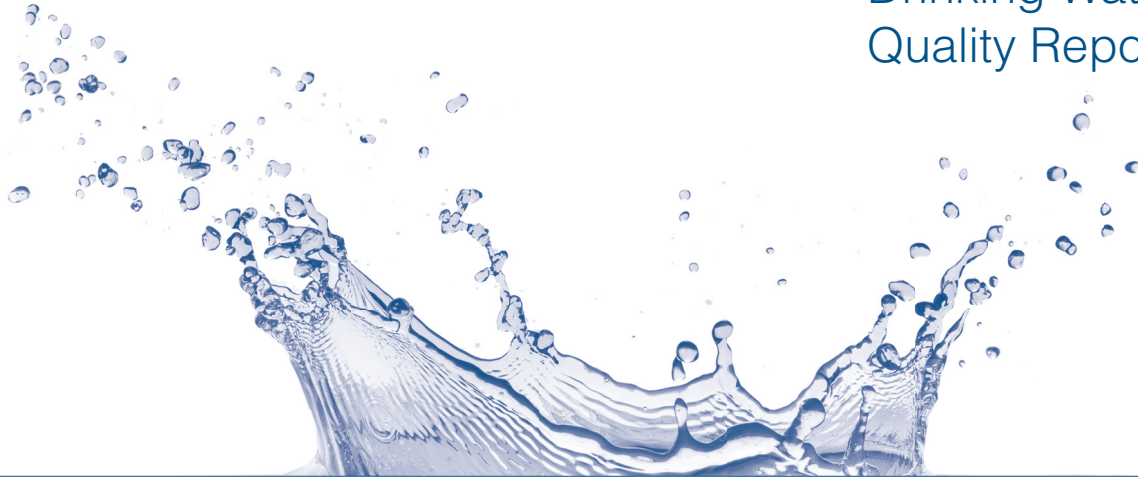




# 2020 Annual Drinking Water Quality Report



## Introduction

The City of Highland Park is pleased to present its Annual Water Quality Report for the period of January 1 to December 31, 2019. This report, as required by Federal law, is designed to inform all customers about the quality of water and services that are delivered each day. The City of Highland Park is pleased to report that last year, as in years

past; your tap water met or exceeded all U.S. Environmental Protection Agency (USEPA) and state drinking water health standards. There were no water quality violations recorded during 2019, nor were there any samples over the Maximum Contaminant Levels (MCL). The City's continuing goal is to provide all of its consumers with a

safe and dependable supply of drinking water. As part of this process, the City wants all customers to understand the efforts that are continually being made to improve the water treatment process and to protect water resources. In short, the City of Highland Park is committed to ensuring the quality of your water.

## The Source of Our Drinking Water

The City of Highland Park Water Plant uses surface water drawn from Lake Michigan. The water is drawn from a 54 inch primary intake located one mile from shore. This primary intake is situated in 30 feet of water, adjacent to two secondary intakes that are 20 and 16 inches in diameter, which also feed water to the filtration plant. Highland Park's primary intake is located far enough offshore (5,150 feet) that the shoreline impacts are not considered a factor on water quality. The secondary 20 and 16 inch intakes, located 1,250 feet and 2,230 feet respectively, are close enough to the shore and may be influenced by potential sources including Central Park. The secondary intakes are used infrequently to augment the capacity of the primary intake or during maintenance or inspection of the primary intake. The combination of the land use, potential sources and the proximity of storm sewer outfalls adds to the susceptibility of these two intakes.



# Contaminants and Protection

## ✓ EPA Source Water Assessment Completed

In 2002 Illinois EPA conducted a federally mandated Source Water Assessment of Highland Park. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>. This report states that sources of potential contaminants for Highland Park intakes include sediment, shoreline erosion, wet weather sewer overflows, wastewater treatment bypasses, stormwater runoff, and air deposition. The IEPA considers all surface water sources of community water supplies to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intake with no protection, only dilution. Hence, the reason for mandatory treatment for all surface water supplies in Illinois. The report also commends Highland Park's active membership to the West Shore Water Producers Association. Coordination regarding water quality situations is frequently discussed during the association's quarterly meetings. Lake Michigan, as well as all the Great Lakes, has many different organizations and associations that are currently working to either maintain or improve water quality. Protection of Lake Michigan is a priority for Highland Park. For information on source water protection please visit the City's website at [https://www.cityhpil.com/government/city\\_departments/public\\_works/water\\_treatment\\_plant/index.php](https://www.cityhpil.com/government/city_departments/public_works/water_treatment_plant/index.php)

If you would like to learn more, please contact the Water Plant at 847.433.4355.

