

2021

Village of Hoffman Estates Annual Water Quality Report



PWS ID#: 0311290

In year 2021, as in years past, your tap water met all U.S. Environmental Protection Agency (USEPA) and Illinois EPA (IEPA) drinking water health standards. The Village employs IEPA-certified operators who monitor the Village's water supply. We are able to report that Hoffman Estates had no violation of a contaminant level or of any other water quality standards. This report covers January 2021 through December 2021, and summarizes the quality of water that was provided last year.



Hoffman Estates tap water meets all U.S. Environmental Protection Agency and Illinois EPA drinking water health standards.

We want our valued customers to be informed about their water quality. If you have any questions about this report or your water system, contact the Village of Hoffman Estates, Haileng Xiao, Superintendent of Water and Sewer, at 847-490-6800, 2305 Pembroke Ave., Hoffman Estates, IL 60169. The Village Board holds public meetings on the first and third Monday of every month at 7 p.m. at the Village Hall, 1900 Hassell Road, Hoffman Estates, IL 60169.

Source of water

Since 1985, Lake Michigan's surface water supply, purchased from the city of Chicago, has been the sole source of water used to provide drinking water for Hoffman Estates residents. The city of Chicago utilizes Lake Michigan as its source water via two water treatment plants: the Jardine Water Purification Plant serves the northern areas of the city and suburbs, while the Sawyer Water Purification Plant serves the southern areas of the city and suburbs. Lake Michigan is the only Great Lake that is entirely contained within the United States. It borders Illinois, Indiana, Michigan, and Wisconsin and is the second-largest Great Lake by volume with 1,180 cubic miles of water and is the third-largest by area.

The treated water is received at two large reservoirs owned by the Northwest Suburban Municipal Joint Action Water Agency (NSMJAWA) and through NSMJAWA's main pumping station. Once the water reaches the Village, no additional treatment is required, and the Village's water distribution system sends water directly to homes and businesses through Village-owned water mains. Altogether, Hoffman Estates regularly maintains 11.8 million gallons of storage capacity, including

Continued on page 2.

Did you know? ???



Americans use nearly **160 gallons of water per person per day**, on average.



Peak water use is from **7 to 8 a.m.**, with a minor peak from **6 to 8 p.m.**



One-third of water is used indoors for drinking, washing and flushing toilets.



Two-thirds of water is used outdoors for watering lawns, filling pools and washing cars.



Water-efficient toilets **cut indoor water use in half.**



The United States uses **58,400 gallons of water per person per year**. Canada uses 32,300 gallons per person per year, while China uses 110,000 gallons per person per year.

Safe drinking water facts

- Bottled water does not have to meet the same strict standards that the USEPA sets for tap water. Instead, the FDA treats bottled water as a food product. No other federal agency regulates bottled water produced and sold within the same state.
- The USEPA has issued drinking water standards (known as MCLs) for more than 80 contaminants. The standards limit the amount of each substance allowed to be present in drinking water. In developing drinking water standards, the USEPA assumes that the average adult drinks two liters of water each day throughout a 70-year life span.



Lake Michigan surface water has been the water source for Hoffman Estates since 1985.

seven elevated tanks and three ground storage reservoirs. For emergency backup purposes, the Village also maintains six groundwater wells, which would only be used if the Lake Michigan water supply were interrupted. These wells are exercised and sampled on a monthly basis.

Source water susceptibility to contamination

The IEPA 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. This is the reason for mandatory treatment for all surface water supplies in Illinois.

Chicago's offshore intakes are located at a distance that shoreline impacts are not usually considered a factor in water quality. At certain times of the year, however, the potential for contamination exists due to wet-weather flows and river reversals. In addition, the placement of the crib structures may serve to attract waterfowl, gulls and terns that frequent the Great Lakes area, thereby concentrating fecal deposits at the intake and thus compromising the source water quality. Conversely, the shore intakes are highly susceptible to storm water runoff, marinas and shoreline point sources due to the influx of groundwater to the lake.

There are a variety of organizations and associations around Lake Michigan that are currently working to either maintain or improve water quality. Citizens should be aware that everyday activities in an urban setting might have a negative impact on their source water. Efforts should be made to improve awareness of storm water drains and their direct link to the lake within the identified local source water area.

