Annual Drinking Water Quality Report for Calendar Year 2016
Kirkland Public Water Supply
Facility Number IL 0370300

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. This report includes drinking water facts, information on violations (if applicable), and contaminants detected in your drinking water supply during calendar year 2016.

Each year, we will provide you a new report. If you need help understanding this report or have general questions, please contact the person listed below.

Contact Name: Dale Miller
Telephone Number: 815-522-6170
E-mail: Kirkpubwks@mchsi.com

Before we begin listing our unique water quality characteristics, here are some important facts you should know to help have a basic understanding of drinking water in general.

Sources of Drinking Water
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

Our source of water comes from Ground Water Wells. The Railroad Well is located south of the water tower; Well 2 is located north the water tower and Well 3 is located at Linda and Hickory Lane.

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 can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Other Facts About 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 EPA's 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).

Source Water Assessments
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 water supply has been completed by the Illinois EPA. Please stop by the Village Hall or call Dale Miller at 815-522-6170 with question regarding the 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.

Based on information obtained in a Well Site Survey by the Illinois EPA, several potential secondary sources are located within 1,000 feet of the wells. The facility has provided additional information on the following potential sources regarding source name or ownership changes: Kirkland Quick Stop is now Kirkland Marathon, the Johnson Leonard property is now Hines Lumber, and Farm Sales and Service Incorporated is now Nesterowicz and Associates. As mentioned above in the “Source of Water Supply” section, the Illinois EPA has determined that two (2) of Kirkland’s wells (railroad well and well #2) are potentially susceptible to contamination based on a number of criteria including; monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and available hydrogeologic data on the wells such as the wells receiving the source water from a highly fractured bedrock aquifer. It should be noted however, that while these two (2) wells are considered...
“susceptible” to contamination, per the “Source Water Quality” section, sample results to date have not identified quantifiable levels of any contaminant of concern. Well #3 receives its source water from a confined, deep bedrock aquifer, and therefore is not considered “susceptible” to contamination at this time. Furthermore, in accordance with the U.S. EPA’s Ground Water Rule, the Illinois EPA has determined that both the railroad well and well #2 are potentially vulnerable to viral contamination. While the potential for viral contamination exists, it should be noted that the Village’s source water for the railroad well and well #2 has not indicated any bacteriological contamination to date. As stated in previous sections of this document, these wells utilize source water from an “unconfined”, highly fractured bedrock aquifer, and without documented, mapped subsurface hydraulic conditions, it is therefore considered vulnerable to viral contamination. At the time of this writing, the Village is actively researching the option of utilizing the Vulnerability Waiver process for well #2. In regards to well #3, the source water is not considered vulnerable to viral contamination. This determination is based upon the evaluation of the following criteria during the Vulnerability Waiver process: well #3 is properly constructed with sound integrity and proper siting conditions; a hydrogeologic barrier exists which should prevent pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because well #3 is constructed in a “confined” aquifer, which should prevent the movement of pathogens into the well, well hydraulics was not considered to be a significant factor in this determination. Hence, well hydraulics was not evaluated for this system’s ground water supply.

### 2016 Regulated Contaminants Detected

The next several tables summarize contaminants detected in your drinking water supply.

#### Definitions:

**AL** Action Level: The concentration of a contaminant which, 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.

**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.

**MCL** Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal 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 disinfectant allowed in drinking water.

**MRDLG** Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

**N/A** Not Applicable

**NTU** Nephelometric Turbidity Units

**pCi/L** Picocuries per liter (a measure of radioactivity)

**ppb** Parts per billion or micrograms per liter (ug/L) - or one ounce in 7,350,000 gallons of water.

**ppm** Parts per million or milligrams per liter (mg/L) - or one ounce in 7,350 gallons of water.

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

### 2016 Regulated Contaminants Detected

#### Lead and Copper

<table>
<thead>
<tr>
<th>Lead and Copper</th>
<th>Date Sampled</th>
<th>MCLG</th>
<th>Action Level (AL)</th>
<th>90th Percentile</th>
<th># Sites Over AL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>07/09/2015</td>
<td>1.3</td>
<td>1.3</td>
<td>0.45</td>
<td>0</td>
<td>Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.</td>
</tr>
<tr>
<td>Lead</td>
<td>07/09/2015</td>
<td>0</td>
<td>15</td>
<td>1.9</td>
<td>0</td>
<td>Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.</td>
</tr>
</tbody>
</table>

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 Pingree Grove 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 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](http://www.epa.gov/safewater/lead).

#### Disinfectants and Disinfection Byproducts

<table>
<thead>
<tr>
<th>Disinfectants and Disinfection Byproducts</th>
<th>Collection Date</th>
<th>Highest Level Detected</th>
<th>Range of Levels Detected</th>
<th>MCLG</th>
<th>MCL</th>
<th>Violation</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
</table>

http://www.epa.gov/safewater/lead.
<table>
<thead>
<tr>
<th>Inorganic</th>
<th>10/08/2015</th>
<th>0.18</th>
<th>0.18 – 0.18</th>
<th>2</th>
<th>2</th>
<th>N</th>
<th>Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>10/08/2015</td>
<td>0.399</td>
<td>0.399 – 0.399</td>
<td>4</td>
<td>4.0</td>
<td>N</td>
<td>Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.</td>
</tr>
<tr>
<td>Fluoride</td>
<td>10/08/2015</td>
<td>0.45</td>
<td>0.45 - 0.45</td>
<td>1.0</td>
<td>N</td>
<td></td>
<td>This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.</td>
</tr>
<tr>
<td>Iron</td>
<td>10/08/2015</td>
<td>10</td>
<td>10 - 10</td>
<td>150</td>
<td>150</td>
<td>N</td>
<td>This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.</td>
</tr>
<tr>
<td>Manganese</td>
<td>2016</td>
<td>0.47</td>
<td>0 – 0.47</td>
<td>10</td>
<td>10</td>
<td>N</td>
<td>Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.</td>
</tr>
<tr>
<td>Sodium</td>
<td>10/08/2015</td>
<td>8.7</td>
<td>8.7 – 8.7</td>
<td>N</td>
<td></td>
<td></td>
<td>Erosion from naturally occurring deposits: Used in water softener regeneration.</td>
</tr>
<tr>
<td>Zinc</td>
<td>10/08/2015</td>
<td>0.064</td>
<td>0.069 – 0.069</td>
<td>5</td>
<td>5</td>
<td>N</td>
<td>This contaminant is not currently regulated by the USEPA. However, the state regulates naturally occurring;</td>
</tr>
<tr>
<td>Radiological Contaminants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Erosion of natural deposits</td>
</tr>
</tbody>
</table>

**Violation Summary Table**

We are happy to announce that NO monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2016.