## Contaminant Sources

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 can dissolve naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Possible contaminants consist of:

- **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 stormwater 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 stormwater runoff and septic systems;
- **Radioactive contaminants**, which may be naturally occurring or be the result of oil and gas production and mining activities.

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 the water poses a health risk. Illinois EPA (IEPA) has determined that Lake Michigan has some of the best drinking water quality in the state. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1.800.426.4791).



## Additional Information

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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the USEPA's Safe Drinking Water Hotline (1.800.426.4791).

## About the Data

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that 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. The City of Highland Park Water Plant routinely monitors drinking water for these constituents, in accordance with State and Federal laws. The following water quality table lists all of the drinking water contaminants that we detected during the period between January 1 and December 31, 2019. Although many more contaminants were tested, only those substances listed in the table 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 noted, 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 concentrations 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. Again, the presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Full comprehensive results may be obtained by calling the contact listed at the end of this report.

# Data Analysis

## 2019 Water Quality Data Table



The “Your Water” column represents the highest sample result collected during the calendar year, unless otherwise noted. The “Range” column represents a range of individual sample results, from lowest to highest that were collected during the calendar year. The “Sample Date” column will show the year the sample was most recently analyzed. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The “Violation” column will indicate whether or not a violation occurred with each contaminant that was detected. The “Typical Source” information lists where contaminants may originate.

### Disinfectants & Disinfectant By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)

Contaminants	MCLG or MRDLG	MCL, TT, OR MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Chlorine [as Cl <sub>2</sub> ] (ppm)	MRDLG =4	MRDL =4	1.6	0.2	1.6	2019	No	Water additive used to control microbes
Total Organic Carbon (%)	NA	TT	100	NA	NA	2019	No	Naturally present in the environment
TTHMs [Total Trihalomethanes] (ppb)	NA	80	37	17.9	52	2019	No	By-product of drinking water disinfection
Haloacetic Acids [HAA5] (ppb)	NA	60	19	11.1	26.5	2019	No	By-product of drinking water disinfection

**Note:** The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set.

**Note:** Some sample results for regulatory compliance are based on a running annual average of quarterly samples, therefore; the result is not the highest level detected. This is the case for Cl<sub>2</sub>, TTHMs and HAA5.

### Inorganic Contaminants

Contaminants	MCLG or MRDLG	MCL, TT, OR MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Barium (ppm)	2	2	0.019	NA	NA	2019	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Calcium (ppm)	NA	NA	35	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA or the state.
Chloride (ppm)	NA	250	17	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; run-off from road salts.
Chromium, Hexavalent (ppb)	NA	NA	0.19	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA or the state.
Copper, Free (ppm)	NA	NA	0.01	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA or the state.
Fluoride (ppm)	4	4	0.707	NA	NA	2019	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Magnesium (ppm)	NA	NA	12	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA or the state.
Nitrate [measured as nitrogen] (ppm)	10	10	0.33	NA	NA	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Potassium (ppm)	NA	NA	1.6	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA or the state
Sodium [optional] (ppm)	NA	NA	12	NA	NA	2019	No	Erosion of natural deposits; Leaching; Used in water softener regeneration.
Sulfate (ppm)	NA	250	23	NA	NA	2019	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal factories
Hardness, Total (as CaCo <sub>3</sub> ppm)	NA	NA	140	NA	NA	2019	No	Erosion from naturally occurring minerals.
Alkalinity, Total (ppm)	NA	NA	110	NA	NA	2019	No	Erosion from naturally occurring minerals.
Total Dissolved Solids (ppm)	NA	NA	180	NA	NA	2019	No	Comprised of inorganic salts, dissolved organic matter, sewage, urban and agricultural run-off, industrial wastewater, chemicals used in the water treatment process, the piping or hardware used to distribute the water.

