



City of Papillion (NE3115313) Annual Water Quality Report

David P. Black, Mayor

For the period of January 1 to December 31, 2022

For more information regarding this report, contact:
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Water Treatment Plant

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If you would like to observe the decision-making processes that affect drinking water quality, please attend the regularly scheduled meeting of the Papillion City Council on the first and third Tuesdays of the month at 7:00 p.m. in the City Council Chambers, located at 122 East Third Street, Papillion, Nebraska.

If you would like to participate in the process, please contact the City Clerk at 402-597-2021 to be placed on the meeting agenda of the Papillion City Council.

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.

Cross-Connection Survey

Nebraska Department of Environment and Energy under Title 179 requires the compliance of a Cross-Connection Survey for all water connections to a public water system every five years. We ask for your assistance in completing this survey. Please visit: <https://www.papillion.org/crossconnection> or call 402-597-2007 Dan Lawson for further details.

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 concentration of detected substances in comparison to the regulatory limits. Substances not detected are not included in the table. The state requires monitoring in 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.

The United States has one of the safest water supplies in the world. However, national statistics don't tell you about safety and quality of the water coming out of your tap. For this reason, the Papillion Water Treatment Plant provides this report annually so you can find out about your own drinking water.

This report includes data collected from **January 1 to December 31, 2022**. It is intended to provide you with important information about your drinking water and the efforts made by the City of Papillion water system to provide safe drinking water.

Sources of Drinking Water:

The sources of drinking water, both tap and bottled, 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 the City of Papillion is ground water. Papillion's residents receive water from our own ground water wells located along the Platte River. A total of 11 wells are drilled into the Platte River Alluvial Aquifer. These wells range in depth from 68 to 110 feet. Papillion's wells pumped a total of 1.917 billion gallons of water in 2022. This included an average daily use of 5.25 million gallons, average monthly use of 159 million gallons, and maximum daily use of 13.75 million gallons August, 2.

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, 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.

Drinking Water Health Notes

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.

While drinking water meets EPA's standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs 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. 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 (1-800-426-4791) www.epa.gov/safewater.com or the NDEE Drinking Water Division at (402) 471-2186.

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. All community water systems are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 (800-426-4791), at <http://www.epa.gov/safewater/lead> or at the NDEE Drinking Water Division (402) 474-1008.

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, vulnerability rating, 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.

www.papillion.org/waterqualityreport

The City Of Papillion 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, Dibromo- chloropropane, 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-Dichlorobenzene, Para-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethylene, Cis-1,2,-Dichloroethylene, Trans-1,2-Dichloroethylene, Dichloromethane, 1,2- Dichloropropane, Ethylbenzene, Monochlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Styrene, Tetrachloro- ethylene, 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-Tetrachloroethane, 1,2-Dichloropropane, Chloromethane, Bromomethane, 1,2,3- Trichloropropane, 1,1,1,2-Tetrachloroethane, Chloroethane, 2,2-Dichloropropane, o-Chlorotoluene, p-Chlorotoluene, Bromobenzene, 1,3-Dichloropropene, Aldrin, Butachlor, Carbar- yl, Dicamba, Dieldrin, 3-Hydroxycarbofuran, Methomyl, Metolachlor, Metribuzin, Propachlor.

Microbiological	Highest No. of Positive Samples	MCL	MCLG	Likely Source of Contamination	Violations Present
COLIFORM (TCR)	In the month of May, 4.26% of samples were positive	Treatment Technique Trigger	0	Naturally present in the environment	No
E. COLI	In the month of April, 1 sample(s) were positive	MCL: A Routine Sample and a Repeat Sample are Total Coliform Positive, and One is also E. Coli Positive	0	Human and animal fecal waste	No

Lead and Copper	Monitoring Period	90 th Percentile	Range	Unit	AL	Sites Over AL	Likely Source of Contamination
COPPER, FREE	2018 - 2020	0.996	0.0358 - 1.59	ppm	1.3	2	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing.
LEAD	2018 - 2020	2.16	0 - 5.33	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	9/12/2022	6.14	6.14	ppb	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
ATRAZINE	10/4/2021	0.163	0.163	ppb	3	3	Runoff from herbicide used on row crops
NITRATE-NITRITE	12/6/2022	0.123	0.123	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)	4/1/2021 - 3/31/2022	25.05	17.1 - 36.7	ppb	60	0	By-product of drinking water disinfection.
TTHM	4/1/2021 - 3/31/2022	43.5125	32.5 - 51.4	ppb	80	0	By-product of drinking water disinfection.

Radiological Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Likely Source of Contamination
GROSS ALPHA, INCL. RADON & U	10/27/2020	4.96	4.96	pCi/L	15	0	Erosion of natural deposits

Unregulated Water Quality Data	Collection Date	Highest Value	Range	Unit	Secondary MCL
NICKEL	7/26/2021	0.00139	0.00139	mg/L	0.1
SULFATE	7/26/2021	69.4	69.4	mg/L	250

During the 2022 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 2022			

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

Additional Required Health Effects Language:

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs 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.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

There are no additional required health effects violation notices.

MCL (maximum Contaminant Level) – The highest level of 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 not 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. **ND** – Not detectable **ppm (parts per million)** – One ppm corresponds to 1 gallon of concentrated 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.