

City of Escanaba

2016 ANNUAL DRINKING WATER QUALITY REPORT

IS MY WATER SAFE?

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards. The City of Escanaba vigilantly safe-guards its water supplies and once again we are proud to report that our water system has never violated a maximum contaminant level or any other water quality standard.

WHERE DOES MY WATER COME FROM?

Escanaba water customers get their drinking water from Little Bay de Noc. The water is pumped to the city's water treatment plant. A chemical called Alum is added to the water to help remove particles that make water cloudy or turbid. This allows particles to clump together and settle out of the water in sediment basins. The water then passes through sand and anthracite filters to remove more particles. Fluoride is added to the water daily to prevent tooth decay and cavities. Powdered activated carbon is added seasonally to control taste and odor problems. Soda ash is added to control corrosion. Corrosive water can cause lead and copper to leach out of pipes. Chlorine is added at various phases in the treatment process to kill harmful bacteria. The State of Michigan has conducted a source water assessment for the City of Escanaba to determine susceptibility of potential contamination. Susceptibility's rated on a six tier scale from "very low" to "high". Escanaba's source water is categorized with high susceptibility, given land uses and contaminant sources within the source water area. However, it is noted that historically, this source water has been effectively treated to drinking water standards. More information or a copy of the Source Water Assessment can be obtained from the Water Department by calling 786-3291, or at www.michigan.gov then click on water, drinking water, source water assessment.

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 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 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 regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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).

LEAD & COPPER ISSUES IN YOUR WATER

Current water issues across the Nation underscores that our first job is to protect the families we serve. Those of us involved in managing, cleaning and delivering water share a solemn obligation to protect public health.

We do not have first-hand information about what occurred in Flint, but this much seems clear. When Flint switched its water supply source; it did not take the required steps to manage water chemistry. The new water caused lead to leach from service lines and home plumbing – lead that ended up in water coming out of the taps. Lead does not come from the treatment plants and water mains. It comes from lead service lines running between the water main in the street and the home, and from plumbing inside the home. In our community, we are not aware of more than one lead service line remaining in our system. We currently have plans scheduled to replace it with a new copper service.

An incident like Flint is unlikely here because the Escanaba Water Department has a very effective Corrosion Control program. The waters of Little Bay De Noc are slightly corrosive to metals and must be treated to reduce that corrosiveness. Soda ash (sodium carbonate) is added to the settled water to increase the pH and control corrosion. This less corrosive water minimizes the chance of dissolving metals such as lead and copper into the drinking water from plumbing fixtures in the home.

The Escanaba Water Department conducts daily checks to insure the water chemistry is consistent with an effective corrosion control program. Using data from the daily lab results, chemical feed rate adjustments are made to produce water that has a tendency to be less corrosive. This also gives it the ability to form a protective coating within the pipe. In accordance with the rules and regulations, sampling is conducted every three years for Lead and Copper. These samples are taken from costumers residences throughout the distribution system. Samples collected under the Lead and Copper Rule are not intended to estimate exposure, but as one of the checks that can initiate re-evaluation of our corrosion control practices. We will conduct this sample on your tap, at a fee of \$50.00 which only covers our costs. Our results here in the City of Escanaba have been below the threshold of concern.

We are not content to simply comply with regulations. We observe the letter of the law and embrace the spirit of it. There is positive movement in the national approach to eliminating lead risks. The U.S. federal regulation that addresses lead in drinking water – the Lead and Copper Rule – is currently under revision. There are other steps you can take to protect your family, including purchasing a certified water filter to remove lead, making sure you flush out the lines after a period of stagnation in order to get fresh water that is coming from the main, and avoiding consuming water from the hot water tap, where lead is more likely to be present. You can find more guidance on www.DrinkTap.org.

Water Quality Data Table

The table below lists the drinking water contaminants we tested for during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA or the State requires us to monitor for certain contaminants less then once per year because concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, may be more then one year old. The cryptosporidium samples are of the raw lake water before treatment.

Terms and Abbreviations:

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

MCL, (Maximum Contaminant Level) (mandatory): The highest level of a contaminant that is allowed in drinking water. The MCL is set as close to the MCLG 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.

MRDLG, (Maximum residual disinfectant level goal): means 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 disinfectant level), means 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.

NA, Not Applicable **NR**, Not Regulated **ND**, Non-Detect

Contaminants (units)	MCLG	MCL	Your Water	Low Range	High Range	Sample Date	Violation	Typical Source
Radioactive Contaminant (pCi/l)	0	15.0	ND	0.01	0.01	2013	No	Erosion of natural deposits
Combined Radium 226/228 (pCi/l)	0	5	0.94	0.94	0.94	2013	No	Erosion of natural deposits
Inorganic Contaminants								
Fluoride (ppm) In house Lab	4	4.0	0.75	0.46	1.93	2017	No	Erosion of natural deposits; industrial
Fluoride (ppm) State Lab	4	4.0	0.66	0.66	0.66	2017	No	Erosion of natural deposits; industrial
Nitrate as N (ppm)	10	10.0	ND	0.00	0.00	2017	No	Erosion of natural deposits; industrial
Organic Contaminant								
Total Organic Carbon (ppm)	NA	TT	2.1	1.6	2.7	2017	No	Naturally occurring carbon
Disinfectant and By-Products								
Chlorine (ppm)	4	4	1.2	0.9	1.4	2017	No	Added to control microbes
TTHM Total Trihalomethane ppm	0	.080 avg	.059	.027	.090	2017	No	By-product of water treatment
HAA5 [Haloacetic Acids 5] (ppm)	NA	.060 avg	.040	.018	.056	2017	No	By-product of water treatment
Microbial Contaminants								
Turbidity (NTU)	NA	TT=1.0	.04	0.03	0.06	2017	No	Soil Runoff
Cryptosporidium	0	TT	0	0	<1	2017	No	Raw Source Water

Unregulated Contaminants

Sulfate (ppm)	NR	NR	44	44	44	2017	No	Erosion of natural deposits,
Sodium (ppm)	NR	NR	27	27	27	2017	No	Erosion of natural deposits,
Chloride (ppm)	NR	NR	13	13	13	2017	No	Erosion of natural deposits
Iron (ppm)	NR	NR	0.2	0.2	0.2	2017	No	Erosion of natural deposits

Contaminants

	MCLG	AL	90th%					
Copper (ppm)	1.3	1.3	0.22	ND	0.47	2016	No	Erosion of natural deposits, leaching
Lead (ppb)	0	15	5	ND	11	2016	No	corrosion of household plumbing, wood preservatives (Copper & Lead)

Units of measure:

Ppm: (parts per million) or **mg/l** (milligrams per liter), **ppb** (parts per billion) or **ug/l** (micrograms per liter), **pCi/l** [(picocuries per liter), measure of radioactivity], **NTU** [(nephelometric turbidity units), Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.]

New lead language: 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 Escanaba 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/safewater/lead>.

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 and/or finished 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 the 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 disease, and it may be spread through means other than drinking water.

For more information:
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Website: www.escanaba.org

Please feel free to call us if you have any interest in taking a short tour of your Water Treatment Plant.