

2022 WATER QUALITY REPORT FOR STUART MUNICIPAL UTILITIES

This report contains important information regarding the water quality in our water system. Most of our water comes from Des Moines Water Works, which treats surface water and ground water. Stuart Municipal Utilities also maintains its own wells (groundwater) for standby purposes. Our water quality testing shows the following results:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	51.00 (51-51)	07/19/2021	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	13.00 (13-13)	07/19/2021	No	By-products of drinking water disinfection
Nitrate [as N] (ppm)	10 (10)	SGL	2.74 (0.089-2.74)	4/14/2021	No	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Lead (ppb)	AL=15 (0)	90th	3.00 (ND - 13)	7/2020	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.01 (ND - 0.02)	7/2020	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	2.26 (1.91 – 2.26)	2021	No	Water additive used to control microbes

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

DEFINITIONS

- 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.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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.
- 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.
- SGL – Single Sample Result
- RTCR – Revised Total Coliform Rule
- NTU – Nephelometric Turbidity Units

GENERAL INFORMATION

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 posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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).

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. STUART MUNICIPAL UTILITIES 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>.

ADDITIONAL HEALTH INFORMATION

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains its water from the sand and gravel of the Alluvial aquifer. The Alluvial aquifer has been determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. The Alluvial wells can be highly susceptible to surface contaminants such as leaking underground storage tanks, containment spills, and excess fertilizer application. A detailed evaluation of our source water was completed by the Iowa Department of Natural Resources and is available from Stuart Municipal Utilities by calling 515-523-2915.

This water supply obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstream supplies.

Original Supply ID	Original Supply Name
IA7727031	Des Moines Water Works

More information about Des Moines Water Works can be found on their website at www.dmww.com or call (515)283-8700

OTHER INFORMATION

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

CONTACT INFORMATION

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact Ben Stouffer with Stuart Municipal Utilities at 515-523-2915. Monday thru Friday between the hours of 7:30 to 4:30.

Board meetings are held on the 2nd Thursday of each month at 5:30 pm at City Hall and are open to the public.

PURCHASED WATER INFORMATION

Our water system purchases water from the system(s) shown below. Their water quality is as follows:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)		Yes/No	
7727031 - DES MOINES WATER WORKS						
03 - MCMULLEN AFTER TREATMENT						
Turbidity	N/A (N/A)	TT	0.19 (0.02- 0.19)	2021	No	Soil runoff
Sodium (ppm)	N/A (N/A)	SGL	18.27 (15.6- 38.7)	4/5/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	2.20 (0.06- 2.67)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 2.46	2021	No	Naturally present in environment
Flouride (ppm)	4 (4)	SGL	0.72 (0.15- 0.93)	4/05/2021	No	Water additive that promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
04 - RACCOON, DES MOINES, & GALLERY FLEUR						
Turbidity (NTU)	N/A (N/A)	TT	0.13 (0.0-0.13)	2021	No	Soil runoff
Flouride (ppm)	4 (4)	SGL	0.73	04/05/2021	No	Water additive that promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Atrazine (ppb)	3 (3)	SGL	0.10	7/9/2019	No	Runoff from herbicide used on row crops
Cis-1,2-Dichloroethylene (ppb)	70 (70)	SGL	0.06 (0- 0.6)	9/2021	No	Discharge from industrial chemical factories
Sodium (ppm)	N/A (N/A)	SGL	22.96	4/5/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	3.40 (ND – 3.40)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	N/A	TT	3.58	2021	No	Naturally present in environment
05 - LP MOON ASR S/EP AFTER TREATMENT						
Gross Alpha, inc (pCi/L)	15 (0)	SGL	ND	2021	No	Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	35.84 (20.98- 83.2)	7/06/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	1.72 (1.36- 1.80)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Atrazine (ppb)	3 (3)	SGL	ND	2021	No	Runoff from herbicide used on row crops
Flouride (ppm)	4 (4)	SGL	0.79 (0.57- 1.54)	2021	No	Water additive that promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
06 - MCMULLEN ASR S/EP						

MCMULLEN ASR S/EP (cont)	MCL (MCLG)	Type	Value & (range)	Date	Violation	Source
Flouride	4 (4)	SGL	19.5 (15.6- 38.7)	2021	No	Water additive that promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	15.42	7/6/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	1.88 (0.14- 1.88)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Arsenic (ppb)	(10) 0	SGL	1.0 (0- 1.0)	2021	No	Erosion of natural deposits; runoff from orchards; runoff from glass and production wastes
07- Saylorville S/EP (After Treatment)						
Flouride	4 (4)	SGL	.69 (0.05- 0.76)	2021	No	Water additive that promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	18.9 (16.5- 22.3)	72/01/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.09 (ND- .054)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon (TOC)	N/A	TT	Annual removal ratio 3.58	2021	No	Naturally present in environment
Turbidity (NTU)	N/A	TT	0.22 (0.02- 0.22)	2021	No	Soil Runoff
Barium (ppm)	2 (2)	SGL	0.07	2020	No	Discharge from drilling wastes; discharge from mining wastes; Erosion of natural deposits
08- Army post ASR (After Treatment)						
Gross Alpha, inc (pCi/l)	15 (0)	SGL	9.2	2021	No	Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	40.64 (28.0- 74.8)	2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	1.77 (1.06- 1.77)	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Combined Radium (pCi/l)	5 (0)	SGL	1.5	2021	No	Erosion of natural deposits
Uranium (ppb)	30 (0)	SGL	1.9	2021	No	Erosion of natural deposits