

2017 WATER QUALITY REPORT FOR CHARITON MUNICIPAL WATER WORKS

This report contains important information regarding the water quality in our water system. The source of our water is surface water. 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	46.00 (36 - 57)	12/31/2017	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	35.00 (27 - 42)	03/31/2017	No	By-products of drinking water disinfection
Copper (ppm)	AL=1.3 (1.3)	90th	0.262 (0.0177 - 0.422)	2017	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	AL=15 (0)	90th	5.00 (ND - 16) 1 sample(s) exceeded AL	2017	No	Corrosion of household plumbing systems; erosion of natural deposits
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	3.2 (1.6 - 4.3)	12/31/2017	No	Water additive used to control microbes
01 - AT PLANT AFTER TREATMENT						
Barium (ppm)	2 (2)	SGL	0.0437	07/13/2015	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.88 (0.28-0.88)	12/2017	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	17.4	09/12/2017	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.400	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon TOC ppm	NA	TT	2.21 (0.83-2.21)	2016	No	Naturally present in the environment.
Turbidity (NTU)	N/A (N/A)	TT	2.06 99.1 % of samples met the requirements	2017	No	Soil runoff

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. CHARITON MUNICIPAL WATER WORKS 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 VIOLATIONS

In January, February, March, April, and May 2017 we had a Res Disinfect Concentration (SWTR) violation for Chlorine.

In August 2017 we had a Public Notice Rule Not Linked to Violation violation for Public Notice Rule.

In 2017 we received a public notice rule violation for failure to provide information to our customers regarding the Chlorine TT violation.

In 2017 we received a public notice rule violation for failure to provide information to our customers regarding the Chlorine TT violation.

During 2017 we had multiple violations and procedures have been changed to avoid future violations.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains water from one or more surface waters. Surface water sources are susceptible to sources of contamination within the drainage basin.

Surface Water Name	Susceptibility
Lake Morris	high
Lake Ellis	high

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 CHARITON MUNICIPAL WATER WORKS at 641-774-4711.

Board meetings are held on the 2nd Monday of each month at 5:30 pm at 101 Albia Road and are open to the public.

PURCHASED WATER INFORMATION

Our water system purchases water from the Rathbun Regional Water shown below. Their water quality is as follows:

Surface Water Name	Susceptibility
Lake Morris	high
Lake Ellis	high

01 - EAST PLANT @ AFTER TREATMENT						
Total Organic Carbon TOC ppm	NA	TT	55.7 (25.5-55.7)	2017	No	Naturally present in the environment.
Fluoride (ppm)	4 (4)	SGL	0.55	02/04/2013	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	25	01/17/2017	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.98 (ND - 0.98)	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU)	N/A (N/A)	TT	0.446 95% of samples met the requirements	2017	No	Soil runoff
Simazine (ppb)	4 (4)	SGL	0.10	04/06/2016	No	Herbicide runoff
Atrazine (ppb)	3 (3)	SGL	0.50	04/10/2017	No	Runoff from herbicide used on row crops
03 - WEST PLANT @ AFTER TREATMENT						
Total Organic Carbon TOC ppm	NA	TT	58.1 (33.3-58.1)	2017	No	Naturally present in the environment.
Fluoride (ppm)	4 (4)	SGL	0.47	01/07/2014	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2 (2)	SGL	0.05	01/07/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	28	01/17/2017	No	Erosion of natural deposits; Added to water during treatment process
Atrazine (ppb)	3 (3)	SGL	0.50	03/15/2017	No	Runoff from herbicide used on row crops
Turbidity (NTU)	N/A (N/A)	TT	0.141 100% of samples met the requirements	2017	No	Soil runoff