

# Village of Glenview

## Annual Water Quality Report

January 1 - December 31, 2010

### Introduction

*For the period of January 1, thru December 31, 2010 the Village of Glenview Water Supply has met or exceeded all USEPA and Illinois state drinking water standards. This Consumer Confidence Water Quality Report is required by the Federal Environmental Protection Agency 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. The Village of Wilmette operates a conventional water filtration and treatment plant that is located on the lakefront. All of the water treated at the plant comes from Lake Michigan. The water plant uses a mixture of chemicals, settling basins and filters to remove all contaminants to below regulated levels. After the water is treated it is pumped into Wilmette's 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 Village of Glenview operates six pumping stations and pumps water into two separate distribution systems and pressure zones. The Glenview water systems have a total water storage capacity of over 17 million gallons and water is pumped to your home or business through a network of pipes which total over 261 miles long.

### 2010 Source Water Assessment Summary

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 and only dilution. For this reason mandatory treatment for all surface water supplies is required 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 the 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.

The sensitivity analysis of both Wilmette's intakes show 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. In addition, the proximity to a major shipping lane adds to the susceptibility should there be a spill near the intakes. 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 the Source Water Assessment document are aimed at this purpose. You may access more information on the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

## Sources of Drinking Water

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).

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>.

In addition to the informational section of the Water Quality Report, we have included several tables for your review. The tables will give you a better picture of the contaminants that were detected in your water and 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** -parts per billion or micrograms per liter

**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.



## 2010 Water Quality Data

### Regulated Contaminants

Lead and Copper	MCLG	AL	90th Percentile	Sites over AL	Violation	Date of Sample
Copper (ppm)	1.3	1.3	0	0	none	07/30/08
Lead (ppb)	0	15	5.52	1	none	07/30/08
Disinfectants and Disinfection By-Products	MCLG	MCL	Highest Level Detected	Range Detected	Violation	Date of Sample
Chlorine (ppm)	MRDLG=4	MRDL=4	0.8	0.7077 – 0.8693	none	monthly
Haloacetic Acids (HAA5) * (ppb)	No goal for the total	60	18	14.34 – 25.1	none	
Total Trihalomethanes (TTHM)* (ppb)	No goal for the total	80	40	30.9 – 58.7	none	

\* 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

Coliform Bacteria	MCLG	MCL	Levels Detected	Violation	Date of Sample
Total Coliform Bacteria	0	5% of monthly samples are positive	3	none	monthly
Fecal Coliform or E. Coli	0	0	0	none	monthly



## 2010 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 their water supply system annually, and is required to be included in this report.

Lead and Copper	MCLG	AL	90th Percentile	Sites Over AL	Violation	Date of Sample
Copper (ppm)	1.3	1.3	0.099	0	none	08/02/08
Lead (ppb)	0	15	5.99	0	none	08/02/08
Inorganic Contaminants	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Violation	Date of Sample
Barium (ppm)	2	2	0.019	0.019 – 0.019	none	
Fluoride (ppm)	4	4.0	1	0.96 – 0.96	none	
Nitrate (measured as Nitrogen) (ppm)	10	10	1	0.66 – 0.66	none	
Sodium (ppm)	N/A	N/A	10	10 - 10	none	
Disinfectants and Disinfection Bi-products	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Violation	Date of Sample
Total Trihalomethanes (TTHM)* (ppb)	No goal for the total	80	23	15.9 - 27	none	
Haloacetic Acids (HAA5)* (ppb)	No goal for the total	60	13	10 – 15.5	none	
Chlorine (ppm)	MRDLG=4	MRDL=4	0.80	0 – 0.8933	none	
Radioactive Contaminants	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Violation	Date of Sample
Combined Radium 226 / 228 (pCi/L)	0	5	1.69	1.69 – 1.69	none	01/14/08
Gross Alpha excluding radon and uranium (pCi/L)	0	15	0.72	0.72 – 0.72	none	01/14/08
Turbidity	Limit (Treatment Technique)		Level Detected	Likely Source of Contamination	Violation	
Highest single Measurement	1 NTU		0.08 NTU	Soil Runoff	none	
Lowest monthly % meeting limit	0.30 NTU		100%	Soil Runoff	none	

### 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)

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, the Village of Wilmette water plant collected source water (Lake Michigan), not finished water, samples for Cryptosporidium, E. Coli, Giardia and turbidity once per month for a period of 24 months from April 2007 to March 2009. Cryptosporidium was detected in the source water (Raw Lake Michigan) in six out of twenty-four samples collected. The table below summarizes the results:

Contaminant	Highest Level Detected	Range of Levels Detected	Units	Violation
E. Coli	3.1	<1 – 3.1	MPN/100 ml	No
Giardia	1	0 – 1	Cysts/L	No
Cryptosporidium	0.2	0 – 0.2	Oocysts/L	No
Turbidity	24.9	0.72 – 24.9	NTU	No

Due to the low average concentration detected of Cryptosporidium, the Illinois EPA has determined that the current water treatment used by the Village of Wilmette is sufficient and no additional treatment is required. We believe it is important for you to know that Cryptosporidium may cause serious illness in immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. These people should seek advice about drinking water from their health care providers.

## About the Data

### Likely Source 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.

#### Combined Radium 226 / 228

Possible source of radium in water supplies comes from erosion of natural deposits.

#### 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.

## About the Data

### Likely Source of Contaminants

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#### Gross Alpha (excluding radon and uranium)

The possible source of gross alpha in water supplies comes from erosion of natural 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 PM on the first and third Thursdays of the month at Village Hall, 1225 Waukegan Road.*

If you have any questions concerning this report or your water system please contact: Jerry Burke, ph. (847) 657-3030. If you know of anyone who receives Glenview water service and did not receive this report, it is available on the Internet at the Glenview web site, WWW.GLENVIEW.IL.US. If you wish to obtain additional copies, they are available upstairs in the Water Billing office at the Village Hall 1225 Waukegan Rd., Glenview, Ill. 60025.

## Did You Know?



- Glenview has been purchasing its water from the Village of Wilmette since 1938. In fact, about **70 percent of the water Wilmette pumps and treats comes into Glenview** (and this will probably jump to 80 percent within the next couple of years).
- Wilmette draws in about **13.8 million gallons of water from the lake every day**.
- Glenview, in turn, pulls in about **9.75 million gallons of treated water each day** from Wilmette. But on hot summer days, the amount has peaked at **20 million gallons!**
- On average, Glenview uses **134 gallons of water/person each day**.
- Our water supply is **monitored 24 hours a day** by both Wilmette and Glenview.
- Both Glenview and Wilmette constantly **test water samples for biological and chemical contaminants**. 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 60 water samples each month for *E.Coli*.
- We're prepared for emergencies! The Village of Glenview has **agreements and underground connections with both the Village of Northbrook and the Village of Northfield for emergency supplies of water**, should we need them. Wilmette has back-up power at its water plant, and the Rugen Road and West Lake reservoir/pumping stations have **two sources of power**. Many of our stations have **back-up generators**.