

CANTON WATER QUALITY - TEST RESULTS FOR 2016

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	5/10/2016	ppm	4	4	0.55	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	5/10/2016	ppm	10	10	0.53	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Disinfection By-Product - Monitoring in Distribution System Stage 2 Disinfection By-Products								
Total Trihalomethanes (TTHM)	2016	ppb	n/a	80	34.1	20.7	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2016	ppb	n/a	60	17.0	13.2	No	By-product of drinking water disinfection
Disinfection - Monitoring in Distribution System by Treatment Plant								
Total Chlorine Residual	Jan.-Dec. 2016	ppm	MRDLG 4	MRDL 4	0.74	0.67-0.81	No	Water additive used to control microbes

2016 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 of Drinking Water	
0.33 NTU	99.7%	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.				

January - March 2016 Microbiological Contaminants - Monthly Monitoring in Distribution					
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
E. coli Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive	Entire Year 0	No	Human waste and animal fecal waste

2014 Lead and 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	2014	ppb	0	15	0	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	.048	0	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

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

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month 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

Special Monitoring				
Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.41	Erosion of natural deposits



2016 Water Quality Report CANTON COMMUNITY

CANTON'S ANNUAL REPORT

This report represents Canton's required annual Consumer Confidence Report (CCR) on water quality. The purpose of the report is to inform you about the quality of your drinking water and the services associated with the process. **This report will illustrate that we are providing you with a safe and dependable water supply.**

DRINKING WATER

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."

SOURCE WATER ASSESSMENT

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 Great Lakes Water Authority (GLWA), 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 GLWA 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 initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. GLWA voluntarily developed and receive approval in 2016 for a source water protection program (SWIPP) for the Detroit River intakes.

The programs includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential of source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation and education. If you would like to more information about the Source Water Assessment or SWIPP, contact Canton Township's Public Works Division at 734/397-1011.

CANTON'S WATER SOURCE

Canton purchases its water from the GLWA. Raw water is drawn from the Detroit River from two locations. The water is treated, then transported via large transmission mains to master meter pits in Canton. Pressure and flows are controlled by a series of meters and pressure-reducing valves and delivered via piping to your home.

Weekly water samples are collected by the GLWA at various locations in Canton and then tested. Dead-end mains are flushed by Canton's Public Works Division and tested for chlorine levels each quarter.

CANTON MEETS THE REQUIREMENTS

The State of Michigan and the EPA requires water testing on a regular basis to ensure its safety. Canton has met all the monitoring and reporting requirements for 2015.

YOUR DRINKING WATER IS SAFE - YOU CAN HELP KEEP IT THAT WAY

Your activities at home directly affect the quality of the rivers and lakes that are Southeast Michigan's greatest resources. Every ditch, storm drain, and stream in your area empties into a larger waterway. The storm sewer catch basins and ditches at the end of your driveway and along your neighborhood streets empty into either the Lower Rouge River or the Middle Rouge River. Here are some items you can do to keep water safe:

- Select slow-release fertilizers which gradually contribute nitrogen to the grass roots. Slow-release fertilizers protect lakes and streams, promote and protect steady grass growth, and protect microbial life in the soil. Nutrients that reach rivers and lakes can cause excessive weed growth that depletes the oxygen supply for fish and aquatic insects.
- Avoid combination fertilizer and weed control products that often add unnecessary herbicides to the landscape.
- Much of the pollution that makes our rivers and lakes unsafe for swimming and fishing comes from animal waste, lawn and garden fertilizers, and vehicles leaking oil or antifreeze.
- Pesticides, fertilizer, and other improperly applied lawn chemicals can kill beneficial bacteria, insects, and worms while promoting shallow root growth and polluting our water resources.
- Paved surfaces such as sidewalks, roads, roofs, patios, and parking lots allow pollutants to easily get into water instead of filtering through soil. Fertilizers left on sidewalks and driveways can easily wash into storm drains if not swept back onto the lawn.

- Never flush unwanted or expired medication down the toilet. Wastewater treatment facilities can't filter these chemicals out, so many drugs are being detected in drinking water.

For proper disposal of prescription drugs, Wayne County suggests you take all 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 sealable bags, further ensuring that the drugs are not divested or accidentally ingested by children or pets; then throw these containers in the trash.

You can also contact your local pharmacy to see if they have a take-back program in place for unused, unneeded, or expired prescription drugs.

PEOPLE WITH SPECIAL 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, persons 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/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available by calling the Safe Drinking Water Hotline at 800/426-4791.

WHAT IS CRYPTOSPORIDIUM?

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. The Great Lakes Water Authority monitored for Cryptosporidium in our source water (Detroit River) at our Southwest Water Treatment Plant during 2016. Cryptosporidium was detected twice in our source water samples. A follow-up water sample was collected from the treated water and Cryptosporidium was not found to be present. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

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. GLWA 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 two 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 800/426-4791 or at www.epa.gov/safewater/lead.

CANTON'S WATER IS SAFE

Canton's water is tested for lead every three years, the last tests were taken in 2014 and showed no significant detection of lead. While it is not uncommon for many older communities to use lead piping for water services, Canton's infrastructure does not contain any lead services. If you have any questions please call Canton's Division of Public Works at 734/397-1011.

Canton and the GLWA are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. h any questions or concerns about your water For questions about this report, call Canton Public Works or the GLWA hotline at 844/455-4592. The following websites also offer additional information about water quality: www.canton-mi.org, www.awwa.org, www.epa.gov/safewater, and www.glwater.org.

KEYS TO DETECTED CONTAMINANTS TABLE

Symbol	Abbreviation for	Definition/Explanation
>	Greater than	
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminates
MRDL	Maximum Residual Disinfectant Level	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
ppb	Parts per billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts per million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
umhos	Micromhas	Measure of electrical conductance of water
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirement which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
RAA	Running Annual Average	The average of analytical results for all samples during the previous four quarters.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
n/a	Not Applicable	
ND	Not Detected	
pCi/L	Picocuries Per Liter	A measure of radioactivity. Picocurie (pCi) means the quantity of radioactive material producing 2.22 nuclear transformations per minute.
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.