Water Quality Report

2022

Public Water Systems ID:
1195550

Introduction

The 2022 Water Quality Report from Southern Illinois University Edwardsville provides information about the source of campus drinking water, contaminant testing, general health precautions, and how calendar year 2022 sample results compare to regulatory requirements. Southern Illinois University Edwardsville 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 SIUE drinking water quality, please contact Facilities, at 618-650-3711 or via email at fmserv@siue.edu.

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 the understanding of drinking water standards and raise awareness of the need to protect your drinking water resources.

Water Information Sources

City of Edwardsville
https://www.cityofedwardsville.com/261/Water-Department

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

State Drinking Water Hotline
800-426-4791

Illinois Environmental Protection Agency
www2.illinois.gov/epa

SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE

WHAT IS THE SOURCE OF SIUE DRINKING WATER?

SIUE purchases water from the city of Edwardsville. Edwardsville's water treatment plant is located outside of the Edwardsville city limits. Water is obtained from two well fields that draw water from the American Bottoms Underground Aquifer. The system has nine wells that have been drilled to an average depth of 114 feet. The water is filtered, softened, and disinfected. Water is pumped from the water treatment plant to the City and its bulk water customers through a network of water mains. Water pressures is maintained in the system by two elevated storage tanks and two ground-level storage tanks. The tanks are constructed of steel and concrete and have a combined volume of 3,420,000 gallons of water. In addition, the water treatment plant has one ground-level storage basin with a volume of 990,000 gallons of water.

SOURCE WATER ASSESSMENT AND ITS AVAILABILTY

Illinois Environmental Protection Agency's Source Water Assessment Plan (SWAP) is available at the city of Edwardsville Water Department. This plan is as assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

WHY ARE THERE CONTAMINANTS IN MY DRINKING WATER?

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 (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity such as:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
- Inorganic contaminants, such as salts and metals, which can 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 can also come from gas stations, urban stormwater runoff, and septic systems
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

PROTECTING THE WATER YOU DRINK

To ensure tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health as public water systems. The city of Edwardsville's advanced water treatment plant processes are designed to reduce any such substances to levels well below any health concern.

The university is required to test the water in its distribution system for coliform, lead, copper, trihalomethanes (TTHM), and haloacetic acids. IEPA requires 4 samples per moth to be analyzed for coliform. The most recent testing results for coliform, Lead, copper, haloacetic acids, and TTHM are provided in the Data Summary table at the end of this report.

ADDITIONAL INFORMATION FOR 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. Southern Illinois University Edwardsville is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. On the SIUE campus, there are no lead service lines. 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.

WATER QUALTY DATA TABLE

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. 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. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor 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 our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL	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 treatment technology.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

2022 City of Edwardsville Water Quality Data								
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2) (ppm)	4	4	1.2	NA	NA	2022	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	7	5.6	8.94	2022	No	By-product of drinking water chlorination
TTHMs [Total Trihalo-	NA	80	29	23.96	33.4	2022	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	.059	NA	NA	2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural
Fluoride (ppm)	4	4	.704	NA	NA	2021	No	Erosion of natural deposits; Water additive promotes strong teeth; Discharge from fertilizer and aluminum facto-
Nitrate [measured Nitrogen] (ppm)	10	10	1	NA	NA	2022	No	Runoff from fertilizer uses; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (optional)	NA		140	NA	NA	2021	No	Erosion of natural deposits; Leaching
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	.215	NA	NA	2020	No	Erosion of natural deposits

Contaminants	MCLG	AL	Your	Sample	# Samples	Exceeds	Typical Source
Inorganic Contaminants							
Copper-action level at	1.3	1.3	.67	2020	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead-action level at con-	0	15	0	2020	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Contaminants

In an effort to insure the safest water possible the State has required the city of Edwardsville to monitor source contaminants

2022 City of Edwardsville Water Quality Data				
Contaminants	State MCL	Your Wa-	Viola-tion	Explanation and Comment
Iron	1 ppm	.019 ppm	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Manganese	150 ppb	18 ppb	No	This contaminant is not currently regulated by the USEPA. However, the state regulates. Source-Erosion of natural deposits.

2022 City of Edwardsville Unregulated Perfluorinated Compounds							
Parameter	**Acronym**	**Year Sampled**	**Health-Based Guidance Level (ng/L)**	**Minimum Reporting Level (ng/L)**	**Highest Result (ng/L)**	**Range Detected (ng/L)**	**Typical Sources**
Perfluorooctanoic acid	PFOA	2022	2	2	7.7	<2.0 to 7.7	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorooctanesulfonic acid	PFOS	2022	14	2	3.4	<2.0 to 3.4	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorobutanesulfonic acid	PFBS	2022	2,100	2	13	<2.0 to 13	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluoroheptanoic acid	PFHpA	2022	-	2	4.8	<2.0 to 4.8	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorohexanesulfonic acid	PFHxS	2022	140	2	7.2	<2.0 to 7.2	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorohexanoic acid	PFHxA	2022	560,000	2	9.7	<2.0 to 9.7	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water

2022 City of Edwardsville Unregulated Perfluorinated Compounds							
Parameter	Acronym	Year Sampled	Health-Based Guid-ance Level (ng/L)	Minimum Reporting Level (ng/L)	Highest Result (ng/L)	Range Detected (ng/L)	Typical Sources
Perfluorononanoic acid	PFNA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorodecanoic acid	PFDA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorotridecanoic acid	PFTrDA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluoroundecanoic acid	PFUnA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
N-Ethyl perfluorooctanesul-fonamidoacetic acid	NETFOSA A	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
N-methyl perfluoroc-tanesulfonamidoacetic acid	NMEFOSA A	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Hexafluoropropylene oxide-dimer acid	HFPO-DA	2022	21	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
4,8-dioxa-3H-perfluorononanoic acid	ADONA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water
Perfluorotetradecanoic acid	PFTeDA	2022	-	2	<2.0	<2.0	Manufactured chemical: Used to make coating and products that resist heat, oil, stains, grease, and water

2022 SIUE WATER QUALITY DATA								
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2)	4	4	1.00	.6	1.3	2022	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	10.55	9.8	11.3	2022	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	48.05	46.4	49.7	2022	No	By-product of drinking water disinfection