2015 Annual

# Water Quality Report

River Grange District
PWS ID: IL0895600

ILLINOIS AMERICAN WATER

## A Message from Illinois American Water President

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

To Our Valued Customer:

Illinois American Water is proud to be your local water service provider, and I am pleased to share with you good news about the quality of your drinking water. Each year, we provide you with our Annual Water Quality Report - and like so many years prior – we continue to supply water that meets or surpasses all state and federal water quality regulations.

This is no small task. Our employees, many of whom are also your neighbors, work hard every day to provide services critical for public health, safety and economic development. Your drinking water is monitored around the clock and tested at every stage of the treatment process. Our team is proud of this commitment to you. They are also proud of our commitment to the community in which they not only work, but live.

We know first-hand how precious our water is, so we work hard to not only protect it, but to educate about the value of water and wise water use. You may see us at local community events or hear about our mobile education center visiting your child's classroom to offer hands-on water lessons. We also provide information through our online learning center. Please visit it at www.illinoisamwater.com/learning-center.

Our team has also continued our commitment to infrastructure investments – investments that keep water pipes, fire hydrants, and water treatment facilities in good condition. Annually, we invest over $80 million to ensure quality water service delivered right to your tap.

At Illinois American Water, our customers are our top priority. We are committed to providing you with the highest quality drinking water and service possible. Please take time to review this water quality report as it provides details about the source and quality of the drinking water delivered to you in 2015. If you have suggestions or comments, please contact me at ilaw.president@amwater.com.

Thanks for allowing us to serve you.

Sincerely,

Bruce Hauk
President

American Water Works Company, Inc., together with its subsidiaries, is referred to as American Water. "Illinois American Water" and the star logo are the registered trademarks of American Water Works Company, Inc. All rights reserved.

## What is a Water Quality Report?

Illinois American Water issues a report annually describing the quality of your drinking water in compliance with state and United States Environmental Protection Agency (USEPA) regulations. The purpose of this report is to increase understanding of drinking water standards and raise awareness of the need to protect your drinking water sources.

At our state-of-the-art research laboratory in Belleville, Illinois, we conduct over 57,000 tests per year, checking drinking water quality at every stage of the water treatment and delivery process. In 2015, we conducted tests for hundreds of contaminants, including those with federal and state maximum allowable levels. This report provides an overview of last year's (2015) water quality results. It includes details about your water and what it contains.

## Source Water Information

The source of water for the River Grange community of our Chicago Metro District is well water purchased from the City of St. Charles. To determine St. Charles' susceptibility to groundwater contamination, the following documents were reviewed: a Well Site Survey, published in 1992 by the Illinois EPA; and a Source Water Protection Plan prepared by the Village of St. Charles, published by Burns and McDonnell in May of 1996. Based on the information obtained in these documents there are 121 potential sources of groundwater contamination that could pose a hazard to groundwater utilized by the St. Charles community water supply wells. Furthermore, information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of Illinois EPA indicated several additional sites with on-going remediation which may be of concern. Based upon this information, the Illinois EPA has determined that the St. Charles Community Water Supply's source water has a low susceptibility to SOC contamination. In addition, Wells #3, #4, and #8 have a low susceptibility to IOC and VOC contamination. However, Wells #7, #9 and #11 have a high susceptibility to VOC and IOC contamination. These susceptibility ratings are a result of monitoring conducted at the wells and entry point to the distribution system, the land use activities and source water protection initiatives (refer to the following section of this report) by the city. Furthermore, in anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that St. Charles' community water supply wells have a low susceptibility to viral contamination. This determination is based upon the completed evaluation of the following criteria used in the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; 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. However, having stated this, the "[U.S.] EPA is proposing to require States to identify systems in karst, gravel and fractured rock aquifer systems as sensitive and these systems must perform routine source water monitoring". Because the community's wells are constructed in both confined bedrock and unconfined sand and gravel aquifers, the Illinois EPA evaluated the well hydraulics associated with St. Charles' well fields. Wells #7, #9 and #11 have an appreciable amount of overburden (the wells range from approximately 90 to 175 feet deep with the last 20 feet open to the aquifer) above the portion of the aquifer contributing a significant quantity of groundwater to the screened interval. This should provide an adequate degree of filtration to prevent the movement of pathogens into the wells.

A copy is available upon request by calling Tom Chinske, Water Quality Supervisor at 630-739-8849. 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.

## Environmental Stewardship

Water is one of the earth's most precious natural resources. Protecting the environment helps to ensure adequate water supply for generations. Our efforts include student education, community events, environmental partnerships and internal initiatives.

Student Education: Illinois American Water reaches thousands of students each year through educational efforts. Our water quality team visits local schools to demonstrate the water treatment process. Our Mobile Education Center (MEC), an 18-foot learning center, offers hands-on water testing and fun lesson plans. These lesson plans can also be found at our website – www.illinoisamwater.com – in the learning center. We partner with Illinois leaders on Science, Technology, Engineering, Mathematics (STEM) education efforts. Students participate in annual community events like the Clean Water Celebration held in Peoria and the Water Festival in Godfrey.

