CITY OF ST. CLAIR SHORES
WATER QUALITY REPORT 2014

Tips to reduce your water bill

You can manage your water bill by monitoring your own water consumption and water loss. Here's a few ways to save both water and money:

STOP THOSE LEAKS!

Check your indoor water using appliances and faucets...especially the toilet. Place food coloring or the colored tablets available at the Water Department in your toilet tank. Don't flush for 5 to 10 minutes. If you see colored water in the bowl you have a leak.

REPLACE YOUR OLD TOILET

Believe or not, your toilet is the largest water user inside your home. If your home was built before 1992 and the toilet has never been replaced, then it is very likely that you do not have a water efficient 1.6 gallon per flush toilet. It's time to replace it.

REPLACE YOUR CLOTHES WASHER

Your clothes washer is the second largest water user in your home. EnergyStar ™ rated washers that have a Water Factor at or lower than 9.5 use 35 to 50 per cent less energy per load.

PLANT THE RIGHT PLANTS & WATER ONLY WHEN NEEDED

Most water is wasted in your garden by watering when your plants or grass does not need it or by not maintaining your irrigation system. Select plants that are appropriate for local climate conditions.

Saving water is smart for you, your pocketbook and the City. Working in partnership, we CAN reduce our water consumption and water loss.

An Open Letter to the Residents & Business Owners of St. Clair Shores

The City of St. Clair Shores is pleased to present the ***Water Quality Report 2014*** to you, our water and sewer customers. This report provides a snapshot of important information about your drinking water. ***The good news: the City of St. Clair Shores has the cleanest, most affordable water in the country.*** We not only provide you with safe tap water, but are also proud to say that the water we supply meets or surpasses all Federal and State standards for water quality and safety.

What determines my bill?

The City of St. Clair Shores bills water by unit-**one unit equals 100 cubic feet or 748 gallons.** As you know, we buy all of our water from the (DWSD) Detroit Water and Sewerage Department and are at their mercy for price increases. Every penny that you pay on your water/sewer bill is used to buy water from the DWSD and maintain our seventy-plus-year old water system. Like the roof on your home or your car, our water system needs constant maintenance.

What is the City doing to reduce my water bill?

Reducing your water bill really comes down to water consumption and water loss.

Water Consumption:

The City of St. Clair Shores Contract with the DWSD includes two new ordinances designed to help the City regulate its peak hour water consumption to assure the lowest possible rates from the DWSD. The first ordinance restricts water consumption during a water supply emergency. The second ordinance restricts irrigation to odd/even numbered days during the summer months. When followed, these actions result in a large savings to the City because it keeps our water rates from the DWSD down and a large savings to the customer because it keeps your water bills down.

Water Loss:

The water that we purchase from the DWSD also goes through a metering system similar to what you have in your home or businesses. Water loss is the result of the amount of water we buy from the DWSD minus the amount of water we sell to our residents and businesses. Our Water Department continually and successfully works toward reducing water loss numbers. Leak detection remains one of our top priorities. We are constantly maintaining valves and hydrants, replacing seals, nuts and bolts. Whenever possible, we replace old, worn-out, stopped or slow-reading water meters with new state-of-the-art meters that are not only more accurate, but electronically alerts the Water Department of a leak. Residents and businesses are usually unaware of problems until something happens that gets their attention...a high water bill, no water coming out of the faucets, low or no water pressure. The Water Department remains vigilant investigating each complaint of a high water bill.

The Water Department operates a four million gallon drinking water storage reservoir. The daily monitoring, calibration and operation of the reservoir allows the City to purchase and store water from the DWSD during low demand hours at a lower cost. This water is then distributed to our water customers during high demand hours. This operation has lowered our peak hourly demand from the DWSD resulting in an annual savings of $300,000 to $500,000. The tank operation also regulates the water pressure throughout our distribution system. Decreased pressure variations have helped to reduce the number of water main breaks.

Violation Notice:

The Water Department received a violation in April 2013 for not collecting a quarterly disinfection by-product sample in our distribution system. Samples were taken during July and August of 2013 that met the acceptable limits and the violation was corrected. Additional information can be found on page 2 of this report.

Frequently asked questions

Who do I contact to have my water turned on?
Contact the Water Billing Office at 586.447.3317.

