

2018 Water Quality Report for Central Lake

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to provide you with information because informed customers are our best allies.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised person 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 infection. These people should seek advice about drinking water from their health care provider. EPA/Center for Disease Control (CDC) guidelines are appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

Your water comes from 3 groundwater wells, each over 100-150 feet drawing from the Central Lake Watershed.

Source water assessment and its availability

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 on geologic sensitivity, well construction, water chemistry and contamination sources/ The susceptibility of our source is low to medium.

Why are there contaminants in my 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 (EPA) 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: microbial contaminants, such as viruses and bacteria, that 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 septic systems; and 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulation establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

If you would like to know more about the report, please contact Robert Mullens, PO Box 368, Central Lake, MI 49622 or call 231-544-2701.

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water primarily form materials and components associated with service lines and home plumbing. Village of Central Lake is responsible for providing high quality drinking water, but you can minimize the potential for lead exposure by flushing your tap water 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/safewater/lead>.

Additional Information for 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 consult their personal doctor.

PFAS Information

Per and Polyfluoroalkyl Substances (PFAS), sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the United States Environmental Protection Agency (US EPA) as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumers products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples from the general US population.

These Chemicals are persistent, which means they do not break down in the environment. They also bioaccumulate, meaning the amount builds up over time in the blood and organs. Although our understanding of these emerging contaminants is constantly evolving, elevated levels of PFAS have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers. Links to these health effects in humans are supported by epidemiologic studies and by laboratory studies in animal models.

Are there health advisory levels?

The US EPA has not established enforceable drinking water standards, called maximum contaminant levels, for these chemicals. However, the US EPA has set a lifetime health advisory (LHA) level in drinking water for two PFAS: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The PFOA and PFOS LHA is the level, or amount below which no harm is expected from these chemicals. The LHA level is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. If both PFOA and PFOS are present, the LHA is 70 ppt for the combined concentration. The amount of PFOA and PFOS combined in the sample collected from our [entry point OR raw water intake] ranged from [XX] to [XX] ppt, [if applicable] which is more than XX times lower than the LHA for the combination of these two chemicals. There are many other PFAS compounds that currently do not have LHA levels. For information on PFOA, PFOS and other PFAS, including possible health outcomes, you may visit these websites: <https://www.epa.gov/pfas>; <https://www.atsdr.cdc.gov/pfas/> or <http://www.michigan.gov/pfasresponse>.

Who can I call if I have questions about PFAS in my drinking water?

If any resident has additional questions regarding this issue, the State of Michigan Environmental Assistance Center can be contacted at 800-662-9278. Representatives may be reached to assist with your questions Monday through Friday, 8:00 AM to 4:30 PM. You may also contact [water supply information].

What other ways could I be exposed to PFOA, PFOS and other PFAS compounds?

PFAS are used in many consumer products. They are used in food packaging such as fast food wrappers and microwave popcorn bags; waterproof and stain resistant fabrics such as outdoor clothing, upholstery and carpeting; nonstick coatings on cookware; and cleaning supplies including some soaps and shampoos. People can be exposed to these chemicals in house dust, indoor and outdoor air, food, and drinking water. There is still uncertainty regarding these routes of exposure and more research is necessary.

How can I stay updated on the situation?

The state has created a website where you can find information about PFAS contamination and efforts to address it in Michigan. The site will be updated as more information becomes available. The website address is: <http://michigan.gov/pfasresponse>.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many core contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise note, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentration of these contaminants do not vary significantly from year to year, or

the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we provide the definition below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violations	Typical Source
				Low	High			
Disinfectants & Disinfection By Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as C12) (ppm)	4	4	0.1	0	0.1	2017	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	ND	ND	ND	2017	No	By product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	4.3	3.4	4.3	2017	No	By product of drinking water disinfection
Inorganic Contaminants								
Fluoride (ppm)	4	4	0.06	ND	0.18	2018	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	0.63	ND	1.3	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	ND	ND	ND	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (optional) (ppm)	NA		8.3	ND	15	2018	No	Erosion of natural deposits; Leaching
Inorganic Contaminants								
Contaminant	MCLG	AL	Your Water	Sample Date	# Sample Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	0.40	Mar 2017	1	No	Corrosion of household plumbing system; Erosion of natural deposits	
Copper - action level at consumer taps (ppm)	1.3	1.3	0.59	Aug 2017	0	No	Corrosion of household plumbing system; Erosion of natural deposits	
Inorganic Contaminants								
Contaminant	MCLF	Al	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Lead - action level at consumers tap (ppb)	0	15	2	Mar 2017	0	No	Corrosion of household plumbing system; Erosion of natural deposits	
Lead - action level at consumers tap (ppb)	0	15	2	Aug 2017	0	No	Corrosion of household plumbing system; Erosion of natural deposits	
Inorganic Contaminants								
Contaminants	Sample Location	LHA (ppt) PFOS + PFAS	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
PFAS (ppt)	TP002	70	ND	Sept 2018	0	No	Food, clothing, household items, use of foam fire suppression	

PFAS (ppt)	WL002	70	ND	Sept 2018	0	No	Food, clothing, household items, use of foam fire suppression
PFAS (ppt)	WL004	70	ND	Sept 2018	0	No	Food, clothing, household items, use of foam fire suppression
Unit Description							
Term	Definition						
ppm	parts per million or milligrams per liter (mg/L)						
ppb	parts per billion or micrograms per liter (ug/L)						
ppt	parts per trillion						
NA	not applicable						
ND	not detected						
NR	monitoring not required, but recommended						
Important Drinking Water Definitions							
Term	Definition						
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no know or expected risk to health. MCLGs allow for a margin of safety						
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						
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						
Variances and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions						
MRDLG	Maximum residual disinfection 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 disinfection 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						
MNR	Monitored Not Regulated						
MPL	State Assigned Maximum Permissible Level						
For more information please contact							
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This report will not be mailed/delivered to customers							