2018 WATER QUALITY DATA - DETECTED CONTAMINANTS

U of I Samples Collected by the University within the Campus Distribution System
IAWC Samples Collected within the Parent Water Supply by Illinois-American Water Company

VIOLATION SUMMARY

We are happy to announce no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2018.

LEAD AND COPPER							
Contaminant (Units)	**Sampled by; Date**	**MCLG**	**MCL**	**90th Percentile**	**# Sites Exceeding AL**	**Violation?**	**Typical Source of Contaminant**
Copper (ppm) *	U of I 2017	1.3	1.3	0.19	0	NO	Water additive used to control microbes.
Lead (ppm) *	U of I 2017	0	15	7.1	1	NO	By-product of drinking water disinfection.
DISINFECTANTS & DISINFECTION BYPRODUCTS							
Contaminant (Units)	**Sampled by; Date**	**MCLG**	**MCL**	**Highest Level Detected**	**Range of Detections**	**Violation?**	**Typical Source of Contaminant**
Chlorine [1] (ppm)	IAWC	MRDLG=4	MRDL=4	2.2	2 - 3	NO	Water additive used to control microbes.
Haloacetic Acids (HAA5) (ppb)	U of I	NA	60	22.3	16.3 - 27	NO	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	U of I	NA	80	63.2	48.3 - 76.5	NO	By-product of drinking water disinfection.
INORGANIC CONTAMINANTS							
Arsenic (ppb)	IAWC 2018	0	10	1	1 - 1	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Fluoride (ppm) [2]	IAWC	4	4	0.71	0.6 - 0.71	NO	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
RADIOACTIVE CONTAMINANTS							
Combined Radium 226/228 (pCi/L)	IAWC 2018	0	5	1.512	0 - 1.512	NO	Erosion of natural deposits.
Gross Alpha Excluding radon and uranium (pCi/L)*	IAWC 2018	0	15	1.24	0 - 1.24	NO	Erosion of natural deposits.
STATE REGULATED CONTAMINANTS							
Sodium (ppm) [3]	IAWC 2018	NA	NA	60	40.5 - 60	NO	Erosion of natural deposits; used in water softener regeneration.
UNREGULATED CONTAMINANT MONITORING RULE 4 [4]							
Manganese (ppb)	IAWC 2018	150	150	19	0.46 - 19	NO	Erosion of natural deposits; used in water softener regeneration.
Total Haloacetic Acids - 9 UCMR4 (ppb)	IAWC 2018	No goal for the total	80	37	24 - 37	NO	By-product of drinking water disinfection.

***** The State of Illinois requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year-to-year, or the system is not considered vulnerable to this type of contamination. As such, some of the data, though representative, is more than one year old.

[1] Chlorine and chloramines are disinfecting agents added to control microbes that otherwise could cause waterborne diseases or other water quality concerns. Most water systems in Illinois are required by law to add either chlorine or cloramines. Levels well in excess of the MRDL could cause irritation of the eyes or nose in some people. The values reported reflect multiple locations in the service area.

[2] Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends a fluoride level of 0.7 mg/L (ppm).

[3] Sodium has no federal or state MCL. 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 the level of sodium in the water.

[4] Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA is determining the occurence of unregulated contaminants in drinking water and whether future regulation is warranted. The MCL for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

DEFINITIONS

MCLG: Maximum Contaminant Level Goal. The level of contaminant in drinking water, below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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 technology.

MRDLG: Maximum Residual Disinfectant Level Goal. 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.

MRDL: Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that a disinfectant is necessary for control of microbial contaminants.

pCi/L: PicoCuries per liter. A measurement of the natural rate of disintegration of radioactive contaminants in water.

Avg: Regulatory compliance with some MCLs are based on running annual averages of monthly samples.

AL: Action Level. The concentration of contaminant that, when exceeded, triggers treatment or other required actions by the water supply.

ALG: Action Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

ppm: Parts per million. Also milligrams per liter – or one ounce in 7,350 gallons of water.

ppb: Parts per billion. Also micrograms per liter – or one ounce in 7,350,000 gallons of water.

ND: Not detectable at testing limits.

NA: Not applicable.

Date Sampled: If sample date appears, the IEPA requires monitoring for the contaminant less than once per year because the concentrations do not frequently change. If sample date does not appear, monitoring was conducted in 2018.

Level Found: This column represents an average of sample result data collected during the sample period. In some cases, it may represent a single sample if only one sample was collected. For lead and copper, the level found equals the 90th percentile of all samples taken.

Range of Detections: This column represents a range of individual sample results, from lowest to highest, that were collected during the sample period.

Highest Level Detected: In most cases this column is the highest detected level unless compliance is calculated on a Running Annual Average or Locational Running Annual Average. If multiple entry points exist, the data from the entry point with the highest value is reported.

