



The City of **TRENTON**



Consumers Annual Report on Water Quality for 2019

The City of Trenton is proud of the fine drinking water it supplies and is honored to provide this report to you.

ATTENTION:
THIS IS AN IMPORTANT
REPORT ON WATER QUALITY
WQR No. 21

Our System

Drinking water quality is important to our community and the region. The City of Trenton 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. City of Trenton 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 City of Trenton 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.

The 2019 Consumers Annual Report on Water Quality shows the sources of our water, lists the results of our tests, and contains important information about your water and health.

The City of Trenton and/or the Great Lakes Water Authority (GLWA) will notify you immediately if there is ever any reason for concern about our water. We are pleased to show you how we have surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the State of Michigan Great Lakes and Energy (EGLE).

The City of Trenton, as well as most of our surrounding communities, purchases water from the Great Lakes Water Authority (GLWA). The GLWA provides drinking water to approximately 4.2 million people in 126 southeastern Michigan Communities. The system uses water drawn from two intakes in the Detroit River, one to the north near the mouth of Lake St. Clair and one to the south near Lake Erie. The water is directed to four (4) large water treatment plants for processing. A fifth water treatment plant located in St. Clair County uses surface water from Lake Huron. The four plants that treat water drawn from the Detroit River service Detroit customers as well as most Downriver communities.

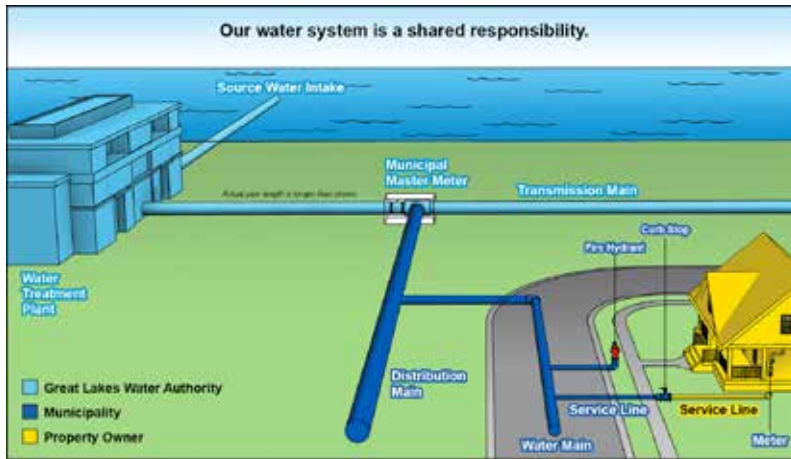
Important Information About Lead

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. The City of Trenton is responsible for providing high quality drinking water, but cannot control the variety of material 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 <http://www.epa.gov/safewater/lead>.

Safe drinking water is a shared responsibility. The water that GLWA delivers to your 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 City of Trenton 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.



City of Trenton Residential Lead and Copper Testing

Lead and Copper Monitoring at Customer's Tap

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2019	ppb	0	15	5.1 ppb	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2019	ppb	1,300	1,300	129.00 ppb	0	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

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

Cryptosporidium

GLWA voluntarily monitors for Cryptosporidium and Giardia in our untreated source water monthly. The untreated water samples collected from our Southwest plant indicated the presence of one Giardia cyst in March. In addition, monitoring indicated the presence of one Giardia cyst and one Cryptosporidium oocyst in the untreated water from the Southwest plant in July. Additional testing was performed on the treated water at the Southwest plant and Cryptosporidium was absent. All other samples collected in the year 2019 were absent for the

presence of Cryptosporidium and Giardia. Systems using surface water like GLWA must provide treatment so that 99.9 percent of Giardia lamblia is removed or inactivated.

