

2022
RESULTS

DETROIT WATER QUALITY REPORT



**Water & Sewerage
Department**

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NOTICE: This 2022 Water Quality Report contains important information about your drinking water. Please have someone translate this document for you if you are unable to read the report.

AVISO: Este Informe de calidad del agua de 2022 contiene información importante sobre su agua potable. Haga que alguien le traduzca este documento si no puede leer el informe.

إشعار : يحتوي تقرير جودة المياه لعام 2022 على معلومات مهمة حول مياه الشرب. يرجى أن يقوم شخص ما بترجمة هذا المستند لك إذا كنت غير قادر على قراءة التقرير

The Detroit Water and Sewerage Department (DWSD) does not discriminate on the basis of race, color, national origin, sex, age or disability in any of our services, programs or activities.

CITY OF DETROIT

Mike Duggan, Mayor

DETROIT CITY COUNCIL (2022)

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DETROIT WATER AND SEWERAGE DEPARTMENT

Gary A Brown, Director



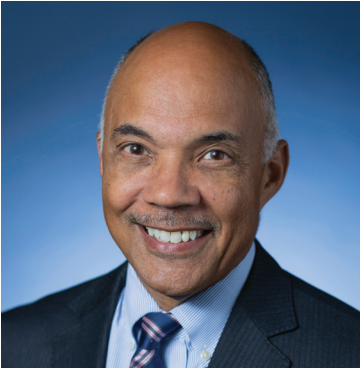
HOW TO REPORT AN EMERGENCY

To report emergencies, such as water main breaks, street flooding, missing manhole covers, broken fire hydrants, and water in your basement, call DWSD at 313-267-8000. Mobile users may download the **Improve Detroit app** for Apple and Android devices to take a photo and report the issue or submit online at detroitmi.gov/DWSD.



PUBLIC PARTICIPATION

The Board of Water Commissioners meets at the Water Board Building, 735 Randolph Street in Detroit. A virtual option is available. The committees meet the first Wednesday of the month at 1 p.m., unless otherwise noticed. The full board meets the third Wednesday of the month at 2 p.m. unless otherwise noticed. To see meeting information, go to detroitmi.gov/DWSD. For questions, please contact the DWSD board secretary at 313-224-4704.



GARY A BROWN, DIRECTOR
Detroit Water and Sewerage Department

Dear Valued Customers,

Detroiters know we have some of the cleanest and best tasting water in the world. Travel to other states and cities, you may be encouraged to drink bottled water. Not here in Detroit - we invite you to drink tap water because the water supplied by the Detroit Water and Sewerage Department (DWSD) is clean and safe for drinking, and some of the best tasting in the world.

The water leaving Detroit’s water treatment plants, operated by the Great Lakes Water Authority (GLWA), does not contain lead. Most water mains are cast iron or ductile material. The primary sources of lead in water are lead service lines, lead solder, and/or fixtures containing lead in the home.

You can view the water quality results beginning on page 17 in this 2022 Detroit Water Quality Report.

To ensure we continue to have your trust in our drinking water quality, DWSD began replacing lead services lines in 2018 while on the street replacing the water main. With new federal funding, this work will be accelerated starting in Spring 2023. In this report, you can read more about DWSD’s Lead Service Line Replacement Program.

Also in this 2022 Detroit Water Quality Report, you will find information about DWSD, including Detroit’s new income-based water affordability program - the Lifeline Plan.

Together, let’s be the difference.

 **A MESSAGE TO OUR CUSTOMERS**

Drinking water quality is important to our community and the region. The Detroit Water and Sewerage Department (DWSD) 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, GLWA consistently delivers safe drinking water to our community. DWSD 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 DWSD water professionals in delivering some of the nation’s best drinking water.

Together, we are committed to protecting public health and maintaining open communication with the community about our drinking water.

To stay informed, register for alerts via email, text message and land line at www.detroitmi.gov/DWSD or text DetroitAlerts365 to 99411.

Our water quality standards are mandated by the Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

HOW WE PROVIDE WATER SERVICES TO YOU

The Great Lakes Water Authority (GLWA) treats drinking water and transports it to the City of Detroit's distribution system through transmission lines. The Detroit Water and Sewerage Department (DWSD) delivers the treated water to neighborhoods through more than 2,700 miles of water mains within the city to the service line of your home or business.

