VILLAGE OF DEERFIELD

Annual Drinking Water Quality Report
Village of Deerfield, Illinois 2018

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

Introduction To Water Quality Report

We are once again pleased and proud to present to you the Annual 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. If you have any questions about this report or water quality, contact Derek Gehrke, Responsible Operator In Charge, at 847.317.7245 or *publicworks@deerfield.il.us* or visit *www.deerfield.il.us.*

We are also pleased to report that the drinking water provided by the Village meets or exceeds all State of Illinois and United States Environmental Protection Agency (EPA) regulations and that we are not operating under any variance or exemption from the established drinking water regulations or standards. Opportunities for participation in the decision-making process that affects drinking water quality are also available at the Deerfield Village Board meetings on the first and third Mondays of every month.

About the Data

On the following pages you will find information regarding:

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 no State or Federal maximum contaminant level (MCL) for sodium. Monitoring is performed to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. Those on a sodium-restricted diet should consult a physician about the level of sodium in the water.

Lead & Copper – The Village continues to be in compliance with regulations for lead and copper control. (*See Lead and Copper Explanation).*

Unregulated Contaminants – An MCL for this has not been established by either State or Federal regulations, nor has mandatory health effects language. The purpose for monitoring this is to assist the U.S. EPA 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 with weekly physical samples. These samples are submitted to the Central Lake County Joint Action Water Agency, an EPA certified laboratory, for analysis. This ensures a rapid response should there ever be a problem.

General Information

The sources of drinking water (both tap 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 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.

To ensure that tap water is safe to drink, EPA 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 to ensure public health.

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.

2018 Water Quality Data - January 1 to December 31, 2018

Containment (units)	EPA MCLG	EPA MCL	High-Level Found	Range of Detection	Violation	Date of Sample	Typical Source of Contamination
Microbial Contaminants							
Turbidity (%<0.3 NTU)*	n/a	0.3 NTU	100%	n/a	NO	2018	Soil runoff
Turbidity (1.0 NTU)*	n/a	1 NTU	0.076 NTU	n/a	NO	2018	Soil runoff
Inorganic Contaminants							
Barium (ppm)*	2	2	.019	.019-.019	NO	2018	Discharge from drilling wastes, metal refineries, erosion of natural deposits.
Fluoride (ppm)*	4	4	.762	.762-.762	NO	2018	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer/aluminum factories.
Sodium (ppm)*	n/a	n/a	11	11-11	NO	2018	Erosion of natural deposits; Used as water softener.
Disinfection / Disinfection By-products							
Chlorine (ppm)	4	4	1	.88-1.20	NO	2018	Water additive used to control microbes.
Total Haloacetic Acids [HAAS] (ppb)	n/a	60	20	11.7-23.9	NO	2018	By-product of drinking water chlorination.
TTHM [Total Trihalomethanes] (ppb)	n/a	80	40	25.8-41.1	NO	2018	By-product of drinking water chlorination.

Additional Unregulated Contaminants

In an effort to ensure the safest water possible, the State has required us to monitor some contaminants not required by Federal regulations. Of those contaminants, only the ones listed below were found in your water.

Sulfate (ppm)*	n/a	100	23.0	23.0 - 23.0	NO	2018	Erosion of natural deposits.
Chloride	n/a	n/a	16	16-16	NO	2018	
Calcium	n/a	n/a	32	32-32	NO	2018	
Magnesium	n/a	n/a	11	11-11	NO	2018	
Hardness Total (ppm)(as CaCo3)	n/a	n/a	130	130-130	NO	2018	Erosion of natural minerals.
Alkalinity	n/a	n/a	110	110-110	NO	2018	Erosion of natural deposits.
Total Dissolved Solids	n/a	n/a	150	150-150	NO	2018	Inorganic salts; dissolved organic matter; sewage; urban and agricultural run-off; industrial wastewater; water treatment process chemicals; hardware used to distribute water.

Lead and Copper - January 1 to December 31, 2018

Lead MCLG	Lead Action Level (AL)	Lead 90th %-tile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th %-tile	# Sites Over Copper AL	Likely Source of Contamination
0	15 ppb	0 ppb	0	1.3 ppm	1.3 ppm	0.127 ppm	0	Corrosion; erosion

*Reported by the City of Highland Park

Lead and Copper Testing

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 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 2018 and Deerfield remains in compliance so as to continue with the IEPA-mandated reduced lead and copper testing cycle. Our next round of testing will occur in 2021.

