



FERNDALE

2013 *Consumers' Annual
Report on Water Quality*

Delivery of safe drinking water is our primary mission.

Water Quality & Safety

Water is one of life's essential commodities. The City of Ferndale Water Department wants you to know that your tap water meets or surpasses all federal and state standards for quality and safety.

For fiscal year 2014-2015, the City has reduced the combined water/sewerage disposal rate 10% from \$110.00 to \$99.00 per thousand cubic feet of consumption for all bills rendered on or after July 1, 2014. The City will continue to revisit the rate structure during the annual budget process to ensure residents are offered an optimal and responsible rate.

• CUBIC FEET

Combined Water and Sewerage Rate

At 100 (1 billed unit, or 1/10 MCF)	\$9.90
At 1,000 (10 billed units or 1 MCF)	\$99.00

- Consumers shall be billed at their actual use starting with 1 billed unit (or 100 cubic feet, or 1/10 MCF). The "minimum bill" was eliminated effective July 1, 2006.
- A readiness-to-serve charge of \$29.00 per billing cycle shall be assessed on all properties connected to the water and/or sewer system to offset the cost of capital acquisitions and its related debt service.

The City of Ferndale and the Detroit Water and Sewerage Department (DWSD) are proud of the fine drinking water they supply and are pleased to provide this informational report to you. The 2013 Consumers Annual Report on Water Quality shows the sources of our water, lists the results of water quality tests, and contains important information about water and health. We 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 Department of Environmental Quality (MDEQ).

The 2013 Annual Consumers' Report of Water Quality was compiled by your Department of Public Works and distributed to the community. This report is a non-funded, mandated requirement by the U.S. Environmental Protection Agency and the Michigan Department of Environmental Quality. All water distributors are required to distribute an annual Water Quality Report.

HOW DO WE KNOW THE WATER IS SAFE TO DRINK?

Detroit Water and Sewerage Department water treatment and transmission facilities operate twenty-four 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 cloudy or turbid. Alum causes the particles to clump together and settle. Fluoride is added to protect 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 is added to the treated water before it leaves the treatment plant. The phosphoric acid helps control the lead that may dissolve in water from household plumbing systems. The chlorine keeps the water disinfected as it travels through the distribution system to your home.

In addition to this 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.

The DWSD, the third largest water and sewer utility in the country, provides water that not only meets safety and health standards, but also ranks among the top ten in the country for quality and value.



SOURCE WATER PROTECTION

Your source of water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River in the United States 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 “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.

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 more information about this report or a complete copy, please contact your Water Department at 248-546-2519.



ABOUT THE SYSTEM

The City of Ferndale purchases water from the City of Detroit. Our primary source of supply is Lake St. Clair, and the water is treated at Detroit’s Northeast and Springwells plants.

Contaminants reasonably expected to be found in 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 Administration’s Safe Drinking Water Hotline at 800-426-4791.

The sources of drinking water (both tap 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provide 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.



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

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 Source in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Flouride	5/13/2013	ppm	4	4	0.63	n/a	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and 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 of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Selenium	6/9/2008	ppb	50	50	1.0	n/a	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Disinfection By-Products – Monitoring in Distribution System – Stage 2								
(TTHM) Total Trihalomethanes	2013	Mg/L	n/a	80	.023	11.3 to 36.1 ppb	No*	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2013	Mg/L	n/a	60	.009	7 to 9 ppb	No*	By-product of drinking water disinfection
Disinfectant Residual – Monitoring in Distribution System								
Disinfectant (Total Chlorine Residual)	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

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	No	Naturally present in the environment.
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	No	Human waste and animal fecal waste.

2011 LEAD AND 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 Source in Drinking Water
Lead	2011	ppb	0	15	3.6 ppb	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	.03 ppm	0	No	Corrosion of household plumbing systems; 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.

Regulate Contaminate	Treatment Technique	Typical Source of Contaminants
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

2013 SPECIAL MONITORING

Contaminate	MCLG	MCL	Level Detected	Source of Contamination
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

* There was one missed sample between 06/01/2013 and 09/09/2013. Samples taken since then show that all results meet acceptable limits.



SPRINGWELLS 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								
Flouride	5/13/2013	ppm	4	4	0.66	n/a	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and 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 of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Selenium	6/9/2008	ppb	50	50	1.0	n/a	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Volatile Organic Contaminants – Monitoring at Plant Finished Water Tap								
Xylene	11/12/2013	ppm	10	10	0.0009	n/a	No	Discharge from petroleum factories; Discharge from chemical factories
Disinfection By-Products – Monitoring in Distribution System Stage 2								
(TTHM) Total Trihalomethanes	2013	Mg/L	n/a	.080	.023	11.3 to 36.1 ppb	No*	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2013	Mg/L	n/a	.060	.009	7 to 9 ppb	No*	By-product of drinking water disinfection
Disinfectant Residuals – Monitoring in Distribution System								
Disinfectant (Total Chlorine Residual)	2013	ppm	MRDGL 4	MRDL 4	0.70	0.59-0.77	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
0.17 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	Violation Yes/No	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	In one month	No	Naturally present in the environment.
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	No	Human waste and animal fecal waste.

