CITY OF EAST DUBUQUE – FRENTRESS LAKE
2024 WATER QUALITY REPORT

INTRODUCTION:
The East Dubuque Water Department, in compliance with the Federal Safe Drinking Water Act, is providing its Frentress Lake customers with the annual Water Quality Report. This report summarizes the quality of water that we provided last year, where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. If you have any questions about this report or concerning your water system, please contact Michael Busch at the City of East Dubuque at phone #815-747-3232. We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled council meetings that are held the first and third Monday of each month at 6:00 p.m.

WHERE DOES MY WATER COME FROM?
Frentress Lake uses groundwater provided by one well located at North Frentress Lake Road and Highway 20. It is drilled into a sandstone/limestone aquifer. An aquifer is a geological formation that contains water. There is one water tower which holds 200,000 gallons. Prior to pumping water into the system chlorine is added at the minimum required limits as a disinfectant to protect citizens from microbial contaminants, and fluoride is added to aid in dental hygiene, by state mandate, and polyphosphate is added to limit discoloration from iron and manganese, and to aid with hydrant flushing yearly to maintain cleanliness of mains and limit tibergulation. The public water system consists of an estimated two miles of water main, 75 fire hydrants, 28 water main valves, 95 metered customers, and we produced 8,789,400 gallons of water in 2024.

DOES FRENTRESS LAKE WATER MEET THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) STANDARDS?
YES!! Our water meets all USEPA standards. In 2024
we conducted over 550 tests to insure compliance with drinking water standards. To ensure that tap water is safe to drink, the USEPA prescribes regulations which 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 also must provide protection for public health. The State of Illinois and the USEPA require us to test our water on a regular basis for over 80 contaminants to ensure its safety. All tests have been submitted as required. There were no detects exceeding USEPA guidelines for the entire year. A summary of testing is included in this report.

DO CITIZENS 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 health care providers. The USEPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at **1-800-426-4791.**

WHY ARE THERE CONTAMINANTS IN MY 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 the 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.**

HOW COULD CONTAMINANTS GET INTO MY WATER?
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. Possible contaminants consists of:

- ***Microbial contaminants,*** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture live stock 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, 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 gas production and mining activities.

THE ILLINOIS EPA SOURCE WATER VULNERABILITY ASSESSMENT RESULTS:
Due to favorable monitoring history, aquifer characteristics, and inventory of potential sources of contaminants, our water supply was issued a vulnerability waiver renewal. No monitoring for volatile organic chemicals or synthetic organic chemicals is required between January 1, 2023 and December 31, 2025.

2024 Water Quality Data

-Definition of Terms-

Avg: *Regulatory compliance with some MCLs are based on running annual average of monthly samples.*
Level 1 Assessment: *A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.*
Level 2 Assessment: *A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.*
Maximum Contaminant Goal (MCLG): *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 setup.*
Maximum Contaminant Level (MCL): *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.*
Maximum Residual Disinfectant Level (MRDL): *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.*
Maximum Residual Disinfectant Level Goal (MRDLG): *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.*
Level Found: *This column represents an average of sample result data collected during the CCR calendar year. In some cases, it may represent a single sample if only one sample was collected.*
Range of Detections: *This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year.*
Date of Sample: *If a data appears in this column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the CCR calendar year.*
Action Level (AL): *The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.*
Treatment Technique (TT): *A required process intended to reduce the level of a contaminant in drinking water.*
nd: *Not detectable at testing limits.*
n/a: *Not applicable*
ppm: *Parts per million or milligrams per liter or one ounce in 7,350 gallons of water*
ppb: *Parts per billion or micrograms per liter or one ounce in 7,350,000 gallons of water*
pCi/L: *Picocuries per liter, used to measure radioactivity.*
MREM: *Millirems per year (a reassure of radiation absorbed by the body)*

Detected Contaminants

Contaminant (unit of measurement) *Typical Source of Contaminant*	*MCLG*	*MCL*	*Level found*	*Range of detections*	*Violation*	*Date of Sample*
Radioactive Contaminants						
BETA/PHOTON EMITTERS (pCi/L) Decay of natural and man-made deposits.	0	4	4	0-5	No	12/19/2001
COMBINED RADIUM 226/228 (pCi/L) Erosion of natural deposits.	0	5	2.74	2.74 – 2.74	No	07/26/2023
GROSS ALFA EXCLUDING RADON AND URANIUM (pCi/L	0	15	3.1	3.1 -3.1	No	07/26/2023

Contaminant (unit of measurement) *Typical Source of Contaminant*	*MCLG*	*MCL*	*Level found*	*Range of detections*	*Violation*	*Date of Sample*

PFAS's Pre and Polyfluoroakyl Substances

- In 2020, our PWS was sampled as part of the State of Illinois PFAS Statewide Investigation. Eighteen PFAS compounds were sampled, and none were detected in our finished drinking water. For more information about PFAS health advisories: https://www2.illinois.gov/epa/topics/water-quality/pfas/pages/pfas-healthadvisory.aspx

Inorganic Contaminants

ARSENIC (ppb) Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	0	10	2.62	2.62 – 2.62	No	07/24/2023

While our water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenics possible health effects against the cost of removing arsenic from drinking water. 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.

BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.101	0.101 – 0.101	No	07/24/2023
COPPER (ppm) Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	1.3 (90^{th} percentile 1.028 ppm)	AL=1.3	1.46	0.0 – 1.46 1 exceeding AL	No	07/30/2024
NICKEL (ppm) Erosion of natural deposits	n/a	25	N/D		No	07/24/2023
FLUORIDE (ppm) Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	4	4.0	0.81	0.81 – 0.81	No	07/24/2023
LEAD (ppb) Corrosion of household plumbing systems; Erosion of natural deposits.	0 (90^{th} percentile N/D ppb)	AL=15	N/D	0.0 – 0.0 0 exceeding AL	No	07/30/2024

Both the system's lead tap sampling data and our Community Water Supply service line material inventory can be obtained by contacting The City of East Dubuque.

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. East Dubuque water department is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water, you may wish to have your water tested, contact the City of East Dubuque at 815-747-3416. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

Disinfectants/Disinfection By-Product

CHLORINE	MRDLG-4	MRDL-4	0.8	0.5 – 1.0	No	12/31/2024
TOTAL HALOACTIC ACIDS (HAA5) (ppb) By-product of water disinfection.	n/a	60	N/D		No	08/08/2023
TTHMs (ppb) (Total TRihalomethanes)	n/a	80	13.0	13.0 – 13.0	No	08/08/2023

By-product of water disinfection.

Inorganic Contaminants

ANTIOMONY (ppb) Discharges from petroleum refineries; Fire retardants; ceramics; electronics; solder	2	6	N/D		No	07/24/2023
NITRATE & NITRITE (ppm) Run off from fertilizer use, leaching from Septic tanks, sewage, erosion of natural deposits	10	10	0.37	0.37 – 0.37	No	07/31/2024
NITRATE (as Nitrogen) (ppm) Runoff from fertilizer use, leaching from Septic tanks, sewage, erosion of natural deposits	10	10	0.37	0.37 – 0.37	No	08/08/2023
ZINC (ppm) Erosion of natural deposits	5	5	N/D		No	07/24/2023

Contaminant (unit of measurement) *Typical Source of Contaminant*	*MCLG*	*MCL*	*Level found*	*Range of detections*	*Violation*	*Date of Sample*
HARDNESS (ppm) Erosion of Natural Deposits			33.3			07/24/2023

Unregulated Contaminants

BROMODICHLOROMETHANE (ppb) By-product of drinking water chlorination.	1	1	4.2	0 – 4.2	No	08/11/2023
CHLOROFORM (ppb) Used as an solvent for fats, oils, rubber, resins; A cleansing agent; Found in fire extinguishers.	1	1	4.5	0 – 4.5	No	08/11/2023
DIBROMOCHLOROMETHANE (ppb) Used as a chemical reagent; An intermediate in Organic synthesis.	1	1	3.2	3.2 – 3.2	No	08/11/2023
SULFATE (ppm) Erosion of naturally occurring deposits.	n/a	10	33.1	33.1 – 33.1	No	07/24/2023

State Regulated Contaminants

IRON (ppb) Erosion from naturally occurring deposits.	n/a	1.0	n/d	0 – 0	No	07/24/2023
MANGANESE (ppb) Erosion of naturally occurring deposits.	n/a	150	n/d	0 – 0	No	07/24/2023
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	n/a	n/a	16.3	16.3 – 16.3	No	07/24/2023

Unit of Measurement

ppm – Parts per million, or milligrams per liter
ppb – Parts per billion, or micrograms per liter
pCi/L – Picocuries per liter, used to measure radioactivity

Water Quality Data Table Footnotes

***BETA/PHOTON EMITTERS**
The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be a level of concern for beta particles.

UNREGULATED CONTAMINANTS:
A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

IRON
This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

MANGANESE
This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.

SODIUM
There is not a state or federal MCL for sodium. 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 this level of sodium in the water.

2024 Non-regulated Contaminant Detections

The following table identifies contaminants detected within the past five years. State and federal regulations do not require monitoring for these contaminants and no maximum contaminant level (MCL) has been established. These detections are for informational purposes only. No mandated health effects language exists. The CCR Rule does not require that this information be reported; however, it may be useful when evaluating possible sources of contamination or characterizing overall water quality.

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Date of Sample: *If a data appears in this column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the CCR calendar year.*

Contaminant (unit of measurement) *Typical Source of Contaminant*	*MCLG*	*MCL*	*Level found*	*Range of detections*	*Violation*	*Date of Sample*
BORON (ppb) Erosion of naturally occurring deposits; Used in detergents and as a water softener; Used in production of glass, cosmetics, pesticides, fire retardants, and for leather tanning.			15.000	15.000 – 15.000	No	1999

Unit of measurement *– Definition*
ppb – Parts per billion, or micrograms per liter

The City of East Dubuque has available upon request this year's Consumer Confidence Report (CCR). The CCR includes basic information on the source(s) of your drinking water, the levels of any contaminants that were detected in the water during 2022, and compliance with other drinking water rules, as well as some educational materials. To obtain a free copy of the report, please call City Hall at 815 747-3416 or you may pick one up at City Hall.