



2016 Annual

# Water Quality Report

Quad Cities District  
PWS ID: IA8222001



## To Our Valued Customer:

Iowa 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 – you will find that we continue to supply water that meets or surpasses all state and federal water quality regulations.

This does not happen by chance. It requires having the right team of experts and technologies in place. Delivering high quality, reliable water service to your tap around the clock also requires significant investment in our water infrastructure. In 2016, we invested about \$15.2 million in water system improvements statewide. From upgrading our treatment facilities to replacing aging water pipelines, we invest prudently and with purpose. In addition, because we invest our dollars responsibly, we provide our water for about a penny per gallon—an exceptional value for a service that is so essential to our daily lives.

We hope you agree it is worth every penny and worth learning more about. Please, take the time to review this report. It provides details about the source and quality of your drinking water using the data from water quality testing conducted for your local water system from January through December 2016.

At Iowa American Water, our customers are our top priority, and we are committed to providing you with the highest quality drinking water and service possible in 2017 and the future to come.

Best Regards,

Randy A. Moore  
President

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

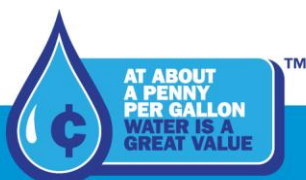
**Chi tiết này thật quan trọng.  
Xin nhờ người dịch cho quý vị.**

## What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (U.S. EPA) regulations, Iowa American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and the need to protect your drinking water sources. This report provides an overview of last year's (2016) water quality. It includes details about where your water comes from and what it contains.

## Where Does My Water Come From?

Water for the Iowa Quad Cities is taken from the Mississippi River and treated in Iowa American Water's state-of-the-art East River Station treatment facility. Our high-tech water treatment plant uses some of the best equipment and technology available to the water industry. The treatment process utilizes conventional coagulation and settling processes and parallel Superpulsator clarification, followed by granular activated carbon filtration. The granular activated carbon filtration process is cited by the U.S. EPA as one of the most effective treatment technologies for the removal of organic chemicals, such as farm pesticides and industrial wastes. It is also highly effective in eliminating many taste and odor problems.



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**WE CARE ABOUT WATER. IT'S WHAT WE DO.®**

## Protecting Your Water Source

The Source Water Assessment Program (SWAP) is a result of the 1996 amendments to the Federal Safe Drinking Water Act (SDWA). Those amendments require all states to establish a program to assess the vulnerability of public water systems to potential contamination. The Iowa Department of Natural Resources (DNR) has prepared Source Water Assessment Reports and Summaries for all public water systems.

In 2003, the Iowa DNR completed an assessment of the Mississippi River watershed in this area. Rivers, streams, and reservoirs are highly susceptible to contamination because of surface runoff. Our water source is considered most vulnerable to contaminants from agricultural and urban runoff. These contaminants include nutrients such as nitrate and phosphorus and other man-made and natural contaminants. A summary report is available upon request from Iowa American Water by contacting Mary Jane Midgett, Director of Operations at (563) 468-9215 or by e-mail at [Mary.Canneymidgett@amwater.com](mailto:Mary.Canneymidgett@amwater.com).

Iowa American Water takes pride in promoting the protection and enhancement of the habitats on our property and those affected by our operations. This includes efforts such as:

- Promoting and working on environmental stewardship projects in our communities, through both financial support and employee volunteerism.
- Looking for opportunities to incorporate stewardship activities in our capital projects.
- Leading by example in our environmental responsibilities (e.g. recycling paper, double-sided printing, turning out the lights).
- Using water wisely, including practicing and encouraging water conservation and source water protection programs.