The system uses source water drawn from three intakes. Two source water intakes are located in the

Detroit River: one to the north, near the inlet of Lake St. Clair, and one to the south, near Lake Erie. The third intake is located in Lake Huron.

Four of the plants treat source water drawn from the Detroit River intakes. The fifth water treatment plant, located in St. Clair County, uses source water drawn from Lake Huron. Detroit customers are provided service from four plants that treat source water drawn from the Detroit River.



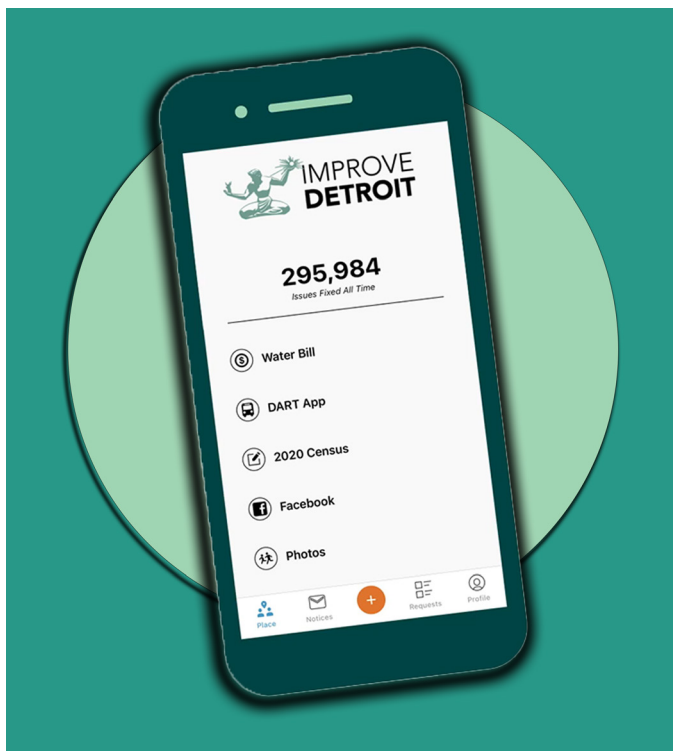
DID YOU KNOW?

Did you know about these tips?

You can save money, protect your pipes and reduce frustration with these helpful tips!

- Clean faucet aerators monthly (the spin-off filter on your faucet). It will help reduce water usage and provide clean drinking water.
- Turn off the faucet while brushing your teeth.
- Try to limit your shower to five minutes or less.
- Wash your car using a bucket instead of a water hose.
- While waiting for water to heat up, collect water in a pitcher or bucket to use for your household plants.
- Try using one glass for drinking water per day. This will reduce the number of glasses to wash, helping save water.
- Pour grease and fats into containers and place in the trash instead of pouring down your drains, which can cause backups.
- Only flush pee, toilet paper and poop in your toilet(s); never flush wipes, tissue, paper towel, feminine products or other objects as they may cause clogged pipes and backups into your home.

- Monitor water usage closely as this can show new leaks or help you alter your habits to reduce water use. You can view your real-time water usage through the DWSD Customer Self-Service Portal. Visit detroitmi.gov/DWSD to log in or register.



Did you know the City of Detroit has an app to report water issues?

When you submit a water or sewer issue using the Improve Detroit app (available on the App Store and Google Play), you will receive an automated service request number to track the progress.

The Improve Detroit app allows Detroiters to report neighborhood problems directly to the City of Detroit. Multiple City departments utilize the Improve Detroit app, including DWSD. There are 12 DWSD service requests you may submit, including investigate water main break, water in basement, missing manhole/catch basin covers, clogged basin, and fire hydrant-related issues.

WATER ASSISTANCE PROGRAMS

DWSD Lifeline Plan

The DWSD Lifeline Plan is Detroit's new income based plan that was launched on August 1, 2022. If you are income-eligible, the plan provides the following benefits:

- ✓ **Shutoff protection** while on the plan.
- ✓ Entire **past due balance erased** when enrolled - you start fresh with a zero balance.
- ✓ Receive an **affordable fixed bill** based on household income and size, and get up to 1,125 gallons of indoor water usage per household member per month.
- ✓ If qualified, receive a **free water audit and minor plumbing repairs** to lower your water usage and save you money.