The source water assessment for our supply purchased from the city of Chicago has been completed by the IEPA. If you would like a copy of this information, stop by the Susan H. Kenley-Rupnow Public Works Center, or call 847-490-6800. To view a summary version of the completed source water assessments, including importance of source water, susceptibility to contamination determination, and documentation and recommendation of source water protection efforts, visit the IEPA website at dataservices.epa.illinois.gov/swap/factsheet.aspx

Substances expected in drinking water

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 USEPA's Safe Drinking Water Hotline at 800-426-4791.

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, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. The USEPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at 800-426-4791.

Continued on page 3.

Water conservation tips

Water conservation not only saves the supply of our water source, it also cuts the cost of water treatment. It also cuts energy costs at the treatment facility associated with pumping and chemical costs for processing of the water. There are a number of conservation measures you can do to conserve on water usage.



Here are a few ways to conserve water inside your home:

- Fix leaking faucets, pipes, toilets, etc.
- Install water-saving devices in faucets, toilets and appliances. Low-flow fixtures are now the only kind produced since 1994. Simply replacing old fixtures with new ones will reduce water consumption by nearly one-half.
- Wash only full loads of laundry.
- Don't use the toilet for trash disposal.
- Take shorter showers. Do not let the water run while shaving, washing, brushing teeth or cleaning fruits and vegetables.
- Soak dishes before washing. Run the dishwasher only when full.

You can conserve water outdoors as well:

- Water the lawn and garden as little as possible. If you must water, do so in the early morning or evening.
- Use mulch around plants and shrubs, or choose plants that don't need much water.
- Repair leaks in faucets and hoses. Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.
- Sweep clippings and leaves from walks and driveways rather than using the hose.
- Obey any and all water bans or regulations.

To learn more about how you can conserve water, visit the WaterSense website at epa.gov/watersense.

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 materials and can pick up substances resulting from the presence of animals or 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 may 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 byproducts of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff, and septic systems
- Radioactive contaminants, which may be naturally-occurring or be the result of oil and gas production and mining activities

In order to ensure that tap water is safe to drink, the USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Year 2021 Regulated Contaminants Detected: Hoffman Estates

The Village of Hoffman Estates takes 60 bacteriological samples every month, total Trihalomethanes (TTHMs) samples four times a year, lead/copper samples, and Stage 2 Disinfectants and Disinfection By-products Rule (DBPR) compliance monitoring in accordance with IEPA standards. Hoffman Estates complied with all USEPA monitoring, reporting and treatment requirements in 2021. **NO drinking water quality violations were recorded for the Village of Hoffman Estates during 2021.** Had we failed to comply, a public notice would have been issued to all customers detailing the nature of the violation and the potential consequences of the violation. Only these regulated and unregulated contaminants were detected:

Contaminant	Unit	MCLG Health Goal	MCL USEPA's Limits	Level Detected	Range Detected	Violation (Yes/No)	Year Sampled	Potential Source of Contamination
Microbial Contaminants								
Total Coliform Bacteria	% pos/mo	0%	5%	0	NA	NO	2021	Naturally present in the environment.
Disinfectants/Disinfection Byproduct								
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.0	0.9 - 1.1	NO	2021	Water additive used to control microbes.
Total Haloacetic Acids (HAA5)	ppb	NA	60	24	12 - 26.0	NO	2021	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs)	ppb	NA	80	49	16.3 - 66.3	NO	2021	By-product of drinking water disinfection.
Lead and Copper								
² Lead	ppb	0	15 = AL	1.9 (90th percentile)	0 sites above AL	NO	2019	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	ppm	1.3	1.3 = AL	<0.05 (90th percentile)	0 sites above AL	NO	2019	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Inorganic/Radioactive/Synthetic Organic Contaminants Detected in Standby Wells (no activation)								
Barium	ppm	2	2	1.4	0.019 - 1.4	NO	2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
⁵ Fluoride	ppm	4	4	1.23	0 - 1.23	NO	2021	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
⁷ Iron	ppm	NA	1.0	2.7	0.12 - 2.7	NO	2021	This contaminant is not currently regulated by the USEPA; however, the state regulates. Erosion of natural deposits.
Manganese	ppb	150	150	48	8.8 - 48	NO	2021	This contaminant is not currently regulated by the USEPA; however, the state regulates. Erosion of natural deposits.
Selenium	ppb	50	50	13	0.0 - 13	NO	2021	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium	ppm	NA	NA	100	26 - 100	NO	2021	Erosion of natural deposits; used in water softener regeneration.
Zinc	ppm	5	5	0.095	0 - 0.095	NO	2021	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal factories.