## Investing in Our Communities

Delivering quality water service requires continued infrastructure investment. Iowa American Water invested about \$11.8 million in water system improvements in the Iowa Quad Cities in 2016 to continue to preserve water quality, maintain reliability and continue to meet the needs of customers. Some of the largest investments include:

- \$3.3 million investment for East River Station Treatment Plant Residuals Project to replace sediment residual collection equipment in the basins and to construct an equalization basin for process residuals. The work, which was complete in 2016, replaced aged equipment, increased efficiency of the treatment process and minimized the impact of residual discharges.
- \$2.9 million investment in upgraded water meters to replace existing touch pad meters with automated meter reading devices. This new equipment gathers

meter readings remotely as workers drive through a neighborhood. This equipment will result in more efficient meter readings through advanced technology and eliminate estimated meter readings, which ultimately provides enhanced service to customers. Because of this upgrade program, Iowa American Water plans to transition to monthly billing in April 2017.

- \$2.7 million investment in the Iowa Quad Cities to replace and upgrade over one mile of aged water main with larger diameter main to improve system reliability and transmission line capacity in some areas. In addition, almost two miles of water main was relocated in conjunction with city street improvement projects.
- \$900,000 investment for a new Storm Water Lift Station at the East River Station Treatment Facility. The project, which was completed in June 2016, allows us to efficiently discharge storm water and residual waste from the site during high river conditions, such as a flood.
- \$500,000 investment in chemical feed systems automation equipment at the East River Station Treatment Facility to automate chemical feed systems and replace aged equipment. The project, which was completed in 2016, enhances water quality and provides more efficiency during chemical applications.

Iowa American Water is proud of its professional and dedicated workforce. Our commitment to customer service and operational integrity remains (and always will be) paramount.

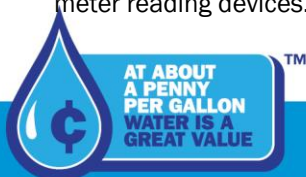
## About Iowa American Water

Iowa 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 services to approximately 212,000 people. With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 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](http://www.amwater.com).

## How to Contact Us

Our customer service center is available Monday through Friday from 7 a.m. to 7 p.m. to answer your questions or schedule a service appointment. Just call (866) 641-2108, and we'll be pleased to assist you. Our online self-service tool, [My Account](#), is available anytime for account information, payments and turning water service on and off at [www.iowaamwater.com](http://www.iowaamwater.com).

**In case of EMERGENCY, you can contact us 24 hours a day/7 days a week at (866) 641-2108.** Water emergencies don't keep business hours, so we're available 24/7 to



assist you at those critical times. You can also visit our website at [www.amwater.com](http://www.amwater.com).

For more information about this report or for any questions related to your drinking water, please call Mary Jane Midgett, Director of Operations at (563) 468-9215 or by e-mail at [Mary.Canneymidgett@amwater.com](mailto:Mary.Canneymidgett@amwater.com).

## Partnership for Safe Drinking Water Program

Iowa American Water joined the Partnership for Safe Water program in 1995, and remains one of only three utilities in Iowa to participate. The voluntary program, which is administered by the U.S. Environmental Protection Agency and other water-related organizations, challenges water utilities to optimize their treatment facility operations and adopt more stringent performance goals than those required by federal and state drinking water standards. Currently the Partnership includes nearly 264 water utilities across the nation committed to the enhancement of drinking water quality and operational excellence in water treatment. Iowa American Water prides itself in being an industry leader that proactively joins initiatives and water research efforts to promote high quality water, reliability and exceptional service to customers.



Iowa American Water's Quad Cities District is the first water utility in Iowa to be awarded the Partnership for Safe Water Program's "Director's Award" for 15 consecutive years and remains one of only two Iowa water utilities to be recognized with this prestigious honor for achieving operational excellence. In 2016, we were recognized for 20 years of participation in the program.

## What's in My Water?

The source of drinking water (both tap water and bottled water) includes 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.

### 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 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, and 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, U.S. EPA 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. Iowa American Water's treatment processes are designed to reduce any such substances to levels well below any health concern.

