2021 U.S. Army Garrison- Rock Island Arsenal
Consumer Confidence Report
For the Period from 01 January to 31 December 2021

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend our weekly Water Quality Meeting. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please contact Laura St. Louis, (309) 782-5366, e-mail: Laura.R.StLouis.civ@army.mil. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water protection efforts, you may access the Illinois EPA website at http://dataservices.epa.illinois.gov/swap/factsheet.aspx. The Illinois EPA has labeled our community water supply Rock Island Arsenal—IL1615387.

Is my water safe?

Last year, we conducted tests for over 80 contaminants for comparison to the maximum contaminant level (MCL) allowed in public drinking water. We are pleased to announce that all sample results were below the MCL threshold. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

Source of Drinking Water:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells.

Where does my water come from?

The Mississippi River is the water source for the Rock Island Arsenal's water treatment plant. The Mississippi River is considered a surface water source, and the source intake is "INTAKE (31946) MISSISSIPPI RIVER".

Source water assessment and its availability:

Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems, hence, the reason for mandatory treatment for all surface water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration, and disinfection. Within the Illinois portion of the Upper Mississippi River Watershed, many commodities, including manufactured goods, petrochemicals, and pesticides are transported along the river system. The production, storage, and transportation of these commodities are a major concern, especially when occurring near surface water intakes. In addition, agricultural runoff within the Illinois portion of the Upper Mississippi River Basin contributes to the susceptibility of the Rock Island Arsenal intake. With high flow rates and long distances of travel on the Mississippi River, critical areas can be extensive. The critical area for the Rock Island Arsenal intake was determined using data from a joint U.S. Environmental Protection Agency/U.S. Geological Survey project.

This project used a computer modeling program (SPARROW) to determine travel times on major rivers in the United States. Accidental spills of hazardous materials into navigable waterways are a major concern because of their frequency in the United States in recent years. Illinois has access to 1,116 miles of inland waterway that can handle commercial barge traffic. These include the Upper Mississippi River, Illinois River Waterway, and the Ohio River. Along these waterways are numerous facilities that load and unload hazardous materials. Analyses of reported spills indicate that between 1974 and 1989, 794 accidental spills of hazardous materials occurred along Illinois waterways. Approximately 92% of these spills occurred along the Mississippi and/or the Illinois River. The assessment shows the critical area of concern (Zone 1) for the Rock Island Arsenal intake. Spills occurring in this critical area will travel to the intake in five hours or less, making contingency planning and spill reporting a major concern in this watershed.

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. 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. 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).

Where did the contaminants in my drinking water come from?

Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife, (2) 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, (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses, (4) 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, and (5) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

What is the EPA's involvement with my drinking water?

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.

Do I need to take special precautions?

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

What about Lead in my drinking water? Do I need to take special precautions?

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. You can minimize the potential for lead exposure by only using cold water for drinking and cooking and by flushing your tap for 30 seconds to 2 minutes when water has been sitting for several hours. If you are concerned about lead in your water, information on lead, 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.

How can I get involved?

Please forward all questions regarding information in this Consumer Confidence Report to Laura St. Louis, (309) 782-5366, e-mail: Laura.R.StLouis.civ@army.mil. If you have an interest in participating in future discussions that may affect water quality, we request that you contact us at the phone number or e-mail noted above. In response, you will be contacted with the time and place for our next water quality meeting.

Source Water Information:

Type of Water: SW – Surface Water
Water System: IL1615387, ROCK ISLAND ARSENAL

Drinking Water Watch (water sampling information):

For additional information on sampling and results visit the Illinois EPA Drinking Water Watch website atDrinking Water Branch (state.il.us) and look up: IL1615387, ROCK ISLAND ARSENAL.

Water Quality Test Results: **Regulated Contaminants**

Lead and Copper

These samples are taken every three years. They are next scheduled to be taken in 2023.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# of Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.032	0	ppm	No.	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	2.1	1	ppb	No.	Corrosion of household plumbing systems; Erosion of natural deposits.

Additional Army Funded Lead in Drinking Water Testing

Current Army policy requires 20% of Army Family Housing and Child Development Center Buildings be tested for lead in drinking water every fiscal year. Every family housing and childcare building will be sampled at least once in a five year period.