How long will my water be turned off if the City needs to repair a water main break?
It's not possible to predict how long the water will be turned off in order to repair a water main break. It depends on the individual circumstances, but be assured that the crews will not leave the site until the repair is complete and the water is back on.

My property was damaged by a water main break repair. When will it be restored?
The City tries to restore areas damaged by water main break repairs in the early spring, as soon as the weather conditions permit.

Why is the water pressure low in one area of my home?
Check your faucets and shower heads. Generally low water pressure is an indication that they are clogged by mineral deposits inside the aerators or screens. Remove and clean these areas to alleviate the problem.

What are the white particles in the water?
White particles in the water are usually caused by the hot water heater "dip tube." These tubes are constructed of PVC and tend to break down over time causing particles to become evident in aerators and screens.

Why is there another water main break in front of my home?
Due to the age of our water system, occasionally a water main will break again even though it has been repaired and property restored previously.

Why is the water cloudy?
Water appears cloudy from oxygen in the water. As the air dissipates, the water clears.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Saint Clair Shores

The City of St. Clair Shores Water Department is 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 May, 2013, the Water Department did not monitor or test for Disinfectants and Disinfection Byproducts (DDBP's) and, therefore, cannot be sure of the quality of our 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.

The table below lists the contaminants we did not properly test for during May, 2013, how often we are supposed to sample for these contaminants and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date follow-up samples were collected.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date additional samples were taken
TTHM[1]	2 samples per quarter	0	5/01/2013 to 5/31/2013	7/29/2013 to 8/03/2013
HAA5[2]	2 samples per quarter	0	5/01/2013 to 5/31/2013	7/29/2013 to 8/03/2013

What happened? What is being done? The Water Department was notified by the Michigan Department of Environmental Quality (MDEQ) on July 23, 2013 that our quarterly monitoring was not conducted during the month of May 2013. The Water Department then took additional samples on July 29, 2013 and again on August 8, 2013. These additional samples met the acceptable limits and brought the Water Department back in to compliance and good standing with the MDEQ. For more information, please contact the Water Department at 586-445-5363 or the MDEQ at 586-753-3755.

This public notice is being sent to you by the City of Saint Clair Shores Water Department.

[1]TTHM, also known as total trihalomethanes, are tested by collecting one sample and testing that sample for chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

[2]HAA5, also known as haloacetic acids, are tested by collecting one sample and testing that sample for monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

What are cross connections?

A cross connection is arrangement of piping which could allow undesirable water, sewage, or chemical solutions to enter your drinking (potable) water system as a result of backflow. Cross connections with potable piping systems have resulted in numerous cases of illness and even death.

Michigan water utilities are required to have a cross connection control inspection program of their water customers to eliminate and prevent cross connections.

The City has used the services of Hydro Designs, Inc to monitor our cross connection program since 1998. They test the backflow devices of our commercial accounts and provide the business owners with the latest information from the DEQ.

What can be done?

Homeowners as well as plant managers, business persons, administrators and school officials all must share the responsibility to protect potable water piping systems from contamination through cross connections. Each should contact either the City or the Macomb County Health Department for assistance in locating and correcting cross connection hazards. Additional information can be found at the Michigan Department of Environment Quality website at www.michigan.gov/deq.

Detroit River intakes for communities receiving water from one or more of these water plants Water Works Park, Springwells, Northeast and Southwest

Your source water for the Northeast Treatment Plant comes from the Detroit River, the Rouge River, the 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 contamination sources. Their 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 the Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards.

DWSD 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 to know more information about this report or a obtain a complete copy of it, contact our Water Department at **586.445.5374**

Lake Huron intake for communities receiving water from the Lake Huron Plant

Your source water from the Lake Huron Water Treatment Plant comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron Water Treatment Plant has historically provided satisfactory treatment of this source water to meet drinking water standards. If you would like to know more information about this report or obtain a complete copy of it, contact your Water Department at **586.445.5374.**

Frequently asked questions

SLC Meter Service installed a new meter at my business. Is SLC Meter Service an authorized company in the City?

Yes, SLC Meter service is an authorized company contracted by the City. They are currently removing and replacing meters throughout the City.