## Important Health Information

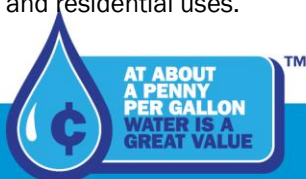
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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.

U.S. EPA/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 at (800) 426-4791 or by calling our 24-hour customer service line at (866) 641-2108 for more information.

## How to Read This Table

Iowa 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 2016, 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 and footnotes.



## Definitions of Terms Used in This Report

- **Action Level:** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- **Amount Detected:** Unless otherwise noted in the footnotes, an average of all sample results for the year, or results from a single sample if only one was collected. With multiple entry points to the distribution system, the data from the entry point with the highest value is reported. Amount detected for distribution samples represents an average of all samples collected.
- **Compliance Achieved:** Indicates that the levels found were all within the allowable levels as determined by the EPA.
- **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 allowed in drinking water. There is convincing evidence that 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.
- **NA:** Not applicable
- **ND:** Not detected
- **pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water.
- **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:** Indicates individual sample results (SS), or a range from lowest to highest, that were collected during the sample period.

- **SS:** Single Sample
- **Typical Source:** Indicates where the substance usually originates.

## Water Quality Results

Iowa American Water conducts thousands of water quality analyses annually to ensure that your water meets all water quality standards. The following tables show what substances were detected in our drinking water in 2016. Many more contaminants are tested for each year but fall below laboratory detection limits. Although all of the substances listed below are under the maximum contaminant level (MCL) set by U.S. EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. For help interpreting this table, see the “How to Read This Table” section.

**There's a lot more to your water bill than just water.**

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground. The facilities that draw water from the source. The plant where it's treated and tested. The scientists, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future. All for about a penny a gallon.

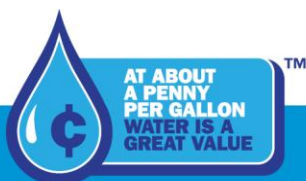
**AT ABOUT A PENNY PER GALLON WATER IS A GREAT VALUE™**

**WE CARE ABOUT WATER. IT'S WHAT WE DO. FIND OUT WHY YOU SHOULD, TOO, at [amwater.com](http://amwater.com).**

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## Turbidity – A Measure of the Clarity of the Water (at the Treatment Facility)

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Turbidity (NTU) (Percent less than 0.3 NTU)	2016	NA	TT <= 0.30 NTU in 95% of the samples each month	100.0% less than 0.3 NTU	100.0%	Yes	Soil runoff
Turbidity (NTU)	2016	NA	TT = 1 NTU max	0.09	0.05 – 0.233	Yes	Soil runoff



## Regulated Substances (Measured on the Water Leaving the Treatment Facility) <sup>1</sup>

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Atrazine (ppb)	2016	3	3	0.10	SS	Yes	Runoff from herbicide used on row crops
Fluoride (ppm) <sup>2</sup>	2016	4	4	0.67	0.28 - 1.08	Yes	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate as Nitrogen (ppm) <sup>3</sup>	2016	10	10	4.93	SS	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (ppm) <sup>4</sup>	2016	TT = 25% Removed	NA	34.6% Removed	23.0% - 42.1% Removed	Yes	Naturally present in the environment

## Other compounds (Measured in the Distribution System)

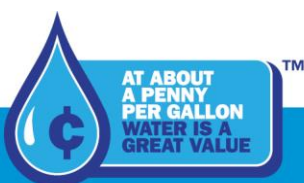
Substance (units)	Year Sampled	MRDLG or MCLG	MRDL or MCL	Results	Range of Detections	Compliance Achieved	Typical Source
Chloramines (ppm) <sup>5</sup>	2016	4	4	2.10	0.05 - 3.46	Yes	Water additive to control microbes
TTHMs [Total trihalomethanes] (ppb)	2016	NA	80	44	25.2 - 60.6	Yes	By-product of drinking water chlorination
HAA5s [Haloacetic acids] (ppb)	2016	NA	60	30	8.4 - 41.9	Yes	By-product of drinking water chlorination.

