

**Village of Glenview**  
**IL0311020**  
**Annual Water Quality Report**  
*January 1 - December 31, 2015*

**Introduction**

*For the period of January 1 thru December 31, 2015, the Village of Glenview Water Supply PWSID IL0311020 has met or exceeded all United States Environmental Protection Agency (USEPA) and Illinois state drinking water standards. This Consumer Confidence Water Quality Report is required by the USEPA to be published annually. The report summarizes the quality of the water that was provided this past year including details about where your water comes from, what it contains, how it compares to current standards and who to contact if you have questions. Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.*

**Water Source and Delivery System**

The Village of Glenview purchases all of its water from the Village of Wilmette. It is treated at the Wilmette Water Plant on the Lake Michigan lakefront and pumped into a water distribution system. A 4 million-gallon standpipe and a 3 million-gallon underground reservoir-pumping station provide additional storage of treated water on the west side of Wilmette, and are used to maintain water pressure in their distribution system as well as supplying a steady flow of water to the Village of Glenview.

The water plant uses a mixture of chemicals, settling basins, and filters to remove all contaminants to below-regulated levels. Free chlorine residuals are maintained throughout the plant and distribution system to prevent the growth of bacteria. Operators are on duty 24 hours a day year-round to monitor the water system. In addition, the water plant has an Illinois Department of Public Health (IDPH) certified laboratory for conducting bacteriological testing.

At times, the quality of the raw lake water that enters the water plant is affected by the opening of the locks operated by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), or from runoff from the use of fertilizers and herbicides on are lawns and golf courses.

The MWRDGC owns and controls a set of locks located in Wilmette Harbor that are occasionally opened during heavy rainfall events to release sewer overflow into the lake. These contaminants, however, do not affect the quality or the safety of the finished water that is delivered to our consumers.

The Village of Glenview operates five major pumping stations and pumps water into two separate pressure zones. The Glenview water systems have a total water storage capacity of over 16.3 million gallons and water is pumped to customers through a network of pipes which total over 230 miles long.

**Source Water Assessment**

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, 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. The sensitivity analysis of both Wilmette's intakes show that they are located far enough offshore that shoreline impacts are not considered a factor on water quality. However, at certain times of the year, the potential for contamination exists due to wet-weather flows from

the North Shore Channel. If currents are flowing in a northerly direction, contaminants from these flows could migrate to Wilmette's intakes and compromise water quality. Correlation between Evanston's rainfall data, North Shore Channel discharge dates, and Wilmette's coliform data show the potential effect of these flows on Wilmette's water quality. In addition, the proximity to a major shipping lane adds to the susceptibility should there be a spill near the intakes. Water supply officials from Wilmette are active members of the West Shore Water Producers Association. Coordination regarding water quality situations (i.e., spills, tanker leaks, exotic species) is frequently discussed during the association's quarterly meetings. Lake Michigan, as well as all the Great Lakes, has many different organizations and associations that are currently working to either maintain or improve water quality. Since the predominant land use within Illinois' boundary of Lake Michigan watershed is urban, a majority of watershed protection activities in this document is aimed at this purpose.

### **Sources of Drinking Water/ Water Contaminants**

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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. The sources of drinking water (both tap water and bottled water) include rivers, streams, lakes, 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 human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, sewage treatment plants, 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.
- Pesticide 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 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.

Drinking water, including bottled water, may be reasonably 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 (1-800-426-4791).

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, 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/Center for Disease Control 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 (1-800-426-4791).

In addition to the informational section of the Water Quality Report, several tables are included, which provide detailed information about the contaminants that were detected in the system's water and some contaminants that were tested for but not detected.

## Understanding the Water Quality Data

### Definitions and Abbreviations:

**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. MCLG's allow for a margin of safety.

**MCL:** Maximum Contaminant Level, or 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.

**MRDLG:** Maximum Residual Disinfectant Goal, or 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.

**MRDL:** Maximum Residual Disinfectant Level, or the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**ALG:** Action Level Goal, or 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.

**AL:** Action Level, or the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**ND:** not detectable at testing limits

**NA:** not applicable

**ppm or mg/L:** parts per million or milligrams per liter

**ppb or ug/L:** parts per billion or micrograms per liter

**PWSID:** Public water supply identification number.

**pCi/L:** Picocuries per liter, used to measure radioactivity

**NTU:** Nephelometric Turbidity Units

**TT:** Treatment Technique

**Avg:** Regulatory compliance with some MCLs are based on running annual average of monthly samples

In most cases, the "Level Detected" column represents an average of sample result data, collected during the calendar year. If a date appears in the "Date of Sample" column, the Illinois EPA requires monitoring for this contaminant less than once a year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the calendar year.