Why has the stop box (water shut off) on my lawn risen up out of the ground?

The stop boxes are made to telescope up and down with the frost in the ground to protect the line from breaking during a frost. If you are concerned, the stop box can be lowered by one of our Water Service employees. Call the Water Maintenance Department at 586.445.5374 to make an appointment.

The valves by our meter are not working or are leaking. Who is responsible for the repair?

The values – located before and after the meter – are part of the homeowner’s plumbing system and are the homeowner’s responsibility to maintain. These valves should be exercised regularly to ensure that they are working properly in the event of a broken pipe or line inside your home requiring immediate water shut down. If you believe you have a leak on the meter itself, contact the Water Maintenance Department at 586.445.5374.

I am concerned about hydrants running during a water main break repair or during the hydrant flushing program?

The City continue to operate hydrants during a water main break repair or a flushing to remove the sediment or mineral deposits from the main. This ensures the best water quality possible to residents.

The manager at my business received a letter regarding cross connection or backflow prevention. Where can I get more information?

All questions and concerns should be addressed directly to Hydro Designs at 800-690-6651 or 248.250.5000.

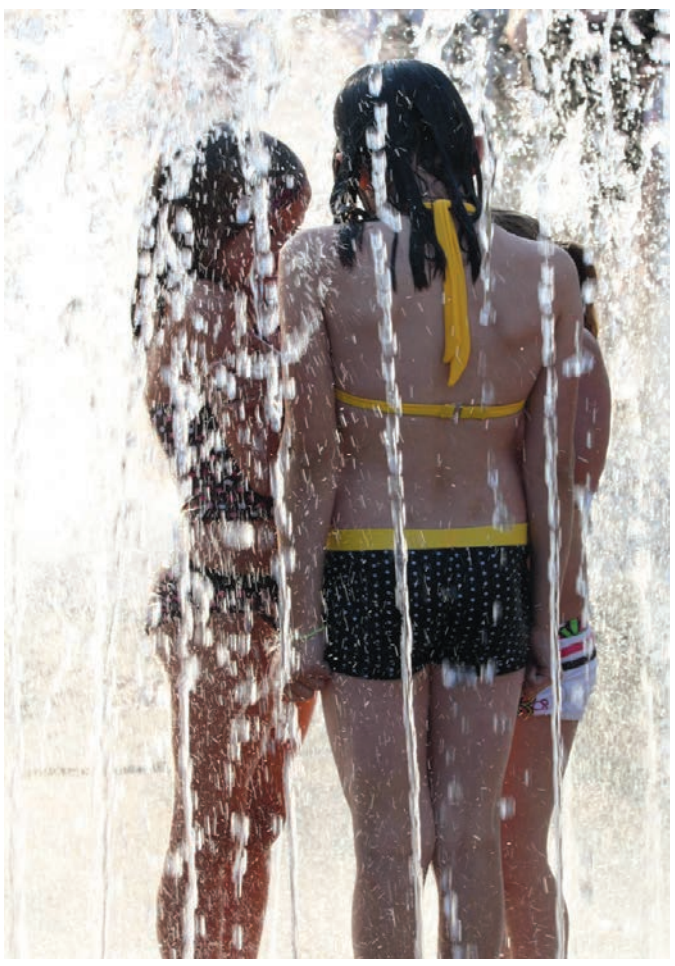
How to read these tables

The tables on the next few pages show the results of our water quality tests. Every regulated contaminant we detected in the water, even in the smallest traces, is listed here. None of the tests performed indicate contaminant levels above allowable limits. The tables contain the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, and the usual sources of such contamination.

The tables do not list hundreds of contaminants we tested for, but did not detect.

The City of St. Clair Shores is proud of our historical relationship to Lake St. Clair and supports efforts to not only protect the source of our drinking water, but also recognize our stewardship of one of the world's greatest supplies of fresh water. Participation in City Council meetings - typically held on the first and third Mondays of each month at 7:00 pm at City Hall - is an excellent opportunity for community involvement in matters that address drinking water quality and storm, sanitary and lake water issues.

If you have any questions regarding this report or would like further information, contact the Water Department at **586.445.5374**. Our offices are located at 19600 Pleasant Avenue, St. Clair Shores, MI 48080.