Cryptosporidium is a microbial parasite found in surface water throughout the United States. Although Cryptosporidium can be removed by filtration, the most commonly used filtration cannot guarantee 100% removal. Current test methods do not enable us to determine if these organisms are dead or alive. Symptoms of infection include nausea, diarrhea and abdominal

cramps. Most healthy persons can overcome the disease within a few weeks. However, immuno-compromised people (such as those with AIDS, undergoing chemotherapy or recent organ transplant recipients) are at a greater risk of developing a severe, life-threatening illness. Immuno-compromised persons should contact their doctor to learn about appropriate precautions to prevent infection. Cryptosporidium must be taken in through the mouth to cause disease and it may be passed by other means than drinking water.

We obtain water from GLWA whose treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the water with chlorine to kill harmful microorganisms that can cause illness. Next, a chemical called alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle to the bottom. Fluoride is also added to protect our teeth from cavities and decay.

The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to chlorine. Finally, a small amount of phosphoric acid and chlorine are added to the treated water just before it leaves the treatment plant. The phosphoric acid helps control the lead that may dissolve in water from old household plumbing systems. The chlorine keeps the water disinfected as it travels through water mains to reach your house.

In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment, and throughout the distribution system. Hundreds of samples are tested each week in certified laboratories by a highly qualified, trained staff. GLWA not only meets safety and health standards but also ranks among the top 10 in the country for quality and value.



National Primary Drinking Water Regulation Compliance

In 2019 Trenton had no drinking water violations. A monitoring violation is not an exceedance of an MCL or health standard. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.





In order to ensure that tap water is safe to drink, the 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 for 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**.

Water costs money...

Don't waste it!

A dripping faucet or fixture can waste 3 gallons of water a day... a total of 1095 gallons a year.

Waste per quarter at 60 psi water pressure			
Diameter of stream	Gallons	Cubic Feet	Cubic Meters
 1/4"	1,181,500	158,000	4.475
 3/16"	666,000	89,031	2.521
 1/8"	296,000	39,400	1.115
 1/16"	74,000	9,850	280

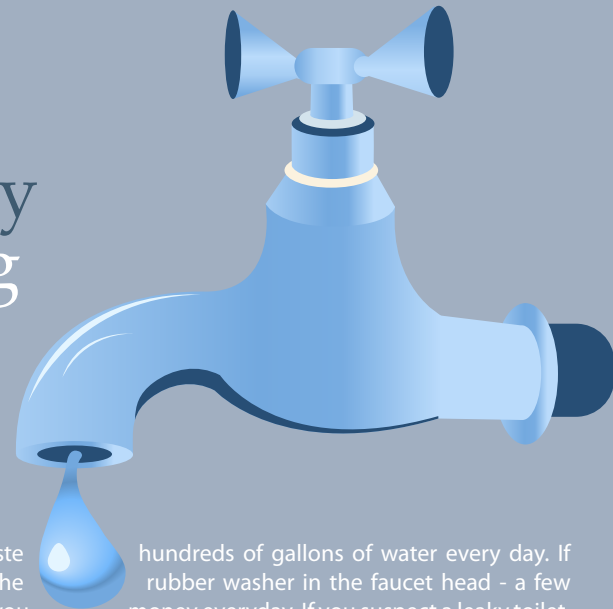
↑ A continuous leak from a hole this size would, over a three month period, waste water in the amounts shown above.

CITY OF TRENTON

DEPARTMENT OF PUBLIC SERVICE

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Check for leaks and stop money from going down the drain!



A leaky faucet or toilet can waste your faucet drips, even a little, replace the cents and a few moments will save you

hundreds of gallons of water every day. If you suspect a leaky toilet, put a little food coloring in the tank (not the bowl). Don't flush for fifteen minutes.

If the color begins to appear in the bowl (without flushing), you have a leak that needs to be fixed right away.

Having a leak repaired will be less costly in the long run than the amount you will pay for wasted water.

Please remember, the City of Trenton cannot adjust your bill for water wasted through leaks!

IMPORTANT NOTICE

Wipes and Personal Hygiene Products Clog Sewer Lines!

