

# 2017 Water Quality Report

## Is my water safe?

In 2017, as in years past, your tap water produced by City Water, Light & Power (CWLP) met all United States Environmental Protection Agency (USEPA) and State of Illinois drinking water health standards. The purification process is monitored 24 hours each day, and CWLP is pleased to report the utility had **no violations** of a contaminant level or of any other water quality standards in 2017. This report, which summarizes the quality of water CWLP provided last year, and other utility information are available on the CWLP website at [www.cwlp.com](http://www.cwlp.com).

## 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. 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?

Lake Springfield is the surface water source of our drinking water. It contains over 17 billion gallons of water and covers about 4,200 acres. Its 265-square-mile watershed, including the Sugar and Lick Creek drainage areas, is composed primarily of agricultural land. During times of low precipitation, water is pumped from the South Fork of the Sangamon River at its confluence with Horse Creek.

## Source water assessment and its availability

Illinois EPA considers all surface water sources of community water supplies to be susceptible to potential pollution problems; hence, the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Causes of pollution to lakes include nutrients, siltation, suspended solids, and organic enrichment. Primary sources of pollution include agricultural run off, land disposal (septic systems), and shoreline erosion. If you would like a copy of the assessment, call the Water Purification Plant at (217)757-8630.

## Other Information

If you have any questions about this report or your water supply, please contact Bob West, our Certified Water Operator at (217) 528-7624. We want our valued customers to be informed about their water quality. If you would like to learn more please feel welcomed to attend any of our regularly scheduled board meetings. The Village of Grandview Board of Trustees meets the first and third Tuesday of each month at 5:30 pm at the Grandview Water Department Office at 2377 E Reservoir, Springfield, IL 62702.

## 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. Possible contaminants consist of:

- Microbial contaminants, such as viruses and bacteria, which can 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/herbicides, which can come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems;

- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure tap water is safe to drink, the USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Illinois Environmental Protection Agency (IEPA) administers the drinking water program in Illinois under rules adopted by the Illinois Pollution Control Board. These rules are identical in substance to those of the USEPA. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Due to a favorable monitoring history, the USEPA and IEPA have issued no variances or exemptions to the CWLP Water Division. This Water Quality Report includes tables that will give you a better picture of the drinking water contaminants CWLP tested for and detected during 2017.

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

CWLP utility issues are discussed at City Council meetings at 5:30 p.m. on the first and third Tuesdays of each month and at the Council Committee of the Whole meetings held at 5:30 p.m. on the Tuesday of each week prior to a City Council meeting. These meetings are open to the public and are held in the City Council chambers on the third floor of Municipal Center West, 300 S. 7th Street.

### **Results of Cryptosporidium monitoring**

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Filtration removes cryptosporidium, but the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of cryptosporidium may cause cryptosporidiosis, the symptoms of which include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the infection within a few weeks, but people who are immuno-compromised have a greater risk of developing a life-threatening illness. The disease may be spread through means other than drinking water, such as poor sanitation practices.

Past monitoring has indicated the presence of Cryptosporidium in our source water, but these organisms have never been detected in the drinking water. Treatment processes have been optimized to ensure that if there are Cryptosporidium cysts in the source water, they will be removed during the treatment process. By maintaining low turbidity, a result of efforts to remove particles from the water, the threat of Cryptosporidium organisms getting through the treatment process and into the drinking water system is greatly reduced.

### **Additional Information for Lead**

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. Springfield City Water, Light & Power 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, (1-800-426-4791), at <http://www.epa.gov/safewater/lead> or <https://cwlp.com/leadawareness>. The Lead and Copper Rule (LCR) was developed to protect public health by minimizing lead levels in drinking water. The LCR established an action level of 15 ppb for lead based on the 90th percentile level of tap water samples collected. Lead is sampled on a mandated three-year-testing cycle with sampling conducted at the customer's tap. CWLP's 2016 testing resulted in no detects for the 50 required samples.

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### Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that were detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below 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 this table is from testing done in the calendar year of the report. The EPA or the State requires CWLP 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 this table 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 below the table.

