

This report covers the drinking water quality for City of Davison, for the calendar year 2013. This information is a snapshot of the quality of the water that we provided to you in 2013. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards.

The Michigan Department of Environmental Quality has performed a source water assessment for the City of Davison and these reports are available for viewing at City Hall and also on the City's web site. The City has also completed a Source Water Protection Plan which was approved by the M.D.E.Q. on December 3, 2005. This document is also available for viewing at City Hall.

Your water comes from five groundwater wells located throughout the city. Four out of five wells pump directly to the Water Treatment Plant located at 601 E Clark St. Your water then goes through the reverse osmosis process to produce water with 7.0 grains per gallon or 122 mg/l of hardness.

- **Source Water Assessment:** Your water comes from five groundwater wells, each over 270 feet deep and drawing from the Flint Watershed. The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of 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 rating is on a seven tiered scale form "very-low" to "very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is well #2 moderate, well #3 moderate, well #4 moderate, and well #5 high. Well #6 was not drilled at the time of the assessment. We are making efforts to protect our sources by participating in the Well Head Protection Program and the Abandon Well Management Program through the State of Michigan Department of Environmental Quality. If you would like to know more about the report, please contact the City of Davison DPW at 810-653-2191.
- **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 systems 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).
- **Sources of Drinking Water:** The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 stormwater runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.
 - * **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
 - * **Radioactive contaminants**, which are naturally occurring.
 - * **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 stormwater 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 and Drug Administration regulations establish limits for contaminants in bottled water, which provide the same protection for public health.

Arsenic Changes

On January 22, 2001 the United States Environmental Protection Agency (U.S. EPA) revised the drinking water MCL for arsenic from 50 parts per billion (ppb) to 10 parts per billion with an effective date of February 22, 2002. Enforcement of the new standard began on January 23, 2006.

Your drinking water during the 2013 calendar year did meet the current rule of below 10 parts per billion the City is not in violation. The City completed a new water treatment facility, which in March of 2005 has brought the City in compliance with the arsenic rule for January 23, 2006. The City is currently producing water which has arsenic levels of 1-2 parts per billion.

Your drinking water meets EPA's standard for arsenic, and it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2013 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 January 1 – December 31, 2013. The State allows us to monitor for certain contaminants less than once per year because the concentrations 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 are more than one year old.

Terms and abbreviations used below:

- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant Level (MCL): 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.
- Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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.
- Maximum Residual Disinfectant Level (MRDL): 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.
- N/A: Not applicable ND: not detectable at testing limit ppb: parts per billion or micrograms per liter ppm: parts per million or milligrams per liter pCi/l: picocuries per liter (a measure of radiation).
- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Contaminant	MCL	MCLG	Range of Detection's	Sample Date	Violation?	Typical Source of Contaminant
Fluoride	4 ppm	2 ppm	.48 mg/l	06/19/13 (Sample every year)	None	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
Arsenic	Effective January 2006 10 ppb	0	1-2 ppb or .001 mg/l - .002 mg/l	Jan. - 0 ppb April - 1 ppb July - 0 ppb Oct. - 2 ppb (Sample every 3 months)	None	Erosion of natural deposits. Run off from orchards, and run off from glass and electrical production waste.
Barium	2 ppm	0	0.07 ppm	06/06/12 (Sample every 3 years)	None	Discharge of drilling waste; Discharge of metal refineries; Erosion of natural deposits.
Bromoform	0.08	0	Not Detected	06/11/12 (Sample every 3 years)	None	Chlorine Disinfection By-Products
Chlorodibromomethane	0.08	0	Not Detected	06/11/12 (Sample every 3 years)	None	Chlorine Disinfection By-Products
Total Trlhalomethanes	0.08	0	Not Detected	06/11/12 (Sample every 3 years)		Chlorine Disinfection By-Products
Radioactive Contaminant						
Gross Alpha	15 Pci/L	0 pCi/L	1.5	06/19/12 (SAMPLE EVERY 9 YEARS)	None	Naturally Occurring
Unregulated Contaminant						
Sodium	N/A	N/A	38 mg/l	06/19/13 (Sample every year)	N/A	Natural Salt
Iron	N/A	0	Not detected	06/19/13	None	Natural in unfinished water

Contaminant	Action Level	Our Water *	Number of Samples Over Action Level
Lead	15 ppb	0.00 ppb	0
Copper	1.3 ppm	0.61 ppm	0

* 90 percent of samples at or below this level

*Lead/Copper test period 06-01-11 through 09-30-11.

