City of Kingsford Water Supply
2019 Annual Water Quality Report

The City of Kingsford Water Department is pleased to provide its customers with this past year's Annual Water Quality Report. Beginning in 1999 this report is made available to our customers every year for the Water Distribution Systems Water Quality for the previous year's test results. Our goal is to provide our customers with a safe and dependable supply of drinking water.

Last year tap water supplied by the Kingsford Water Distribution System met all U.S. Environmental Protection Agency (EPA) and State of Michigan Department of Environmental Quality (MDEQ) drinking water health standards. This report is an overview of the water quality testing and results taken during the testing period ending in 2019. Included are details about where your water comes from, what it contains, and how it compares to EPA and MDEQ water quality standards. We are committed to providing quality water to our customers and providing you with this information.

Source Water Assessment Program.

In 2003 the Michigan Department of Environmental Quality performed a source water assessment of the City of Kingsford Wells. Under the provisions of the 1996 amendments to the Safe Drinking Water Act, the State of Michigan is required to develop and implement an assessment of all public source water supplies. City of Kingsford wells received a score of Moderately High. For Further information on this report you may contact Justin Wickman, Public Works Department at (906) 774-3070.

The Sources of Kingsford's Water.

The City of Kingsford Water Distribution System drinking water comes from five wells located in the northwest part of the city. The No. 1 well is 100 feet deep and can produce 750 gallons of water per minute. The No. 4 well is 70 feet deep and can produce 130 gallons of water per minute. The No. 5 well is 90 feet deep and can produce 800 gallons of water per minute. The No. 6 well is 150 feet deep and can produce 750 gallons of water per minute. The No. 7 well is 150 feet deep and can produce 1550 gallons of water per minute. The City of Kingsford Water Distribution System provides water to residences, businesses, and industry in the City of Kingsford along with the Skidmore and East Kingsford Areas of Breitung Township.

Drinking Water in General.

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 Safe Drinking Water Hotline 1 (800) 426-4791.

General Sources of Drinking Water.

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 Water before it is Treated.

1. Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

2. 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.

3. Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential use.

4. 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.

5. 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 the public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Do you need to take special precautions?

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 1(800) 426-4791.

Water Quality Data Table

During the testing period ending in 2019, the Kingsford Water Supply was tested for over 140 contaminants including Automated Partial Chemicals, Volatile Organic Chemicals, Synthetic Organic Chemicals, Radiological Contaminants, Lead, Copper and Cyanide; also included in the required testing was the routine sampling and testing for Bacteriological Contaminants.

The table below lists all of the drinking water contaminants that we detected during the testing period ending in 2019. The presence of 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 in the calendar year of 2019. The Environmental Protection Agency and/or the State of Michigan Department of Environmental Quality require us to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

Terms and Abbreviations used below:

MCLG: Maximum Contaminants Level Goal: 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.

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.

AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Contaminants	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Radiological Contaminants								
Gross Alpha (pCi/l)	0	15	1.13	1.01	1.24	07/15/14	**No**	Decay of natural and manmade deposits.
Gross Beta (pCi/l)	0	50	0.10	0.0	0.64	07/06/11	**No**	Erosion of natural deposits.
Radium 226	0	} 5.0 comb.	n/d	0.05	0.15	09/03/19	**No**	
Radium 228	0		0.736	0.0	0.95	09/03/19	**No**	
Inorganic Contaminants								
Nitrate (ppm)	0	10.00	1.20	0.08	2.20	07/9/19	**No**	Fertilizer runoff and natural
Fluoride (ppm)	0	4.000	n/d	n/d	0.062	07/9/19	**No**	Natural
Arsenic (ppm)	0.002	0.010	0.002	n/d	0.002	09/3/19	**No**	Natural
Barium (ppm)	2.00	2.000	0.036	n/d	0.036	09/3/19	**No**	Natural
Microbiological Contaminants								
Total Coliform (samples taken in 2019)	0	0	n/d	n/d	n/d	2019	**No**	Naturally present in the environment.
Unregulated Contaminants								
Sodium (ppm)	NR	NR	16.0	2.7	16.0	07/9/19	**No**	Erosion of natural deposits.

