VILLAGE OF DEERFIELD

Annual Drinking Water Quality Report Village of Deerfield 2024

This information is being published in accordance with the 1996 Safe Water Drinking Act as directed by the U.S. Environmental Protection Agency.

We are once again pleased and proud to present to you the Annual Drinking Water Quality Report. This Consumer Confidence Report (CCR) is designed to inform you about the water we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. The Village is committed to ensuring the quality and delivery of your water. We hope you find this information useful.

The drinking water provided by the Village meets or exceeds all State of Illinois and United States Environmental Protection Agency (EPA) regulations and we are not operating under any variance or exemption from the established drinking water regulations or standards. Opportunities for participation in the decision making processes that affect drinking water quality are also available at the Village of Deerfield Board meetings on the first and third Mondays of every month. If you have questions about this report or water quality, please contact Nick Hamilton, Responsible Operator in Charge, at 847.317.7245, or e-mail pw@deerfield.il.us.

Source of Drinking Water

The Village of Deerfield purchases all water from the City of Highland Park. The City of Highland Park draws its raw water from a 54-inch intake pipe located a mile off shore in Lake Michigan at a depth of approximately 30 feet. In addition, there are two smaller pipes used as secondary intakes, which are 16 and 20 inches in diameter.

Susceptibility to Contamination

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those elements may be microbes, organic or inorganic chemicals, or radioactive materials. All 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. Susceptibility is defined as the likelihood for the source water of a public water system to be contaminated at concentrations that would pose a concern. The Illinois EPA (IEPA) considers all surface sources of 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. Hence, the reason for mandatory treatment for all surface water supplies in Illinois.

As mentioned above, Highland Park has three intake lines. The 54-inch intake pipe is normally used alone, with the two smaller intakes used to augment high demand or during maintenance of the 54-inch pipe. As these are closer to the shore, they have a greater susceptibility to be influenced by potential sources of contaminants. Regardless of which lines are used, the finished water leaving the Highland Park Water Plant always meets or exceeds all IEPA and EPA regulations.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1.800.426.4791. To access the Highland Park Water Assessment Summary, visit: bit.ly/3VlfkZN

Contaminants Monitoring Results

The Village of Deerfield and City of Highland Park routinely monitor for contaminants in your drinking water according to Federal and State Laws.

General

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 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 may be naturally occurring or the result of oil and gas production and mining activities.

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.

2024 Water Quality Data – January 1, 2024 to December 31, 2024

Turbidity – Tested at regular intervals at least six times each day by the City of Highland Park

Treatment Technique Requirement	Your Water	Violation	Typical Source of Contamination	Other Information
95% of samples at or below 0.3 NTU	All samples below 0.3 NTU	No	Suspended organic & inorganic particles	Turbidity is a measurement of the cloudiness of the water caused by suspended particles. Turbidity is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants.
No sample greater than 1 NTU	Highest sample = 0.070 NTU	No	Suspended organic & inorganic particles	

Disinfectants – Samples are collected every month from 20 locations throughout the Village

Analyte	Range Low	Range High	Minimum Level Allowed	MRDLG	MRDL	Violation	Typical Source of Contamination
Chlorine (ppm) as CL_2	0.52	1.64	0.50	4	4	NO	Water additive used to control microbes

Disinfectant By-Products – Samples are collected every 90 days from two locations within the Village water system

Analyte	Highest Result	Range Low	Range High	MCLG	MCL	Violation	Typical Source of Contamination
Total Haloacetic Acids [HAA5] (ppb)	19.9	15.0	23.9	n/a	60	NO	By product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	48.3	27.9	55.0	n/a	80	NO	By product of drinking water disinfection

Some sample results for regulatory compliance are based on a running annual average (RAA) of quarterly samples. This is the case for HAAs and TTHMs. The highest result listed above is the highest RAA for the four quarters and not the highest level detected. Note: There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Regulated Inorganic Contaminants (IOC) – Tested by the City of Highland Park annually from a single location in the water system

Analyte	Your Water	MCLG	MCL	Violation	Typical Source of Contamination
Barium (ppm)	0.020	2	2	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride (ppm)	25	n/a	250	NO	Naturally occurring; runoff from road salt
Fluoride (ppm)	0.64	4	4	NO	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	none detected	10	10	NO	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Sulfate (ppm)	24	n/a	250	NO	Naturally occurring; discharge from metal factories
Zinc (ppm)	none detected	n/a	5	NO	Naturally occurring; discharge from metal factories

* All tests were single samples

In addition to the above-mentioned tests, Deerfield continuously monitors and tests your water through our water control system as well as weekly physical samples. These samples are submitted to the IEPA certified Central Lake County Joint Action Water Agency for analysis. This ensures a rapid response should there ever be a problem.

Total Organic Carbon (TOC) is a measurement of the amount of organic carbon in the water. Organic carbon comes from decaying natural organic matter as well as synthetic sources. TOC removal was measured each month and the City of Highland Park met all TOC removal requirements.

Non-Regulated Inorganic Contaminants

The contaminants below are not currently regulated in drinking water by the USEPA or IEPA. Many of these are analyzed in order to monitor the effectiveness of our corrosion control program. An optimized corrosion control program reduces the amount of lead that may leach from plumbing systems into the drinking water. *All tests are single samples.