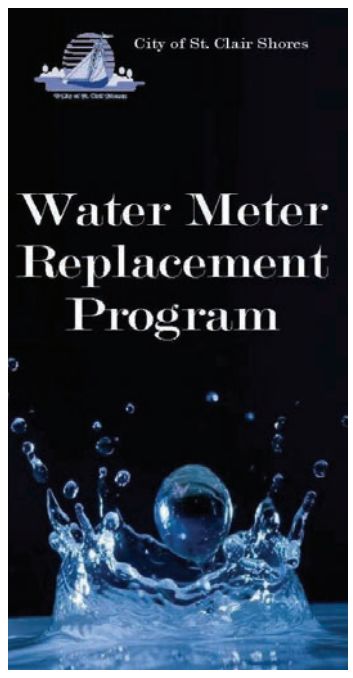


Key to Detected Contaminants Tables

Symbol	Abbreviation for	Definition/Explanation
>	Greater Than	
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, and trichloroacetic acids. Compliance is based on the total.
LRRA	Locational Running Annual Average	
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. MLRDG'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.
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 micrograms per liter. A microgram = 1/1000 gram
raa	Running Annual Average	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Treatment Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.

What you need to know about the Water Meter Replacement Program

The City of St. Clair Shores recently launched a City-wide Water Meter Replacement Program that will take place over the next two to three years. Residents will be mailed an informational brochure (shown right) when meter installers are in your neighborhood. There is no need for residents to call the City at this time.



All water meters will be replaced with a new Automated Meter Reading System that will ensure the most accurate and cost effective method of meter reading currently available. The following are a few of the most frequently asked questions about the program:

WHAT DOES "AUTOMATED METER READING SYSTEM" MEAN?

An automated meter reading system allows a signal to be sent to the Water Billing Department once daily for 1-2 seconds. This system eliminates the costly and labor intensive need for manual house-to-house meter reading. The signal ONLY transmits water usage readings and is a one-way signal. Water Billing cannot transmit any data back to your water meter. The signal requires an output power of 2-watts from the internal battery pack (expected to last 10 to 15 years) and transmits on a FCC licensed low radio frequency of 175 MHz.

WHY DOES MY WATER METER HAVE TO BE REPLACED?

The water meters are on average 25 years old and are at the end of their useful life. Use of older water meters result in all customers paying for unmetered water instead of the resident/homeowner who is actually using the water. The new water meters will ensure that all water customers are billed accurately.

DO I HAVE TO HAVE MY METER REPLACED?

Yes. You can, however, "opt-out" of the automated reading system. If you select to opt-out of the program, you will be responsible for the costs associated with manually reading your water meter. You will also still need to schedule an appointment to have the meter replaced.

WILL I BE BILLED FOR THE NEW METER?

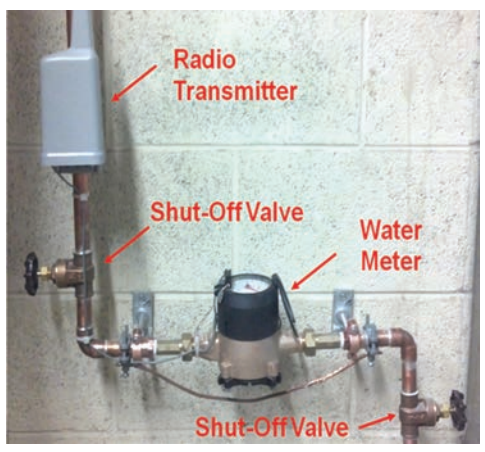
No. The Water Meter Replacement program will be self-funded through the water and sewer capital fund and through the savings generated from the program. Residents will not be charged.

HOW LONG WILL IT TAKE TO INSTALL THE NEW WATER METER?

Normal installation time is less than one (1) hour. A person 18 years of age or older must be present for the installation.

HOW WILL I KNOW IF THE PERSON KNOCKING AT MY DOOR WORKS FOR THE CITY?

All City personnel will be wearing uniforms, a photo identification tag, and will be driving a Water Department van (shown right). You can also call the Meter Replacement Program office at 586-447-3305 to confirm his/her employment PRIOR to letting them in your home. Your safety is our first consideration



WHAT IS MY RESPONSIBILITY?

