IRA TOWNSHIP WATER DEPARTMENT

2017 ANNUAL DRINKING WATER QUALITY REPORT

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water source is Anchor Bay, Lake St. Clair, this is surface water fed by the St. Clair River. We are pleased to report that our drinking water is safe and meets Federal and State requirements. The State preformed an assessment of our source water in 2003 to determine the susceptibility or the potential for contamination. The source water report has been completed and Ira Township source water rating is highly susceptible. If you have any questions about this report or concerning your water utility, please contact Ira Township Water Department at 586-725-7231. Office hours are between 7:00 a.m. and 5:00 p.m. Monday through Friday. The water plant is located at 7069 Meldrum Rd., Fair Haven Michigan. Regularly scheduled Township Board meetings are held the first Monday of every month at 7:00 p.m. in the Township hall located at 7085 Meldrum Rd.

Ira Township Water department routinely monitors for contaminants in your drinking water according to Federal and State laws. Ira Township has conducted testing for more than 230 different possible drinking water contaminants. The water department also tests for the presence of coliform bacteria and *E.coli* in the plant tap and in the distribution system. This table shows the results of our monitoring for the period of January 1st to December 31, 2017. Some testing is done less often than once a year, as will be noted in the chart below. Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose 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 Ira Township Water Department does not monitor any bottled drinking water sold or used in Ira Township.

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 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 results from urban storm water runoff, industrial or domestic discharges, oil and gas production, mining, or farming.
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.
Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water run-off, and residential uses.
Radioactive, 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Thank you for allowing us to continue providing your family with clean, quality water this year. We will make every effort to provide a safe, dependable water supply to our customers. If you have any questions about this report or your water supply, please call the Ira Water Department 586-725-7231 or email us at waterplant@iratownship.org.

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter – one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just barely noticeable to the average person.
Action Level – the concentration of a contaminant, which if exceeded, triggers treatment or other requirements a water system must follow.
Maximum Contaminant Level – The "Maximum Allowed" (MCL) is 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 Contaminant Level Goal – The "Goal" (MCLG) is 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 Residual Disinfectant Level – or MRDL, 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.
Maximum Residual Disinfectant Level Goal- or MRDLG, means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.
Note: Some tests are not preformed every year. "The State allows us to monitor for certain contaminants less than once a 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" Results from the most recent test dating back no further than 5 years are reported in the tables below.

Ira Township Water Treatment Plant
2017 Regulated Detected Contaminants Tables

Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Annual Monitoring at Plant Finished Water Tap								
Fluoride	4/18/2017	ppm	4	4	<.10	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System								
Total Trihalomethanes (TTHM)	Jan-Dec 2017	ppb	n/a	80	60.5	39-74	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	Jan-Dec 2017	ppb	n/a	60	35.5	22-58	No	By-product of drinking water disinfection
Disinfectant (Total Chlorine residual)	Jan-Dec 2017	ppm	MRDGL 4	MRDL 4	1.03	.20-1.80	No	Water additive used to control microbes

2017 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**
0.05 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.			

2017 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	0 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.	0 in entire year	No	Human waste and animal fecal waste.

2017 Lead and Copper Monitoring at Customers' Tap								
Contaminant	**Test Date**	**Units**	**Health Goal MCLG**	**Action Level** AL	**90th Percentile Value***	**Number of Samples Over AL**	**Violation** yes/no	**Major Sources in Drinking Water**
Lead	2017	ppb	0	15	1.3	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2017	ppb	1300	1300	10	0	No	Corrosion of household plumbing system; 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. Infants and children who drink water containing lead in excess of the AL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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. Ira Township Water Department *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://water.epa.gov/drink/info/lead*

Regulated Contaminant	**Treatment Technique**	**Running annual average**	**Monthly Ratio Range**	**Violation Yes/No**	**Typical Source of Contaminant**
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

2017 Special Monitoring

Contaminant	**MCLG**	**MCL**	**Level Detected**	**Source of Contamination**
Sodium (ppm)	n/a	n/a	1.3	Erosion of natural deposits

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.