

# Village of Caseyville

## 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 Public Works Superintendent Brian Rader at (618) 344-1234 or attend any of our regularly scheduled meetings. They are held at 7:00 p.m. on the Third Wednesday of each month at the Caseyville Village Hall at 909 South Main St. Caseyville.

The Village of Caseyville purchases your water from Illinois American Water Company. This water is piped from the East St. Louis Water Treatment Plant which receives water from the Mississippi River. A source water assessment for the East St. Louis 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.

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>.

The Village of Caseyville 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 1<sup>st</sup> to December 31<sup>st</sup>, 2016 at their East St. Louis supply. The second table includes the system monitoring data for the Village of Caseyville.

### Illinois American Water – East St. Louis

#### Regulated Substances (Measured in the water leaving the treatment facility)

Substance (units)	Year Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
Atrazine (ppb)	2014	3	3	1.5	ND - 1.5	Yes	Runoff from herbicide used on row crops
Arsenic	2016	0	10	1	1 - 1	Yes	
Fluoride (ppm) <sup>1</sup>	2016	4	4	.8	0.73 - .77	Yes	Water additive that promotes strong teeth
Nitrate (ppm) <sup>2</sup> [measured as Nitrogen]	2016	10	10	5	3.5 - 5.05	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Combined Radium 226/228 (pCi/L)	2014	0	5	0.9	S	Yes	Erosion of natural deposits
Beta/positron emitters (pCi/L)	2014	0	50	4.4	S	Yes	Decay of natural and man-made deposits
Gross alpha emitters (pCi/L)	2014	0	15	1.5	S	Yes	Erosion of natural deposits

<sup>1</sup> 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.

<sup>2</sup> Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six 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. The value in the "amount detected" column is the maximum detected for the year.

#### Other Compounds (Measured in the distribution system or in the water leaving the treatment facility)

Substance (units)	Year Sampled	MCLG/MRDLG	MCL/MRDL	Highest Level	Range of Detections	Compliance Achieved	Typical Source
TTHMs [Total trihalomethanes] (ppb)	2016	NA	80	26	15.9 - 35.1	Yes	By-product of drinking water chlorination
HAAs [Haloacetic acids] (ppb)	2016	NA	60	23	5.2 - 33.3	Yes	By-product of drinking water chlorination
Chloramines (ppm) <sup>3</sup>	2016	4	4	2.6	2.0 - 3.0	Yes	Water additive used to control microbes
TOC [Total organic carbon] (removal factor) <sup>4</sup>	2015	NA	TT Removal $\geq$ 1.0	1.5	0.7 - 1.9	Yes	Naturally present in the environment

<sup>3</sup> 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. At the East St. Louis facility, chloramines are used the majority of the year. Chloramines are a disinfectant made from combining chlorine and ammonia.

<sup>4</sup> Total organic carbon (TOC) has no health effects. However, TOC provides a means for the formation of disinfection by-products. One way to minimize disinfection by-product formation is to remove a specific percentage of the TOC present in the source water. The numbers in the Amount Detected and Range columns are the TOC removal factors, where the removal factor is defined as the actual percent TOC removal divided by the required percent removal. A value of 1.0 or greater in the Amount Detected column indicates that compliance with the removal requirement was achieved.

## Turbidity<sup>5</sup> – (Measured in water leaving the treatment facility)

Substance (units)	Year Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
Turbidity (NTU) (<0.3 NTU)	2016	NA	.3 NTU	100%	100% - 100%	Yes	Soil runoff
Turbidity (NTU)	2016	NA	1 NTU max	0.16	NA	Yes	Soil runoff

<sup>5</sup>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. 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.

## Lead and Copper<sup>6</sup> (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)	2016	1.3	1.3	0.191	53	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb) <sup>7</sup>	2016	0	15	2	53	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

<sup>6</sup>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 1.300 ppm for copper.

<sup>7</sup>Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated levels of lead in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the EPA's Safe Drinking Water Hotline 800-426-4791.

## State Regulated Substances

Substance (units)	Year Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
Sodium (ppm) <sup>8</sup>	2016	NA	NA	16	16 – 16.2	Yes	Erosion of naturally occurring deposits; Byproduct of home water softening.
Manganese	2015	150	150	20	15 – 20	Yes	Erosion of naturally occurring deposits

<sup>8</sup>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.

## Unregulated Substances<sup>9</sup>

Substance (units)	Year Sampled	Highest Level Detected	Range of Detections	Typical Source
Sulfate (ppm)	2015	38.1	37.4 – 38.1	Erosion of naturally occurring deposits

<sup>9</sup>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. For the N-nitroso-dimethylamine and the N-nitroso-pyrrolidine, in the "Amount Detected" column we are reporting the average, and in the "Range of Detections" column we are reporting the lowest and highest individual readings.

## Unregulated Contaminant Monitoring Rule (UCMR3)<sup>10</sup>

Substance (units)	Year Sampled	Highest Level Detected	Range of Detections	Typical Source
1,4-Dioxane (ppb)	2014	0.30	0.26 – 0.30	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics, and shampoos, cleaning agent, surface coating, and adhesive agent.
Chromium (ppb)	2014	0.4	ND – 0.4	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation
Chromium (VI) (ppb)	2014	0.09	0.09 – 0.09	Naturally occurring element; used in making steel and other alloys; used for chrome plating, dyes, and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)	2014	1.6	1.4 – 1.6	Naturally-occurring element found in ores and present in plants, animals, and bacteria; commonly used form molybdenum trioxide used as a chemical reagent.
Strontium (ppb)	2014	142	131 – 142	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Vanadium (ppb)	2014	0.7	0.6 – 0.7	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

<sup>10</sup>Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

## Cryptosporidium

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 2015, our monitoring of the Mississippi River raw untreated water indicated the presence of this organism. The Mississippi River cryptosporidium levels ranged from not detected to 0.698 oocysts/L, with an average of 0.078 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.

## Advisory Summary for Illinois American Water Company

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

They 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.

# CASEYVILLE WATER QUALITY REPORT

## Regulated Substances

Substance (units)	Date Sampled	MCLG	Action Level AL	90 <sup>th</sup> Percentile	# Sites over AL	Compliance Achieved	Typical Source
Copper (ppm)	2014	1.3	AL=1.3	0.438	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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 1.300 ppm for copper. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated levels of lead in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the EPA's Safe Drinking Water Hotline 800-426-4791.

## Disinfections/Disinfectant By-Products

Substance (units)	Date Sampled	MCLG	MCL	Highest Level Detected	Range of Detections	Compliance Achieved	Typical Source
HAAS-Total Haloacetic Acids	2016	N/A	60	19	11.5 – 26	Yes	By-product of drinking water chlorination
TTHM-Total trihalomethanes (ppb)	2016	N/A	80	43	16.4 – 69.4	Yes	By-product of drinking water chlorination
Chloramines (ppm)*	2016	MRDLG=4	MRDL=4	2.2	1.0 – 3.0	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.

## Definition of Terms

**Non-Detects (ND)** - laboratory analysis indicates that the contaminant is not present. **Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000. **Parts per billion (ppb) or Micrograms per liter** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000. **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water. **Millirems per year (mrem/yr)** - measure of radiation absorbed by the body. **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. **Action Level (AL)**-the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. **Maximum Contaminant Level** - The Maximum Allowed (MCL) is 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** - The Goal (MCLG) is 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** -The MRDL is the highest level of disinfectant routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants. **Maximum Residual Disinfectant Level Goal** – The level of drinking water disinfectant below which there is no known or expected risk to health.

---

---

As you can see by the table there were no violations issued for The Village of Caseyville in 2016. 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.

