

City of Highwood Drinking Water Quality Report

Calendar Year
2005



City of Highwood, 17 Highwood Avenue, Highwood, Illinois 60040
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Overview

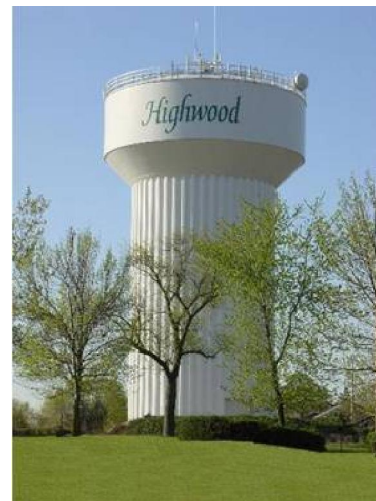
By Jeffrey T. Harding, Water Plant Superintendent

The City of Highwood is pleased to present its 2005 Drinking Water Quality Report. The Safe Drinking Water Act (SDWA) requires that all public water suppliers provide its consumers with a "Consumers' Confidence Report." This report, required by Federal Law, is designed to inform all water consumers with detailed information about the quality of the drinking water being distributed. The City is committed to provide all of its water consumers with a reliable supply of safe drinking water. We are proud to report that the water supplied by the City of Highwood Water Treatment Plant continues to meet or exceed all State of Illinois and United States Environmental Protection Agency (EPA) regulations.

Highwood Water Plant - The City of Highwood Water Treatment Plant has been in existence since 1939. The City completed a major renovation project of the facility in 2001. The plant is now capable of producing two million gallons of safe water daily to its consumers due to the technology and infrastructure upgrades.

Water Source - The City of Highwood Water Treatment Plant is supplied by surface water from Lake Michigan through a 16-inch diameter ductile iron pipe. The water intake is at a depth of 25 feet and extends 3,500 feet offshore northeast of the facility.

About Lake Michigan - As a natural resource, Lake Michigan serves a broad spectrum of purposes. The lake provides drinking water to an estimated six million residences in Northeastern Illinois. Its recreational opportunities attract fishing, boating, swimming and other water-oriented interests and also serves as an avenue for domestic and international commerce. Lake Michigan is the only "Great Lake" that is entirely contained within the United States. Further, it is the second largest "Great Lake" by volume (1,180 cubic miles). The lake is approximately 118 miles wide and 307 miles long and has more than 1600 miles of shoreline. Lastly, the lake has an average depth of 279 feet and reaches 925 feet at its deepest point. Lake Michigan has some of the best drinking water quality in the State of Illinois.





Annual Drinking Water Quality Report

HIGHWOOD

IL0970550

Annual Water Quality Report for the period of January 1 to December 31, 2005

This report is intended to provide you with important information about your drinking water and the efforts made by the HIGHWOOD water system to provide safe drinking water. The source of drinking water used by HIGHWOOD is Surface Water. This report will not be mailed to water consumers, as it will be published in a newspaper of general circulation within the City of Highwood. Further, this report is available for inspection on the City's internet website, www.cityofhighwood.com.

For more information regarding this report contact:

Name: Jeff Harding, Superintendent of Water

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Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

Source of Drinking Water
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).

Source Water Assessment

A Source Water Assessment summary is included below for your convenience.

Susceptibility is defined as the likelihood for the source water(s) of a public water system to be contaminated at concentrations that would pose a concern. The Illinois EPA considers all surface water sources of a community water supply 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, 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. Highwood's intake has a moderate sensitivity and therefore has greater protection from shoreline contaminants due to mixing and dilution. However, although there are no potential sources within Highwood's critical assessment zone, there are several within the immediate source water area. Shoreline contaminants in the vicinity of this intake such as the combination of the land use, the proximity of storm sewer outfalls and NSSD pumping stations are perceived as a threat and add to the susceptibility of this intake. However, it should be stressed that treatment employed by Highwood is protective of their consumers as noted by the facility's finished water history. The best way to ensure a safe source of drinking water for a water supply is to develop a program designed to protect the source water against potential contamination on the local level. Since the predominant land use within Illinois' boundary of Lake Michigan watershed is urban, a majority of watershed protection activities in this document are aimed at this purpose. Citizens must be aware that activities around the house may have a negative impact their source water. The main efforts of the immediate community should be an awareness of storm water drains and the direct link to the Lake within the identified Lake Michigan watershed. A proven best management practice (BMP) for this purpose has been the identification and stenciling of storm water drains within a watershed. Stenciling along with an educational component that relates the proper storage, disposal and use of potential contaminants is necessary to keep the Lake a safe reliable source of drinking water. Also, Lake Michigan, as well as all the Great Lakes, has a variety of organizations and associations that are currently working to either maintain or improve water quality.

2005 Regulated Contaminants Detected

Lead and Copper

Date Sampled: 8/1/2005

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	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	15 ppb	11 ppb	1	1.3 ppm	1.3 ppm	0.08 ppm	0	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation. Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology. Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety. mg/l: milligrams per litre or parts per million - or one ounce in 7,350 gallons of water. ug/l: micrograms per litre or parts per billion - or one ounce in 7,350,000 gallons of water. na: not applicable. Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples. Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
TTHMs [Total Trihalomethanes]	7/5/2005	29.52	Not Applicable	N/A	80	ppb	No	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	7/5/2005	16.7	Not Applicable	N/A	60	ppb	No	By-product of drinking water chlorination
Chlorine	9/30/2005	0.6302	0.59 - 0.6302	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant			
Barium	1/4/2005	0.019	Not Applicable	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits			
Fluoride	1/4/2005	0.9	Not Applicable	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge			
Nitrate-Nitrite	4/26/2004	0.41	Not Applicable	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits			
Nitrate (As N)	5/2/2005	0.48	Not Applicable	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.				1/4/2005	6	Not Applicable	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; used in water softener regeneration
Zinc				1/4/2005	8	Not Applicable	N/A	5000	ppb	No	Naturally occurring; discharge from metal factories

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.

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	0.19	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.