Many household products are labeled and marketed as DISPOSABLE and/or FLUSHABLE; many baby and adult personal hygiene products, along with household wipes and cleaning towelettes are labeled both disposable and flushable. While these products may be marketed as a convenience item in this way, the truth is that these types of items have the ability to clog and stop up not only the sewer line on your property, but also can cause blockage and service problems in the public sewer system and pump stations.

Unlike toilet paper, these products **DO NOT** break down once they are flushed. They can cause blockages in your on-site sewer, **especially older pipelines that may have greases, roots, or other obstructions already existing**. A repair of the on-site sewer line can leave the home owner or business owner with a **very costly sewer repair**.

On larger scale, when these products make their way into the public sewer system they collect together, causing very large obstructions and clogs in the main collector lines and get tangled in pump stations requiring repair or replacement of equipment.

WHAT WE CAN ALL DO TO HELP..

The following items should **NEVER** be flushed into the sewer system:

- Disinfecting/surface wipes
- Baby wipes
- Jewelry wipes
- Cosmetic wipes
- Disposable diapers or diaper liners
- Cotton swabs
- Toilet cleaning pads
- Mop or "Swiffer" type refills
- Paper towels
- Pet care wipes
- First aid wipes
- Bio-pads (nursing home, home healthcare, etc.)
- Feminine hygiene products
- ANY moist towelettes



ANY CONSUMER ITEM THAT IS NOT TOILET PAPER!

Every home and business has a sewer connection to the public sewer system. This connection runs from the home or business to the sewer main where it is connected to the public sewer system. This on-site sewer line is the responsibility of the home or business owner to keep clear so there are no backups of wastewater into the home or business. Save yourself and your Sewer Utility from costly repairs and/or replacement bills. **DO NOT FLUSH THE LISTED ITEMS; PLACE THEM IN THE TRASH, NOT THE TOILET.**

Detroit River Intakes

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, in the U. S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality in partnership with the U.S. Geological survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contaminant sources. The susceptibility of our Detroit River source water intakes were determined to be highly susceptible to potential contamination. However, all four Detroit water treatment plants that use source water from Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. DWSD participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. If you would like more information about this report or a complete copy of this report, please contact your water department at (734) 675-8470.



Schedule Automatic Lawn Watering to Reduce Future Rate Increases

In order to control increasing wholesale costs for water from the GLWA we are requesting that owners of automatic lawn sprinkler systems with pre set timers schedule their sprinklers to come on after 11:00 p.m. and that all automatic lawn watering be complete by 5:00 a.m. These efforts will help limit the City of Trenton's peak daytime water usage and ultimately reduce future rate increases to the City of Trenton, this effort will help control the water rate increases that you are required to pay. Many people believe that watering lawns at night is harmful; Michigan State University's Co-Operative Extension Service states that watering at night does not harm your lawn, and in fact un-irrigated lawns are soaking wet every morning in the summer from dew forming. Additionally watering at night limits losses to evaporation and allows the water to soak into the ground better. Sprinklers need to be timed to correspond to this routine wetting of the grass, and be cycled to be complete before 5:00 A.M.



Prescription Drug Disposal - DO NOT FLUSH!

The new Federal prescription drug disposal guidelines are designed to reduce the diversion of prescription drugs, while also protecting the environment. These Guidelines urge Americans to:

DO NOT FLUSH!!

- Contact your local pharmacy to see if they have a take-back program in place for unused, unneeded, or expired prescription drugs.
- Take unused, unneeded, or expired prescription drugs out of their original containers:
- Mix the prescription drugs with an undesirable substance, like used coffee grounds, cat litter, or old latex paint and put them in impermeable, nondescript containers, such as empty cans or sealed bags, further ensuring that the drugs are not diverted or accidentally ingested by children or pets;
- Throw these containers in the trash