Year 2021 Regulated Contaminants Detected: Hoffman Estates (Continued)

Contaminant	Unit	MCLG Health Goal	MCL USEPA's Limits	Level Detected	Range Detected	Violation (Yes/No)	1 ¹ Year Sampled	Potential Source of Contamination
Inorganic/Radioactive/Synthetic Organic Contaminants Detected in Standby Wells (no activation)								
Combined Radium 226/228	pCi/L	0.0	5	7.26	0.683 – 7.26	NO	2019	Erosion of natural deposits.
Gross Alpha, excluding Radon and Uranium	pCi/L	0.0	15	13.4	0 – 13.4	NO	2019	Erosion of natural deposits.

Year 2021 Contaminants Detected: City of Chicago

Contaminant	Unit	MCLG Health Goal	MCL USEPA's Limits	Highest Level Detected	Range of Detections	Violation (Yes/No)	1 ¹ Year Sampled	Potential Source of Contamination
Microbial Contaminants								
⁴ Turbidity	% ≤ 0.3 NTU	NA	(95% ≤ 0.3 NTU) TT	Lowest Monthly 100%	100% - 100%	NO	2021	Soil runoff.
⁴ Turbidity	NTU	NA	TT = 1 NTU (max)	0.20	NA	NO	2021	Soil runoff.
Inorganic Contaminants								
Barium	ppm	2	2	0.0203	0.0200 - 0.0203	NO	2021	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate (as Nitrogen)	ppm	10	10	0.28	0.28 - 0.28	NO	2021	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Total Nitrate and Nitrite (as Nitrogen)	ppm	10	10	0.28	0.28 - 0.28	NO	2021	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
State Regulated Contaminants								
⁵ Fluoride	ppm	4	4	0.77	0.65 – 0.77	NO	2021	Water additive that promotes strong teeth.
³Unregulated Contaminants								
Sulfate	ppm	NA	NA	27.4	26.9 – 27.4	NO	2021	Erosion of natural deposits.
⁶ Sodium	ppm	NA	NA	9.99	9.79 – 9.99	NO	2021	Erosion of natural deposits. Used as water softener.
Total Organic Carbon (TOC)								
The percentage of the TOC removal was measured each month, and the system met all TOC removal requirements set by IEPA.								
Radioactive Contaminants								
Combined Radium 226/228	pCi/L	0.0	5	0.95	0.83 - 0.95	NO	2020	Decay of natural and man-made deposits.
Gross Alpha, excluding radon and uranium	pCi/L	0.0	15	3.1	2.8 – 3.1	NO	2020	Decay of natural and man-made deposits.

Footnotes

¹Year Sampled: The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

³Lead: 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 Hoffman Estates 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 the potential for lead exposure by flushing your tap for 30 seconds to two 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 by calling the USEPA's Safe Drinking Water Hotline at 800-426-4791 or by visiting epa.gov/safewater/lead.

³Unregulated 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 the USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Footnotes (Continued)

⁴ Turbidity:	Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration systems and disinfectants.
⁵ Fluoride:	Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health (IDPH) recommends an optimal fluoride level of 0.7 mg/L with a range of 0.6 mg/L to 0.8 mg/L.
⁶ 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.
⁷ Iron:	There is no USEPA MCL for iron. The IEPA set an MCL of 1.0 ppm for iron. As the level was detected in raw well water and not in finished water, it is not a violation.