2011 LEAD AND 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 Source in Drinking Water
Lead	2011	ppb	0	15	3.6 ppb	0	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	.03 ppm	0	No	Corrosion of household plumbing systems; 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.

Contaminant	Treatment Technique	Typical Source of Contaminants
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

2013 SPECIAL MONITORING

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.62	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.

*There was one missed sample between 06/01/2013 and 09/09/2013. Samples taken since then show that all results meet acceptable limits.



ADDITIONAL INFORMATION

The EPA (Environmental Protection Administration) prescribes regulations to ensure that tap water is safe to drink. These regulations limit the amount of certain contaminants in the water that a public system supplies. The FDA (Food and Drug Administration) regulates bottled water.

LEAD and COPPER

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 Ferndale 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 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/safe-water/lead>.

CRYPTOSPORIDIUM

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, immuno-compromised people, infants and small children, and 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 diseases, and it may be spread through means other than drinking water.

UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which the EPS has not established drinking water standards. Monitoring helps EPS to determine where certain contaminants occur and whether it needs to regulate those contaminants. Beginning in July 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 List 2 in 2008-2009 were detected.

KEY TO DETECTED CONTAMINANT TABLE

SYMBOL	ABBREVIATION	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, dichloroacetic and trichloroacetic acids. Compliance is based on the total.
LRAA	Locational Running Annual Average	
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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 a 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.
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	
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 total.



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the City of Ferndale

The City of Ferndale 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 June, 2013, we 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 not properly tested for during June, 2013, how often we are supposed to sample for these contaminants and how many samples are supposed to be taken, how many samples we took, when samples should have been taken, and the date follow-up samples will be collected:

Contaminant Sampling Frequency	Required Taken	# of Samples Taken	When Samples Should Have Been Taken	Date Additional Samples Were Taken
TTHM ¹	1 sample per	0	06/01/2013 to 06/30/2013	09/09/2013 to 09/13/2013
HAA5 ²	1 sample per	0	06/01/2013 to 06/30/2013	09/09/2013 to 09/13/2013

What happened? What is being done? The City of Ferndale qualified for reduced monitoring after its initial year of State mandated DDBP routine compliance monitoring as a result of the high quality water provided to its residents. Due to the newness of this sampling requirement, there was a miscommunication in the responsibility for sample collection. This miscommunication has since been rectified and routine sampling will re-commence in September and continue on its new, reduced schedule. Based on past monitoring, the City of Ferndale water system has never experienced concerns with DDBPs in their system and stands behind the quality of its drinking water.

For more information, please contact Ferndale DPW at 248-546-2519 or the Department of Environmental Quality at 586-753-3755.

¹ TTHM, also known as total trihalomethane, 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.





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PUBLIC PARTICIPATION

The City of Detroit Board of Water Commissioners meets the third Wednesday of each month. Call (313) 964-9571 for information.

The Ferndale City Council from time to time has issues before it which are water related. Individuals have a right to participate in these discussions. The Ferndale City Council meets at 7:30 PM on the second and fourth Monday of each month at 300 East Nine Mile Road. The agenda for each meeting is posted in the City of Ferndale Library. Please call the City Clerk's office at (248) 546-2384 for additional information. We welcome your comments and opinions about this report and will be happy to answer any questions you may have.

Please direct your comments or questions to the Water Department at (248) 546-2520.

VULNERABILITY OF SOME POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immunocompromised 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).

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

SPANISH SPEAKING INDIVIDUALS

"El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien."

SAFE DRINKING WATER HOTLINE
1-(800)-426-4791

We would encourage you to report any concerns or problems to the Water Department immediately. The following table will provide direction for addressing concerns that you may have with your water.

IMPORTANT NUMBERS

Problem/Concern	Regular Working Hours Mon.-Thurs. (7:30 AM - 4 PM)	Before/After Regular Working Hours
Watermain/ Service Breaks (Leaks)	Water Dept. (248) 546-2520	Police Dept. (248) 541-3650
Low Water Pressure	Water Dept. (248) 546-2520	Police Dept. (248) 541-3650
Illegal Hydrant Use	Water Dept. (248) 546-2520	Police Dept. (248) 541-3650
Water Quality Concerns (Color, Smell, Taste, etc.)	Water Dept. (248) 546-2520	Police Dept. (248) 541-3650
Water Meter (High Bills, leaks, etc.)	Water Billing Office (248) 546-2374 Mon.-Thurs. (8 AM - 5 PM)	

City Yard • 248.546.2520

• Mon. - Thurs. 7:30 a.m. to 4:00 p.m.
• Friday 7:30 a.m. to 11:30 a.m.