Annual Drinking Water Quality Report 2022

PWS ID: IL0971450

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This is your annual Water Quality Report for the period of January 1, 2022, through December 31, 2022. Each year the Village issues this report to provide you information about the quality of our drinking water, the source of our water, how it is treated and the regulated compounds it contains. These reports are issued in compliance with the Safe Drinking Water Act. For more detailed information about our water's quality, please contact the Village at 847-945-3990 or our Consultant, Gewalt Hamilton Associates, Inc at 847-478-9700.

Source 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.

The source of our water is surface water purchased from the Village of Northbrook. Northbrook draws water from Lake Michigan. It is then treated and pumped into their distribution system. We then draw water from Northbrook, into a 1 million gallon ground storage reservoir. From there it is pumped into the Riverwoods distribution system. Riverwoods also purchased water from Deerfield in 2022.

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Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or contact our water operator at 847-821-6290. To view a summary version of the completed Source Water Assessments, including:

- Importance of Source Water
- Susceptibility to Contamination Determination
- 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

Source of Water: Northbrook

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. This is the reason for mandatory treatment for all surface water supplies in Illinois. Both of Northbrook's intakes

are located far enough offshore that shoreline point sources are not considered a factor on water quality. However, at certain times of the year the potential for contamination exists due to stormwater runoff and wet weather flows from the North Shore Channel. If currents are flowing in a northerly direction, contaminants from these flows could migrate to Northbrook's intakes and compromise water quality. A correlation between Northbrook's rainfall data and coliform data combined with North Shore Channel discharge dates show the potential effect of these flows on Northbrook's water quality.

Contaminants

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 EPAs Safe Drinking Water Hotline at: (800) 426-4791

Ensuring Safe Drinking Water

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 (800) 426-4791 or at http://www.epa.gov/safewater/lead

Understanding This Report

In order to help you understand this report, here are some abbreviations and definitions that may be contained in it. The following tables contain scientific terms and measures, some of which may require explanation.

AL: Action Level	The concentration of a contaminant which if exceeded, triggers treatment or other requirements which a water system must follow.
ALG: Action Level Goal	The Level of a contaminant below which there is no known or expected health risk.
Avg: Average	Average
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
MCL: Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG's as feasible using the best available treatment technology.
MCLG: Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health.
MRDL: Maximum Residual Disinfectant Level	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.
MRDLG: Maximum Residual Disinfectant Level Goal	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.
N/A: Not Applicable	Not Applicable
MREM	Millirems per year (a measure of radiation absorbed by the body)
PPM: Parts Per Million	Milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
PPB: Parts Per Billion	Micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
pCi/L: Picocuries per Liter	A measure of radioactivity in drinking water.
TT: Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.

Lead and Copper

Contaminant	Date Sampled	MCLG	AL	90th Percentile	# of Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2021	1.3	1.3	.37	0	PPM	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2021	0	15	2.8	1	PPB	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectants and Disinfectant By-products

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/22	0.9	0.70-0.98	MRDLG = 4	MRDL = 4	PPM	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2022	19	13.64 – 26.1	No goal for total	60	PPB	N	By-product of drinking water disinfection.
Total Trihalomethanes TTHM	2022	34	22.7-51.2	No goal for total	80	PPB	N	By-product of drinking water disinfection.

Disinfectants and Disinfectant By-products (Northbrook IL0312070)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/22	1.1	0.9 - 1.3	MRDLG = 4	MRDL = 4	PPM	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2022	18	4.18 – 20.2	No goal for total	60	PPB	N	By-product of drinking water disinfection.
Total Trihalomethanes TTHM	2022	34	12.82 – 33.8	No goal for total	80	PPB	N	By-product of drinking water disinfection.

Inorganic Contaminants (Northbrook IL0312070)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2022	0.019	0.019 - 0.019	2	2	PPM	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2022	0.6	0.638 - 0.638	4	4.0	PPM	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium	2021	10	10 – 10			PPM	N	Erosion from naturally occurring deposits. Used in water softener regeneration.

Radioactive Contaminants (Northbrook IL0312070)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	1/7/20	.603	.603 - .603	0	5	pCi/L	N	Erosion of natural deposits.

Turbidity (Northbrook IL0312070)

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.05 NTU	N	Soil Runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	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 (Northbrook IL0312070)

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

PFAS Detection (Northbrook IL0312070)

In 2021, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Results from this sampling indicated PFAS were detected in our drinking water at or below the health advisory level established by the Illinois EPA. Follow up monitoring is being conducted. For more information about PFAS health advisories https://www2.illinois.gov/epa/topis/water-quality/pfas/Pages/pfas-healthadvisory.aspx

Contaminant	Date	Highest Level Detected	Units	Violation
PFOS	2/2/21	2.0	ng/L	N
PFOS	1/19/21	No Detection	ng/L	N
PFOA	1/19/21	No Detection	ng/L	N
PFOS	12/15/2020	2.4	ng/L	N
PFOA	12/15/2020	2.0	ng/L	N

Disinfectants and Disinfectant By-products (Deerfield IL0974340)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/22	1.2	1 – 1.3	MRDLG = 4	MRDL = 4	PPM	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2022	21	8 – 21.6	No goal for total	60	PPB	N	By-product of drinking water disinfection.
Total Trihalomethanes TTHM	2022	53	20.4 - 59	No goal for total	80	PPB	N	By-product of drinking water disinfection.

Disinfectants and Disinfectant By-products (Highland Park IL0970500)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/22	1.6	1.4 - 2	MRDLG = 4	MRDL = 4	PPM	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2022	18	7.52 – 19.8	No goal for total	60	PPB	N	By-product of drinking water disinfection.
Total Trihalomethanes TTHM	2022	39	16.91 – 51.7	No goal for total	80	PPB	N	By-product of drinking water disinfection.

Inorganic Contaminants (Highland Park IL0970500)

Contaminant	Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2022	0.019	0.019 - 0.019	2	2	PPM	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2022	0.7	0.708 – 0.708	4	4.0	PPM	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2022	.38	0.38 – 0.38	10	10	PPM	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	2022	13	13 - 13			PPM	N	Erosion from naturally occurring deposits. Used in water softener regeneration.

Turbidity (Highland Park IL0970500)

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.166 NTU	N	Soil Runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	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 (Highland Park IL0970500)

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