



Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes it, the commonly-used filtration methods cannot guarantee 100% removal. Ottumwa Water and Hydro has installed Ultraviolet disinfection treatment which kills these organisms if any were to get by regular treatment/filtration. Our monitoring indicates the presence of these organisms in our source water. We conducted supplemental monitoring as part of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). The LT2 Rule builds on earlier rules to address the risk to public water systems for protection beyond current requirements. 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, immune-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. Immune-compromised individuals should consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Water quality has always been our primary concern at Ottumwa Water & Hydro. We believe that the best way to assure you that your drinking water is safe is to provide you with accurate facts. This Consumer Confidence Report will explain where your water comes from and the treatment process used to make it safe for drinking. The chart contained in this report will list the U.S. Environmental Protection Agency water quality regulations and the levels of contaminants detected in our water in 2018.

The Water Works completed several projects in 2018. Those include water main replacements for S. Davis, S. Sheridan, E. Main St., S. Fellows, S. Iowa Ave, E. Elmdale, N. Court, N. Ash, Vanness, Park Lane, West St. and Woodbine. In addition, several minor improvements were completed at the Water Treatment Plant.

Several large water main projects for 2019 include N. Marion, N. Elm and E. Highland. Another large water main project for 2019 is a section of E. Main from Court to Jefferson, which will be done in conjunction with a City of Ottumwa sewer and streetscape project. Two other projects also being done in conjunction with City sewer and street reconstruction include sections of N. Jefferson and E. Alta Vista Ave. Some other smaller water main projects scheduled for 2019 include sections of Filmore, E. Woodland, N. Green, N. Jefferson and Cherry Street.

We expect to start a large construction project at the Water Treatment Plant in 2019 to improve our lime waste disposition process and improve the system redundancy. We are continuing to evaluate the impact of high nitrate levels in Des Moines River and how we are going to address that issue. The goal and commitment of the Ottumwa Water & Hydro Board of trustees, management and staff is to meet the needs of our community for safe drinking water now and into the future.



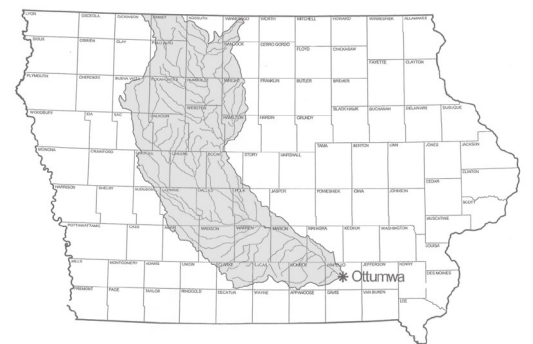
WHERE DOES MY WATER COME FROM?

The source of your water supply is the Des Moines River and the Ottumwa Reservoir. The Ottumwa Water & Hydro operates a low head hydro-electric generation facility that dams the Des Moines River, creating a reservoir of source water for our public water supply.

SOURCE WATER ASSESSMENT

An assessment of the Des Moines River watershed was completed in 2002. The assessment identifies and prioritizes potential sources of contamination in the Des Moines River Watershed. The susceptibility of these water sources is high. These potential sources include, but are not limited to: soil erosion, chemicals, such as fertilizer and pesticides, animal agriculture, wastewater treatment facilities—including septic systems and petroleum products. To view the Source Water Assessment, contact Ottumwa Water & Hydro at (641) 684-4606.

WATERSHED MAP



QUALITY TAP WATER

FOR MORE INFORMATION on this Consumer Confidence Report or other water quality concerns, please contact:

Ottumwa Water & Hydro
230 Turner Drive
Ottumwa, Iowa 52501
Phone: (641) 684-4606
Fax: (641) 682-3269

Public meeting information:
We encourage our customers to

attend and participate in the meetings of our water utility. The Ottumwa Water & Hydro five-member Board of Trustees meets on the third Tuesday of each month at 4:00 p.m. Board meetings are open to the public.

Ottumwa Water & Hydro
230 Turner Drive
Ottumwa, Iowa 52501
Phone: (641) 684-4606

Many customers wish to know if bottled water is safer than regular tap water. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water that must provide the same protection for public health. Any bottled water labeled “drinking water” must meet EPA’s drinking water regulations. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of a contaminant does not necessarily indicate that water poses a health risk.

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. Ottumwa Water and Hydro 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 about 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>.

More information about contaminants and potential health effects can be obtained by contacting the:

EPA’s Safe Drinking Water Hotline, 1-800-426-4791 or
<http://water.epa.gov/drink>

AWWA Safe Drinking Water Website—www.drinktap.org

Drinking Water and Health Information from the EPA

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemo-therapy, 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 from their health care providers about drinking water. The EPA and Centers for Disease Control 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).

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 for advice from your health care provider.