It is the property owner's responsibility to maintain the water pipes and shut-off valves in their home (shown left). Please test the shut-off valves before and after your water meter replacement by closing and opening them. If not working, you will need to have them repaired and/or replaced. It is important for these shut-off valves to be working in case of a leak in your home and or if an emergency shut-off is needed. Residents will also need to clear the area around your water meter to allow room for the installers. For more information, visit the Water Meter Replacement page at www.scsmi.org.

Household Hazardous Waste Guide...

Cleaning products like aerosols, bathroom and drain cleaners and car supplies like starting fluids and repair products are all considered household hazardous waste. Many ingredients in these products are corrosive or reactive. If they are not disposed of properly, they can harm people, wildlife and the environment. Chemicals in them can actually contaminate our rivers, lakes and drinking water.

Tips for handling toxics..

- Store household hazardous wastes in their original containers and make sure the labels are readable.
- Save money and reduce waste by purchasing only what you need and use.
- Let solvents and paint thinners set in a closed jar to let dirt and paint settle to the bottom. You can reuse the top portion and dispose of less waste!

Hazardous waste accepted by Macomb County Health Dept:

Automotive Products..

- Used motor oil and filters
- Battery acid
- Gasoline
- Brake fluid
- Transmission fluid
- Cleaners, wax, polish
- Antifreeze

Lawn/Garden Products...

- Pesticides
- Fertilizers
- Weed killers
- Poisons

Household Products...

- Oven cleaner
- Drain cleaner
- Rat/ant poison
- Degreasers
- Non-narcotic medications
- Solvents
- Oil-based paint
- Nail polish/remover
- Muriatic acid
- Photography chemicals
- Aerosols
- Coleman lighter fluid
- Pool chemicals
- Fluorescent tubes
- Mercury products

For more information, contact the Macomb County Hazardous Waste Hotline at 586.466.7923

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Lake Huron Water Treatment Plant

2013 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
INORGANIC CHEMICALS - ANNUAL MONITORING AT PLANT FINISHED WATER TAP								
Fluoride	5/13/2013	ppm	4	4	**0.55**	**n/a**	**No**	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories
Nitrate	5/13/2013	ppm	10	10	**0.32**	**n/a**	**No**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium	6/9/2008	ppm	2	2	**0.01**	**n/a**	**No**	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
DISINFECTION BY-PRODUCTS - MONITORING IN DISTRIBUTION SYSTEMS								
Total Trihalomethane (TTHM)	2013	ppb	n/a	80	28.4	**8.3-** 41.7	**No**	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2013	ppb	n/a	60	13.0	**4.0-** 21.0	**No**	By-product of drinking water disinfection
DISINFECTANT RESIDUALS MONITORING IN DISTRIBUTION SYSTEM								
Disinfectant (Total Chlorine Residual)	Jan-Dec 2013	ppm	MRDGL 4	MRDL 4	**0.81**	**0.65-0.93**	**No**	Water additive used to control microbes

2013 TURBIDITY_ MONITORED EVERY 4 HOURS AT PLANT FINISHED WATER TAP

Highest Single Measurement Cannot Exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation Yes/No	Major Sources in Drinking Water
0.26 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.

2013 MICROBIOLOGICAL CONTAMINANTS - MONTHLY MONITORING IN DISTRIBUTION SYSTEM

Regulated Contaminant	MCLG	MCL	Highest Number Detected in one month	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 or fecal Coliform bacteria	0	A routine sample & a repeat sample are total coliform positive, & one is also fecal Or E.coli positive	**entire year** 0	No	Human waste and animal fecal waste

2011 LEAD & COPPER MONITORING AT CUSTOMERS' 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	2011	ppb	0	15	0 ppb	**0**	**No**	Corrosion of household plumbing system; Erosion of natural deposits
Copper	2011	ppm	1.3	1.3	0.046 ppm	**0**	**No**	Corrosion of household plumbing system Erosion of natural deposits; Leaching from wood preservatives

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

Regulated Contaminant	Treatment Technique	Running Annual Average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month & because the level was low, there is no requirement for TOC removal				Erosion of natural deposits

2012 SPECIAL MONITORING

Contaminant	MCLG	MCL	Level Detected	Source of Contaminant
Sodium (ppm)	n/a	n/a	**4.52**	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.

