

# 2021 CONSUMER CONFIDENCE REPORT



CITY OF  
**Ames**<sup>™</sup>  
WATER PLANT

1800 E. 13th Street | Ames, IA 50010

Este informe contiene información importante acerca de su agua potable. Le recomendamos que encuentre recursos que le pueden ayudar a traducir esta información.

For more information, please visit [www.CityOfAmes.org/Water](http://www.CityOfAmes.org/Water) or 515.239.5150



## AT YOUR SERVICE – EVEN IN A DISASTER

The year 2020 brought to light just how critical water and wastewater utilities are in protecting our way of life. It also demonstrates the importance – and the quiet, unheralded payoff – of forward-looking planning.

- As the coronavirus pandemic unfolded last year, what was the very first bit of advice you were given to help slow the spread? “Wash your hands frequently.”
- When the derecho struck central Iowa in the middle of August, the Ames water and sewer utilities continued operating uninterrupted.
- When much of Iowa was in the grasp of a severe drought in the fall of 2020, the Ames Water Plant was easily able to meet the community’s needs.

The Water Plant’s Capital Improvements Plan includes a number of projects intended to continue to make Ames’ drinking water system even more resilient to disasters of all types. Planned projects include:

- Additional groundwater supplies to increase flexibility and prepare for growth in the community;
- Additional standby power sources to increase the self-reliance of the utility amid a devastating catastrophe; and
- An ongoing focus on physical and cyber security measures to protect against intentional malevolent acts.

Even actions like cross-training our staff so that multiple people can operate and maintain our treatment facilities provides an enhanced capability to react when something unexpected happens.

It can be difficult to know what the future might bring, or what emergency might arise next. But as Benjamin Franklin once said, “Failing to plan is planning to fail.” If there is one lesson we need to hang on to from 2020, it’s that we need to continue proactively growing the resiliency of our water systems, and not take them for granted. Failure to do so could have a debilitating impact on our way of life.

*John Kolum*



Substance (units)	Test Year	No. of Samples	Range	Average Value	Highest Allowed Level (MCL)	Ideal Level (MCLG)	Typical Source of Substance
<b>SUBSTANCES TESTED FOR</b>							
Nitrate (ppm)	2020	42	ND	ND	10	<10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Total Coliform (P/A)	2020	749	Present in 0% of Monthly Samples	Present in 0% of Monthly Samples	Present in <5% of Monthly Samples	Present in 0% of Monthly Samples	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water.
Total Chlorine (ppm)	2020	749	1.30 - 2.80	2.46	4	<4	Water additive used to control microbes.
Fluoride (ppm)	2020	1,094	0.08 - 0.97	0.56	4	<4	Erosion of natural deposits; Water additive which promotes strong teeth .
Sodium (ppm)	2018	1	35	35	N/A	N/A	Erosion of natural deposits; Added to water during treatment process.
Nitrite (ppm)	2020	42	0.005 - 0.170	0.034	1	<1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Combined Radium (pCi/L)	2020	1	1.0	1.0	5.0	0	Erosion of natural deposits.
Chlorate (ppm)	2020	2	1.20 - 1.30	1.25	N/A	N/A	By-product of drinking water disinfection.
Chlorite (ppm)	2020	2	ND	ND	1.0	< 0.8	By-product of drinking water disinfection.
Total Trihalomethanes - TTHM (ppb)	2020	2	ND	ND	80	N/A	By-product of drinking water disinfection.
Total Haloacetic Acids - HAA5 (ppb)	2020	2	ND	ND	60	N/A	By-product of drinking water disinfection.
Substances (units)	Test Year	No. of Samples	90% of Samples Were Below	No. of Samples Above AL	Action Level (AL)	Ideal Level (MCLG)	Typical Source of Substance
<b>SUBSTANCES REGULATED AT THE CONSUMERS TAP</b>							
Lead (ppb)	2019	52	2.37	0	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	2019	52	0.02	0	1.3	<1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

**ABBREVIATIONS TO KNOW:** **ND:** not detected by test method **ppm:** parts per million, same as milligrams per liter (mg/L) **ppb:** parts per billion, same as micrograms per liter (µg/L) **TT:** treatment technique, value determined by available treatment technology **pCi/L:** picocuries per liter

**TERMS TO KNOW:** Regulated substances have Maximum Contaminant Levels (MCLs) set by the EPA. This is the highest level of a contaminant that is allowed in drinking water. Some contaminants have Maximum Contaminant Level Goals (MCLGs). This is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for an additional margin of safety. MCLs are set as close to MCLGs as feasible using the best available water treatment process. Unregulated substances do not have established MCLs but are monitored regularly. If an unacceptable amount of any substance is ever found in our water, the City of Ames will notify residents immediately and take corrective action to eliminate the problem. The MCL for lead and copper is known as the Action Level (AL) which, if exceeded, triggers treatment or other requirements. If 90% of all samples tested are not below the action level concentration, then the water utility is required to implement treatment improvements to lower lead/copper levels. Other actions, such as public education and notices, may also be required.



