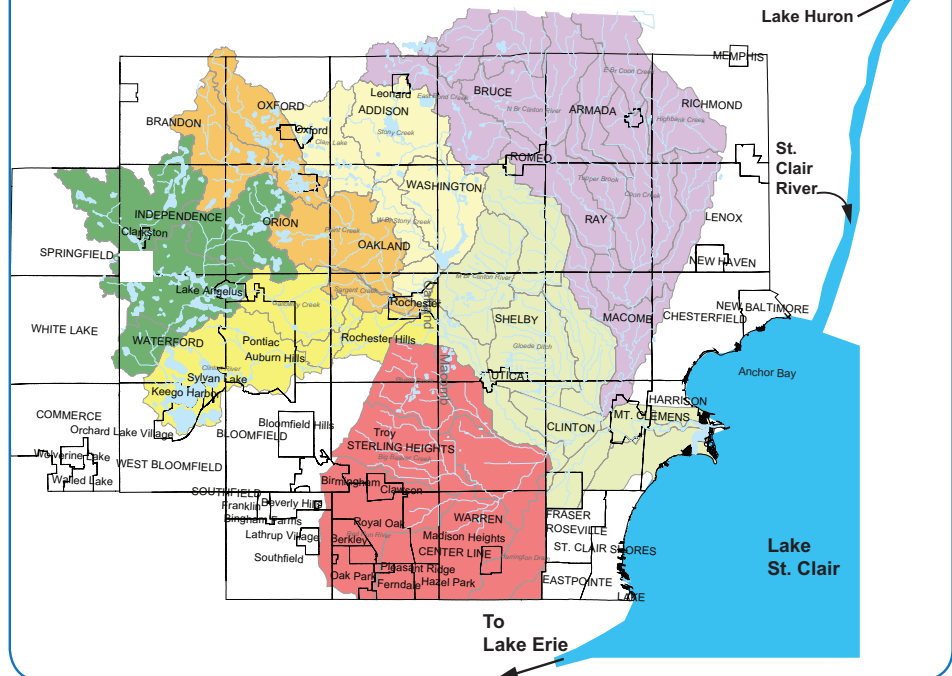
Storm drains are the openings you see along curbs, in streets and in parking lots. Water and debris which enter the

storm system do not go to a treatment facility; instead, they flow directly to our lakes and streams.

Under the National Pollutant Discharge Elimination System Phase II, communities in southeastern Michigan have banded together to plan for and accomplish storm water management.

The Clinton River Watershed

A watershed is another word for a river or lake basin. It is the area of land that drains into a body of water. Rain and snowmelt within this area flows down the rivers and streams and into the lake below. The Clinton River Watershed is an area over 760 square miles in four southeastern Michigan counties (Lapeer, Macomb, Oakland, and St. Clair) that flows into the Clinton River. More than 1.4 million people in 60 communities inhabit the watershed area. The Clinton River stretches more than 80 miles from its headwaters in Brandon, Springfield and Independence Townships to its mouth in Harrison Township, where it enters Lake St. Clair.



Heritage Gardens at the Shelby Township Offices



DID YOU KNOW THAT 4.9 MILLION PEOPLE LIVE IN SOUTHEAST MICHIGAN?

The actions of each and every one of us affects the quality of life in our watershed. We can all pitch in and do our part to protect our precious water supply. The Southeast Michigan Council of Governments has developed some suggestions we can follow to help keep our water clean.



HELP KEEP POLLUTION OUT OF STORM DRAINS

Storm drains lead directly to our lakes and streams. Don't dump oil, pet waste, leaves, dirty water or anything else down a storm drain.

Remember, only rain in the drain!

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.

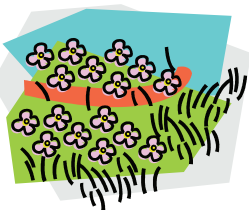


FERTILIZE CARINGLY AND SPARINGLY

Excess fertilizer that gets into storm drains pollutes our lakes by causing algae blooms and using up oxygen fish need to survive. If you think you need fertilizer, have your soil tested, then follow the manufacturer's instructions. **Remember, the use of phosphorous fertilizer is banned in Michigan.** Blow excess fertilizer off your driveway and walkway and back onto the lawn to KEEP IT OUT OF THE DRAINS!

