



## **2017 Annual Drinking Water Quality Report**

### **Is my water safe?**

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your drinking water comes from, what it contains, how it compares to standards set by regulatory agencies and the efforts made by the Wilmette Water Management Department to provide safe drinking water.

This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies. For more information regarding this report, please contact Patrick Brennan at 847-251-1666.

### **Do I need to take special precautions?**

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. The Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

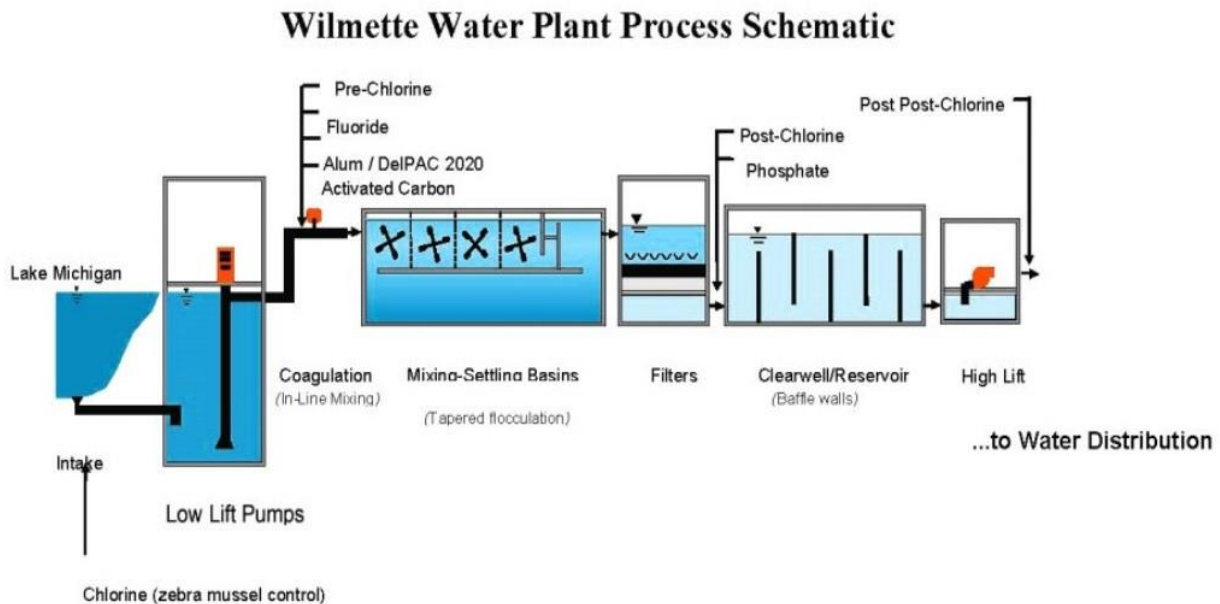
### **Where does my water come from?**

Raw water enters the Wilmette plant through intake lines out in Lake Michigan. During the summertime, a small dose of chlorine is fed into the intake pipes to help control the growth of zebra mussels. After traveling under the lake bed to the low lift pumping station, the raw water receives a second (pre) chlorine dose in the low lift pump suction well for disinfection. Next, the water is lifted about 15 feet by low lift pumps and delivered to the water plant.

Treatment chemicals – including coagulant (for the removal of turbidity, or “cloudiness” in the water), fluoride (for prevention of dental cavities) and powdered activated carbon (for taste and odor removal) – are fed at the water plant’s in-line water mixers. This is the chemical pretreatment step, before distribution to the mixing-settling basins. Typically, no more than a teaspoonful of chemicals is added to every 100 gallons of water treated.

Following this, the pretreated water enters one of six slow mix basins for the flocculation step. In this step, “floc” particles are formed when alum reacts with the raw water, forming a sticky, gelatinous precipitate. Gentle mixing is applied in each basin causing the floc particles to collide with and entrain natural turbidity particles in the raw water. In the sedimentation step that follows mixing, 90% of these floc particles settle out.

After sedimentation, the treated water is delivered to the dual media filters for the final polishing step, filtration. The filtered water receives a second (post) dose of chlorine to maintain a residual in the distribution system and a dose of ortho-polyphosphate (for corrosion inhibition in the water mains) before entering the water plant’s underground clearwell/reservoirs.



Source: Village of Wilmette – Water Treatment Description

## Source Water Assessment

The Illinois Environmental Protection Agency (IEPA) 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 of contaminations 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 and Kenilworth's water quality. In addition, the proximity to a major shipping lane adds to the susceptibility should there be a spill near the intakes.

### **Why are there contaminants in my 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). 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 material, and can pick up substances resulting from the presence of animals or from human activity:

- 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 stormwater 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 stormwater runoff, and septic systems; and
- Radioactive contaminants, which can 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, EPA 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.

### **Cross Connection Control Survey**

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- Boiler/ Radiant heater (water heaters not included)
- Underground lawn sprinkler system
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property
- Decorative pond
- Watering trough

### **How can I get involved?**

Decisions affecting the Kenilworth water system are made by the Village Board. Village Board meetings are typically held the third Monday of every month at the Village Hall, 419 Richmond Road, Kenilworth, Illinois 60043. Residents are encouraged to attend.