Northeast Water Treatment Plant

2013 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
INORGANIC CHEMICALS - ANNUAL MONITORING AT PLANT FINISHED WATER TAP								
Fluoride	5/13/2013	ppm	4	4	**0.63**	**n/a**	**No**	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories
Nitrate	5/13/2013	ppm	10	10	**0.42**	**n/a**	**No**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium	6/9/2008	ppm	2	2	**0.01**	**n/a**	**No**	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Selenium	6/9/2008	ppb	50	50	**1**	**n/a**	**No**	Discharge from petroleum and metal Refineries; Erosion of natural deposits Discharge from mines
DISINFECTION BY-PRODUCTS - MONITORING IN DISTRIBUTION SYSTEMS								
Total Trihalomethane (TTHM)	2013	ppb	n/a	80	28.4	**8.3-** 41.7	**No**	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2013	ppb	n/a	60	13.0	**4.0-** 21.0	**No**	By-product of drinking water disinfection
DISINFECTANT RESIDUALS MONITORING IN DISTRIBUTION SYSTEM								
Disinfectant (Total Chlorine	2013	ppm	MRDGL 4	MRDL 4	**0.73**	**0.56-0.85**	**No**	Water additive used to control microbes

2013 TURBIDITY_ MONITORED EVERY 4 HOURS AT PLANT FINISHED WATER TAP

Highest Single Measurement Cannot Exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation Yes/No	Major Sources in Drinking Water
0.16 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.

2013 MICROBIOLOGICAL CONTAMINANTS - MONTHLY MONITORING IN DISTRIBUTION SYSTEM

Contaminant	MCLG	MCL	Highest Number Detected in one month	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 or fecal Coliform bacteria	0	A routine sample & a repeat sample are total coliform positive, & one is also fecal Or E.coli positive	**entire year** 0	No	Human waste and animal fecal waste

2011 LEAD & COPPER MONITORING AT CUSTOMERS' TAP

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value	Number of Samples Over AL	Violation Yes/No	Major Sources in Drinking Water
Lead	2011	ppb	0	15	0 ppb	**0**	**No**	Corrosion of household plumbing system; Erosion of natural deposits
Copper system	2011	ppm	1.3	1.3	0.046 ppm	**0**	**No**	Corrosion of household plumbing Erosion of natural deposits; Leaching from wood preservatives

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

Regulated Contaminant	Treatment Technique	Running Annual Average	Monthly Ratio Range	Violation Yes/No	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month & because the level was low, there is no requirement for TOC removal				Erosion of natural deposits

2012 SPECIAL MONITORING

Contaminant	MCLG	MCL	Level Detected	Source of Contaminant
Sodium (ppm)	n/a	n/a	**5.93**	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.

Source water & contaminants

St. Clair Shores drinking water comes from the world's largest fresh water supply - the Great Lakes. St. Clair Shores receives water from two facilities maintained by the Detroit Water and Sewer Department (DWSD); the Northeast and Lake Huron treatment plants. The surface water treatment plants filter and treat water before it's released into the DWSD water system transmission lines and delivered to our distribution system and finally to you, our valued customer.

A very important fact we must realize is that the quality of our drinking water is directly affected by our own property water runoff and the release of improperly disposed of materials into the stormwater system. Keeping grass clippings from the streets and catch basins and using environmentally safe lawn and garden fertilizer products helps sediment and algae problems.

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 the water poses a health risk. **More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA'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 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 many 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 stormwater 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 stormwater 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 guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800.426.4791.

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. St. Clair Shores 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 hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested.

Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800.426.4791 or at the EPA's website at http://www.epa.gov/safewater.

Lead: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastro-intestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

About our system...

The St. Clair Shores Water Department maintains and provides 24 hour service for…

- 220 miles of water main
- 1,708 fire hydrants and hydrant valves
- 1,625 main gate valves
- and reads over 26,000 meters

Our residents, businesses and public facilities consume approximately three billion gallons of water a year.

The mission of the Water Department is to provide clean, healthy, uninterrupted water service while maintaining adequate pressures and volumes for Emergency use.

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