Analyte	Your Water	MCLG	MCL	Sample Date	Typical Source of Contamination Contamination
Alkalinity, Total (ppm)	100	n/a	n/a	2024	Erosion from naturally occurring deposits.
Calcium (ppm)	35	n/a	n/a	2024	Erosion from naturally occurring deposits.
Chromium Hexavalent (ppm)	0.18	n/a	n/a	2024	Naturally occurring; discharge of dye and paint pigments, wood preservatives, and chrome plating
Copper	0.0048	n/a	n/a	2024	Erosion from naturally occurring deposits; leaching from wood preservatives
Hardness, Total (ppm as CaCo3)	140	n/a	n/a	2024	Erosion from naturally occurring deposits.
Magnesium (ppm)	12	n/a	n/a	2024	Erosion from naturally occurring deposits.
PFOA (ppt)	none detected	n/a	n/a	2024	Man-made chemicals used in a variety of industrial and consumer products such as carpet and clothing tratments and firefighting foams
PFOS (ppt)	none detected	n/a	n/a	2024	Man-made chemicals used in a variety of industrial and consumer products such as carpet and clothing tratments and firefighting foams
Sodium (ppm)	14	n/a	n/a	2024	Erosion of natural deposits; used in water softener regeneration
Total Dissolved Solids	180	n/a	n/a	2024	Comprised of inorganic salts, dissolved organic matter, chemicals used in the water treatment process, and the piping or hardware used to distribute the water

Note: PFOA and PFOS are part of a larger group of chemicals called per- and polyfluoroalkyl substances or PFAS. Currently there is no State or Federal MCL for any of the more than 5,000 known PFAS compounds. The USEPA has proposed a MCL of 4 ppt for PFOA and 4 ppt for PFOS.

Note: There is no State or Federal 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.

Lead and Copper

The IEPA lead and copper testing program began in 1992. Due to consistent low concentration levels of lead and copper, the Village has been placed on a reduced testing cycle by the Illinois Environmental Protection Agency (IEPA) and is only required to test every three years. Currently, a round of testing consists of 30 samples. Our most recent round of lead and copper testing took place in 2024 with all samples reporting below the action levels for lead and copper with no violations found. Copies of the lead sampling results are available at the Village and Public Works. Our next round of testing will occur in 2025 with the EPA's new Fifth Liter testing guidelines. This will now require 60 samples every six months.

The Village of Deerfield 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 Village of Deerfield 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 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 on the Village's website.

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 Lead & Copper Contamination
0	15ppb	0 ppb	0	1.3ppm	1.3 ppm	0.16 ppm	0	Corrosion of household plumbing systems; Erosion of natural deposits

Definitions

In the previous tables you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we have provided the following definitions:

ppm - parts per million or milligrams per liter (mg/l) or one ounce per 7,350 gallons of water.

ppb - parts per billion or micrograms per liter (mcg/l) or one ounce per 7,350,000 gallons of water.

ppt - parts per trillion or nanograms per liter (nanograms/l) or one ounce per 7,350,000,000 gallons of water.

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

% < 0.3 NTU - percent samples less than 0.3 NTU.

Mrem/yr - millirems per year, used to measure radiation absorbed by the body.

pCi/l - picocuries per liter, used to measure radioactivity.

 # pos/mo - number of positives per month.

AL - Action Level or the concentration of a contaminant, which if exceeded, triggers treatment or other required actions that the water supply system must follow.

TT - Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water. For some contaminants, a TT is established rather than an MCL.

MCL - Maximum Contaminant Level or the highest level of a contaminant 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.

n/a - not applicable.

MRDL - Maximum Residual Disinfectant Level: The highest level of a drinking water disinfectant allowed in drinking water.

MRDLG - Maximum Residual Disinfection Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health.

About The Data

Organic Carbon - 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.

Turbidity (NTU) - Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of the filtration and disinfectants.

Sodium - There is not a state or federal MCL for sodium. Monitoring is performed 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 the level of sodium in the water.

Lead & Copper - The Village of Deerfield has been in compliance with regulations for lead and copper control. (See Lead and Copper Explanation on page 7.)

Unregulated Contaminants - A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

In addition to the above mentioned tests, Deerfield continuously monitors and tests your water through our water control system as well as weekly physical samples. These samples are submitted to the IEPA certified Central Lake County Joint Action Water Agency for analysis. This ensures a rapid response should there ever be a problem.

In 2024, the Village completed the required testing of the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5). All samples taken during the year were Non-Detectable (below what can be measured). As part of the testing requirements, the Village received a violation for failure to notify customers of the non-detectable results. If you are interested in examining the results please contact Public Works.

As part of the 2025 water system testing, the Village is providing public notice of violation for not collecting TTHM and HAA5 samples within the newly set timeline. Our collection due date was January 19, 2025. However due to the 19th being a Sunday and the 20th being a federal holiday, samples were collected and sent to the lab on the next business day on January 21. Samples were tested and within parameters set by the EPA.

Special Information Available

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised individuals, 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 at 1.800.426.4791.

Top Ways to Conserve Water

Conserving water is easy if you follow these helpful tips:

- Test for a leaking toilet by adding food coloring to the tank. If any color appears in the bowl after 30 minutes, your toilet is leaking. Leaking toilets can waste thousands of gallons of water. Flush as soon as the test is done, since food coloring may stain the tank.
- Use water-conserving plumbing fixtures and water-flow restrictors on sinks and showers. Bathroom facilities typically constitute 75% of the water used in homes.
- Run your dishwasher and washing machine when you have a full load.
- Store drinking water in the refrigerator instead of letting the tap run every time you want a glass of cool water.
- Never put water down the drain when there may be another use for it such as watering a plant or garden, or doing housework.
- Water your lawn and/or garden during the coolest part of the day to minimize evaporation. Apply water slowly, exactly where it is needed. Position sprinklers so that water lands on the lawn and shrubs, not on paved areas. Keep in mind that sprinkling restrictions are in place from May 15 - September 15.