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

WATER QUALITY REPORT

2018

Public Water System ID: IL0195500

INTRODUCTION

The 2018 Water Quality Report from the University of Illinois at Urbana-Champaign provides information about the source of campus drinking water, contaminant testing, general health precautions, and how calendar year 2018 sample results compare to regulatory requirements. **The U of I is pleased to report that all United States Environmental Protection Agency (USEPA) and Illinois Environmental Protection Agency (IEPA) drinking water quality standards have been met, with no violations of maximum contaminant levels (MCLs).**

If you have any questions about this report or U of I drinking water quality, please contact Facilities & Services, Safety and Compliance at 217-265-9828 or via email at cruhter@illinois.edu. **A copy of this report is available at go.fs.illinois.edu/waterquality or by contacting Safety and Compliance.**

In compliance with state and USEPA regulations, the university issues a report annually describing the quality of your drinking water. The purpose of this report is to increase understanding of drinking water standards and raise awareness of the need to protect your drinking water sources.

WATER INFORMATION SOURCES

Illinois American Water
www.illinoisamerican.com

United States Environmental Protection Agency
www.epa.gov/safewater

Safe Drinking Water Hotline
800-426-4791

Illinois Environmental Protection Agency
www2.illinois.gov/epa

Surf Your Watershed
Locate your watershed and a host of information.
www.epa.gov/surf

Envirofacts
U.S. environmental data.
www.epa.gov/enviro

National Radon Program Services
800-SOS-RADON
www.sosradon.org

LOCAL GROUPS INVOLVED IN WATER AND ENVIRONMENTAL ISSUES

Mahomet Aquifer Consortium
www.mahometaquiferconsortium.org

Prairie Rivers Network
217-344-2371
www.prairierivers.org

ILLINOIS

WHAT IS THE SOURCE OF U OF I DRINKING WATER?

The University of Illinois purchases drinking water from Illinois-American Water Company (IAWC), Champaign District. Water is delivered to campus via five metered locations, and this configuration is known as a consecutive water system. Therefore, the distribution system is considered a public water system. The campus system includes approximately 46 miles of water main. The university distributes this water to the vast majority of campus buildings, however a minority of buildings are supplied directly from IAWC. The following information about IAWC, Champaign District water supply is from their 2018 Annual Water Quality Report and is available by calling 217-373-3273 or visiting their website at www.illinoisamerican.com.

The source of supply for IAWC is groundwater. Currently, 21 wells deliver water for treatment to two lime-softening plants: the Mattis Avenue Plant, located in Champaign, and the Bradley Avenue Plant, located west of Champaign. The wells are primarily located in the Mahomet Aquifer and supply water to both plants. The wells range from 208 to 366 feet in depth and are protected from surface contamination by geologic barriers in the aquifers. An aquifer is a porous underground formation (such as sand and gravel) that is saturated with water.

SOURCE WATER ASSESSMENT

The IEPA has completed a source water assessment for the Champaign County system. In this report, IEPA indicates the wells supplying Champaign County are not geologically sensitive.

To determine IAWC - Champaign's susceptibility to groundwater contamination, a Well Site Survey Report from February 1991 and a source inventory conducted in 1999 by the Illinois Rural Water Association, in cooperation with the Illinois EPA, were reviewed. Based on the information contained in these documents, potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the IAWC-Champaign's community water supply wells.

The IEPA has determined that IAWC Champaign's wells are not susceptible to inorganic chemical (IOC), volatile organic chemical (VOC), and synthetic organic chemical (SOC) contamination. This determination is based on a number of criteria including monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, and noting the available hydrogeologic data for the wells. The IEPA has made recommendations to further minimize the risk to the facility's groundwater supply. If you would like additional information on the source water assessment, please contact Safety and Compliance at 217-265-9828 or go to http://dataservices.epa.illinois.gov/swap/factsheet.aspx.

PROTECTING THE WATER YOU DRINK

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants 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 as public water systems. IAWC's advanced water treatment processes are designed to reduce any such substances to levels well below any health concern.

The university is required to test water in its distribution system for coliform, lead, copper, trihalomethanes, and haloacetic acids. IEPA requires 15 samples per month to be analyzed for coliform. In 2018, normal operations of the U of I water distribution system resulted in approximately 16 samples per month for coliform. The most recent testing results for coliform, lead, copper, haloacetic acids, and total trihalomethanes (TTHM) are provided in the Data Summary table at the end of this report.

GENERAL INFORMATION ABOUT ALL DRINKING WATER

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and, in some cases, radioactive material. It can also dissolve substances resulting from the presence of animals or human activity. Substances 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 may be naturally occurring or result from urban stormwater 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 stormwater 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 stormwater runoff and septic systems; and
- Radioactive Contaminants, which may occur naturally or result from oil and gas production and mining activities.

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IMPORTANT HEALTH CONSIDERATIONS

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that 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 USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels.

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, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

USEPA and Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

RADON

Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Major sources of radon gas are soil and cigarettes. Inhalation of radon gas has been linked to lung cancer; however, it is not clear how radon in your drinking water contributes to this health effect. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, contact the Champaign-Urbana Public Health District, or call 1-800-SOS-RADON.

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 University of Illinois 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 two 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 by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or at www.epa.gov/safewater/lead.

ARSENIC

While your drinking water meets the EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

2018 DATA SUMMARY

The following table lists the contaminants that were detected in your water. The presence of contaminants does not necessarily indicate that the water poses a health risk. The data in this table represents a combination of the testing results on finished water from the distribution system and its parent supply, IAWC, Champaign District. The university monitors water daily at five separate metered feeds. Additionally, the university monitors water at eight points within the campus distribution system. IAWC monitors the parent water supply at points prior to entering the campus distribution system.