

2018 Consumer Confidence Report

Water quality is our primary commitment at Burlington Municipal Waterworks. We believe that the best way to assure you that your drinking water is safe is to provide you with accurate facts.

The information in this Consumer Confidence Report summarizes the results of our water monitoring program as required by the Environmental Protection Agency (EPA) during 2017. Many of the analyses are required by the Safe Drinking Water Act and other regulations. However, we monitor for contaminants above and beyond the basic requirements. If you have questions about the information in this report please contact us at (319) 754-6501

Burlington Waterworks is dedicated to providing you, the customer, with the safest and most dependable supply of drinking water available.



SOURCE WATER ASSESSMENT

There are two sources of water that the Burlington Municipal Waterworks uses to supply the needs of our customers. Approximately 80% comes from the Mississippi River. The remaining 20% comes from the 3 wells in the Pleistocene aquifer. The Pleistocene aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer fairly quickly. The Burlington Municipal Waterworks wells will be most susceptible to activities such as gas stations, industrial sites and municipal wastewater discharges. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available from Burlington Municipal Waterworks at (319) 754-6501

QUALITY TAP WATER



For more information on this Consumer Confidence Report or other water quality concerns, please contact:

Burlington Municipal Waterworks
Ken Gregory
Plant Manager
3000 Des Moines Ave.
Burlington, IA 52601
(319) 752-7611



Public meeting information:
We encourage our customers to attend and participate in the meetings

of our water utility. Burlington Municipal Waterworks Board of Trustees meet the second Tuesday of each month at 9:00 a.m. Board meetings are open to the public.

Burlington Municipal Waterworks
Shane Johnson
General Manager
500 North Third Street
Burlington, IA 52601
Phone: (319) 754-6501

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, persons with cancer undergoing chemo-therapy, 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.

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.

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. Burlington Municipal Waterworks 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 water testing is available from the Safe Drinking Water Hotline.

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>

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. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they can cause disease. We conducted supplemental monitoring as suggested in the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) to determine if additional treatment is needed. 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. We encourage immune-compromised individuals to 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.

2017 Water Quality Results—Burlington Municipal Waterworks

SUBSTANCE	YEAR TESTED	VIOLATION YES/NO	HIGHEST LEVEL ALLOWED (MCL)	HIGHEST DETECTED LEVEL	UTILITY RANGE & % OF SAMPLES MEETING TURBIDITY LIMITS	EPA MCLG (EPA GOAL)	SOURCES OF CONTAMINANT
MICROBIAL CONTAMINANTS							
Turbidity (NTU)*	2017	No	0.3	0.12	0.01-0.12 (100%)	N/A	Soil runoff
INORGANIC CHEMICALS							
Barium (mg/l)	2014	No	2	0.0171	N/A	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (mg/l)	2017	No	4	1.07 RAA	0.32-1.34	4	Additive to promote strong teeth; discharge from fertilizer and aluminum factories; erosion of natural deposits
Nitrate [as N] (mg/l)	2017	No	10	4.0	0.8-4.0	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (mg/l)	2017	No	N/A	13.3	N/A	N/A	Erosion of natural deposits; added to water during treatment process
ORGANIC CONTAMINANTS							
Total Trihalomethane [TTHM] (ppb)	2017	No	80	53.18 LRAA	35.1-70.0	N/A	Byproduct of treatment process
Total Haloacetic Acids [HAA5] (ppb/l)	2017	No	60	26.18 LRAA	20.40-37.1	N/A	Byproduct of treatment process
DISINFECTANT							
Chlorine as Free S/EP (mg/l)	2017	No	4	3.46	2.20-3.46	4	Additive used to control microbes
Chlorine as Total S/EP (mg/l)	2017	No	4	3.70	2.11-3.70	4	Additive used to control microbes
Chlorine as Total Distribution for MDRL Calculation (mg/l)	2017	No	4 MRDL	2.44 RAA	0.40-3.10	4 MDRL	Additive used to control microbes
SOURCE WATER			% REMOVAL	% REMOVAL			
TOTAL ORGANIC CARBON			RANGE	REQUIRED	SOURCES OF CONTAMINANT		
Mississippi River and Wells	2017	No	52.45-62.63%		15-30%		Naturally present in the environment
Cryptosporidium	2017	No	N/A	0.10/L	0.0-0.1/L	N/A	Human and animal waste (Sampling is on untreated raw water)
SUBSTANCE			ACTION LEVEL	MAXIMUM 90% DETECTION	UTILITY RANGE	# SAMPLES ABOVE ACTION LEVEL	SOURCES OF CONTAMINANT
COPPER AND LEAD AT CUSTOMER TAP							
Copper (ppm)	Aug-16	No	1.3	0.0183	ND-0.0244		Corrosion of home plumbing; erosion of natural deposits
Lead (ppb)	Aug-16	No	15	1.7	ND-4.4	2	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 the Burlington Municipal Waterworks.

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.

LRAA » Locational Running Annual Average

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 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

N/A » Not applicable

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 agriculture activity. If you are caring for an infant, you should ask for advice from your health care 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. Burlington Municipal Waterworks 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 methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

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.

