



2016 Annual Water Quality Report

This report is designed to inform you about the quality water we delivered to you over the past year. If you have any questions about this report or concerning your water utility, please contact our water supply operator, Sandy Kuhn at 618 669-2861 or attend any of our regularly scheduled meetings. They are held at 7:00 p.m. on the second Monday of each month at the Water Company office, 103 Park Street, Pocahontas.

Bond Madison Water Company purchases your water from Illinois American Water Company. This water is piped from the Granite City Water Treatment Plant which receives water from the Mississippi River. A source water assessment for the Granite City system has been completed by the Illinois EPA and a copy is available upon request by calling Rachel Bretz, Illinois American Water Quality Supervisor at 618-465-6736 ext 4. IEPA 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.

The Granite City distribution system also has an interconnection with the East St. Louis distribution system. Water is routinely supplied to the Granite City system through that connection. To view a summary version of the completed Source Water Assessments you may access the IEPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Bond Madison Water Company routinely monitors for contaminants in your drinking water according to Federal and State laws. The first table in this report shows the results of Illinois American's monitoring for the period of January 1st to December 31st, 2016 at their Granite City supply. Because customers may at times receive water from the East St. Louis supply, the second table contains the monitoring information from that distribution system. The third table includes the system monitoring data for Bond Madison Water Company.

Illinois American Water

Cryptosporidium (East St. Louis & Granite City)

Cryptosporidium is a protozoan found in untreated surface waters throughout the United States (the organism is generally not present in a ground water source). Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100% removal. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, people with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such people to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it is spread through means other than drinking water. USEPA issued a new rule in 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. In 2016, our monitoring of the Mississippi River raw untreated water indicated the presence of this organism. The Mississippi River cryptosporidium levels at our Granite City raw water source ranged from not detected to 0.273 oocysts/L, with an average of 0.060 oocysts/L. The Mississippi River cryptosporidium levels at our East St. Louis raw water source ranged from not detected to 0.500 oocysts/L, with an average of 0.089 oocysts/L. Although this organism is present, it is at levels low enough that no supplemental treatment is required by our facility per USEPA standards.

Water Quality Results

Illinois American Water – Granite City

2016 Regulated Substances Detected

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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Fluoride ³	2016	0.8	0.78 – 0.78	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen) ⁴	2016	5	4.98 – 4.98	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium ⁵	2016	17	16.7 -16.7	N/A	N/A	ppm	No	Erosion from naturally occurring deposits: Used in water softener regeneration.

3 Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends a fluoride level of 0.7 mg/L. Highest Level Detected is an annual average.

4 Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you, should ask advice from your health care provider.

5 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.

Radiological Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters ⁶	2011	15 pCi/L	15-15 pCi/L	0	4	mrem/y	No	Erosion of natural deposits.
Gross Alpha emitters	2011	2.9	2.9-2.9	0	15	pCi/L	No	Erosion of natural deposits.

6 The MCL for Beta/photon emitters is 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.

Turbidity				
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % Meeting Limit	0.3 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	0.15 NTU	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of the effectiveness of our filtration system, water quality, and disinfectants. The treatment technique requires that at least 95% of routine samples are less than or equal to 0.3 NTU, and no sample exceeds 1 NTU. We are reporting the percentage of all readings meeting the standard of 0.3 NTU, plus the single highest reading for the year.

Total Organic Carbon
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA. TOC has no health effects but contributes to the formation of disinfection by-products. Reduction of TOC can help to minimize disinfection by-product formation.

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

Granite City Advisory Summary

The following violation occurred during 2016. We included a brief summary of the actions we took following notification.

We received a 2016 Consumer Confidence Report (CCR) Advisory for CCR Adequacy/Availability/Content starting July 1, 2016 and ending July 19, 2016. Due to a computer issue, there were errors in the data tables that were not consistent with IEPA. The errors were corrected immediately and the CCR was reposted to the website July 19, 2016. The IEPA acknowledged the corrected report was posted online and that the deficiencies were corrected and the advisory had been returned to compliance.