Table definitions

AL (Action Level):	The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.
ALG (Action Level Goal):	The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. If exceeded, triggers treatment or other requirements, which a water system must follow.
Avg:	Regulatory compliance with some MCLs is based on running annual average of monthly samples.
Fecal Coliform or E. Coli MCL:	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. Coli positive.
HAA5:	Dibromoacetic Acid, Dichloroacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid, Trichloroacetic Acid;
HAA6Br:	Bromochloroacetic Acid, Bromodichloroacetic Acid, Dibromoacetic Acid, Chlorodibromoacetic Acid, Monobromoacetic Acid and Tribromoacetic Acid.
HAA9:	Bromochloroacetic Acid, Bromodichloroacetic Acid, Chlorodibromoacetic Acid, Dibromoacetic Acid, Dichloroacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid, Tribromoacetic Acid and Trichloroacetic Acid.
Level Detected:	This column represents an average of sample result data collected during the consumer confidence report (CCR) calendar year. For some samples, it may represent the highest level.
MCL (Maximum Contaminant Level):	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.
MCLG (Maximum Contaminant Level Goal):	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.
MRDL (Maximum Residual Disinfectant Level):	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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.
MREM (Millirems Per Year):	A measure of radiation absorbed by the body.
NA:	Not applicable.
ND:	Not detectable at testing limits.
NTU (Nephelometric Turbidity Units):	A measure of clarity (water cloudiness).
pCi/L (picocuries per liter):	A measure of radioactivity.
ppb (parts per billion):	Micrograms per liter (µg/L) or one ounce in 7,350,000 gallons of water.
ppm (parts per million):	Milligrams per liter (mg/L) or one ounce in 7,350 gallons of water.
Range of Detections:	This column represents a range of individual sample results, from lowest to highest, that were collected during the CCR calendar year.
TT (Treatment Technique):	A required process intended to reduce the level of a contaminant in drinking water.
90th Percentile:	90 percent of samples are equal to or less than the number in the chart.
% pos/mo:	Percent of positive samples per month.
%≤0.3NTU	Percent of samples less than or equal to 0.3 NTU

City of Chicago Department of Water Management (CDWM) source water assessment summary

The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies. The SWAP inventories potential sources of contamination and determined the susceptibility of the source water to contamination. The Illinois EPA has completed the Source Water Assessment Program for our supply.

2021 voluntary monitoring

The City of Chicago has continued monitoring for Cryptosporidium, Giardia and E. Coli in its source water as part of its water quality program. No Cryptosporidium or Giardia was detected in these samples collected in 2021. Treatment processes have been optimized to provide effective barriers for removal of Cryptosporidium oocysts and Giardia cysts in the source water, effectively removing these organisms in the treatment process.

Continued on page 6.

By maintaining low turbidity through the removal of particles from the water, the possibility of Cryptosporidium and Giardia organisms getting in the drinking water system is greatly reduced.

In 2021, the CDWM has also continued monitoring for Hexavalent Chromium, also known as Chromium-6. USEPA has not yet established a standard for Chromium-6, a contaminant of concern which has both natural and industrial sources. Please address any questions or concerns to CDWM's Water Quality Division at 312-744-8190. Data reports on the monitoring program for Chromium-6 are posted on the City's website which can be accessed at the following address below:

cityofchicago.org/city/en/depts/water/supp_info/water_quality_resultsandreports/city_of_chicago_emergincontaminantstudy.html

For more information, please contact :

Andrea R.H. Cheng, Ph. D., P.E. Commissioner at 312-744-8190

**Chicago Department of Water Management
1000 East Ohio Street
Chicago, IL 60611
Attn: Andrea R.H. Cheng, Ph. D., P.E.**

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in public places or distributing copies by hand or email.

In 2021, the Village's water supply from the City of Chicago through NSMJAWA's main pumping station was stable with no service interruption that required activation of emergency wells. Although the level of contaminants detected in well water samples may have the following health effects, this does not represent the quality of water you actually received.

- **Alpha emitters:** Certain minerals are radioactive, and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha

emitters in excess of the MCL over many years may have an increased risk of getting cancer.

- **Arsenic:** Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- **Barium:** Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
- **Combined radium:** Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
- **Chromium:** Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
- **Iron:** Excessive iron in water may cause staining of laundry and plumbing fixtures, and may accumulate as deposits in the distribution system.
- **Manganese:** Excessive manganese in the water may cause staining of laundry and plumbing fixtures. It may also produce an unpleasant taste in beverages, including coffee and tea.
- **Nitrate/Nitrite:** Infants below the age of six months who drink water containing Nitrate/Nitrite in excess of the MCL could become seriously ill, and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
- **Selenium:** Exposure above the MCL may cause hair or fingernail loss; numbness in fingers or toes; circulatory problems.
- **Uranium:** Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
- **Zinc:** Some people who drink water containing excessive zinc may experience toxic effects to their blood and cardiovascular systems. Damage may also occur to the skin, respiratory system, developmental system and reproductive system, and it may weaken the immune system.

For more information about this report, please contact the Public Works Department at 847-490-6800 or visit the Water Division website at hoffmanestates.org/waterquality.

