

Some or all of these definitions may be found in this report:

**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 Contaminant Level 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 safety.

**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.

**Below Detection Levels (BDL)** - laboratory analysis indicates that the contaminant is not present.

**Not Applicable (N/A)** - does not apply.

**Parts per million (ppm)** - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per trillion (ppt)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Parts per quadrillion (ppq)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - a measure of the radioactivity in water.

**Millirem per year (mrem/yr)** - measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL)** - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

**Nephelometric Turbidity Unit (NTU)** - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

**Variations & Exemptions (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

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

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber.

Tradúzcalo o hable con alguien que lo entienda bien.

**To request a paper copy call (270) 597-2165.**



## Edmonson Co. Water District Water Quality Report

(Monitoring and testing performed during 2023)



Water System ID: KY0310114

Manager: Kevin Shaw

270-597-2165

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Meeting location and time:

Water District Office – 1128 Hwy 295 N

Brownsville, KY

2<sup>nd</sup> and 4<sup>th</sup> Tuesday each month at 8:30 AM

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product.

Edmonson Co. Water District treats surface water from the Green River at the Brownsville treatment plant “A” and from Nolin Reservoir at the Wax treatment plant “B”. Source Water Assessment Plans have been developed for both sources of water. An analysis of the overall susceptibility to contamination for these sources indicates that this susceptibility is generally moderate. Areas of high concern consist of underground storage tanks, agricultural activities, bridges, culverts, and transportation corridors, oil and gas production facilities, and landfills. The complete Source Water Assessment Plan is available for review at the Edmonson County Water District office during normal business hours.

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 may be obtained by calling the Environmental Protection Agency's 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 may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or 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. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

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

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. Your local water system 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 and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.



**To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.**

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. **Copies of this report are available upon request by contacting our office during business hours.**

**Regulated Contaminant Test Results Edmonson County Water District Treatment Plant A (Brownsville)**

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.029	0.029 to 0.029	Mar-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.61	0.61 to 0.61	Mar-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	1.29	1.29 to 1.29	Feb-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits

**Disinfectants/Disinfection Byproducts and Precursors**

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.8 (lowest average)	1.00 to 2.96 (monthly ratios)	2023	No	Naturally present in environment.
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\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.37 (highest average)	0.39 to 2.2	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	42 (high site average)	24 to 48 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	63 (high site average)	27 to 86 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.

**Household Plumbing Contaminants**

Copper [1022] (ppm) Round sites exceeding action level 0	AL = 1.3	1.3	0.116 (90 <sup>th</sup> percentile)	0.003 to 0.206	Jun-23	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 1	AL = 15	0	5 (90 <sup>th</sup> percentile)	0 to 47	Jun-23	No	Corrosion of household plumbing systems

**Other Constituents**

Turbidity (NTU) TT * Representative samples	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.27	100	No	Soil runoff

Fluoride (added for dental health)	<b>Average</b>	<b>Range of Detection</b>
	0.8	0.61 to 1.5

**Regulated Contaminant Test Results Edmonson County Water District Plant B (Wax)**

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.025	0.025 to 0.025	Mar-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.92	0.92 to 0.92	Mar-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	2.9	2.9 to 2.9	Feb-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Atrazine [2050] (ppb)	3	3	BDL	BDL to 0.4	Sep-23	No	Runoff from herbicide used on row crops

**Disinfectants/Disinfection Byproducts and Precursors**

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.32 (lowest average)	1.00 to 2.44 (monthly ratios)	2023	No	Naturally present in environment.
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\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

**Other Constituents**

Turbidity (NTU) TT * Representative samples	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	1.5	99	Yes	Soil runoff

Fluoride (added for dental health)	<b>Average</b>	<b>Range of Detection</b>
	0.9	0.5 to 1.26

Violation 2024-9953657 - Due to a pump malfunction the treatment plant at Wax experienced higher turbidity levels than normal during a shortperiod in August. The pump was replaced and the turbidity levels returned to normal levels. A public notice was distributed for this violation This issue has been resolved.

Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Violations 2023-9953653; 2023-9953654; 2023-9953656; 2024-9953658; 2024-9953659

Cryptosporidium is a disease-causing microorganism that was found in our raw water source during a series of sampling a few years ago. It was found in our source water. It was not detected in the finished water. Based on this study, our water system was required to maintain a specified level of additional treatment to address Cryptosporidium. We were unaware of this additional treatment requirement. Nephelometric Turbidity Unit (NTU) is a measure of the clarity of water. Due to Cryptosporidium being found in our source water we were required to maintain 0.15 NTU instead of the previously required 0.3 NTU. During 2023 our system fell below this level at our treatment plants. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Treatment modifications have been made and plans are being discussed for new treatment plant construction. Public notices were distributed for these violations.