Protecting our water... 7 SIMPLE STEPS

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

1. Help keep pollution out of storm drains. Storm drains lead directly to our lakes and streams. So, never dump oil, pet waste, leaves, dirty water, or anything down a storm drain. Remember, only rain in the drain.
2. Fertilize sparingly and carefully. Excess fertilizer that gets into storm drains pollutes our lakes by causing large algae blooms and using up oxygen fish need to survive. Sweep excess fertilizer back onto your lawn, use a low or no phosphorus fertilizer, and have your soil tested to see what, if any, fertilizer is needed.
3. 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.
4. Clean up after your pet. Whether on a walk or in your yard, promptly clean up after your pet. Not only will be you a good neighbor, you will also protect our water from harmful bacteria.
5. Practice good car care. Consider taking your car to a car wash or washing your car on the grass.
6. 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.
7. Save water. Overwatering our lawns can easily carry pollution to the storm drains and to our lakes and streams. Consider using a broom instead of a hose to clean sidewalks and driveways. Direct hoses and sprinklers on the lawn, not the driveway. This will help save our lakes and streams and save you money.



Key to Detected Contaminants Table		
>	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.
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 the water system.
LEVEL 2	Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
LRAA	Locational 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.

Unregulated Contaminant Monitoring Rule - Unregulated contaminants are those for which the Environmental Protection Agency (EPA) has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Before EPA regulates a contaminant, it considers adverse health effects, the occurrence of the contaminant in drinking water, and whether the regulation will reduce health risk. The Great Lakes Water Authority monitored for 20 unregulated contaminants quarterly in 2019. The following table list the unregulated substance detected during the calendar year 2019.

UNREGULATED CONTAMINANT	Test Date	Unit	Highest Level Detected	SMCL	Range of Detection	Noticeable Effects above SMCL	Major Source in Drinking water
Manganese	2019	ppb	0.48	50	0.0 - 0.48	Black to brown color; black staining; bitter metallic taste	Erosion of natural deposits.

These tables are based on tests conducted by GLWA in the year 2019 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.

Southwest Water Treatment Plant 2019 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
INORGANIC CHEMICALS – MONITORING AT PLANT FINISHED WATER TAP								
Fluoride Southwest Plant	6/11/2019	ppm	4	4	0.74	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate Southwest Plant	6/11/2019	ppm	10	10	0.99	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium Southwest Plant	5/16/2017	ppm	2	2	0.01	n/a	no	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS – MONITORING IN DISTRIBUTION SYSTEM BOTH PLANTS								
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)	2019	ppb	n/a	80	22	13-35	no	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2019	ppb	n/a	60	12.35	7.4-17	no	By-product of drinking water disinfection.
DISINFECTANT RESIDUALS – MONITORING IN DISTRIBUTION SYSTEM SOUTHWEST PLANT								
Total Chlorine Residual	Jan-Dec 2019	ppm	4	4	0.60	0.49-0.69	no	Water additive used to control microbes.

2019 TURBIDITY – MONITORED EVERY 4 HOURS AT PLANT FINISHED WATER TAP				
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)		Violation yes/no	Major Sources in Drinking Water
Southwest 0.18 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.				

2020 MICROBIOLOGICAL CONTAMINANTS – MONTHLY MONITORING IN DISTRIBUTION SYSTEM						
Regulated Contaminant	MCLG	MCL		Highest Number Detected	Violation yes/no	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples		in one month 0	no	Naturally present in the environment.
<i>E. coli</i> Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E. coli</i> positive.		in one year 0	no	Human waste and animal fecal waste.

REGULATED CONTAMINANT	TREATMENT TECHNIQUE 2019	TYPICAL SOURCE OF CONTAMINANT
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Level Detected	Violation yes/no	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	5/13/2014	pCi/L	0	5	0.65 + or - 0.54	no	Erosion of natural deposits

2019 SPECIAL MONITORING

CONTAMINANT	MCLG	MCL	LEVEL DETECTED	SOURCE OF CONTAMINATION
Sodium (ppm) Southwest	n/a	n/a	7.25	Erosion of natural deposits

Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.

The City of
TRENTON

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