



City of Prospect Heights

Public Works Department-Water Department
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The City of Prospect Heights Annual Drinking Water Quality Report For 2013

We are pleased to present to you this year's **Annual Drinking Water Quality Report**. The report is designed to inform you about the water quality and services we deliver to you everyday. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the effort we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of our water. The City of Prospect Heights has water operators certified by the Illinois Environmental Protection Agency (IEPA) on staff, to maintain and monitor water quality. We are members of the American Water Works Association, Illinois Rural Water Association, and North Suburban and Mid-Central Water Operators Association.

This report is intended to provide you with important information about your drinking water and the efforts made by the City of Prospect Heights to provide safe drinking water. The source of drinking water used by Prospect Heights is Lake Michigan, produced by the Village of Wilmette and travels through the water main system owned by the Village of Glenview and provided from Illinois American Water Company through a purchase agreement. In total, over 120 contaminants were tested and were all within range of EPA's quality standards. The tap water has a hardness of 150 mg/l or about 8.2 grains per gallon. This report will provide information pertaining to surface water supplies.

The public may comment on items pertaining to the water system, at a council meeting and register to speak to the City Council members. The council meetings are held the second and fourth Mondays of every month, beginning at 6:30 pm.

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Source Water

Source of the Drinking Water

The Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intakes with no protection only dilution, which is the reason for mandatory treatment for all surface water supplies in Illinois. A workgroup from the Great Lakes States was organized to develop a protocol for assessing the Great Lakes. The mission of the Great Lakes Protocol was to develop a consistent procedure allowing the flexibility necessary to properly conduct source water assessments of the Great Lakes as a drinking water source. This flexibility takes into account the variability of these sources and site-specific concerns for determination of source sensitivity and susceptibility (Illinois EPA, 1999). Sensitivity is defined as the intrinsic ability of surface water to be isolated from contaminants by the physical attributes of the hydrologic or geologic setting. With this in mind, the degree of sensitivity becomes the prevailing factor in the susceptibility determination for intakes on the Great Lakes. Intakes located close to shore, or close to a major shipping lane will be more sensitive and thus more susceptible to potential contamination. The sensitivity analysis of both Wilmette's intakes are located far enough offshore that shoreline impacts are not considered a factor on water quality. However, at certain times of the year the potential for contamination exists due to wet-weather flows from the North Shore Channel. If currents are flowing in a northerly direction, contaminants from these flows could migrate to Wilmette's intakes and compromise water quality. Correlation between Evanston's rainfall data, North Shore Channel discharge dates and Wilmette's coliform data show the potential effect of these flows on Wilmette's water quality. In addition, the proximity to a major shipping lane adds to the susceptibility should there be a spill near the intakes.

Water supply officials from Wilmette are active members of the West Shore Water Producers Association. Coordination regarding water quality situations (i.e., spills, tanker leaks, exotic species, etc) is frequently discussed during the associations 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. Since the predominant land use within Illinois' boundary of Lake Michigan watershed is urban, a majority of watershed protection activities in this document is aimed at this purpose.

Source Water Assessment summary

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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 pickup 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 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.

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 at (800) 426-4791.

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).

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. We 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>.

2013 Regulated Contaminants Detected

Disinfectants & Disinfection By-	Collection Date	Highest Level	Range of Levels	MCLG	MCL	Units	Violation	Likely Source Of
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Products		Detected	Detected					Contaminant
Chlorine	12/31/2013	1	0.8 – 1.13	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Total Haloacetic Acids (HAA5)	2013	13	5 - 25.1	N/A	60	Ppb	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethane]	2013	29	11 - 49	N/A	80	ppb	No	By-product of drinking water chlorination
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Barium	07/23/2012	0.036	0.036-0.036	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	07/23/2012	1.08	1.08 - 1.08	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge
State Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Iron This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.	07/23/2012	0.49	0.49-0.49	2	2	ppb	No	Erosion from naturally occurring deposits
Manganese This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.	07/23/2012	11	11 - 11	150	150	ppb	No	Erosion of naturally occurring deposits
Sodium There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.	07/23/2012	26	26 - 26	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; used in water softener regeneration

Nitrate (As N)	2013	0.07	0.7 - 0.7	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
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Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Combined Radium	2013	7.6	7.6 - 7.6	0	5	pCi/L	No	Erosion of natural deposits
Alpha Emitters	2013	8.41	8.41 - 8.41	0	15	pCi/L	No	Erosion of natural deposits

Lead and Copper

Definitions:

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

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

Lead MCLG	date	Lead Action Level (AL)	Lead 90th Percentile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th Percentile	# Sites Over Copper AL	Likely Source of Contamination
0	09/16/2011	15 ppb	3.6	0	1.3 ppm	1.3 ppm	0.15	0	Corrosion of household plumbing systems; Erosion of natural deposits

The Village of Wilmette 2013 Regulated Contaminants Detected

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

Lead MCLG	date	Lead Action Level (AL)	Lead 90th Percentile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th Percentile	# Sites Over Copper AL	Likely Source of Contamination
0	2011	15 ppb	No Detect	0	1.3 ppm	1.3 ppm	0.07	0	Corrosion of household plumbing systems; Erosion of natural deposits

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Chlorine	2013	0.9	0.7-1.00	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes
Total Haloacetic Acids (HAA5)	2013	15.68	ND-18	N/A	60	Ppb	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes]	2013	28.15	ND-39.9	N/A	80	ppb	No	By-product of drinking water chlorination

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Barium	2013	0.023	0.023-0.023	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2013	1	1 - 1	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge
Nitrate (As N)	2012	0.76	0.76-0.76	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
State Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Sodium There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.	2013	15	15-15	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; used in water softener regeneration

Turbidity

Limit (Treatment Technique)	Lowest Monthly % meeting limit	Violation	Source
0.3 NTU	100%	No	Soil Runoff
Limit (Treatment Technique)	Highest Single Measurement	Violation	Source
1 NTU	0.13	No	Soil Runoff

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA, unless a TOC violation is noted in the violations section.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Combined Radium	01/14/2008	1.69	1.69 -1.69	0	5	pCi/L	No	Erosion of natural deposits
Alpha Emitters	01/14/2008	0.72	0.72 - 0.72	0	15	pCi/L	No	Erosion of natural deposits

Water Quality Test Results

Maximum Contaminant Level Goal or MCLG: 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 Contaminant Level or MCL: 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 residual disinfectant level goal or MRDLG:

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.

Maximum residual disinfectant level or

MRDL:

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.

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

na: not applicable.

Avg: Regulatory compliance with some MCLs is based on running annual average of monthly samples.

ppm: milligrams per liter or parts per million -