The Village 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 is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, minimize potential for lead exposure by flushing the tap for 30 seconds to 2 minutes before using water for drinking or cooking. Those concerned about lead in water, may wish to have their 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 at 800.426.4791 or at ***www.epa.gov/safewater/lead.***

Definitions

In the previous tables you will find many terms and abbreviations with which you may not be familiar. 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 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 that, if exceeded, triggers treatment or other requirements which a water system must follow.

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 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.

Lake Michigan: Our Water Source

The Village of Deerfield purchases all of its water from the City of Highland Park. 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.

Lake Michigan, like the other Great Lakes, was formed as glaciers retreated north during the last ice age. Lake Michigan is the largest lake completely within the United States at 118 miles wide and 307 miles long. Lake Michigan averages 279 feet in depth and reaches 925 feet at its deepest point. The lake's drainage basin, which is approximately twice as large as its 22,300 square miles of surface water, includes portions of Illinois, Indiana, Michigan and Wisconsin. The Great Lakes are among the world's most valuable sources of fresh surface water. Almost half of all the liquid fresh water in the world is found in the Great Lakes. Most of the world's surface fresh water is locked away in the ice caps around the North and South Poles, which makes us appreciate the Great Lakes that much more.

All sources of drinking water, including Lake Michigan, are subject to potential contamination by items that are naturally occurring or 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.

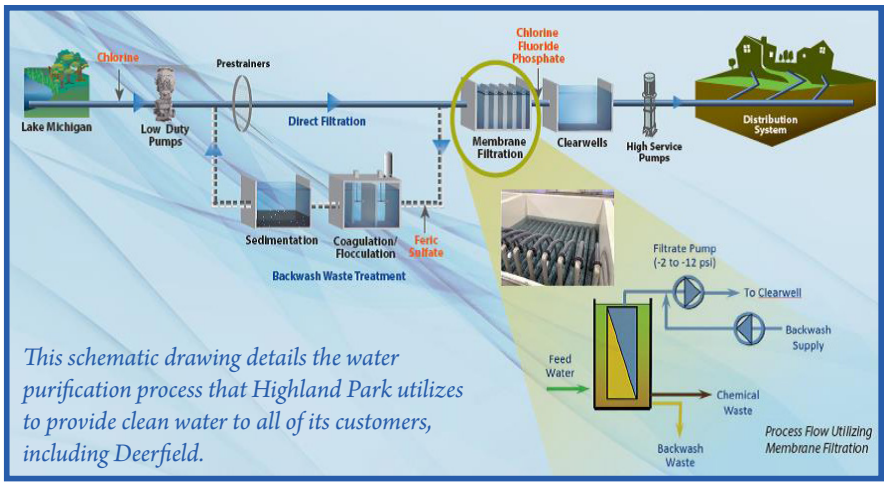
The presence of contaminants does not necessarily indicate that the water poses a health risk. Susceptibility is defined as the likelihood for the source water of a public water system to be contaminated at concentrations that would pose a concern.

Our Water Source Continued

The Illinois EPA (IEPA) considers all surface sources of the 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 previously mentioned, 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 contamination. However, 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 800.426. 4791. To access the Highland Park Water Assessment Summary, visit: *www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl?rm=show_facility_detail&facility_number=0970500&cws=y.*



This schematic drawing details the water purification process that Highland Park utilizes to provide clean water to all of its customers, including Deerfield.

Top 10 Ways to Conserve Water

Conserving water is easy if you follow these helpful tips:

1. 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.

2. Use water-conserving plumbing fixtures and water-flow restrictors on sinks and showers. Bathroom facilities typically constitute 75% of the water used in homes.

3. Run your dishwasher and washing machine when you have a full load.

4. Take a short shower instead of a bath. A bath uses 30 to 50 gallons of water. Showers use about a gallon of water per minute.

5. Store drinking water in the refrigerator instead of letting the tap run every time you want a glass of cool water.

6. Never put water down the drain when there may be another use for it such as watering a plant or garden, or doing housework.

7. Be conscientious of the amount of water you use when running your garbage disposal. Have your food scraps cut into small pieces so they can be disposed of quickly, minimizing the amount of time you need to run the faucet.

8. For landscaping and gardens, choose plants that are native to the area in which you live or plants that are drought resistant. Native plants are accustomed to the natural amount of precipitation that occurs in the area where they are found and normally do not require any additional watering. Group plants together based on similar watering needs.

9. 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.

10. Use a bucket of water and a spray head on the hose to wash your car. A running hose can waste hundreds of gallons of water in the time it takes to wash a car.

SPECIAL INFORMATION

Some people may be more vulnerable to contaminants in drinking water. 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 *800.426.4791.*