2018 Water Quality Results—Ottumwa Water & Hydro

SUBSTANCE							
MICROBIAL CONTAMINANTS							
	YEAR TESTED	VIOLATION YES/NO	HIGHEST LEVEL ALLOWED (MCL)	HIGHEST DETECTED LEVEL	UTILITY RANGE	EPA MCLG (EPA GOAL)	SOURCES OF CONTAMINANT
Turbidity (NTU)	2018	No	0.3	0.167	0.045-0.167 (100.00%)	N/A	Soil runoff
SOURCE WATER							
TOTAL ORGANIC CARBON							
	YEAR TESTED	VIOLATION YES/NO	% REMOVAL RANGE		% REMOVAL RATIO		SOURCES OF CONTAMINANT
Des Moines River TOC	2018	No	27-49%		1.58-3.2%		Naturally present in the environment
OTHER SOURCE WATER CONTAMINANTS							
	YEAR TESTED	VIOLATION YES/NO		HIGHEST DETECTED LEVEL	UTILITY RANGE		SOURCES OF CONTAMINANT
Cryptosporidium (oocysts/L)	2018	No	TT	0.100	<0.100-0.100		Untreated raw water, human and animal waste
Giardia (oocysts/L)	2018	No	TT	0.200	<0.100-0.200		Untreated raw water, human and animal waste
E. coli (cfu/100 mL)	2018	No	TT	390	<1.0-390		Untreated raw water, human and animal waste
INORGANIC CHEMICALS							
Fluoride (ppm)	2018	No	4	0.99	0.17-0.99	4	Additive to promote strong teeth; discharge from fertilizer and aluminum factories; erosion of natural deposits
Nitrate (as N) (ppm)	2018	No	10	8.60	2.50-8.60	10	Runoff from fertilizer use; leaching from septic tanks; sewage, erosion of natural deposits
Sodium (ppm)	2018	No	N/A	34.5	N/A	N/A	Erosion of natural deposits; added to water during treatment
ORGANIC CONTAMINANTS							
Total Trihalomethane [TTHM] (ppb)	2018	No	80	60.0 LRAA	32-105	N/A	Byproduct of treatment process
Total Haloacetic Acids [HAA5] (ppb)	2018	No	60	37.0 LRAA	25-54	N/A	Byproduct of treatment process
Atrazine (ppb)	2018	No	3	0.72	N/A	3	Runoff from herbicide used on row crops
DISINFECTANT							
Chlorine (mg/L)	2018	No	4	2.8 RAA	2.14-3.33	4 MRDLG	Additive used to control microbes
SUBSTANCE AT CUSTOMER TAP							
	YEAR TESTED	VIOLATION YES/NO	ACTION LEVEL	90th PERCENTILE	UTILITY RANGE	# SAMPLES ABOVE ACTION LEVEL	SOURCES OF CONTAMINANT
Copper (ppm)	2016	No	1.3	0.023	ND-0.0305	0	Corrosion of home plumbing; erosion of natural deposits
Lead (ppb)	2016	No	15	1.70	ND-3	0	Corrosion of home plumbing; erosion of natural deposits

NOTE: The EPA requires monitoring of over 80 drinking water contaminants. Those listed above are the only contaminants detected in your drinking water. For a complete list, contact Ottumwa Water & Hydro.

Definitions

Action Level (AL) » The concentration of a contaminant that, if exceeded, triggers a treatment or other requirement that a water system must follow.

Inorganic Contaminant » Such as salts and metals, which can occur naturally or come from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Maximum Contaminant Level (MCL) » The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) » The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Residual Disinfectant Level (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 (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.

Microbiological Contaminants » Very small organisms, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Most Probable Number (MPN) » The most probable number (MPN) is the number of organisms that are most likely to have produced laboratory results in a particular test. The MPN method is used to quantify the concentration of the viable microorganisms in a sample.

ND » Not detected at testing limit.

NTU » Nephelometric Turbidity Units

Organic Contaminants » Includes synthetic and volatile organic chemicals, which are industrial and petroleum process byproducts and can also come from gas stations, urban storm water runoff and septic systems.

pCi/L » Picocuries per liter

ppb » Parts of contaminant per billion parts of water. One part per billion (ppb) is equivalent to a single penny in ten million dollars. Ppb may also be referred to as **ug/L** or micrograms per liter.

ppm » Parts of contaminant per million parts of water. One part per million (ppm) is equivalent to a single penny in ten thousand dollars. Ppm may also be referred to as **mg/L** or milligrams per liter.

Pesticides and Herbicides » May come from agriculture, urban storm water runoff and residential use.

RAA » Running Annual Average.

Radioactive Contaminants » Occur naturally or result from oil and gas production and mining activities.

TOC » Total organic carbon in untreated water.

Treatment Technique (TT) » A required process intended to reduce the level of contaminant in drinking water.

Chlorine Disinfectant » The most common drinking water treatment is disinfection. Disinfection is considered to be the primary mechanism to kill bacteria and other germs to prevent the spread of waterborne diseases. Chlorine is the most widely used disinfectant. Disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts. EPA sets standards for controlling the levels of disinfectants and disinfection byproducts in drinking water. The water quality chart in this report reflects these standards and the utility's ability to meet those standards.

Fluoride » Some fluoride is naturally present in the source water. The amount is carefully monitored every day so optimum concentration is maintained.

If you have concerns about fluoride, you should discuss this topic with your dentist and doctor.

Nitrate » 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 may 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 for advice from your healthcare provider.

Turbidity » Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

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 compounds associated with service lines and home plumbing. Ottumwa Water & Hydro are 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 methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Revised Total Coliform Rule (RTCR) » Establishes a maximum contaminant level for *E. coli* and uses *E. coli* and total coliforms to initiate a "find and fix" approach to address fecal contamination that could enter the distribution system. It requires public water systems to perform assessments to identify sanitary defects and subsequently take action to correct them.

Total Trihalomethanes (TTHMs) » Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.