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 Davison 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 at 1-800-426-4791 or at <http://www.epa.gov/drink/info/lead/index.cfm>.

*Raw Water entering the plant 240-260 mg/l hardness, finished water from plant 110-120 mg/l hardness.

Chlorine or Chloramines	Previous Year											
	Jan	Fe	Ma	Ap	Ma	Ju	Jl	Au	Se	Oc	No	De
Bacteriological sample Site #1	1.17	1.4	0.87	0.77	0.58	0.23	0.5	0.53	0.37	0.35	0.6	0.27
Bacteriological sample Site #2	1.17	1.44	0.97	0.64	0.7	0.35	1.04	0.98	1.04	0.63	0.77	0.4
Bacteriological sample Site #3	1.02	1.06	1.14	1.07	0.95	0.87	0.68	0.78	0.76	3.12	0.79	0.99
Average of all measurements taken in the month	1.12	1.36	1	0.83	0.75	0.49	0.74	0.77	0.73	1.37	0.72	0.56
RAA calculated quarterly of 12 monthly averages			1.16			0.69			0.75			0.89
Chlorine or Chloramines	Year Covered by the CCR											
	Jan	Fe	Ma	Ap	Ma	Ju	Jl	Au	Se	Oc	No	De
Bacteriological sample Site #1	0.67	0.45	0.88	0.6	0.83	0.8	0.59	0.15	0.69	0.29	0.47	0.47
Bacteriological sample Site #2	0.47	0.18	0.53	0.4	0.75	0.4	0.39	0.17	0.48	0.14	0.25	0.25
Bacteriological sample Site #3	0.96	0.94	0.91	1.03	0.76	0.91	0.69	0.89	0.63	0.88	0.77	0.89
Average of all measurements taken in the month	0.7	0.52	0.77	0.68	0.78	0.7	0.56	0.4	0.6	0.44	0.5	0.54
RAA calculated quarterly of 12 monthly averages			0.66			0.72			0.52			0.49

Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Is our water system meeting other rules that govern our operations? The State and EPA require us to test our water on a regular basis to ensure its safety.

The City of Davison routinely samples the water quality for Microbial contaminants on a weekly basis. This is done by taking samples from each well site, along with designated distribution sites. These samples are then sent to the D.E.Q. for testing. The results are sent back to the City of Davison to compile our monthly operations report per D.E.Q. requirements.

The City of Davison also tests for approximately 78 additional contaminants per D.E.Q. scheduling requirements, which are not listed on the table due to no detection of those contaminants.

Residents requesting a list of those sample results may do so by contacting the Department of Public Works or the City of Davison at 653-2191.

The City of Davison met all the monitoring and reporting requirements for 2013.

The City of Davison has completed the Reliability Study. The purpose of this study is to conduct a general evaluation of the city's water distribution system. The previous water study was performed in August 1998. The scope of the study includes analyzing the distribution system's response to current and estimated future water and firefighting demands, evaluating supply and storage requirements within the service area and recommending distribution system improvements to address any deficiencies within the service area. The planning period for this system evaluation includes current conditions, 5-year (year 2018) and 20-year (year 2033) demand projections. The primary elements of this study include:

- Evaluation of historical trends of population growth, development, service area expansion and water use.
- Projection of future population, service area and water requirements.
- Evaluation of the adequacy of existing distribution facilities
- Hydraulic analyses of the pipeline network and the storage facilities to determine the capability of the distribution system and storage facilities to meet current and future water demands.
- Development of a master plan for the water system, including recommended improvements.

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, as they happen.

2013 Projects

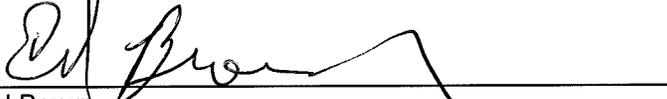
In 2013 the City of Davison completed several major projects to protect the stability of the water system. A water rate study was completed and the increase in the water rates began on January 1, 2014. Several commercial sized meters were removed, new meters and back flow prevention devices were installed. Due to the aging of the system the water main on Main Street between Clark Street and Mill Street had to be replaced. The 4" water main on the west side of Main Street (from Mill Street to Third Street) was abandoned. Well #5 was taken out of service and was rebuilt with a new bowl.

We invite public participation in decisions that affect drinking water quality.

For more information about your water, or the contents of this report, contact Michael Hart City Manager or Brian Gist Licensed Water Operator at 810-653-2191. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.



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