## 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. The Ames Water Treatment Plant 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>.

## PROTECTING AGAINST LEAD

The Ames Water Plant produces water that helps lower the risk of lead contamination. Lead is not present when the water leaves the treatment plant, but can enter the drinking water when private service lines, made of lead, corrode. The Ames Water Plant makes corrosion less likely by maintaining a very specific water chemistry. Some parameters are monitored continuously, and Water Plant operators perform additional tests daily to ensure that the water is unlikely to corrode lead pipes. For more detailed information about how we help limit lead exposure, visit [www.CityOfAmes.org/Lead](http://www.CityOfAmes.org/Lead).

## DRINKING WATER REGULATIONS

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

## SOURCE WATER EVALUATION

Ames' award-winning water originates in groundwater aquifers. The water in Ames' aquifers flows through the remnants of ancient riverbeds of loway Creek and the South Skunk River as they existed before the most recent glaciers changed the terrain. The City of Ames uses 22 wells to access the water in the layers of sand and gravel in these ancient riverbeds. In 2014, the Iowa Department of Natural Resources (IDNR) completed a source water evaluation for Ames. The evaluation determined that Ames' groundwater has the potential to be contaminated by leaking underground storage tanks, landfills, or improper hazardous waste disposal. As water travels over the surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. Water can also pick up substances resulting from human and animal activity. The City of Ames works diligently to ensure that contamination does not impact the Ames water supply. Interested

citizens can request a copy of the IDNR source water evaluation at the City of Ames Water Treatment Plant.

## SPECIAL HEALTH CONCERNS

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 people, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791).

## WATER TREATMENT PROCESS

The United States has some of the best public water supplies in the world. To make this happen, trained professionals work 24 hours a day to provide you with the best possible water.

**FROM THE WELL** - The Ames Water Treatment Plant provides treatment to ensure a safe, palatable supply of drinking water for its customers. Have you ever wondered how the underground water supply gets to you? It all begins when well water enters the treatment plant through an aerator. This vents dissolved gases to the atmosphere that would contribute undesirable taste and odor and interfere with subsequent treatment steps. Dissolved iron combines with oxygen in the air to form rust particles that are removed in a later treatment step.

**LIME ADDED TO REMOVE HARDNESS** - The water then flows into solids contact units where lime is added to raise the pH. In the center column, or solids contact zone, the lime forms solid particles which remove calcium and magnesium, minerals that contribute to hardness.

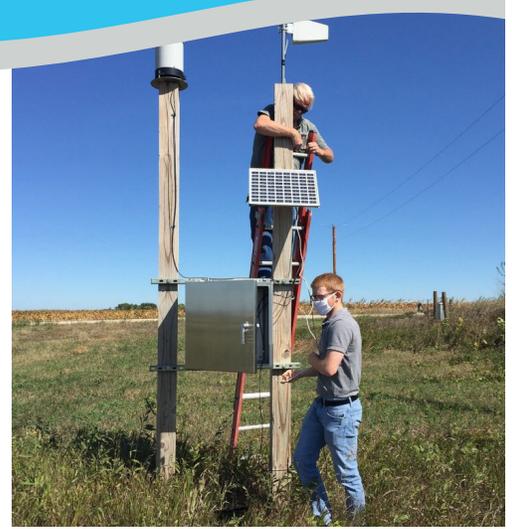
**HARDNESS SETTLES OUT** - The water then travels to the clarification zone of the solids contact unit where the insoluble calcium and magnesium particles settle to the bottom. These residuals, commonly known as sludge, flow to a lagoon and are allowed to dry. The residuals are recycled to farm fields as a soil conditioner.

**CLEAN, FILTERED WATER** - Next, water enters recarbonation tanks where carbon dioxide gas is diffused into the water to stop the softening reaction. After recarbonation, polyphosphate is added to stabilize the water and reduce scale build-up on the filters. Water is then filtered through beds of anthracite coal and sand. These filters remove fine suspended particles.

**TO YOUR HOME** - Finally, in accordance with recommendations from the U.S. Department of Health and Human Services and the U.S. Environmental Protection Agency, fluoride is added to the water for dental protection just prior to distribution to the community.



# LOOKING BACK AT 2020



The Ames City Council is the governing body that oversees the Ames water system. Bring your ideas to the public forums at the City Council meetings which are normally held at 6:00 p.m. on the second and fourth Tuesdays of each month in the City Council Chambers at 515 Clark Ave., or via Zoom teleconference.

For questions regarding the information in this report, or any questions related to your water, please contact the Ames Water Treatment Plant at 515.239.5150.



Find us on Twitter, Instagram, and Facebook: @AmesWater