TIER 1 135% FPL* <i>*Federal poverty level</i>		TIER 2 136% - 150% FPL*		TIER 3 151% - 200% FPL*	
You Pay Monthly \$18 For water, sewer & drainage if your income is:		You Pay Monthly \$43 For water, sewer & drainage if your income is:		You Pay Monthly \$56 For water, sewer & drainage if your income is:	
Number of People in the Household	Maximum Annual Household Income	Number of People in the Household	Maximum Annual Household Income	Number of People in the Household	Maximum Annual Household Income
1	\$18,075	1	\$20,385	1	\$27,180
2	\$24,352	2	\$27,465	2	\$36,620
3	\$30,630	3	\$34,545	3	\$46,060
4	\$36,908	4	\$41,625	4	\$55,500
5	\$43,185	5	\$48,705	5	\$64,940
6	\$49,463	6	\$55,785	6	\$74,380
7	\$55,740	7	\$62,865	7	\$83,820
8	\$62,018	8	\$69,945	8	\$93,260

Take part and tap into the DWSD Lifeline Plan. Call 313-386-9727 or go to waynemetrolife.org/DWSDlifeline.

Payment Arrangement: The 10/30/50 Plan

The 10/30/50 Plan is developed for Detroit water customers who experience difficulty in paying their past due bills. There are no income restrictions to qualify. Customers make a down payment of either 10%, 30% or 50% of the past due balance, dependent on the account status. The balance of the past due amount is equally spread over a set timeframe, which the customer pays in addition to the normal monthly bill. All payments must be made in full and on time to stay enrolled. You can enter a payment arrangement on the DWSD Customer Self-Service Portal at detroitmi.gov/paymywaterbill or call 313-267-8000.

To learn more, go to www.detroitmi.gov/water or call 313-267-8000

DWSD Offers Convenient, Safe Ways to Access Accounts and Make Payments

We're working hard to deliver clean water to nearly 700,000 residents just like you. It's what we do in the community, every day! Here are easy ways to access your account, pay your water bill and even open or close an account, including using convenient, self-service options.



Access your account and pay online at detroitmi.gov/DWSD, and set up auto-pay, enroll in a payment arrangement, if needed, turn-on/off service, and track your real-time water usage to manage your budget and help detect leaks.

You may also email DWSD Customer Service at mydwsd@detroitmi.gov or call 313-267-8000.



Visit one of the more than 60 no-fee kiosks in and around Detroit and use cash, check or debit/credit card to pay your bill. Find your nearby kiosk at: DWSDkiosk.com



Call our automated pay-by-phone system at 313-267-8000 and ask for current balance and due date. You may say, "Pay My Bill" then you will get instructions on entering your account and payment information by phone.



Send your payment by mail with check or money order payable to the "Board of Water Commissioners."

Mail to:

Board of Water Commissioners
Detroit Water and Sewerage Department
PO Box 554899
Detroit, MI 48255-4899



COMMUNICATIONS TO DETROIT RESIDENTS



The City of Detroit launched Detroit Alerts 365, a notification system that sends Detroit-specific emergency notifications via cell phone, landline, text, and/or email. This new, free system can reach people in seconds to notify them of critical situations such as severe weather

warnings, flooding/natural disasters and boil water advisories. Alerts come in one of four languages: English, Spanish, Arabic and Bengali. To register, visit detroitalerts365.org or text **DetroitAlerts365** to **99411**.

MICHIGAN'S LEAD & COPPER RULE AND DETROIT'S TEST RESULTS

DWSD's efforts to get the lead out continue

Under Michigan's revised Lead and Copper Rule, DWSD lead and drinking water testing results have been 10 parts per billion (ppb) in 2019, 9 ppb in 2020, 12 ppb in 2021 and 12 ppb in 2022, which are all under the state action level for lead remediation.

Detroit has an estimated 77,197 lead service lines based on a total of 311,000 water service lines. There are 28,922 service lines with unknown pipe material. Since 2018, DWSD has replaced 2,078 lead service lines while on the same street replacing the water main.



All communities with lead service lines must sample tap water in homes with lead service lines as required by EGLE and the EPA. In summer 2022, DWSD collected water samples from 51 homes with lead service lines. The 90th percentile of samples was 12 ppb, which is under the action level of 15 ppb. DWSD's last report of 12 ppb in 2021 was with the same sampling methodology that was required by EGLE beginning in 2019. A water supply exceeds the action level if more than 10 percent of all samples is over the action level.

