

# CITY OF HIGHLAND PARK

## 2013 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, 2012. 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 2012, 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.

### SOURCE OF HIGHLAND PARK'S DRINKING WATER

The City of Highland Park Water Plant uses surface water drawn from a 54" Intake Pipe located one mile from shore in Lake Michigan. This Intake Pipe is situated in 30 feet of water, adjacent to two smaller pipes that are 20 and 16 inches in diameter, which also feed water to the filtration plant.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be

### EPA SOURCE WATER ASSESSMENT COMPLETED

In 2002 Illinois EPA (IEPA) conducted a federally mandated Source Water Assessment of Highland Park, and it is available to consumers by contacting the Water Plant at 847-433-4355. IEPA has determined that Lake Michigan has some of the best drinking water quality in the state. Also, IEPA has determined 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. Some of the potential contaminants are: inorganic compounds, synthetic organics, and volatile organics. (See: [http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl?rm=show\\_facility\\_detail&facility\\_number=0970500&cws=y](http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl?rm=show_facility_detail&facility_number=0970500&cws=y))

microbes, organic or inorganic chemicals, or radioactive materials. 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. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).





## CONTAMINANTS MONITORING RESULTS

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 table below lists all of the drinking water contaminants that we **detected** during the period between January 1 and December 31, **2012**. Again, the presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

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 fracking;

**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.



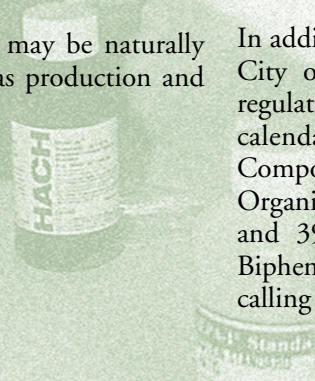
## ABOUT THE DATA

**Turbidity** – 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.

**Sodium** – There is not a federal or state MCL for sodium. Monitoring is required 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.

**Lead and Copper** – 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 or at <http://www.epa.gov/safewater/lead>. 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 2011, Highland Park sampled water from thirty 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 7.42 ppb. The 90th percentile level for copper was 0.487 ppm as illustrated in the results table.

In addition to the contaminants listed in the following table, the City of Highland Park tested for the presence of 74 other regulated contaminants which were not detected during this calendar year. These contaminants include 12 Inorganic Compounds (i.e. Arsenic, Mercury, and Cyanide), 23 Volatile Organic Compounds (i.e. MTBE, Vinyl Chloride and Benzene) and 39 Synthetic Organic Compounds (i.e. Polychlorinated Biphenyls (PCB's) and DDT). Results may be obtained by calling the contact listed at the end of this report.





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.

## 2012 WATER QUALITY DATA

Contaminant (units)	EPA MCLG	EPA MCL	Highland Park highest Level Found	Range of detection	Violation Yes/NO	Date of Sample (if not tested annually)	Typical Source of Contamination
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Turbidity (NTU)	n/a	0.3	100%	n/a	NO	2012	Soil runoff.

100% of the samples were below the TT value of 0.3 NTU. A value less than 95% constitutes a TT violation. The highest single measurement was 0.19 NTU. Any measurement in excess of 1 NTU is a violation unless otherwise approved by the state.

<b>INORGANIC CONTAMINANTS</b>							
Barium (ppm)	2	2	0.02	0.02-0.02	NO	2012	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	0.8	0.8-0.8	NO	2012	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen) (ppm)	10	10	0.5	0.5-0.5	NO	2012	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

## DISINFECTANTS & DISINFECTANT BY-PRODUCTS (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)

Chlorine (as C12) (ppm)	MRDLG = 4	MRDL = 4	1.0	0.69-1.29	NO	2012	Water additive used to control microbes.
Chloramines (as C12) (mg/l)	MRDLG = 4	MRDL = 4	1.0	0.69-1.29	NO	2012	Water additive used to control microbes.
Haloacetic Acids (HAA5) {ppb}	n/a	60	11.0	6.0-14.7	NO	2012	By-product of drinking water chlorination.
TTHM [Total Trihalomethanes] (ppb)	n/a	80	21.0	14.2-32.0	NO	2012	By-product of drinking water disinfection.
Total Organic Carbon	n/a	TT	100	n/a	NO	2012	Naturally present in the environment.

*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 Chlorine, Chloramine, HAA5, and TTHMs.*

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

## STATE REGULATED CONTAMINANT

Sodium (ppm)	n/a	MPL	6.5	6.5-6.5	NO	2012	Erosion of natural deposits; leaching; used in water
Zinc (ppm)	5	5	0.008	0.008-0.008	NO	2012	Naturally occurring; discharge from metal factories

## LEAD AND COPPER

Lead MCLG	Lead Action Level (AL)	90th Percentile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	90th Percentile	# Sites Over Copper AL	Sample Date	Likely Source of Contamination
0	15 ppb	7.42 ppb	0	1.3 ppm	1.3 ppm	0.487 ppm	0	2011	Corrosion of household plumbing systems; Erosion of natural deposits

## ADDITIONAL CONTAMINANTS

Contaminant	State MCL	Your Water	Violation	Explanation and comment
Sulfate	500 ppm	35 ppm	NO	Erosion of natural deposits
Hexavalent Chromium	n/a		NO	Industrial processes from steel and pulp mills

In accordance with the recommended protocol issued by the USEPA in January 2011, the City of Highland Park has instituted a quarterly monitoring plan for Hexavalent Chromium. The USEPA does not have a MCL for Hexavalent Chromium, nor does it require testing for it.

	Raw (Lake) Water	Finished (Treated) Water	Distribution system "maximum residence time" representative samples	
			Sample #1	Sample #2
2012 - 1st Quarter	0.30 ppb	0.21 ppb	0.23 ppb	0.24 ppb
2012 - 2nd Quarter	0.31 ppb	0.24 ppb	0.26 ppb	0.30 ppb
2012 - 3rd Quarter	0.43 ppb	0.23 ppb	0.23 ppb	0.28 ppb
2012 - 4th Quarter	0.38 ppb	0.17 ppb	0.18 ppb	0.20 ppb



## DEFINITIONS

In the table above, 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:

### Unit Descriptions

**mg/L - milligrams per liter** or the number of milligrams of substance in one liter of water.

**ppm - Parts per million** or Milligrams per liter (mg/L).

**ppb - Parts per billion** or Micrograms per liter (µg/L).

**NTU - Nephelometric Turbidity Unit**, used to measure the cloudiness in drinking water.

**NA** – not applicable

### Drinking Water Definitions

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

**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.

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

**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

## 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).

## WATER CONSERVATION

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit [epa.gov/watersense](http://epa.gov/watersense) for more information.



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

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