Community Events: We participate in the "It's Our River Day" celebrations each September across the state. These events promote education, recreation and conservation within Illinois watersheds. Illinois American Water employees volunteer at the Mississippi Earthtones Festival in Alton. We also contribute to river cleanup efforts with the Illinois River Sweep, Vermillion River Clean Up, Living Lands and Waters Great Mississippi River Clean Up, and more.

Environmental Partnerships: As a part of our Environmental Grant Program we presented over $15,000 in 2015 for six environmental projects focused on the improvement, restoration and protection of water sources in our communities. We are continuing our multi-year agreement with Great Rivers Land Trust to reduce sedimentation of the Piasa Creek and Mississippi River. The agreement has been highlighted as a model by the USEPA. Our Champaign County team partners on the Mahomet Aquifer Consortium to protect our precious resources.

Pharmaceutical Disposal Programs: Illinois American Water has collaborated with communities to implement over 35 pharmaceutical disposal programs across the state. These efforts have led to the prevention of flushing medications and the proper disposal of hundreds of thousands pounds of unwanted medications. To learn more or to find a disposal location near you, please visit www.illinoisamwater.com under Water Quality & Stewardship.

Internal Initiatives: On a daily basis, our facilities utilize technologies such as variable frequency motors and motion sensor lighting to ensure efficient energy use. Recycling programs at company facilities also help to reduce waste and protect the environment. Illinois American Water incorporates native and prairie plantings on company property whenever possible to reduce water use and mowing costs.

The company's newest water treatment plant in Champaign County earned the first LEED® certification for a water treatment facility in Illinois. LEED is the nation's leading program for the design, construction and operation of high- performance green buildings. In addition, an upgrade at the water treatment plant in Peoria includes the incorporation of ultraviolet (UV) technology to enhance water quality.

Illinois American Water's Pontiac and Streator Districts installed ultrasonic units to effectively control algae and reduce the use of treatment chemicals. Illinois American Water also implemented solar power in the Peoria and Interurban (Metro East) Districts, decreasing electricity costs and benefiting our customers.

## American Water

American Water is the largest and most geographically diverse publicly traded U.S. water and wastewater utility company. Marking its 130th anniversary in 2016, the company employs 6,700 dedicated professionals who provide regulated and market-based drinking water, wastewater, and other related services to an estimated 15 million people in 47 states and Ontario, Canada. More information can be found by visiting www.amwater.com.

## Illinois American Water

Illinois American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 1.2 million people. American Water also operates a customer service center in Alton and a quality control and research laboratory in Belleville.

## Questions?

To learn more about water quality, visit our website at: www.illinoisamwater.com. For questions or copies contact **Tom Chinske, Water Quality Supervisor, at thomas.chinske@amwater.com or at 630-739-8849.**

## Water Information Sources

Illinois American Water
www.illinoisamwater.com

United States Environmental Protection Agency
www.epa.gov/safewater

Safe Drinking Water Hotline: 800-426-4791
Illinois Environmental Protection Agency
www.epa.state.il.us

## Surf Your Watershed

Locate your watershed and a host of information
http://cfpub.epa.gov/surf/locate/index.cfm

## Envirofacts

Access to U.S. environmental data
www.epa.gov/enviro

## Substances Expected to be in 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 can acquire naturally occurring minerals, in some cases, radioactive material and substances resulting from the presence of animals or from human activity.

Substances 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, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, may also come from gas stations, urban storm water runoff, and septic systems.

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

To ensure that tap water is of high quality, USEPA prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Illinois American Water's advanced water treatment processes are designed to reduce any such substances to levels well below any health concern.

## Important Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the 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 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC (Centers for Disease Control and Prevention) 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.

## 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. Illinois American Water 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.

## How to Read the Data Tables

Illinois American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the data tables. While most monitoring was conducted in 2015, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting these tables, see the "Table Definitions" section and footnotes.

## Table Definitions and Abbreviations

- Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- Compliance Achieved: Indicates that the levels found were all within the allowable levels as determined by the USEPA.
- Highest Level Detected: In most cases this column is the highest detected level unless compliance is calculated on a Running Annual Average or Locational Running Annual Average. If multiple entry points exist, the data from the entry point with the highest value is reported.
- 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.
- 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 routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG (Maximum Residual Disinfectant Level Goal): The level of 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 contamination.
- NA: Not applicable
- ND: Not detectable at testing limits
- pCi/L (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- ppm (parts per million): One part substance per million parts water, or milligrams per liter.
- ppb (parts per billion): One part substance per billion parts water, or micrograms per liter.
- Range Of Detections: The range of individual sample results, from lowest to highest, that were collected during the sample

period.
- S: Single sample

## 2015 Water Quality Information

We are pleased to report that during the past year, the water delivered to your home or business complied with, or was better than, all state and federal drinking water requirements.

