

DWSD 2004 REGULATED DETECTED CONTAMINANTS TABLES

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Fluoride	Aug 17 2004	ppm	4	4	1.0	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System (level detected in the highest running annual average based on quarterly averages)								
Total Trihalomethanes (TTHM)	Feb-Nov 2004	ppb	n/a	80	24.6	9.4-48.5	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Feb-Nov 2004	ppb	n/a	60	19.2	4.7-40.1	No	By-product of drinking water disinfection
Disinfectant (chlorine) Residual (ppm)	Jan-Dec 2004	ppm	MRDLG 4	MRDL 4	0.71	0.55-0.79	No	Water additive used to control microbes

2004 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
0.27 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.			

2004 Microbiological Contaminants – Monthly Monitoring in Distribution System					
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> or fecal coliform bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or <i>E. coli</i> positive.	entire year 0	No	Human waste and animal fecal waste.

Total Organic Carbon Removal					
Regulated Contaminants	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 ration 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.

2004 Special Monitoring				
Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	Not detected	Erosion of natural deposits

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

KEYS TO DETECTED CONTAMINANTS TABLES

Symbol	Abbreviation for	Definition/Explanation
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 contaminants.
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.
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 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.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Compliance is based on the total.
pCi/l	picocuries per liter	A measure of radioactivity.
n/a	Not applicable	
≥	More than or equal to	

Public comments are welcome and can be addressed at Canton Board meetings. For dates and times, call 734/394-5100. For questions about this report, call the Canton Public Works Division, at 734/394-5151 or the Environmental Protection Agency's (EPA) Safe Drinking Water hotline at 800/426-4791. The following web sites also offer additional information about water quality:

www.canton-mi.org
www.awwa.org
www.epa.gov/safewater
www.dwsd.org



 Canton Municipal Services Department
Public Works Division
1150 Canton Center Road South
Canton, MI 48188

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Important Information Enclosed: 2004 Water Quality Report



CANTON COMMUNITY

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2004 Water Quality Report

This report represents our seventh annual Water Quality Report for the Canton community. The report will explain where your water comes from, the treatment process it goes through, along with source water assessment information. The report will also answer some frequently asked questions. The charts contained in this report show that all contaminants detected in your water are within the U.S. Environmental Protection Agency (EPA) standards. Our goal is to provide you with a safe and dependable drinking 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.



SUBSTANCES THAT MAY BE 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 land 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:

- 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.

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- 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.

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 Detroit Water and Sewerage Department (DWSD), and the Michigan Public Health Institute performed a source water assessment to determine the susceptibility of potential contamination. The susceptibility rating is on a seven-tiered scale from very low to 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 the Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards.

You can learn more about this report by visiting the DWSD website at www.dwsd.org or by contacting DWSD at 313/935-7106

OUR WATER COMES FROM

Canton purchases its water from the Detroit Water and Sewerage Department (DWSD). Raw water is drawn from the Detroit River from two locations near the east end of Belle Isle and also at the Fighting Island intake, located beyond the international boundary line in Canadian waters.



SOURCE WATER TREATMENT PROCESS

Canton’s water is treated at Detroit’s Springwells plant and at the DWSD’s Southwest plant in Allen Park. Water treatment facilities operate 24 hours a day, seven days a week. The treatment process begins with disinfecting the source 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 turbid (cloudy). Alum causes the particles to clump together and settle to the bottom. These particles are then removed. Fluoride is also added to protect teeth from cavities and decay.

The water then flows through fine sand filters called filter beds. These filters remove even more particles and substances before treatment, during treatment, and throughout the distribution system. Hundreds of samples are collected and tested each week at certified

laboratories by highly qualified and trained staff. The Detroit Water System not only meets safety and health standards, but also ranks among the top ten in the country for quality.

CANTON MEETS THE REQUIREMENTS

The State of Michigan and the EPA require us to test our water on a regular basis to ensure its safety. Canton has met all the monitoring and reporting requirements for 2004.

CANTON SYSTEM

Canton purchases treated water from the DWSD. The water is transported via large transmission mains to five master meter pits in Canton. Pressure and flow are controlled by a series of meters and pressure reducing valves and is then delivered via piping to your home.

Weekly water samples are collected by City of Detroit 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.

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

In Canton, every ditch, storm drain, and stream in the area empties into a larger waterway. The storm drains near the end of your driveway and along your neighborhood streets empty into the Lower Rouge River and the Middle Rouge River. That’s why your activities at home directly affect the quality of the rivers and lakes that are Southeast Michigan’s greatest resources.

- 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, fertilizers and other improperly applied lawn chemicals can kill beneficial bacteria, insects, and worms while promoting shallow root growth and polluting our water resources.

- Paved services such as sidewalks, roads, roofs, patios, and parking lots allow pollutants to more 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.

- When nutrients from fertilizers reach rivers and lakes, they cause excessive weed growth which depletes the oxygen supply for fish and aquatic insects and makes the water unusable for recreation.

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, 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/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency’s (EPA) Safe Drinking Water Hotline 800/426-4791.

CRYPTO WHAT?

Cryptosporidium is a disease-causing parasite that lives in the intestinal tract of many animals, including dogs and cats. Symptoms of infection include diarrhea, abdominal cramps, headaches, nausea, and vomiting. The disease is typically spread through contact with feces or an infected animal or person and then consuming contaminated food or water. Cryptosporidium can be introduced into bodies of water by way of surface water runoff containing animal waste, and sewage discharge. The DWSD has been testing for Cryptosporidium since 1994 and has not detected it in any of their source water supplies.

CANTON'S INDIVIDUAL LEAD AND COPPER MONITORING RESULTS

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	2002	ppb	0	15	0	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2002	ppb	1300	1300	15.5	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.