2021 and 2022 Family Housing Lead Testing

Building Number	Collection Date	Level Detected	Action Level	Units	Above Action Level	Likely Source of Contamination
Q2608	1/27/2022	0	15	ppb	No.	Corrosion of household plumbing systems; Erosion of natural deposits.
Q2464	1/27/2022	0	15	ppb	No.	
Q2490	1/27/2022	0	15	ppb	No.	
Q2642	1/27/2022	0	15	ppb	No.	
Q2566	1/27/2022	0	15	ppb	No.	
Q2418	1/25/2022	0	15	ppb	No.	
Q2514	1/25/2022	0	15	ppb	No.	
Q2600	1/27/2022	0	15	ppb	No.	
Q2558	1/27/2022	0	15	ppb	No.	
Q4038	1/27/2022	0	15	ppb	No.	
Q4239	1/27/2022	0	15	ppb	No.	
Q2628	1/27/2022	0	15	ppb	No.	
Q2548	1/28/2022	0	15	ppb	No.	
Q2360	1/28/2022	0	15	ppb	No.	
Q2504	1/28/2022	0	15	ppb	No.	
Q4223	1/28/2022	0	15	ppb	No.	
Q4089	1/28/2022	0	15	ppb	No.	
Q4139	1/27/2022	0	15	ppb	No.	
Q4123	1/31/2022	0	15	ppb	No.	
Q2530	1/22/2022	0	15	ppb	No.	
Q4155	1/23/2022	0	15	ppb	No.	
Q2340	1/24/2022	0	15	ppb	No.	
Q2588	1/23/2022	0	15	ppb	No.	
Q2578	1/22/2022	0	15	ppb	No.	
Q4071	1/24/2022	0	15	ppb	No.	
Q2320	1/22/2022	0	15	ppb	No.	
Q4171	1/24/2022	0	15	ppb	No.	
Q4189	1/24/2022	0	15	ppb	No.	
Q4205	1/25/2022	0	15	ppb	No.	
Q2534	1/25/2022	0	15	ppb	No.	
Q2442	1/25/2022	0	15	ppb	No.	
Q4105	1/24/2022	0	15	ppb	No.	
Q2620	1/26/2022	0	15	ppb	No.	
Q4051	1/26/2022	0	15	ppb	No.	

The results of these Army funded lead samples from previous years are available from the DPW Environmental Office upon request.

Disinfectants and Disinfectant By-Products

Disinfectants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	2021	3.2	2 – 3.2	MRDLG = 4	MRDL = 4	ppm	No.	Water additive used to control microbes.
Disinfection By-Products	**Collection Date**	**Highest LRAA Calculated**	**Range of Levels Detected in Calendar Year 2021**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Haloacetic Acids (HAA5)	2021 (Quarterly)	36	21 – 47.8	No goal for the total.	60 (LRAA)	ppb	No.	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2021 (Quarterly)	27	10.78 - 30.6	No goal for the total.	80 (LRAA)	ppb	No.	By-product of drinking water disinfection.

Coliform Bacteria

	Collection Date	Total No. of Positive	Fecal Coliform or E. Coli MCL	Total # of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
Coliform Bacteria	2021	1		0	N	Naturally present in the environment.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2021	0.0085	0.0085 - 0.0085	2	2	ppm	No.	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Manganese	2021	5	5.2 – 5.2	150	150	ppb	No.	This contaminant is not currently regulated by the USEPA. However, the state regulates erosion of natural deposits.
Nitrate (measured as Nitrogen)	2021	2	1.7 -1.7	10	10	ppm	No.	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2021	2	2.2 – 2.2	50	50	ppb	No.	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium	2021	13	13 - 13			ppm	No.	Erosion from naturally occurring deposits; Used in water softener regeneration.

Radioactive Contaminants

These samples are taken every nine years. They are next scheduled to be taken in 2023.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	10/07/2014	0.752	0.752 – 0.752	0	5	pCi/L	No.	Erosion of natural deposits.
Gross alpha excluding radon and uranium	10/07/2014	0.034	0.034 – 0.034	0	15	pCi/L	No.	Erosion of natural deposits.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.14 NTU	No.	Soil Runoff.
Lowest monthly % meeting limit	0.15 NTU	100%	No.	Soil Runoff.
Information Statement: Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration systems and disinfectants.				

