2018 Consumer Confidence Report (CCR) on Water Quality for the City of Jefferson, Iowa

Is my water safe?
Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The Jefferson Water Department vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

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

Source water assessment and its availability
The City of Jefferson water supply obtains its water from one or more groundwater aquifers. Every aquifer has a degree of susceptibility to contamination because the characteristics of the aquifer, overlying materials, and human activity. Susceptibility to contamination generally increases with shallower aquifers, increasing permeability of the aquifer and overlying material, nearby development or agricultural activity, and abandoned or poorly maintained wells. A detailed evaluation of your source water was completed by the IDNR, and is available from the Jefferson Water Treatment Plant or the Jefferson City Hall. The phone numbers respectively are (515) 386-2611 and (515) 386-3111. The Jefferson source water aquifer name is Pleistocene and the susceptibility is ranked as insignificant.

Why are there contaminants in my drinking 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 that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Lead in drinking water

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. The Jefferson Water Dept. is 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 or at http://www.epa.gov/safewater/lead.

Other Information
For questions regarding this Consumer Confidence Report now being published, or if you would like to obtain a copy, please contact City Hall at (515) 386-3111 to have a copy mailed to you or stop by 220 N. Chestnut St. between the hours of 8:00 a.m. and 5:00 p.m., Mon – Fri. Due to the fact that this CCR report is being published on the City website, it will **NOT** be mailed out. Decisions regarding the water system are made at the City council meetings held on the 2nd and 4th Tuesdays at 5:00 p.m. at City Hall located at 220 N. Chestnut in Jefferson and are open to the public.

Educational Statement for Arsenic
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.

2018 Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Contaminant(s) (units)	MCLG	MCL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products (Stage 1)								
Haloacetic Acids (HAA5)(ppb)	NA	60	23	NA	NA	07/10/2018	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	NA	80	59	NA	NA	07/10/2018	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	N/A	10	3.30	NA	NA	5/10/2016	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Fluoride (ppm)	4	4	0.66	.496	.901	2018	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	2.100	NA	NA	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.191	NA	NA	6/06/2013	No	Erosion of natural deposit; leaching
Sodium (ppm)	NA	NA	220	NA	NA	2/26/2018	No	Erosion of natural deposit; leaching
cis-1,2-Dichloroethylene (ppb)	70	70	1.47	NA	NA	10/09/2018	No	Discharge from industrial chemical factories

Contaminant(s) (units)	MRD	MRDLG	Your Water	Range Low	Range High	Sample Dates	Violation	Typical Source
Disinfectants & Disinfection By-Products								
Chlorine (as Cl2) (ppm)	4	4	1.20 RAA	.49	2.30	Jan-Dec 2018	No	Water additive used to control microbes

Contaminant(s) (units)	MCLG	AL	Your Water	Range Low	Range High	Sample Dates	Exceeds AL	Typical Source
Inorganic Contaminants			**80 samples, 0 exceeded**					
Lead (ppb)	0	15	1.30 (90^{th})	0	0	2018	No	Corrosion of household plumbing systems Erosion of natural deposits
Copper (ppm)	1.3	1.3	.993 (80 samples, 1 exceeded AL)	.0828	1.20	2018	No	Corrosion of household plumbing systems; Erosion of natural deposits Leaching of wood preservatives

Contaminant(s) (units)	MCLG	AL	Your Water	Range Low	Range High	Samples Total	Samples Exceed	Sample Dates	Typical Source
Total Coliform Bacteria	0	Presence of coliform bacteria in >5% of monthly samples	0	NA	NA	5	0	01/01/18-12/31/18	Naturally present in the environment

Units Description:

NA: Not applicable

ND: Not detected

NR: Not reported

MNR: Monitoring not required, but recommended.

RAA: Running Annual Average, The calculation of maximum disinfectant residual is based on the monthly average of the Total chlorine residual measured at the same time compliance bacterial samples are collected (includes Repeat/Check samples but excludes Specials). *Should not exceed 4.0 mg/L.

ppm: parts per million, or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (µg/L)

pCi/L: picocuries per liter (a measure of radioactivity)

IDSE: Initial Distribution System Evaluation, reports the range of individual sample results from monitoring from the same calendar year.

Important Drinking Water Definitions

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.

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.

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

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

MRDLG: Maximum residual disinfection level goal. 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.

MRDL: Maximum residual disinfectant level. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

For more information:

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