"The water supplied by DWSD is clean and safe for drinking, and some of the best in the world," said Gary Brown, DWSD director. "The water leaving Detroit's water treatment plants, operated by the Great Lakes Water Authority, does not contain lead. The primary sources of lead in water are lead service lines, lead solder, and/or fixtures containing lead in the home. Since 2018, we have been replacing lead service lines while on the same street replacing the water main and providing pitcher filters to those residents and businesses as a precautionary measure. In the next few months, with federal funding, we will accelerate our lead service line replacement program."

The Chief Public Health Officer for the City of Detroit Denise Fair Razo said, "This is welcome news for Detroiters, especially children, who are deserving of our very best efforts to ensure that everyone regardless of zip code, has access to clean water that is safe to drink. We know that the number one source of lead poisoning in children is decaying paint and dust in homes that were constructed prior to 1978. The Detroit Health Department can help, with education on how to reduce lead exposure in homes, and referrals to get children tested. If anyone has any concerns regarding lead exposure inside their home, I encourage you to request a lead test from your child's primary healthcare provider or contact the Detroit Health Department."

The Michigan Lead and Copper Rule Testing Method

The Michigan Lead and Copper Rule, revised in 2019, is the most stringent in the nation. It changed the way lead samples are collected at Detroit homes and all Michigan communities. In the past, DWSD collected only the first liter of water out of the tap. Under the revised rule - used in testing in the past four years - both the first and fifth liter are collected. The first liter represents water from household plumbing and fixtures, and the fifth liter is more likely to represent water from the lead service line. The service line is the pipe which brings water from the water main in the street to inside the home or business. In Detroit, most service lines are either lead, copper or galvanized steel. Lead service lines are under two inches in diameter and are mostly at single family or duplex homes. The new sampling technique more accurately represents the range of lead in the drinking water in Detroit homes.

Lead in Drinking Water

The water leaving Detroit water treatment plants, operated by the Great Lakes Water Authority (GLWA), does not contain lead, but lead can be released into drinking water from lead service lines and home plumbing as the water moves from the water mains to your tap. Beginning in 1945, Detroit stopped allowing the installation of lead piping for water service lines. Homes before 1945 are most likely to have a lead pipe that connects the home to the water main, known as a lead service line. The lead in



lead service lines, household plumbing and fixtures can dissolve or break off into water and end up in tap water. The water provided to DWSD customers contains a corrosion inhibitor to reduce leaching from lead service lines and other lead components, but lead can still be present in water at the tap.

Health Effects of Lead

Lead can cause serious health and development problems. The greatest risk of lead exposure is to infants, young children, and pregnant women. Older homes can have many sources of lead exposure including paint, dust and soil. If you have questions about other sources of lead exposure, please contact the Detroit Health Department at [313-876-0133](tel:313-876-0133).



Example of the lead pipe being held up against the copper that has been installed.

Sources of Lead

Drinking water is only one source of lead exposure. Some of the most significant sources, especially for children six years old and under, include lead-based paint and lead contaminated dust and soil. Because lead can be carried on hands, clothing, and shoes, sources of exposure to lead can include the workplace and certain hobbies. Wash your children's hands and toys often as they can come in contact with dirt and dust containing lead. In addition, lead can be found in certain types of pottery, pewter, food and cosmetics. If you have questions about other sources of lead exposure, please contact the health department.

Most plumbing products such as service lines, pipes and fixtures contain lead. The infographic below demonstrates where sources of lead in drinking water could be in your home. Older homes may have more

lead unless the service line and/or plumbing has been replaced. Lead-based solder and lead-based fittings and fixtures are still available in stores to use for non-drinking water applications. Be careful to select the appropriate products for repairing or replacing drinking water plumbing in your home. Even materials currently marked "lead free" have up to 0.25% lead by weight.

Galvanized plumbing can be a potential source of lead. Galvanized plumbing can absorb lead from upstream sources like a lead service line. Even after the lead service line has been removed, galvanized plumbing can continue to release lead into drinking water over time. Homes that are served by a lead service line should consider replacing galvanized plumbing inside the home.

How does lead get into your home tap water?

Lead can be found in a wide variety of products in your home, including older paint, faucets and plumbing materials. You cannot see, taste or smell lead in your water. Lead in tap water can cause health problems in people of all ages. Young children and pregnant people are most at risk.

Faucets, fixtures, pipes, fittings and valves sold before 2014 may be a source of lead.