For your information, we have compiled a table showing what substances were detected in your drinking water during 2015. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by the U.S. Environmental Protection Agency (USEPA), we feel it is important that you know exactly what was detected and how much of the substance was present in your water.

# Water Quality Results

## Regulated Substances (Measured at the St. Charles treatment facility)

| Substance (units) | Year Sampled | MCLG | MCL | Amount Detected | Range of Detections | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| Alpha emitters (pCi/L) | 2015 | 0 | 15 | 10.2 | 5.4-10.2 | Yes | Erosion of natural deposits |
| Arsenic | 2015 | 0 | 10 | 0.821 | 0-0.821 | Yes | Erosion of natural deposits; runoff from orchards; runoff from glass and electronic wastes |
| Barium (ppm) | 2015 | 2 | 2 | 1.15 | 0.075-1.15 | Yes | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Benzo(a)pyrene (ppt) | 2015 | 0 | 200 | 147 | 0-147 | Yes | Leaching from linings of water storage tanks and distribution lines |
| Fluoride (ppm) [2] | 2015 | 4 | 4 | 1.2 | 0.98-1.2 | Yes | Water additive that promotes strong teeth |
| Nitrate (ppm) | 2015 | 10 | 10 | 0.453 | 0-0.453 | Yes | Run off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Radium Combined (pCi/L) | 2015 | 0 | 5 | 3.8 | 0.47-3.8 | Yes | Erosion of natural deposits |

## Other Compounds (Measured in the distribution system)

| Substance (units) | Year Sampled | MCLG/ MRDLG | MCL/ MRDL | Amount Detected | Range of Detections | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| TTHMs [Total trihalomethanes] (ppb) | 2014 | NA | 80 | 35.9 | S | Yes | By-product of drinking water chlorination |
| HAAs Haloacetic acids] (ppb) | 2014 | NA | 60 | 3.4 | S | Yes | By-product of drinking water chlorination |
| Chlorine (ppm) | 2015 | 4 | 4 | 0.5 | 0.0-0.5 | Yes | Water additive used to control microbes |

## Lead and Copper [3] (Collected at customers' taps)

| Substance (units) | Year Sampled | MCLG | Action Level | 90th Percentile | Number of Samples Collected | Number of Samples Above Action Level | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|---|
| Copper (ppm) | 2015 | 1.3 | 1.3 | 1.211 | 10 | 1 | Yes | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb) | 2015 | 0 | 15 | 2 | 10 | 0 | Yes | Corrosion of household plumbing systems; Erosion of natural deposits |

## State Regulated Substances (Measured at the St. Charles treatment facility)

| Substance (units) | Year Sampled | MCLG | MCL | Amount Detected | Range of Detections | Compliance Achieved | Typical Source |
|---|---|---|---|---|---|---|---|
| Iron (ppb) [4] | 2015 | NA | 1000 | 272 | 0-272 | Yes | Erosion of naturally occurring deposits |
| Manganese (ppb) [5] | 2015 | NA | 150 | 148 | 0-148 | Yes | Erosion of naturally occurring deposits |
| Sodium (ppm) [6] | 2015 | NA | NA | 81.8 | 23.2-81.8 | Yes | Erosion of naturally occurring deposits; By-product of home water softening |

## Unregulated Substances[7]

| Substance (units) | Year Sampled | Highest Level Detected | Range of Detections | Typical Source |
|---|---|---|---|---|
| Sulfate | 2015 | 93.8 | 14-93.8 | Erosion of Natural deposits |

The IEPA requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data in the table above, though accurate, is more than one year old.

[1] The MCL for Beta/photon emitters is often written as 4 millirem/year (measure of rate of radiation absorbed by the body). Laboratory results are reported in pCi/L as we have on the table above. EPA considers 50 pCi/L as the level of concern for beta emitters.

[2] Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride level of 0.9 mg/L to 1.2 mg/L.

[3] Compliance with the Lead and Copper Rule (LCR) is determined by the levels of lead and copper found in samples taken from customers' taps. LCR requirements are met if the 90th percentile of all samples taken does not exceed the action level of 15 ppb for lead or 1.3 ppm for copper.

[4] Iron is currently not regulated by USEPA. However, the state has set an MCL for iron for supplies serving a population of 1000 or more. Iron is not a health concern but can cause staining of plumbing and fixtures. River Grange adds a phosphate based sequestering agent to control the aesthetic impacts of iron. [5] Manganese is currently not regulated by USEPA. However, the state has set an MCL for manganese for supplies serving a population of 1000 or more.

Manganese is not a health concern but can cause staining of plumbing and fixtures.

[6] There is no 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.

[7] A maximum contaminant level (MCL) for this substance has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this substance is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.