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set. There were no TOC violations during this reporting period.

PFAS (per- and polyfluoroalkyl substances)

In 2020, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Results from this sampling indicated PFAS were detected in our drinking water above the health advisory level established by Illinois EPA. Additional monitoring is being conducted. Neither the Illinois EPA nor the U.S. EPA have yet developed enforceable drinking water standards (MCLs) for PFAS. For more information about PFAS health advisories PFAS Statewide Health Advisory - Per- and Polyfluoroalkyl Substances (illinois.gov)

PFAS Analyte	Acronym	IL EPA Guidance Level (ppt)	US EPA Heath Advisory Level (ppt)	Results (ppt)	
				10/21/2020	11/17/2020
Perfluorobutanesulfonic acid	PFBS	140,000	--	ND	2.6
Perfluorohexanesulfonic acid	PFHxS	140	--	ND	ND
Perfluorononanoic acid	PFNA	21	--	ND	ND
Perfluorooctanesulfonic acid	PFOS	14	70	5.3	5.5
Perfluorooctanoic acid	PFOA	2	70	2.6	3.1
Perfluorohexanoic acid	PFHxA	560,000	--	ND	ND
Hexafluoropropylene oxide dimer	HFPO-DA	560	--	ND	ND

Additional Army Funded PFAS Testing

The Army has undertaken PFAS monitoring at its Installations since 2016. The table below contains the results of the Army-funded PFAS monitoring at the Arsenal conducted in 2020.

PFAS Analyte	Acronym	2016 US EPA Heath Advisory Level (ppt)	Results (ppt)
			07/13/2020
Perfluorobutanesulfonic acid	PFBS	--	2.0
Perfluorohexanesulfonic acid	PFHxS	--	ND
Perfluorononanoic acid	PFNA	--	ND
Perfluorooctanesulfonic acid	PFOS	70	10
Perfluorooctanoic acid	PFOA	70	3.6
Perfluorohexanoic acid	PFHxA	--	ND
Hexafluoropropylene oxide dimer	HFPO-DA	--	ND
Perflouroheptanoic acid	PFPeA	--	ND
Perflourodecanoic acid	PFDA	--	ND
Perflourotridecanoic acid	PFTrA	--	ND
Perflourotetradeconoic acid	PFTeA	--	ND
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	--	ND
N-methyl perfluorooctanesulfonamidoacetic acid	NmeFOSAA	--	ND
Perflouroundecanoic acid	PFUnA	--	ND
Perflourododecanoic acid	PFDoA	--	ND
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9CI-PF3ONS	--	ND
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11CI-PF3OUdS	--	ND
4,8-dioxa-3h-perfluorononanoic acid	DONA	--	ND

Important Drinking Water Definitions	
Terms	**Definitions**
Action Level	ACTION LEVEL: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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 the margin of safety.
Avg	AVERAGE: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
LRAA	LOCATIONAL RUNNING ANNUAL AVERAGE: The calculated average of the four most recently taken quarterly compliance samples for a particular location in the distribution system.
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.
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.
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.
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.
NA	Not applicable.
ND	Not detected.
NTU	NEPHELOMETRIC TURBIDITY UNITS. Turbidity is a measure of the cloudiness of the water. Monitored because it is a good indicator of the effectiveness of filtration systems.
pCi/L	PICOCURIES PER LITER: units of radioactivity
ppb	PARTS PER BILLION: micrograms per liter or one ounce in 7,350,000 gallons of water
ppm	PARTS PER MILLION: milligrams per liter or one ounce in 7,350 gallons of water
ppt	PARTS PER TRILLION; nanograms per liter or one ounce in 7,350,000,000 gallons of water

Violations Table

Violations Table		
Lead and Copper Rule - The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity.		
Violation Type	**Violation Begin**	**Violation End**
Lead Consumer Notice	12/30/2020	2/01/2021
Violation Explanation		
We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested in the time required. Results were supposed to be provided no later than 30 days after learning the results. Results were provided on 2/01/2021.		

For more information please contact:

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