Tip! Boiling water does NOT reduce lead. Water will evaporate during boiling, leaving the same amount of lead in less water.

Tip! Use a water filter certified to reduce lead, such as a faucet-mounted filter or a water filter pitcher.

Lead can get into our bodies when swallowed from drinking water, paint chips, or dust or inhaling dust from the air.

Service lines made of lead – the pipes that bring water into your home – could be a source of lead.

In-home pipes made of galvanized iron, lead or copper with lead solder can corrode and decay, which may result in lead entering your water, causing increased lead levels.

Learn more at
Michigan.gov/KnowYourWater
Know your water.

Information provided by the Michigan Statewide Drinking Water Advisory Council.

Source: Michigan Department of Environment, Great Lakes & Energy

Additional information regarding lead, including "Frequently Asked Questions about Lead in Drinking Water," can be found on the City of Detroit's website at www.detroitmi.gov/leadsafe, or visit EGLE's website at www.michigan.gov/MILeadSafe.

Lead Service Line Replacement Program

In 2018, prior to the revised Michigan Lead and Copper Rule, DWSD began replacing lead service lines as part of its asset management program when on the same street replacing the water main. Extensive outreach, including neighborhood meetings and information packets, to the owner/occupant is done prior to construction. The city owns the portion of the service line from the water main to the stopbox (turn-on/off valve typically in the front yard). The property owner is responsible for the service line from the stopbox to inside the house. Therefore, DWSD gets owner/occupant permission to replace lead service lines when its crews encounter them after visually verifying service line material at each house by excavating around the stopbox during scheduled water main replacement. With owner/occupant permission, the lead service line is replaced with copper at DWSD's expense through

its Capital Improvement Program. A white paper on DWSD's Lead Service Line Replacement Program was in the October 2020 issue of the Journal of the American Water Works Association, titled "Detroit's Robust Full Lead Service Line Replacement Program," as a best practice for other water utilities in America.

DWSD Director Brown said, "We have 100% compliance of homeowners or occupants agreeing to the lead service line replacement when we are on the street replacing the public water main. Thanks to \$90 million in federal and state funding, and more on the way, we will be able to accelerate lead service line replacement, beginning in Spring 2023, from about 700 pipes per year to about 5,000 per year over the next three years."



A DWSD contractor replaces a lead service line with copper.

STEPS YOU CAN TAKE TO REDUCE YOUR EXPOSURE TO LEAD IN YOUR WATER



Run your water to flush out lead.

The more time water has been sitting in your home's pipes, the more lead it may contain. Therefore, if your water has not been used for several hours, run the water before using it for drinking or cooking. This flushes lead-containing water from the pipes. If you do not have a lead service line, run the water for 30 seconds to two minutes, or until it becomes cold or reaches a steady temperature. If you do have a lead service line, run the water for at least five minutes to flush water from both the interior building plumbing and the lead service line.



Use only cold water for drinking and cooking. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water.



Use only filtered water or bottled water for preparing baby formula.



Do not boil water to remove lead.

Boiling water will not reduce lead levels. In the event DWSD issues a boil water advisory due to low water pressure (such as caused by a large water main break), water users in the designated advisory area will be advised to boil water before using it for cooking, drinking and brushing their teeth. Residents with lead service lines should **only boil filtered water** – not water directly from the tap.



Consider using a filter to reduce lead in drinking water.

The Detroit Health Department recommends that any household with a child or pregnant woman use a certified lead filter to reduce lead from their drinking water. Look for filters that are tested and certified to **NSF/ANSI Standard 53 for lead reduction**. Some filter options include a pour-through pitcher or faucet-mount systems. If the label does not specifically mention lead reduction, check the Performance Data Sheet included with the device. Be sure to maintain and replace the filter device in accordance with the manufacturer's instructions to protect water quality.



Infants and children who drink water containing lead 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.



Get your child tested. Contact the Detroit Health Department at 313-876-0133 or your healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.



Test your water for lead. To request for your water to be tested, please visit www.detroitmi.gov/leadsafe and search “lead and copper sample request form.” If you do not have Internet access, please call the DWSD at 313-267-8000.



