

City of Burton



2009

Drinking Water Quality Consumer Confidence Report

Mayor Charles Smiley

Symbol	Abbreviation	Definition/Explanation
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known 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.
n/a	Not applicable	
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 water system must follow.
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.
>	Greater Than	
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.
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.



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**City of Burton
Consumer Confidence Report
2009**

This report covers the drinking water quality for the City of Burton during the calendar year 2009. This information is a snapshot of the quality of water that we provided you in 2009. Included in this report are details about where your water comes from, what it contains and how it compares to Environmental Protection Agency (EPA) and state standards.

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. Your source water 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 US 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 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 about this report, please contact your local water department @ 810-742-9230.

- ◆ Contaminants and their presence in 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 EPA's Safe Drinking Water Hotline (800-426-4791).
- ◆ Vulnerability of Sub Populations: 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/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 (800-426-4791).
- ◆ 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 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.
 - Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
 - Organic chemical contaminants, including synthetic and volatile organics, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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. Food & Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

WATER QUALITY DATA

The table on page 3 lists all the drinking water contaminants that were detected during the 2009 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done between January 1 - December 31, 2009. The State allows us to monitor for certain contaminants less than once a year because the concentration of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some may be more than one year old.

**Lake Huron Water Treatment Plant
2009 Regulated Detected Contaminants Table**

<u>Contaminant</u>	<u>Test Date</u>	<u>Unit</u>	<u>Health Goal MCLG</u>	<u>Allowed Level MCL</u>	<u>Level Detected</u>	<u>Range of Detection</u>	<u>Major Sources in Drinking Water</u>	<u>Violation Yes/No</u>
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Inorganic Chemicals-Annual Monitoring at Plant Finished Water Tap

Fluoride	8/31/2009	ppm	4	4	1.26	N/A	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No
Nitrate	8/31/2009	ppm	10	10	0.29	N/A	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.	No
Barium	6/9/2008	Ppm	2	2	0.01	N/A	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.	No

Disinfectant Residuals and Disinfection By-Products - Monitoring in Distribution System (level detected is the highest running annual average based on quarterly averages)

Total Trihalomethanes (TTHM)	Feb-Nov 2009	ppb	N/A	80	16.8	7.2-33.8	By-product of drinking water chlorination	No
Haloacetic Acids (HAA5)	Feb-Nov 2009	ppb	N/A	60	10.4	6.7-16.4	By-product of drinking water disinfection	No
Disinfectant (Tot. Chlor. Res)	Jan-Dec 2009	ppm	MRDGL 4	MRDL 4	0.83	0.68-0.85	Water additive used to control microbes	No

Radioactive Contaminants - Plant Finished Water Tap

Alpha Emitters	11/16/01	pCi/l	0	15	3.19	N/A	Erosion of Natural Deposits	No
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2009 Turbidity - Monitored Every 4 hours @ Plant Finished Water Tap

Highest Single Measurement Cannot Exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (Minimum 95%)	Major Sources in Drinking Water	Violation Yes/No
0.12 NTU	100%	Soil Runoff	No

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.

2009 Microbiological Contaminants - Monthly Monitoring in Distribution System

Contaminant	MCLG	MCL	Highest Number Detected	Major Sources in Drinking Water	Violation Yes/No
Total Coliform Bacteria	0	Presence of Coliform Bacteria >5% of monthly samples	In one month - 0	Naturally present in the environment	No
E coli or fecal coliform 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	Human waste and animal fecal waste	No

Lead and Copper Monitoring at Customers' Tap

Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90 th Percentile value	Number of Samples Over AL	Major Sources in Drinking Water	Violation Yes/No
Lead	Aug. 2008	ppb	0	0.015	.0065	0	Corrosion of household plumbing system; erosion of natural deposits	No
Copper	Aug. 2008	ppm	1.3	1.3	.021	0	Corrosion of household plumbing system; erosion of natural deposits; leaching from wood	No

							preservatives	
<p>* The 90th percentile value 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.</p>								

Regulated Contaminant	Treatment technique	Running Annual Average	Monthly Radio 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 and because the level was low, there is no requirement for TOC removal.				Erosion of natural deposits.

2009 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	N/A	N/A	4.74	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. Beginning in July of 2008- April 2009, the Detroit Water And sewerage department (DWSD) began monitoring quarterly for unregulated contaminants under the Unregulated Contaminant Monitoring Rule 2 (UCMR2). All the UCMR2 contaminants monitored on list 1 and 2 in 2008-2009 were undetected.

Is our water system operating properly and meeting the rules established by the State and EPA?

YES! We have met the State and EPA requirements, i.e., water testing, monitoring and reporting for 2009. During 2009 we collected 287 bacteriological samples throughout our water distribution system, and are pleased to report that no contamination was detected.

We are committed to providing you safe, reliable and healthy water. We are pleased to provide you with this information to keep you fully informed about your water. We will be updating this report annually and will also keep you informed of any problems that may occur throughout the year.

Fecal coliform and E coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children and people with severely compromised immune systems.

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.

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 Burton is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. If you are concerned about lead in your drinking 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>.

FREQUENTLY ASKED QUESTIONS

Q: What about chlorine by-products?

A: One of the irrevocable laws of the universe states "nothing ever goes away". During treatment, chemicals are added to water to kill bacteria that cause disease. This process produces other substances, i.e., trihalomethanes, or THMs. Tests conducted in California suggest that pregnant women may have an increased risk of miscarriage if they drink water with high levels of THMs. Some THMs are also thought to cause cancer at certain levels. All our samples have tested far below USEPA mcl guidelines for THMs. The USEPA mcl is 100 parts per billion and our water averaged only 17.7 parts per billion.

Q: Do we need to use a "treatment device" in our home or business?

A: The water delivered to our customers is safe to drink and meets or exceeds the USEPA and MDEQ quality standards. On site "treatment systems" may costs hundreds of dollars plus the cost of frequent filter changes. The extra expense is unnecessary as a matter of safety. If a customer installs filtration equipment to improve taste, it is recommended to change the filter as per manufacturer recommendations, because the filters are an excellent breeding ground for bacteria.

If a customer has or installs filtration equipment to improve water softness the gain may be minimal, for systems cost hundreds of dollars and are expensive to operate; our water averages 5 grain hard as compared to average local well water at 20 grain hard.

For more information about your water or the contents of this report, you may contact Gregory Kray P.E., D.P.W. Director at 810-742-9230 ext 241 or you can find additional information on our website www.burton.mi.us or the EPA website <http://wwwepa.gov/safewater/ccr1.html>.