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 (See shelbytwp.org/recycle for the next scheduled date and for alternative disposal information).



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.

PRACTICE GOOD CAR CARE

Consider taking your car to a car wash or washing your car on the grass.



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 information visit www.semco.org or www.crowc.org.



h₂O

The Water We Drink

Shelby Township's water is purchased from the Great Lakes Water Authority and is surface water from Lake Huron which has been treated at the Lake Huron Treatment Plant.

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.



Beautiful Lilly Pads are abundant at Holland Ponds

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.

“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).”

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 several other governmental agencies performed a source water assessment in 2004 to determine the susceptibility or relative potential of contamination.



Holland Ponds is home to a flourishing Heron population

The susceptibility rating is a seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contamination 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.

GLWA voluntarily developed and received approval in 2016 for a source water protection program (SWIPP) 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 or the SWIPP please, contact your water department (586) 731-5990.

Safe Drinking Water is a Shared Responsibility

Drinking water quality is important to our community and the region. The Shelby Township Department of Public Works 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. Shelby Township Department of Public Works 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 Shelby Township Department of Public Works 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.

Shelby Township Department of Public Works 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.



Water Testing

The Great Lakes Water Authority monitors approximately 200 regulated and unregulated contaminants in drinking water, including pesticides and radioactive contaminants.

All monitoring data in this report is from 2016.

Water Quality Matters

We all play a role in maintaining the quality of our drinking water. The Great Lakes Water Authority, local municipalities and customers are connected through a complex water infrastructure system that is designed to protect public health.

The Great Lakes Water Authority operates five water treatment plants that treat water drawn from Lake Huron and the Detroit River to meet Safe Drinking Water Act requirements. Our commitment to deliver the best water quality possible is evident in our use of proven treatment techniques and a comprehensive monitoring program. We set target treatment standards that are stricter than state regulatory requirements and test more frequently during treatment.

The 126 communities that receive drinking water from Great Lakes Water Authority operate a local distribution system that includes a network of water mains, fire hydrants and sometimes booster stations and pressure reducing valves.

These communities keep water flowing through local piping at the right pressure, maintain pipes and valves, flush and maintain fire hydrants, monitor the distribution system for specific contaminants, and address customer concerns.