Illinois American Water – East St. Louis

2016 Regulated Substances Detected

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

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2016	1	1 - 1	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Fluoride ⁴	2016	0.8	0.73 – 0.77	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen) ⁵	2016	5	3.50 – 5.05	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium ⁶	2016	16	16 – 16.2	N/A	N/A	ppm	No	Erosion from naturally occurring deposits: Used in water softener regeneration.

4 Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends a fluoride level of 0.7 mg/L. Highest Detect is an annual average.

5 Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you, should ask advice from your health care provider.

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.

Radiological Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	2014	0.9	0.9 – 0.9	0	5	pCi/L	No	Erosion of natural deposits.
Beta/photon emitters ⁷	2014	4.4 pCi/L	4.4 – 4.4 pCi/L	0	4	mrem/y	No	Erosion of natural deposits.
Gross Alpha emitters	2014	1.5	1.5 – 1.5	0	15	pCi/L	No	Erosion of natural deposits.

7 The MCL for Beta/photon emitters is 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.

Turbidity				
	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Lowest Monthly % Meeting Limit	0.3 NTU	100%	No	Soil Runoff
Highest Single Measurement	1 NTU	0.16 NTU	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of the effectiveness of our filtration system, water quality, and disinfectants. The treatment technique requires that at least 95% of routine samples are less than or equal to 0.3 NTU, and no sample exceeds 1 NTU. We are reporting the percentage of all readings meeting the standard of 0.3 NTU, plus the single highest reading for the year.

Total Organic Carbon
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA. TOC has no health effects but contributes to the formation of disinfection by-products. Reduction of TOC can help to minimize disinfection by-product formation.

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.

East St. Louis Advisory Summary

The following violation occurred during 2016. We included a brief summary of the actions we took following notification.

We received a 2016 Consumer Confidence Report (CCR) Advisory for CCR Adequacy/Availability/Content starting July 1, 2016 and ending July 19, 2016. Due to a computer issue, there were errors in the data tables that were not consistent with IEPA. The errors were corrected immediately and the CCR was reposted to the website July 19, 2016. The IEPA acknowledged the corrected report was posted online and that the deficiencies were corrected and the advisory had been returned to compliance.

BOND MADISON WATER QUALITY REPORT

Regulated Substances

Substance (units)	Date Sampled	MC LG	Action Level AL	90 th Percentile	# Sites over AL	Compliance Achieved	Typical Source
Copper (ppm)	2015	1.3	1.3	0.318	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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. 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 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Disinfection/Disinfectant By-Products

Substance (units)	Date Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
HAAS-Total Haloacetic Acids (ppb)	2016	N/A	60	21	16 – 29.6	Yes	By-product of drinking water chlorination
TTHM-Total trihalomethanes (ppb)	2016	N/A	80	41	19.2– 51.3	Yes	By-product of drinking water chlorination
Chloramines (ppm)*	2016	MRDLG=4	MRDL=4	2	1.5 – 2	Yes	Water additive used to control microbes

* Chlorine and chloramines are disinfecting agents added to control microbes that otherwise could cause waterborne diseases or other water quality concerns. Most water systems in Illinois are required by law to add either chlorine or chloramines. Levels well in excess of the MRDL could cause irritation of the eyes or nose in some people. The values reported reflect multiple locations in the service area. Chloramines are a disinfectant made from combining chlorine and ammonia.

Table Definitions and Abbreviations

- **Action Level (AL):** 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

As you can see by the table there were no violations. Your drinking water meets or exceeds all Federal and State requirements. “All sources of drinking water are subject to potential contamination by contaminants that are naturally occurring or are manmade. Those contaminants can be microbes, organic or inorganic chemicals, or radioactive materials.” All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. 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 microbiological contaminants are available from the Safe Drinking Water Hotline.