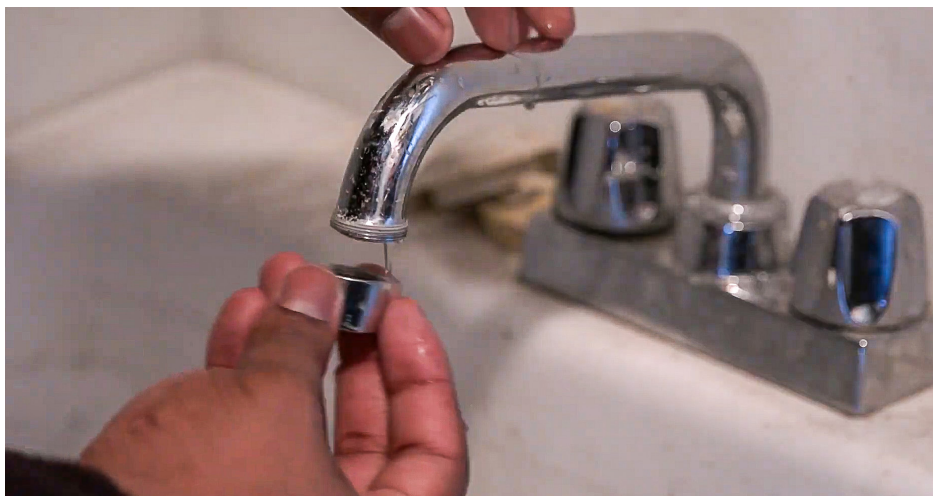
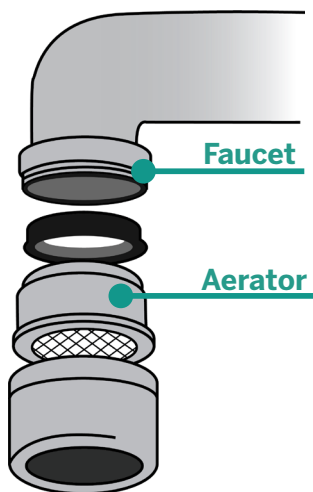
Identify older plumbing fixtures that likely contain lead. Older faucets, fittings, and valves sold before 2014 may contain higher levels of lead, even if marked “lead-free.” Faucets, fittings, and valves sold after January 2014 are required to meet a more restrictive “lead-free” definition but may still contain up to 0.25 percent lead. When purchasing new plumbing materials, it is important to look for materials that are certified to meet NSF standard 61.



Add your home to the DWSD replacement wait list. When you confirm the existence of a lead service line at your house, take a photo near the water meter in your basement or crawl space and add your home to the DWSD Lead Service Line Replacement Program wait list. Go to www.detroitmi.gov/LSLR.



Clean your aerators. The aerator is the screen at the end of your faucet. It catches debris. This debris could include particulate lead. The aerator should be removed monthly to rinse out any debris (see images below).



Additional information regarding lead, including “Frequently Asked Questions about Lead in Drinking Water,” can be found on the City of Detroit’s website at www.detroitmi.gov/leadsafe or visit EGLE’s website at www.michigan.gov/MILeadSafe.

GET TO KNOW YOUR SOURCE WATER

Substances Found in Source Water

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 materials and substances resulting from the presence of animal or 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses;
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, which also can come from gas stations, urban stormwater runoff and septic systems; and
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for human 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. 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**.



Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, and 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 at 800-426-4791.

Information about lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. DWSD 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 have a service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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 **800-426-4791** or at <http://www.epa.gov/safewater/lead>.

Source Water Protection

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, watersheds in the U.S. and parts of the Thames River, Little River, Turkey Creek, and Sydenham watersheds in Canada. The Michigan Department of Environment, Great Lakes and Energy (EGLE) 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 GLWA's Detroit River source water for potential contamination. The susceptibility rating is based on a seven-tiered scale and ranges from very low to very high determined primarily using geologic sensitivity, water chemistry, and potential contaminant sources. The report described GLWA's Detroit River intakes as highly susceptible to potential contamination. GLWA's water treatment plants that service the city of Detroit and draw water from the Detroit River have historically provided satisfactory treatment and meet drinking water standards.



GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA and DWSD participate in the National Pollutant Discharge Elimination System (NPDES) permit discharge program and has an emergency response management plan. GLWA has updated Surface Water Intake protection plans for the Belle Isle and Fighting Island intakes. The plans have seven elements that include: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation, and public education activities. If you would like to know more information about the Source Water Assessment report, please, contact GLWA at 313-926-8102.

Since 2018, DWSD has been investing about \$100 Million annually on water and sewer upgrades and stormwater management. Below is a snapshot of the progress through 2022.