| Contaminants   | MCLG or MRDLG | MCL, TT, or MRDL | Detect In Your Water | Range |      | Sample Date | Violation | Typical Source  |
|--|---------------|------------------|----------------------|-------|------|-------------|-----------|---|
|  |               |                  |                      | Low   | High |             |           |   |
| <b>Disinfectants/Disinfection By-Products</b>  |               |                  |                      |       |      |             |           |   |
| (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)  |               |                  |                      |       |      |             |           |   |
| Chloramine (as Cl <sub>2</sub> ) (mg/L)  | 4             | 4                | 2                    | 2     | 2    | 2017        | No        | Water additive used to control microbes   |
| Haloacetic Acids (HAA5) (ppb)  | NA            | 60               | 24                   | 11.2  | 22.8 | 2017        | No        | By-product of drinking water chlorination   |
| TTHMs [Total Trihalomethanes] (ppb)  | NA            | 80               | 43                   | 18.5  | 65.8 | 2017        | No        | By-product of drinking water disinfection   |
| The percentage of TOC removal was measured each month and CWLP met all TOC removal requirements.   |               |                  |                      |       |      |             |           |   |
| <b>Inorganic Contaminants</b>  |               |                  |                      |       |      |             |           |   |
| Arsenic (ppb)  | 0             | 10               | .857                 | NA    | NA   | 2017        | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes                    |
| Barium (ppm)   | 2             | 2                | .0167                | NA    | NA   | 2017        | No        | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| Fluoride (ppm)   | 4             | 4                | .6                   | .58   | .74  | 2017        | No        | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Nitrate [measured as Nitrogen] (ppm)   | 10            | 10               | .28                  | ND    | .28  | 2017        | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |
| <b>State Regulated Contaminants</b>  |               |                  |                      |       |      |             |           |   |
| Sodium (ppm)   | NA            |                  | 13.9                 | NA    | NA   | 2017        | No        | Erosion of natural deposits; Leaching   |
| There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, consult a physician about this level. |               |                  |                      |       |      |             |           |   |
| <b>Microbial Contaminants</b>  |               |                  |                      |       |      |             |           |   |
| Turbidity (NTU)  | NA            | 0.3              | 100%                 | NA    | NA   | 2017        | No        | Soil runoff   |
| 100% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was .30. Any measurement in excess of 1 is a violation unless otherwise approved by the state.   |               |                  |                      |       |      |             |           |   |
| <b>Radioactive Contaminants</b>  |               |                  |                      |       |      |             |           |   |
| Alpha emitters (pCi/L)   | 0             | 15               | .365                 | NA    | NA   | 2011        | No        | Erosion of natural deposits   |

| Contaminants                          | MCLG or MRDLG | MCL, TT, or MRDL | Detect In Your Water | Range |      | Sample Date | Violation | Typical Source                          |
|---------------------------------------|---------------|------------------|----------------------|-------|------|-------------|-----------|---|
|                                       |               |                  |                      | Low   | High |             |           |   |
| Radium (combined 226/228) (pCi/L)     | 0             | 5                | .828                 | NA    | NA   | 2011        | No        | Erosion of natural deposits             |
| <b>Synthetic Organic Contaminants</b> |               |                  |                      |       |      |             |           |   |
| Atrazine (ppb)                        | 3             | 3                | .5                   | ND    | .5   | 2017        | No        | Runoff from herbicide used on row crops |

| Unit Descriptions |  |
|-------------------|--|
| Term              | Definition   |
| ppm               | ppm: parts per million, or milligrams per liter (mg/L)   |
| ppb               | ppb: parts per billion, or micrograms per liter (µg/L)   |
| mg/L              | mg/L: Number of milligrams of substance in one liter of water  |
| 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. We monitor it because it is a good indicator of the effectiveness of our filtration system. |
| NA                | NA: not applicable   |
| ND                | ND: Not detected   |

| Important Drinking Water Definitions |   |
|--------------------------------------|---|
| Term                                 | Definition  |
| 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 follow.   |
| Variations and Exemptions            | Variations 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 convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.                              |

**For more information please contact:**

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### Source Water Information

| Source Water Name        | Type of Water | Report Status | Location                               |
|--------------------------|---------------|---------------|--|
| NORTH GRAND MASTER METER | SW            |               | NORTH SIDE OF NORTH GRAND AT DANIELS   |
| STARNES MASTER METER     | SW            |               |  |
| WHEELER MASTER METER     | SW            |               | SOUTH SIDE OF NORTH GRAND AT RR TRACKS |

### 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 [redacted]. 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: SPRINGFIELD Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems; hence, the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Causes of pollution to the lake include nutrients, siltation, suspended solids, and organic enrichment. Primary sources of pollution include agricultural runoff, land disposal (septic systems), and shoreline erosion.

**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.

**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             |
|--|-----------------|------------------------|--------------------------|-----------------------|----------|-------|-----------|--|
| Chloramines                                | 12/31/2017      | 2                      | 1.6 - 2.2                | MRDLG = 4             | MRDL = 4 | ppm   | N         | Water additive used to control microbes.   |
| Haloacetic Acids (HAAs)                    | 2017            | 17                     | 9.3 - 21                 | No goal for the total | 60       | ppb   | N         | By-product of drinking water disinfection. |
| Total Trihalomethanes (TTHM)               | 2017            | 44                     | 28 - 57.1                | No goal for the total | 80       | ppb   | N         | By-product of drinking water disinfection. |