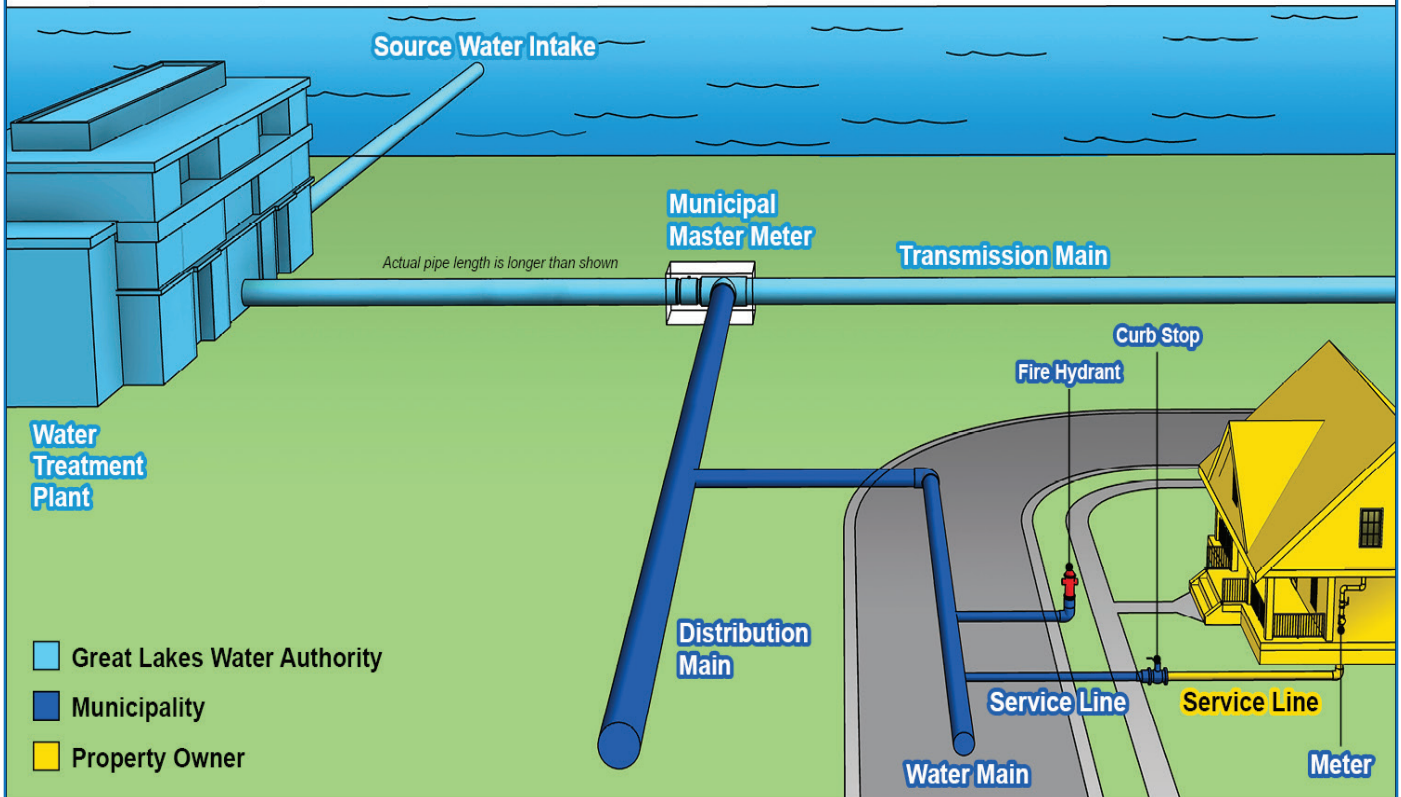
The nearly 4 million customers that receive GLWA water rely on this service each day to drink, cook, clean, flush toilets, wash clothes and water their lawns. Customers have a responsibility to maintain the plumbing in their homes and to follow steps to support good water quality. These steps include running water if it hasn't been used for a while, cleaning faucet aerators and shower heads, and flushing hot water heaters.

Lead was not detected in Shelby 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. Shelby 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 or at: www.epa.gov/safewater/lead



Our water system is a shared responsibility.



The Great Lakes Water Authority: Welcome to history in the making!

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 Shelby Township Department of Public Works 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.

Key to Detected Contaminants Tables

> - Greater than

°C - Celsius

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

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 - Location Running Annual Average

The average of analytical results for samples at a particular monitoring location during the previous four quarters.

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

The average of analytical results for all samples during the previous four quarters.

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.

We are proud that your drinking water currently meets or exceeds all Federal and State requirements. The EPA has determined that our water IS SAFE at these levels.

**Lake Huron Water Treatment Plant
2016 Regulated Detected Contaminants Tables**

Inorganic Chemicals – Monitoring at the Plant Finished Water Tap								
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
Fluoride	5-10-16	ppm	4	4	0.50	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	5-10-16	ppm	10	10	0.46	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfection By-Products – Monitoring in Distribution System, Stage 2 Disinfection By-Products									
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)	2016	ppb	n/a	80	24.75	12-34	no	By-product of drinking water chlorination	
Haloacetic Acids (HAA5)	2016	ppb	n/a	60	16.18	8.2-27	no	By-product of drinking water disinfection	

Disinfectant Residuals – Monitoring in Distribution System by Treatment Plant									
Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water	
Total Chlorine Residual	Jan-Dec 2016	ppm	4	4	0.79	0.61-0.85	no	Water additive used to control microbes	

2016 Turbidity – Monitored every 4 hours at Plant Finished Water					
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
0.28 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.

2016 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.