**Note:** There is not a federal or state MCL for sodium. Monitoring is required for information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 ppm, and you are on a sodium-restricted diet, you should consult a physician.

# Data Analysis (cont.)

## 2019 Water Quality Data Table (Cont.)

### Coliform Bacteria

Contaminants	MCLG	Total Coliform MCL	Highest # of Positive	E. coli MCL	Total # Positive E. coli samples	Violation	Typical Source
Coliform Bacteria	0	1 positive monthly sample	1	-	0	No	Naturally present in the environment.

### Microbiological Contaminants

Contaminants	MCLG or MRDLG	MCL, TT, OR MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Turbidity (NTU)	NA	0.3	100	NA		2019	No	Soil runoff

100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.062 NTU. Any measurement in excess of 1 is a violation unless otherwise approved by the state.

**Note:** Turbidity is a measure of the cloudiness of the water caused by suspended particulates and is monitored because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

### Lead and Copper Contaminants

Contaminants	MCLG	AL	Your Water	Sample Date	# of Samples Exceeding AL	Violation	Typical Source
Copper - action level at consumer taps (ppm)	1.3	1.3	0.18	2017	0	No	Corrosion of household plumbing systems; Erosion of natural
Lead - action level at consumer taps (ppb)	0	15	4	2017	0	No	Corrosion of household plumbing systems; Erosion of natural

To minimize contamination resulting from corrosion, Highland Park has implemented a corrosion control program. The EPA established a lead action level of 15 parts per billion (ppb) and a copper action level of 1.3 ppm. The 90th percentile result of samples analyzed for lead and copper content in homes with lead pipes must be less than these action levels. In 2017, Highland Park sampled water from thirty-three homes with lead service lines and analyzed them for lead and copper content. All results, were below the action levels. The 90th percentile level for lead was 4 ppb. The 90th percentile level for copper was 0.18 ppm as illustrated in the results table.

**Note:** The City of Highland Park is in full compliance with all State and Federal regulations governing the control of lead and copper within public drinking water supplies. 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 Highland Park 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 <http://www.epa.gov/safewater/lead>.

### Additional Unregulated Contaminants-UCMR-4

#### Distribution System

Analyte	Collection Date	Highest Level Detected	Range of Levels Detected	MCL	Units
HAA5	10/8/2019	14.9	13.4-14.9	NA	ppb
HAA6Br	10/8/2019	7.7	7.6-7.7	NA	ppb
HAA9	10/8/2019	21.2	20.0-21.2	NA	ppb

#### Raw Water

Bromide	10/8/2019	30	30.0-30.0	NA	ppb
Total Organic Carbon	10/8/2019	2.2	2.2-2.2	NA	ppm

Every five years, in accordance with the Safe Drinking Water Act, the EPA identifies a new list of contaminants that are suspected to occur in public water systems. This list is referred to as the Unregulated Contaminant Monitoring Rule (UCMR). A maximum contaminant level (MCL) for these contaminants have not been established by either state or federal regulations, nor has mandatory health effects language been set. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

## Drinking Water Definitions

In the water quality data table, 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:

- TT** : Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.
- AL** : Action Level or the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL** : Maximum Contaminant Level or 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.
- MCLG** : Maximum Contaminant Level Goal or 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.

- MRDLG** : Maximum Residual Disinfection Level Goal or the level of a drinking water disinfectant below which there is no known or expected risk to health.
- MRDL** : Maximum Residual Disinfectant Level or the highest level of a disinfectant allow in drinking water.
- MPL** : Maximum Permissible Level that is state assigned.

#### UNIT DESCRIPTIONS

- ppm** : Parts per million or Milligrams per liter (mg/L).
- ppb** : Parts per billion or Micrograms per liter (µg/L).
- NTU** : Nephelometric Turbidity Units, used to measure the cloudiness in drinking water.
- NA** : Not applicable.

## Contact Us

For more information about this report or your water utility in general, please contact:



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