Lead/Copper at Consumer Tap

	AL	MCLG	Your Water	Samples>AL #90%ile			
Lead (ppb)	15.0	0	5.0	0	07/19	**No**	Corrosion of household plumbing systems.
Copper (ppb)	1300	1300	0.9	0	07/19	**No**	Corrosion of household plumbing systems.

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. The City of Kingsford 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.
The City of Kingsford distribution system currently has 2,411 water services that were installed between 1925 to the present. Those services installed to residences and small businesses between 1925 to the late 1960s contained an 18-inch long section of lead pipe that connected the water main to the galvanized iron service piping. It is has been reported that approximately 1487 water services contain lead goosenecks at the end of 2019. Since the late 1960s, smaller water services have been installed using type K copper pipe and no lead pipe section. In addition, over the years many water services have been repaired or replaced and the lead sections have been removed and replaced with copper pipe. The City is in the process of taking inventory of the water services that contain these short sections of lead pipe to meet the requirements of the recently changed rules to PA 399 DRINKING WATER Act and to formulate a plan to begin replacing these services. This information regarding the number of water services containing any lead pipe will be reported in future Water Quality Reports.

Per- and Polyfluoroalkyl Substances (PFAS)

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 (U.S. EPA) as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumer 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 U.S. 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 U.S. EPA has not established enforceable drinking water standards, called maximum contaminant levels, for these chemicals. However, the U.S. 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 system ranged from **ND to 3 ppt**, which is more than **23 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.

Why was City of Kingsford's source water tested for PFAS?

The Michigan Department of Environmental Quality (MDEQ) has coordinated a statewide initiative to test drinking water from all schools that use well water and community water supplies for PFAS. MDEQ is taking this precautionary step to testing these drinking water sources to determine if public health actions are needed.

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].

Is it safe to eat fish in these areas?

Wild fish samples are being collected from local lakes and rivers. These samples will be analyzed to determine the levels of PFAS in fish and make recommendations on how much is safe to eat. Some information is already available in the State of Michigan Eat Safe Fish guides, which are available at http://www.michigan.gov/eatsafefish.

May I bathe or swim in water containing PFAS?

Yes, information currently available suggests that this is not a major contributor to overall exposure.

How can PFAS affect people's health?

Some scientific studies suggest that certain PFAS may affect different systems in the body. The National Center for Environmental Health (NCEH)/Agency for Toxic Substances and Disease Registry (ATSDR) is working with various partners to better understand how exposure to PFAS might affect people's health.

If you are concerned about exposure to PFAS in your drinking water, please contact the Michigan Department of Health and Human Services Toxicology Hotline at

800-648-6942, or the Center for Disease Control and Prevention/ATSDR at https://www.cdc.gov/cdc-info/ or 800-232-4636. Currently, scientists are still learning about the health effects of exposures to PFAS, including exposure to mixtures.

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.

What is being done about this issue?

State and local agencies are actively working to obtain more information about this situation as quickly as possible. Additional testing of the drinking water will be conducted to demonstrate that the PFAS levels are consistent and reliably below the existing LHA. Additional monitoring in and around our region and other affected areas will also be performed by the Michigan Department of Environmental Quality, which will help us answer more questions and determine next steps.

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

Units Description:

Ppm:	parts per million, or milligrams per liter (mg/l)	NA:	Not Applicable
Ppb:	parts per billion, or micrograms per liter (ug/l)	NR:	Not Regulated
Ppt:	parts per trillion, or nanograms per liter (ng/l)	n/d:	Not Detected
PCi/l:	picocuries per liter (a measure of radioactivity)		

A COPY OF THIS REPORT IS AVAILIBLE AT THE KINGSFORD CITY HALL, 305 S. CARPENTER AVENUE AND THE PUBLIC WORKS FACILITY, 1500 CARTER DRIVE, KINGSFORD, MICHIGAN 49802 or the City of Kingsford web site located at http://www.cityofkingsford.com/WaterQualityReport
"THIS REPORT WILL NOT BE MAILED TO EACH CUSTOMER"

For more information contact: **Anthony D. Edlebeck, City Manager**
City of Kingsford
305 S. Carpenter Avenue, Kingsford, MI. 49802
Telephone: (906) 774-3526

Jeff DeMuri, Public Works Superintendent
City of Kingsford
1500 Carter Drive, Kingsford, MI. 49802
Telephone: (906) 774-3070