2014 Lead and Copper Monitoring at Customer 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	2014	ppb	0	15	.78	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	.0442	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 TOC removal requirement	Erosion of natural deposits

Radionuclides 2014								
Regulated contaminant	Test date	Unit	Health Goal MCLG	Allowed Level	Level detected	Violation Yes/no	Major Sources in Drinking water	
Combined Radium 226 and 228	5-13-14	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	4.00	Erosion of natural deposits

2014 Special Monitoring*				
Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.76	Erosion of natural deposits
Strontium (ppm)*	n/a	n/a	94.2	Naturally present in the environment
Chromium (ppm)*	n/a	n/a	0.2	Naturally found in rocks, plants, soil and volcanic dust, and animals
Chromium (VI) (ppm)*	n/a	n/a	0.11	Erosion of natural chromium deposits
4-Androstene -3,17-dione (ppm)*	n/a	n/a	0.0006	Steroidal hormone naturally produced in the human body

*In 2014, Shelby Township tested for these contaminants as part of the EPA's Unregulated Contaminant Monitoring Rule 3. Unregulated contaminants are those which the EPA has not established drinking water standards. Monitoring these helps the EPA determine where certain contaminants occur and whether they need to regulate those contaminants.



Charter Township of Shelby
Department of Public Works
 6333 23 Mile Road
 Shelby Township, MI 48316
 Monday - Friday 8:00 am - 4:30 pm

Richard Stathakis, Supervisor
 Stanley Grot, Clerk
 Mike Flynn, Treasurer
 John Vermeulen, Trustee
 Vince Viviano, Trustee
 Lynn Wilhelm, Trustee
 Douglas Wozniak, Trustee

What is MISS DIG?

MISS DIG System, Inc. is the Utility Safety Notification System for the state of Michigan, and is a not-for-profit corporation made up by Member Facility Owners.

MISS DIG is a FREE service that homeowners and contractors use to notify facility owners of their intent to dig.



ITS THE LAW.



MISSION

The mission of MISS DIG System, Inc. is to safeguard the public, environment, property, and utility infrastructures and promote utility damage prevention through a quality, cost-effective process for our customers.

HOW TO PLACE A LOCATE REQUEST

Excavators, landscapers, farmers, homeowners and contractors can contact us 7 days a week, 24 hours a day!

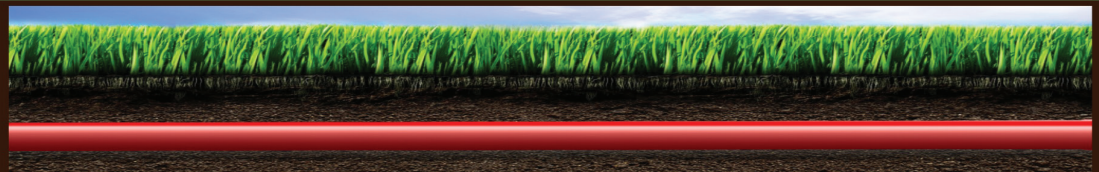
You can place your FREE locate request via our web based application, [e-Locate](#), for a single address if you have a valid email. You will receive a confirmation email from MISS DIG along with general information pertaining to the excavation project.

-or-
 by placing a toll free call to  or 800-482-7171

MICHIGAN'S UTILITY COLOR CODE

RED		Electric
YELLOW		Gas, Oil, Steam or Petroleum
ORANGE		Communications
BLUE		Potable Water
PURPLE		Reclaimed Water Irrigation
GREEN		Sewer & Drain Lines
WHITE		Proposed Excavation
PINK		Temporary Surveying

When to Place



According to Public Act 174 of 2013, an excavator shall provide a dig notice to the MISS DIG System at least 3 business days, but not more than 14 calendar days, before the start of any blasting or excavation.



"Blasting"

means changing the level or grade of land or rendering, tearing, demolishing, moving, or removing earth, rock, buildings, structures, or other masses or materials by seismic blasting or the detonation of dynamite or any other explosive agent.

"Excavation"

means moving, removing, or otherwise displacing earth, rock, or other material below existing surface grade with power tools or power equipment, including, but not limited to, grading, trenching, tiling, digging, drilling, boring, augering, tunneling, scraping, cable or pipe plowing, and pile driving; and wrecking, razing, rending, moving, or removing a structure or mass of materials.



BEFORE YOU DIG CONTACT MISS DIG- IT IS THE LAW!