# The Village of Glenview

## 2015 Water Quality Data

### Regulated Contaminants IL0311020

Disinfectants and Disinfection By-Products	MCLG	MCL	Highest Level Detected	Range Detected	Violation	Date of Sample
Chlorine (ppm)	MRDLG=4	MRDL=4	1.0	0.8 – 1	none	12/31/2015
Haloacetic Acids (HAA5) * (ppb)	No goal for the total	60	18	4.45 – 22.7	none	2015
Total Trihalomethanes (TTHM)* (ppb)	No goal for the total	80	46	16.02 – 51.5	none	2015

\* Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

### Microbiological Contaminants IL0311020

Contaminant	Total Coliform MCL	Highest Number of positive	Fecal Coliform or E. Coli MCL	Total # of positive E.coli or fecal Coliform samples	Ideal Goal MCLG	Last Monitoring Period	Violation?	Major Sources in Drinking Water
Coliform bacteria	5% positive monthly sample	5		0	0	2015	none	Naturally present

### Lead and Copper Test Results IL0311020

Lead and Copper	Date Sampled	MCLG	AL	90th Percentile	Sites over AL	Violation	Likely Source of Contamination
Copper (ppm)	Aug. 2014	1.3	1.3	0.1347	0	none	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead (ppb)	Aug. 2014	0	15	4.55	0	none	Corrosion of household plumbing systems; Erosion of natural deposits.

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 or at <http://www.epa.gov/safewater/lead>.

**Unregulated Contaminant Monitoring Rule:** The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. These data serve as a primary source of occurrence and exposure information that the agency uses to develop regulatory decisions. If a PWS monitoring for UCMR3 finds contaminants in its drinking water, it must provide the information to its customers in this annual water quality report. Below is a table of the results of our UCMR3 monitoring in 2014. All other contaminants were not detected.

<b>Unregulated Contaminants Detected During 2014</b>			
<b>Unregulated Contaminant</b>	<b>Average Detection</b>	<b>Range of Detections</b>	<b>MCL</b>
Chlorate, ppb	66	49-83	NA
Chromium, ppb	0.35	0.3 – 0.4	NA
Hexavalent chromium, ppb	0.235	0.23 – 0.24	NA
Molybdenum, ppb	1.1	1.1– 1.1	NA
Strontium, ppb	129.6	123.2 – 136	NA
Vanadium, ppb	0.25	0.2-0.3	NA



### 2015 Village of Wilmette Water Quality Data

Listed below is data supplied by Village of Wilmette. This water analysis information was compiled from samples that Wilmette is required to take of its water supply system annually, and is required to be included in this report.

IL0313300

<b>Inorganic Contaminants</b>	<b>MCLG</b>	<b>MCL</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>Violation</b>	<b>Date of Sample</b>
Barium (ppm)	2	2	0.019	0.019 - 0.019	none	2015
Fluoride (ppm)	4	4.0	1.0	1.0 - 1.0	none	2015
Nitrate as N (ppm)	10	10	< 0.35	< 0.35	none	2015
Sodium (ppm)	N/A	N/A	11	11 -11	none	2015
<b>Turbidity</b>	<b>Limit (Treatment Technique)</b>		<b>Level Detected</b>	<b>Likely Source of Contamination</b>	<b>Violation</b>	
Highest single Measurement	1 NTU		0.09 NTU	Soil Runoff	none	
Lowest monthly % meeting limit	0.30 NTU		100%	Soil Runoff	none	

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. The

Village of Wilmette monitors it because it is a good indicator of water quality and the effectiveness of the Water Plant's 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.

### Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) – Second Round

The objective of the LT2ESWTR, published by the US EPA, is to reduce the incidence of disease associated with *Cryptosporidium* and other pathogenic organisms. As required by the LT2ESWTR – Second Round, the Village of Wilmette water plant is collecting source water (Lake Michigan), **not finished water**, samples for *Cryptosporidium*, E. Coli, and turbidity once a month for 24 months from October 2015 to September 2017. The table summarizes the results collected so far.

Contaminant	Highest Level Detected	Range of Levels Detected	Units	Violation
Cryptosporidium	< 0.1	< 0.1	Oocysts/L	No
E. Coli	3	< 1 - 3	MPN/100 ml	No
Turbidity	17.3	0.74 – 17.3	NTU	No

We believe it is important for you to know the *Cryptosporidium* may cause serious illness in immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have under gone organ transplants, people with HIV/AIDS or other immune disorders. These people should seek advice from their health care providers

## About the Data

### Likely Sources of Contaminants

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#### Barium

Possible sources of barium in water supplies can come from discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.