311 Miles

Water system assessed

97 Miles

Water mains replaced or lined

2,078 Lines

Lead service lines replaced

311 Miles

Sewer system miles assessed

67 Miles

Sewer pipes lined or replaced

246 Segments

Sewer segments repaired

19 Projects Installed

Stormwater management

83.8 Million Gallons

Stormwater managed annually

Key to the Detected Contaminants

AL	Action Level The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.	n/a not applicable
		ND Not Detected
°C	Celsius A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.	NTU Nephelometric Turbidity Units Measure of cloudiness of water.
>	Greater Than	PCi/L Picocuries Per Liter Measure of radioactivity.
HAA5	Haloacetic Acids HAA5 is the total of bromoacetic, chloroacetic, di-bromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.	ppb Parts Per Billion (one in a billion) The ppb is equivalent to micrograms per liter. A microgram = 1/1000 gram.
Level 1	Level 1 Assessment A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our system.	ppm Parts Per Million (one in a million) The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
LRAA	Locational Running Annual Average The average of analytical results for samples at a particular monitoring location during the previous four quarters.	RAA Running Annual Average The average of all analytical results for all samples 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.	SMCL Secondary Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow a margin of safety.	TT Treatment Technique A required process intended to reduce the level of a contaminant in drinking water.
MRDL	Maximum Residual Disinfectant Level The highest level of disinfectant allowed in drinking water. There is convincing evidence that additional of a disinfectant is necessary for control of microbial contaminants.	µmhos Micromhos Measure of electrical conductance of water



2022 CITY OF DETROIT

REGULATED CONTAMINANTS TABLE

2022 Inorganic Chemicals - Monitoring at Plant Finished Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	7/12/2022	ppm	4	4	0.88	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	7/12/2022	ppm	10	10	0.97	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	5/16/17	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2022 Disinfection Residual - Monitoring in the Detroit Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2022	ppm	4	4	0.70	0.49-0.81	no	Water additive used to control microbes

2022 Disinfection By-Products - Stage 2 Disinfection By-Products Monitoring in the Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
(TTHM) Total Trihalomethanes	2022	ppb	n/a	80	30.3	8.4-49.0	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2022	ppb	n/a	60	14.7	2.4-28.0	no	By-product of drinking water chlorination

2022 Disinfectant By-Product - Monitoring at the Waterworks Park Plant Finished Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Bromate	April - Dec. 2022	ppb	0	10	ND	ND-ND	no	By-product of drinking water ozonation

2022 Turbidity - Monitored Every 4 Hours at the 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	Major Sources in Drinking Water
0.29NTU	100%	no	Soil runoff

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

GLWA is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether our drinking water meets health standards. GLWA routinely monitors your water for turbidity (cloudiness). This indicates whether GLWA is effectively filtering the water supply. We did not produce a filter profile for EGLE review within 7 days of an August 1, 2022, **individual filter** exceedance at the GLWA Springwells Water Treatment Plant as required by law. A filter profile is a summary of the turbidity and flow through the filter and is used to identify any trends in filter performance.

*Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. * These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What should I do? There is nothing you need to do currently. This is not an emergency. You do not need to boil water or use an alternative source of water currently. Even though this is not an emergency, as GLWA water customers, you have a right to know what happened and what was done to correct the situation.

What happened? What is being done? The filter profile has since been produced and submitted to EGLE and additional response actions have been implemented at the plant. GLWA is making every effort to ensure this does not happen again. For more information, please contact the GLWA Water Quality Manager at 313 926-8102.

2022 Special Monitoring						
Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	7/12/2022	ppm	n/a	n/a	6.2	Erosion of natural deposits

Lead and Copper Monitoring at the Customer's Tap in 2022									
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Number of Sites Over AL	Range of Individual Samples	Violation	Major Sources in Drinking Water
Lead	2022	ppb	0	15	12	4	0-22	no	Lead services lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits
Copper	2022	ppm	1.3	1.3	0.1	0	ND-0.2	no	Corrosion of household plumbing system; erosion of natural deposits

* 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 is measured each quarter and because the level is low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides - Monitored at the Plant Finished Tap in 2014								
Regulated Contaminant	Test Date	Unit	MCLG	MCL	Level Detected	Violation	Major Sources in Drinking Water	
Combined Radium Radium 226 and 228	5/13/14	pCi/L	0	5	0.65 ± 0.54	no	Erosion of natural deposits	

These tables are based on tests conducted by GLWA in the year 2022 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these tables. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The data is representative of the water quality, but some are more than one year old.

