



City of Fairbury

Annual Water Quality Report For January 1 to December 31, 2024

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

Para Clientes Que Hablan Español: Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

For more information regarding this report, or to request a hard copy, contact:

GREGORY DEFRAIN
402-729-3648

If you would like to observe the decision-making processes that affect drinking water quality, please attend the regularly scheduled meeting of the Village Board/City Council. If you would like to participate in the process, please contact the Village/City Clerk to arrange to be placed on the agenda of the meeting of the Village Board/City Council.

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 EPA's Safe Drinking Water Hotline (800-426-4791).

Source Water Assessment Availability:

The Nebraska Department of Environment and Energy (NDEE) has completed the Source Water Assessment. Included in the assessment are a Wellhead Protection Area map, potential contaminant source inventory, and source water protection information. To view the Source Water Assessment or for more information please contact the person named above on this report or the NDEE at 402-471-3376 or go to <http://dee.ne.gov>.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Sources of Drinking Water:

The sources of drinking water (both tap water 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 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.

The source of water used by City of Fairbury is ground water under the direct influence of surface water.

Contaminants 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 can be naturally occurring or result from urban storm water 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 storm water 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 storm water runoff, and septic systems.
- * Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Drinking Water Health Notes:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. City of Fairbury 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: GREGORY DEFRAIN, 402-729-3648. 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>.

The City of Fairbury is required to test for the following contaminants: Coliform Bacteria, Antimony, Arsenic, Asbestos, Barium, Beryllium, Cadmium, Chromium, Copper, Cyanide, Fluoride, Lead, Mercury, Nickel, Nitrate, Nitrite, Selenium, Sodium, Thallium, Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Dibromochloropropane, Dinoseb, Di(2-ethylhexyl)- phthalate, Diquat, 2,4-

D, Endothall, Endrin, Ethylene dibromide, Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), Pentachlorophenol, Picloram, Polychlorinated biphenyls, Simazine, Toxaphene, Dioxin, Silvex, Benzene, Carbon Tetrachloride, o-Dichloro- benzene, Para-Dichlorobenzene, 1,2-Dichlorethane, 1,1-Dichloroethylene, Cis-1,2,-Dichloroethylene, Trans-1,2-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, Ethylbenzene, Monochlorobenzene, 1,2,4-Trichloro- benzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Styrene, Tetrachloroethylene, Toluene, Xylenes (total), Gross Alpha (minus Uranium & Radium 226), Radium 226 plus Radium 228, Sulfate, Chloroform, Bromodichloromethane, Chlorodibromomethane, Bromoform, Chlorobenzene, m-Dichlorobenzene, 1,1-Dichloropropene, 1,1-Dichloroethane, 1,1,2,2-Tetrachlorethane, 1,2-Dichloropropane, Chloroethane, Chlороethane, 2,2-Dichloropropane, o-Chlorotoluene, p-Chlorotoluene, Bromobenzene, 1,3-Dichloropropene, Aldrin, Butachlor, Carbaryl, Dicamba, Dieldrin, 3-Hydroxycarbofuran, Methomyl, Metolachlor, Metribuzin, Propachlor.

How to Read the Water Quality Data Table:

The EPA and State Drinking Water Program establish the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to the regulatory limits. Substances not detected are not included in the table. The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be older than one year.

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.

AL (Action Level) – The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.

MRDL (Maximum Residual Disinfectant Level) – The highest level of a disinfectant allowed in drinking water.

N/A – Not applicable.

Units in the Table:

ND – Not detectable.

ppm (parts per million) – One ppm corresponds to 1 gallon of concentrate in 1 million gallons of water.

mg/L (milligrams per liter) – Equivalent to ppm.

ppb (parts per billion) – One ppb corresponds to 1 gallon of concentrate in 1 billion gallons of water.

ug/L (micrograms per liter) – Equivalent to ppb.

pCi/L (Picocuries per liter) – Radioactivity concentration unit.

RAA (Running Annual Average) – An ongoing annual average calculation of data from the most recent four quarters.

LRAA (Locational Running Annual Average) – An ongoing annual average calculation of data from the most recent four quarters at each sampling location.

90th Percentile – Represents the highest value found out of 90% of the samples taken in a representative group. If the 90th percentile is greater than the action level, it will trigger a treatment or other requirements that a water system must follow.

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

Microbiological	Highest Number of Positive Samples			MCL			MCLG	Likely Source of Contamination	Violations Present
No Detected Results were Found in the Calendar Year of 2024									
Lead and Copper	Monitoring Period	90 th Percentile	Range	Unit	AL	Sites Over AL	Likely Source of Contamination		
COPPER, FREE	2024	0.895	0.0363 - 1.08	ppm	1.3	0	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing.		
LEAD	2024	1.8	0 - 5.4	ppb	15	0	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing.		
Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Likely Source of Contamination		
ARSENIC	8/20/2024	2	2	ppb	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.		
BARIUM	7/5/2022	0.227	0.227	ppm	2	2	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits.		
CARBON, TOTAL	10/8/2024	1.21	0.876 - 1.21	ppm			Naturally present in the environment		
CHROMIUM	7/5/2022	0.721	0.721	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.		
ENDRIN	4/15/2024	0.112	0 - 0.112	ppb	2	2	Residue of banned insecticide		
FLUORIDE	7/5/2022	0.239	0.239	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; Fertilizer discharge.		
NITRATE-NITRITE	4/15/2024	10.1	1.03 - 10.1	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits		
Disinfection Byproducts	Monitoring Period	Highest RAA	Range	Unit	MCL	MCLG	Likely Source of Contamination		
TOTAL HALOACETIC ACIDS (HAA5)	1/1/2024 - 12/31/2024	1.655	1.2 - 2.11	ppb	60	0	By-product of drinking water disinfection.		
TTHM	7/1/2023 - 6/30/2024	6.13	3.92 - 8.34	ppb	80	0	By-product of drinking water disinfection.		
Radiological Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Likely Source of Contamination		
COMBINED RADIUM (-226 & -228)	6/18/2024	1.86	1.35 - 1.86	pCi/L	5	0	Erosion of natural deposits		
GROSS ALPHA, INCL. RADON & U	6/17/2024	3.08	0 - 3.08	pCi/L	15	0	Erosion of natural deposits		
RADIUM-228	6/18/2024	1.86	1.35 - 1.86	pCi/L		0	Erosion of natural deposits		
Unregulated Water Quality Data	Collection Date	Highest Value		Range		Unit	Secondary MCL		
ALKALINITY, CARBONATE	1/11/2022	224		176 - 224		mg/L			
CALCIUM	1/11/2022	85.1		69.4 - 85.1		mg/L			
CONDUCTIVITY (Water Quality Parameter used for Corrosion Control Study)	1/11/2022	785		575 - 785		umhos/cm			
METOLACHLOR	4/15/2024	0.131		0 - 0.131		ppb			
SULFATE	7/19/2022	29		29		mg/L	250		

During the 2024 calendar year, we had the below noted violation(s) of drinking water regulations.

Violation Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year of 2024			

The City of Fairbury has taken the following actions to return to compliance with the Nebraska Safe Drinking Water Act:

Additional Required Health Effects Language:

Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

There are no additional required health effects violation notices.

The City of Fairbury lead service line inventory has been prepared and can be accessed here: _____