#### Chlorine

Water additive used to control microbes.

#### Copper

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short time could experience gastrointestinal distress or could suffer liver or kidney damage and develop Wilson's disease. People with Wilson's disease should consult their personal doctor. Possible sources of copper in water supplies can come from erosion of natural deposits; leaching from wood preservatives; and corrosion of household plumbing systems.

#### Iron

Erosion from natural occurring deposits

#### Lead

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical and mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Possible sources of lead in water supplies can come from household plumbing systems and erosion of natural deposits.

### TTHMs Total Trihalomethanes and HAA5 Haloacetic Acids

Trihalomethanes and haloacetic acids are by-products of drinking water chlorination.

### Total Coliform Bacteria

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Coliforms found in more samples than allowed are a warning of potential problems.

### Fecal Coliforms and E. Coli

Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for young children and people with severely compromised immune systems. Fecal coliforms and E. coli are naturally present in the environment.

### 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. Possible sources of sodium in water supplies can come from erosion of naturally occurring deposits and used in water softener regeneration.

### Fluoride

Possible sources of fluoride in drinking water can come from erosion of natural deposits, water additive which promotes strong teeth and fertilizer discharge.

### Nitrate

Nitrate in drinking water can come from runoff from fertilizer use; leaching from septic tanks, sewage; and erosion of natural deposits.

### Turbidity

Turbidity is a measurement of the cloudiness of the water caused by suspended particles and its primary source is soil runoff. It is monitored because it is a good indicator of water quality and the effectiveness of the water plant's filtration system and disinfectants.

***We want our valued customers to be informed about their water quality. We invite you to participate in the decision-making processes that affect drinking water quality. Please feel welcome to attend any of our regularly scheduled Village Board meetings which are held at 7:30 p.m. on the first and third Tuesdays of the month at Village Hall, 2500 East Lake Avenue. Check the [Calendar on the Village of Glenview website](#) for more meeting information.***

If you have any questions concerning this report or your water system, please contact: Jerry Burke at (847) 657-3030. This report is available on the internet at the Glenview web site, [www.glenview.il.us/2015waterqualityreport](http://www.glenview.il.us/2015waterqualityreport). Printed copies are available at the Customer Service counter at Village Hall 2500 E. Lake Avenue, Glenview, IL 60026.

<i><b>Did You Know?</b></i>
Glenview has been purchasing water from the Village of Wilmette since 1938. In fact, about <b>70 percent of the water Wilmette pumps and treats comes into Glenview.</b>
On average, a Glenview resident uses <b>85 gallons of water per person each day.</b>
Our water supply is <b>monitored 24 hours a day</b> by both Wilmette and Glenview.
Both Glenview and Wilmette constantly <b>test water samples for biological and chemical contaminants.</b> Wilmette has a laboratory on site at its water plant where full-time staff members routinely do "spot checks" of raw and treated water, and Glenview tests a minimum of 50 water samples each month for



total coliform and E.coli.
This water quality report contains a lot of test information and data, but more than 120 different contaminants are monitored with only the few listed in this report showing some level of detection. However, <b>all contaminants tested were either <u>none detected</u> or were within EPA's water quality standards.</b>
We are prepared for emergencies! The Village of Glenview has <b>agreements and underground connections with both the Village of Northbrook and the Village of Northfield for emergency supplies of water</b> , should we need them. Wilmette has back-up power at its water plant, and the Rugen Road and West Lake reservoir/pumping stations have <b>two sources of power</b> . All of our major pumping stations also have <b>emergency back-up generators</b> .
<b>Is it advisable to use water from the hot water tap for drinking, cooking or making baby formula?</b> <b>No.</b> Hot water generally comes from a hot water heater that may contain impurities that should not be ingested. Some of these impurities might be metals from household plumbing that are dissolved and concentrated in the heating process.
<b>Why does water sometimes have a musty taste and odor?</b> During the summer months, residents may notice a slight "musty" or "earthy" taste and odor in the water. The chemicals that cause this are naturally occurring but harmless in the concentrations found in Wilmette's/Glenview's drinking water. Wilmette adds activated carbon to the water to help remove these odors. Keeping an open container of water in the refrigerator allow the odors to dissipate and improves the taste of the water.
<b>Why does the water coming out of the faucet sometimes look milky or opaque?</b> This generally occurs in cold weather, when water entering the house is colder than the temperature inside. Cold water holds more oxygen than warm water. As the cold water warms, the oxygen escapes in tiny air bubbles that make the water look "milky."
<b>What is the hardness of the water?</b> The tap water has a hardness of 150mg/L, or about 8.2 grains.