ABOUT UNREGULATED CONTAMINANTS MONITORING

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

2019 Unregulated Contaminants Monitored at the Plant Finished Taps

Unregulated Contaminant	Test Date	Unit	Highest Level Detected	SMCL	Range of Detection	Noticeable Effects Above the SMCL	Source of Contaminant
Manganese	2019	ppb	0.48	50	0.0-0.48	black to brown color; black staining; bitter metallic taste	Erosion of natural deposits and corrosion of iron pipes

2019 Unregulated Contaminants - Monitored in the Distribution System Haloacetic Acids

Unregulated Contaminant	Test Date	Unit	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Haloacetic Acid 9 (HAA9)	2019	ppb	n/a	31.41	6.72-31.41	n/a	By-product of drinking water chlorination
Haloacetic Acid 5 (HAA5)	2019	ppb	60	22.5	4.5-22.5	no	By-product of drinking water chlorination
Haloacetic Acid Brominated 6 (HAA6BR)	2019	ppb	n/a	11.34	2.22-11.34	n/a	By-product of drinking water chlorination



2022 CITY OF DETROIT TAP WATER MINERAL ANALYSIS

Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	0.23	0.02	0.06
Total Solids	ppm	205	96	140
Total Dissolved Solids	ppm	169	90	135
Aluminum	ppm	0.474	0.013	0.055
Iron	ppm	0.5	0.2	0.3
Copper	ppm	0.003	ND	0.001
Magnesium	ppm	8.5	7.2	7.7
Calcium	ppm	30.2	24.8	26.3
Sodium	ppm	8.1	4.8	5.5
Potassium	ppm	1.3	0.9	1.0
Manganese	ppm	0.004	ND	0.000
Lead	ppm	0.001	ND	0.000
Zinc	ppm	0.010	ND	0.001
Silica	ppm	2.9	1.4	2.1
Sulfate	ppm	33.9	19.9	26.5
Chloride	ppm	18.7	7.9	10.8

Parameter	Units	Max.	Min.	Avg.
Phosphorus	ppm	0.87	0.24	0.47
Free Carbon Dioxide	ppm	13.6	1.0	8.4
Total Hardness	ppm	112	66	92
Total Alkalinity	ppm	100	40	78
Carbonate Alkalinity	ppm	ND	ND	ND
Bi-Carbonate Alkalinity	ppm	100	40	78
Non-Carbonate Hardness	ppm	56	ND	15
Chemical Oxygen Demand	ppm	12.0	ND	3.9
Dissolved Oxygen	ppm	16.5	3.4	11.4
Nitrite Nitrogen	ppm	ND	ND	0.0
Nitrate Nitrogen	ppm	0.97	0.21	0.39
Fluoride	ppm	0.88	0.08	0.61
pH		8.16	7.06	7.28
Specific Conductance @ 25 °C	µmhos	283	162	215
Temperature	°C	23.9	0.9	13.2



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Great Lakes Water Authority

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During January 1, 2022, to March 31, 2022, we did not correctly monitor for bromate. Therefore, we cannot be sure of the quality of your drinking water during that time.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

The table below lists the contaminants we did not properly test for, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the dates we will collect follow-up samples.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been collected	Date additional samples will be collected
Bromate	1 sample every three months	0	January 1, 2022 – March 31, 2022	April 1, 2022 – June 30, 2022

What happened? What is being done? A sample will be collected during the period of April 1, 2022, to June 30, 2022. We are making every effort to assure this does not happen again. We will be collecting follow-up samples.

For more information, please contact **Patrick Williford 313 926-8127**.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Great Lakes Water Authority.

CERTIFICATION:

WSSN: 02838

I certify that this water supply has fully complied with the public notification regulations in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature: 

Director of Detroit Water and Sewerage Department
Title: _____ Date Distributed: May 16, 2023

How and why basements flood and steps you can take to protect your property:

Visit www.detroitmi.gov/basementprotection to download the City of Detroit Basement Backup & Flooding Handbook.

This report is available on the City of Detroit website at detroitmi.gov/2022waterqualityreport

We welcome your comments and opinions about this report. Please direct your comments or questions to the DWSD Public Affairs Group.

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Water & Sewerage
Department

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