City of Papillion (NE3115313)
Annual Water Quality Report
For the period of January 1 to December 31, 2019

David P. Black, Mayor

For more information regarding this report, contact:
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15406 South 87th Street
Papillion, NE 68046
402-597-2018
www.papillion.org

Safe Drinking Water Hotline
1-800-426-4791
www.epa.gov/safewater.com

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.

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, 2019**. 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.

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 1,457,972,000 gallons of water in 2019. This included an average daily use of 3,994,444 gallons, average monthly use of 121,497,667 gallons, maximum daily use of 11,837,000 gallons August, 9, and minimum daily use of 1,319,000 gallons March, 17.

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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

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. 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) or the Department of Health and Human Services, Division of Public Health, Office of Drinking Water at 402-471-2541.

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 DHHS/DPH/Office of Drinking Water (402-471-2541).

Source Water Assessment Availability

The Nebraska Department of Environmental Quality (NDEQ) 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 NDEQ at 402-471-6988 or go to www.deq.state.ne.us

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

If your home was built before 1990, please take a moment to check if there are plastic couplings on your water meter. Staff from the Papillion Water Plant will change these at no cost to you by appointment. Please call 402-597-2018 to set up a time. Changing the couplings will prevent them from breaking and potentially flooding your basement. If you are not sure about the couplings, please call the Water Plant at 402-597-2018, and staff would be happy to check for you.

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, 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-Dichlorobenzene, 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-Trichlorobenzene, 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, 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, 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.

City of Papillion — TEST RESULTS — NE3115313

Microbiological	Highest No. of Positive Samples	MCL	MCLG	Likely Source of Contamination	Violations Present
Coliform (TCR)	In the month of November, 1 sample was positive	TT	0	Naturally present in the environment	No

Lead and Copper	Monitoring Period	90th Percentile	Range	Unit	AL	Sites Over AL	Likely Source of Contamination
Copper, Free	2015-2017	0.8384	0.00566-1.18	ppm	1.3	0	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing
Lead	2015-2017	2.28	0.561-25.1	ppb	15	1	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	8/27/2019	6.29	6.29	ppb	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2/24/2014	0.146	0.146	ppm	2	2	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2/24/2014	3.54	3.54	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2/24/2014	0.36	0.36	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; fertilizer discharge
Nitrate-Nitrite	12/10/2018	0.184	0.184	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Disinfection By-Products	Monitoring Period	Highest LRAA	Range	Unit	MCL	MCLG	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	1/1/2019 – 12/31/2019	28.1	17.8 – 40.6	ppb	60	0	By-product of drinking water disinfection
TTHM (Total Trihalomethanes)	4/1/2018 – 3/31/2019	56.1375	42.7 – 65.8	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)	4/9/2018	0.719	0.719	pCi/L	5	0	Erosion of natural deposits
Gross Alpha, Incl. Radon & U	10/24/2017	13.3	13.3	pCi/L	15	0	Erosion of natural deposits
Radium-228	4/9/2018	0.719	0.719	pCi/L		0	Erosion of natural deposits

Unregulated Water Quality Data	Collection Date	Highest Value	Range	Unit	Secondary MCL
Sulfate	7/30/2018	84.1	84.1	mg/L	250

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year of 2019			

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.
- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of getting cancer.
- Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

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:

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.

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

mg/L (micrograms per litter) – Equivalent to ppm.

ND – Not detectable.

ppm (parts per million) = mg/L (milligrams per liter) – One ppm or one mg/L corresponds to 1 gallon of water in 1,000,000 gallons of water.

ppb (parts per billion) = ug/L (micrograms per liter) – One ppb corresponds to 1 gallon of water in 1,000,000,000 gallons of water.

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.

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

ug/L (micrograms per liter) – Measurement of radioactivity; equivalent to ppb.

Nebraska Department of Health and Human Services Title 179 requires the completion 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 to complete the questionnaire, or call 402-597-2007 to request a paper copy. If you need assistance in filling out this form, or if you have any questions about cross-connections, please call 402-597-2007. If you have already submitted your cross-connection survey, we thank you for your cooperation in helping to protect the City of Papillion's water system.