

# 2023 CONSUMER CONFIDENCE REPORT



City of Ames Water Plant, 1800 E. 13th Street | Ames, IA 50010



## STAYING AHEAD OF REGULATIONS

It's pretty amazing how far drinking water utilities have come in protecting our customers. Anymore, it means our staff must constantly watch for new trends in order to be ready for what might be coming next.

Recently, the US EPA has proposed several new rules that impact drinking water. These new rules cover a wide range of issues, including updates for well-known things like lead and copper, and new rules for emerging issues like PFAS. They also address things like computer security and the ways that utilities communicate with their customers. Here are some highlights of how Ames prepared for these new rules even before they were published.

### LEAD.

Ames has a long-standing treatment process that is designed to help protect against issues like the high lead found in Flint, Michigan several years ago. While the new rule requires extra documentation and testing, it won't change the way we treat the water, because we were already doing what the rule requires.

### PFAS.

This is a group of man-made chemicals made popular in the media with nicknames like "forever chemicals." Ames

first started monitoring for PFAS several years ago, and we identified a single well that had high PFAS levels. That well was removed from use before the new rules were released. The rule likely won't be finalized until the end of 2023, but our test results indicate that Ames drinking water will immediately comply.

### CYBERSECURITY.

Ames has long been working on cybersecurity protection. We have completed several assessments and audits performed by outside experts. Again, Ames will already meet the requirements of this rule when it is finalized.

### WATER QUALITY REPORTS.

A recently proposed rule would change the things we must include in the annual report that you are reading right now. We do apologize if the report becomes harder to read in the future, but the things we are required to put in the report continue to get longer and more complicated. Our best advice: if you have any questions at all, give us a call at the Ames Water Plant. We are always ready to share our passion for water with you.

A handwritten signature in black ink that reads 'John Kalum'. The signature is written in a cursive style with a large, looped 'J' and 'K'.

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 call 515.239.5150

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)	2022	42	ND	ND	10	<10	Runoff from fertilizer use; Leaching from septic tanks or sewage; Erosion of natural deposits.
Total Coliform (P/A)	2022	731	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)	2022	731	1.01 - 2.72	2.39	4	<4	Water additive used to control microbes.
Fluoride (ppm)	2022	1,127	0.22 - 1.20	0.68	4	<4	Erosion of natural deposits; Water additive which promotes strong teeth.
Sodium (ppm)	2021	1	32	32	N/A	N/A	Erosion of natural deposits; Added to water during treatment process.
Nitrite (ppm)	2022	41	0.01 - 0.18	0.065	1	<1	Runoff from fertilizer use; Leaching from septic tanks or sewage; Erosion of natural deposits.
Barium (ppm)	2021	1	0.08	0.08	2	<2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Combined Radium (pCi/L)	2020	1	1.0	1.0	5.0	0	Erosion of natural deposits.
Chlorate (ppm)	2022	2	0.13 - 0.14	0.135	N/A	N/A	By-product of drinking water disinfection.
Chlorite (ppm)	2022	2	ND	ND	1.0	<0.8	By-product of drinking water disinfection.
Total Trihalomethanes - TTHM (ppb)	2022	2	ND	ND	80	N/A	By-product of drinking water disinfection.
Total Haloacetic Acids - HAA5 (ppb)	2022	2	ND	ND	60	N/A	By-product of drinking water disinfection.
PFBS (ppt)	2022	5	ND - 2.5	0.50	N/A	N/A	Food packaging; Non-stick and stain-resistant consumer products; Aqueous fire-fighting foams; Cosmetics; Industrial processes.
PFBA (ppt)	2022	5	2.2 - 3.2	2.56	N/A	N/A	
PFHxS (ppt)	2022	5	2.0 - 7.5	3.48	N/A	N/A	
PFHxA (ppt)	2022	5	ND - 3.8	0.76	N/A	N/A	
PFOA (ppt)	2022	5	ND - 3.6	1.12	N/A	N/A	
PFPeA (ppt)	2022	5	ND - 4.2	0.84	N/A	N/A	
PFOS (ppt)	2022	5	2.4 - 6.8	3.38	N/A	N/A	
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)	2022	60	3.5	1	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	2022	60	0.02	0	1.3	<1.3	Corrosion of household plumbing systems; Erosion of natural deposits.

**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) ppt: parts per trillion TT: treatment technique, value determined by available treatment technology pCi/L: picocuries per liter PFBS: Perfluorobutanesulfonic Acid PFBA: Perfluorobutanoic Acid PFHxS: Perfluorohexanesulfonic Acid PFHxA: Perfluorohexanoic Acid PFOA: Perfluorooctanoic Acid PFPeA: Perfluoropentanoic Acid PFOS: Perfluorooctanesulfonic Acid

SEE FOLLOWING PAGE FOR TERMS TO KNOW

## 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791) or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## PROTECTING AGAINST LEAD

The Ames Water Treatment 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 Treatment Plant makes corrosion less likely by maintaining a very specific water chemistry. Some parameters are monitored continuously, and Water Treatment 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 EPA's Safe Drinking Water Hotline.

## 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.

## 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, chlorine is added to disinfect the water as it 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. EPA, fluoride is added to the water for dental protection just prior to distribution to the community.



**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.

# LOOKING BACK AT 2022

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.



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.



Find us on Twitter and Instagram: @AmesWater