### **For more information please contact:**

Contact Name: Patrick Brennan

Address: 419 Richmond Rd. Kenilworth, IL 60043

Phone: 847-251-1666

E-Mail: [info@kenilworthil.org](mailto:info@kenilworthil.org)

## Water Quality Data and Consumer Confidence Report

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. Included with this report is the EPA's Consumer Confidence Report. This report lists all of the drinking water contaminants that were detected during the 2017 calendar year. Although many more contaminants were tested, only those substances listed were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in the Consumer Confidence Report is from testing done in the calendar year of the report. The EPA or the State of Illinois requires Wilmette to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In the Consumer Confidence Report you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions directly below.

| <b>Unit Descriptions</b> |  |
|--------------------------|--|
| <b>Term</b>              | <b>Definition</b>  |
| PPM                      | PPM: Parts per million, or milligrams per liter (mg/L)   |
| PPB                      | PPB: Parts per billion, or microgram per liter   |
| pCi/L                    | pCi/L: picocuries per liter (a measure of radioactivity)   |
| NTU                      | NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. This is monitored because it is a good indicator of the effectiveness of our filtration system. |
| NA                       | Not applicable   |
| NR                       | NR: Monitoring not required, but recommended   |

| <b>Important Drinking Water Definitions</b> |   |
|---|---|
| <b>Terms</b>                                | <b>Definition</b>   |
| MCLG  | 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.  |
| MCL   | 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.   |
| TT  | TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.  |
| AL  | AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must allow.  |
| Variances and Exemptions                    | Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.   |
| MRDLG                                       | MRDLG: Maximum residual disinfection 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. |
| MRDL  | MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is no convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.                           |
| MNR   | MNR: Monitored Not Regulated  |
| MPL   | MPL: State Assigned Maximum Permissible Level   |

# Consumer Confidence Report

## Annual Drinking Water Quality Report

KENILWORTH

IL0311500

Annual Water Quality Report for the period of January 1 to December 31, 2017

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

The source of drinking water used by KENILWORTH is Purchased Surface Water

For more information regarding this report contact:

Name \_\_\_\_\_

Phone \_\_\_\_\_

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

| Source of Drinking Water  |
|---|
| 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 material, and can pick up substances resulting from the presence of animals or from human activity.  |
| Contaminants that may be present in source water include: <ul style="list-style-type: none"><li>- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.</li><li>- 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.</li><li>- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.</li><li>- 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.</li><li>- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.</li></ul> |

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| 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 EPAs Safe Drinking Water Hotline at (800) 426-4791.   |
| In order to ensure that tap water is safe to drink, EPA prescribes regulations which 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.  |
| 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/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 (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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a> . |



Source Water Information

Source Water Name

Type of Water

Report Status

Location

CC01-METERED CONNECTION W/ WILMETTE

SW

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## Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by City Hall or call our water operator at \_\_\_\_\_. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Source of Water: WILMETTEThe 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 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.

**Lead and Copper**

Definitions:  
 Action Level Goal (ALG): 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.  
 Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination  |
|-----------------|--------------|------|-------------------|-----------------|-----------------|-------|-----------|---|
| Copper          | 2017         | 1.3  | 1.3               | 0.57            | 0               | ppm   | N         | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead            | 2017         | 0    | 15                | 6.42            | 1               | ppb   | N         | Corrosion of household plumbing systems; Erosion of natural deposits.                                   |

**Water Quality Test Results**

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

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

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal or MRDLG: 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.

na: not applicable.

mrem: millirems per year (a measure of radiation absorbed by the body)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

## Water Quality Test Results

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

## Regulated Contaminants

| Disinfectants and Disinfection By-Products | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG                  | MCL      | Units | Violation | Likely Source of Contamination   |
|--|-----------------|------------------------|--------------------------|-----------------------|----------|-------|-----------|--|
| Chlorine                                   | 12/31/2017      | 0.8                    | 0.56 - 0.97              | MRDLG = 4             | MRDL = 4 | ppm   | N         | Water additive used to control microbes.   |
| Haloacetic Acids (HAA5)                    | 2017            | 3                      | 0 - 5.9                  | No goal for the total | 60       | ppb   | N         | By-product of drinking water disinfection.   |
| Total Trihalomethanes (TTHM)               | 2017            | 45                     | 43 - 46.9                | No goal for the total | 80       | ppb   | N         | By-product of drinking water disinfection.   |
| Inorganic Contaminants                     | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG                  | MCL      | Units | Violation | Likely Source of Contamination   |
| Barium                                     | 2017            | 0.019                  | 0.019 - 0.019            | 2                     | 2        | ppm   | N         | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.                                |
| Fluoride                                   | 2017            | 0.6                    | 0.595 - 0.595            | 4                     | 4.0      | ppm   | N         | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate [measured as Nitrogen]             | 05/02/2016      | 0.44                   | 0.44 - 0.44              | 10                    | 10       | ppm   | N         | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.                               |
| Sodium                                     | 2017            | 7                      | 7.4 - 7.4                |                       |          | ppm   | N         | Erosion from naturally occurring deposits. Used in water softener regeneration.  |
| Radioactive Contaminants                   | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG                  | MCL      | Units | Violation | Likely Source of Contamination   |
| Combined Radium 226/228                    | 05/04/2015      | 0.995                  | 0.995 - 0.995            | 0                     | 5        | pCi/L | N         | Erosion of natural deposits.   |

## Turbidity

|                                | Limit (Treatment Technique) | Level Detected | Violation | Likely Source of Contamination |
|--------------------------------|-----------------------------|----------------|-----------|--------------------------------|
| Highest single measurement     | 1 NTU                       | 0.09 NTU       | N         | Soil runoff.                   |
| Lowest monthly % meeting limit | 0.3 NTU                     | 100%           | N         | Soil runoff.                   |

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our 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, unless a TOC violation is noted in the violations section.

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