## Bacterial Results (Measured in the Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Highest Monthly Amount Detected	Range of Detections	Compliance Achieved	Typical Source
Total Coliforms (% Positive/month)	2016	0	5%	0	0	Yes	Naturally present in the environment

## Tap Water Samples: Lead and Copper Results <sup>6</sup>

Substance (units)	Year Sampled	Action Level	MCLG	Amount Detected in 90 <sup>th</sup> Percentile Sample	Number of Samples Collected	Compliance Achieved	Number of Samples Above Action Level	Typical Source
Copper (ppm)	2015	1.3	1.3	0.08	50	Yes	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2015	15	0	2	50	Yes	0	Corrosion of household plumbing systems; Erosion of natural deposits



## Other Substances of Interest (Unless Noted, Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	Amount Detected	Range of Detections	Typical Source
Alkalinity (ppm as CaCO <sub>3</sub> )	2016	158	119 - 203	Erosion of natural deposits
Hardness (ppm as CaCO <sub>3</sub> )	2016	239	162 - 307	Erosion of natural deposits
Hardness (gpg)	2016	12.87	9.46 - 17.96	Erosion of natural deposits
pH	2016	7.6	7.3 - 7.9	Potential of hydrogen is a numerical scale used to determine the acidity or basicity of an aqueous solution. Measurements are calculated based off the amount of hydrogen ions present in a solution.
Sodium (ppm) <sup>7</sup>	2016	7.8	SS	Erosion of natural deposits
Chromium (ppb) <sup>8</sup>	2016	ND	SS	Chromium is an odorless and tasteless metallic element found naturally in rocks, plants, soil and volcanic dust, humans and animals
Chromium VI (ppb) <sup>8</sup>	2015	0.08	SS	Discharge from steel and pulp mills; Erosion of natural deposits
Strontium (ppb) <sup>8</sup>	2016	100	SS	An alkaline earth metal found commonly in nature
Vanadium (ppb) <sup>8</sup>	2016	ND	SS	Naturally-occurring elemental metal

### Additional Water Quality Research

*Cryptosporidium* is a microbial pathogen found in surface waters throughout the United States. *Cryptosporidium* must be ingested to cause disease, and it can be spread through means other than drinking water. 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. People with severely weakened immune systems who ingest *Cryptosporidium* have a risk of developing life threatening illness. We encourage such individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Although *Cryptosporidium* can be removed through commonly-used filtration methods, USEPA issued a rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. The initial round of monitoring ending in 2007 indicated levels of *Cryptosporidium* in the Mississippi River were low enough, and our treatment process effective enough, that additional levels of treatment were not required. A second round of sampling was required to begin in 2015. To comply with this rule, Iowa American Water once again began conducting 24 consecutive months of monitoring for *Cryptosporidium* in our raw water sources in 2015-2017. We have detected the organism in the Mississippi River during this testing, but based on the results of our *Cryptosporidium* monitoring in 2016, additional treatment may be required in the future.

<sup>1</sup> The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

<sup>2</sup> Fluoride is added to the water to help promote strong teeth.

<sup>3</sup> 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.

<sup>4</sup> Total organic carbon (TOC) has no health effects. However, TOC contributes to the formation of disinfection by-products. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAA5s). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

<sup>5</sup> Chloramine is a disinfecting agent added to control microbes that otherwise could cause waterborne diseases or other water quality concerns. Most water systems are required by law to add disinfecting agents, such as chloramine. The values reported reflect multiple locations in the service area.

<sup>6</sup> 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. Iowa-American Water Co- Davenport 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>.

<sup>7</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.

<sup>8</sup> Results were measured from samples taken in the Distribution System in compliance with the Unregulated Contaminant Monitoring Rule (UCMR). The purpose of the UCMR is to help EPA determine where certain contaminants occur and whether it needs to regulate those contaminants.

