

WATER DISTRICT No. 1 of MIDLAND COUNTY

2016 DRINKING WATER QUALITY REPORT

NEWS AND NOTES

This annual Drinking Water Quality Report has been prepared to provide our customers with the most recent water quality data. The drinking water supplied meets all state and federal water quality standards. However, in 2016 there were two minor violations. First, a change in our population required 6, rather than the usual 5, tri annual samples to be drawn for lead and copper analysis. The 5 samples taken were well within acceptable standards. To compensate for this, we will be gathering 6 samples in 2017. Secondly, we missed the month window by 8 days, to draw one of our quarterly disinfection byproducts samples. The samples drawn tested well within acceptable standards, but could not be counted. Our next set of samples brought us back into compliance.

We shall continue to strive to maintain the entire system to the highest standards.

As always, the goal of WD #1 is, to build a better future by providing water to its citizens.

WHERE DOES OUR WATER COME FROM?

Water District #1 has purchased water from the City of Midland, since our system's origin in 1970. Midland has received its source water supply from Lake Huron since 1948. The source water pumping facility is jointly owned and operated by the cities of Midland and Saginaw and is called the Saginaw-Midland Municipal Water Supply Corporation (SMMWSC). Water from Lake Huron is drawn into the system through two intake structures located one and two miles offshore at Whitestone Point near Au Gres.

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).

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:

- 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 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.
- Radioactive contaminants, which can be naturally-occurring or may 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. FDA regulation establishes limits for contaminants in bottled water which must provide the same protection for public health.

Source Water Assessment: In June 2003 the Michigan Department of Environmental Quality released a Source Water Assessment Report (SWAR) for our community's source of raw water. Our community is provided raw water from two Lake Huron water intakes located off the shores of Whitestone Point, which is roughly 8-miles north of Au Gres, MI. Included in the SWAR is a susceptibility analysis of our raw water. Susceptibility is a measure of the factors within the source water area that may pose a risk to the water supply. The SWAR concluded that our intakes have a **moderately low** susceptibility to potential contamination. Although the threat of contamination still exists, this rating is considered excellent for a surface water source. A copy of the report is available for review at the Water Office at Midland City Hall. If you have questions or need additional information on our SWAR please call the Water Plant at 837-3515

Information on copper: 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 gastrointestinal 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 contact their personal doctor. If you are concerned about elevated copper levels in your home's water, you may wish to flush your tap for 30 seconds to two minutes before using the water or have your home's water tested. For further information contact the Water District Office at 687-2709

Information on 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. Water District #1 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 800-426-4791 or at <http://www.epa.gov/drink/info/lead>.

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.

Important Definitions

The following tables contain scientific terms and measures, some of which may require an explanation.

Maximum Contaminant Level or MCL: The highest level of a contaminant, which is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level or 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.

Maximum Residual Disinfectant Level Goal or MRDLG: 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 contamination.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Action Level or AL: The concentration of a contaminant which, if exceeded, triggers the need for additional treatment or other requirements which a water system must meet.

Part per million (PPM); part per billion (PPB): These units describe the levels of detected contaminants.

Turbidity: A measure of water clarity. Lower numbers indicate clearer water. Measurement is in nephelometric turbidity units (ntu).

Water District #1 of Midland County Test Results for 2016

Substances regulated at the Water Treatment Plant

Substance	Unit	Amount Detected		MCL	MCLG	Likely Source	Violation?
		Range	Average				
Fluoride	ppm	0.59-0.79	0.69	4	4	Erosion of natural deposits and treatment additive, promotes strong teeth	NO
Turbidity	ntu	0.03-0.21	n/a	TT ^a	n/a	Soil runoff; suspended matter in surface water	NO
Barium ^b	ppm	0.01	0.01	2	2	Erosion of natural deposits; discharge of drilling wastes; Discharge from metal refineries.	NO

a. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system. The limits for turbidity state that all samples must be below 1 ntu, and that at least 95% of the samples each month be lower than 0.3 ntu. 100% of our monthly samples were less than 0.3 ntu.

b. Test date 2013. Testing for this substance conducted every nine years.

Substances regulated in the Distribution System

Substance	Unit	Amount Detected		MCL	MCLG	Likely Source	Violation?
		Range	Highest LRAA ^c				
Total Trihalomethanes	ppb	42-85.4	65	80		By-products of drinking water chlorination	NO
Total Haloacetic Acids	ppb	04-15	18	60		By-products of drinking water chlorination	NO
Chlorine	ppm	0.02-1.13	0.72	4.0	4.0	Treatment additive for Microbial contaminant control	NO

c. Highest Running Annual Average (LRAA) calculated quarterly.

Substances regulated at the Customer's Tap (Water District No. 1 of Midland County)

Substance	Unit	Amount Detected		MCL	MCLG	Likely Source	Violation?
		90th Percentile					
Copper ^{d, f}	ppm	0.445		AL=1.3	1.3	Corrosion of household plumbing systems	NO
Lead ^{e, f}	ppb	3.0		AL=15	0	Corrosion of household plumbing systems	NO

d. No testing sites exceeded the Copper Action Level of 1.300 ppm.

e. Zero testing sites exceeded the Lead Action Level of 15 ppb

f. Test date 2016. Testing for this substance conducted every three years.

Unregulated Parameters

Substance	Unit	Amount Detected		Likely Source	Violation?
		At Water Plant	At end of system		
Sodium	ppm		5	Erosion of natural deposits	NO
		Range	Average	Range	Average
Chromium	ppb	0.23-0.42	0.33	0.28-0.34	0.31
Strontium	ppb	98-100	99	110-110	110
Hexavalent chromium	ppb	0.23-0.30	0.27	0.27-0.27	0.27

2016 Drinking Water Quality Report

Water District #1 of Midland County
P.O. Box 320, Sanford, Mi

BOARD OF TRUSTEES - MEETINGS
HELD THIRD WEDNESDAY EACH MONTH
AT JEROME TOWNSHIP HALL 737 W. BEAMISH RD. SANFORD MI