



# CLINTON UTILITIES BOARD

## 2018 WATER QUALITY REPORT

Clinton Utilities Board (CUB) is pleased to provide you with this Consumer Confidence Report (CCR) announcing that the water we treat and distribute meets or exceeds all federal and state requirements. At CUB's award-winning water treatment plant thousands of tests are performed annually in order to ensure that all CUB customers are provided safe, high-quality drinking water. We are proud of our history of providing high-quality drinking water and are committed to maintaining this level of excellence.

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and 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.

Contaminants that may be present in source water:

- 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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The table included in this CCR displays the results of our monitoring for the period of January 1, 2017 to December 31, 2017. All 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 (1-800-426-4791).

The source of the drinking water CUB treats and distributes is the Clinch River, a "surface water" supply. TDEC has prepared a Source Water Assessment Program (SWAP) Report for our section of the Clinch River. The SWAP Report assesses the susceptibility of our untreated water source to **potential** contamination. Tennessee's water sources have been rated as "reasonably susceptible", "moderately susceptible" or "slightly susceptible" based on geologic factors and human activities in the vicinity of the water source. Our section of the Clinch River has been rated by TDEC as "reasonably susceptible" to **potential** contamination.

An explanation of Tennessee's Source Water Assessment Program, the SWAP summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed online at <https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html> or you may contact Clinton Utilities Board to obtain copies of the Lower Clinch Watershed assessment.

### Information for Consumers at Risk

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 their 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 microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

### Contact Information

- For more information about CUB's water, contact CUB's Water Department at 865-457-9232.
- CUB's Board meets on a monthly basis. Information about regularly scheduled board meetings can be obtained by calling CUB.



# Water Quality Data

## What does this chart mean?

- **AL** - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Avg.** - Average Level
- **MCL** - Maximum Contaminant Level, or 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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- **MCLG** - Maximum Contaminant Level Goal, or 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.
- **MRDL** - Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
- **MRDLG** - Maximum Residual Disinfectant Level Goal, or 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.
- **N/A** - Not Applicable
- **NTU** - Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just barely noticeable to the average person.
- **ppb** - Parts per billion which equals micrograms per liter - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **ppm** - Parts per million which equals milligrams per liter (mg/l) - explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **RTCR** - Revised Total Coliform Rule. This rule went into effect on April 1, 2016, and replaces the MCL for total coliform with a "Treatment Technique" trigger for a system assessment.
- **TT** - Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.

Contaminant	Violation Yes/No	Level Found	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source
<b>REGULATED CONTAMINANTS</b>								
Total Coliform Bacteria (RTCR)	No	0	N/A	2017	N/A	0	TT	Naturally present in the environment
Turbidity <sup>1</sup>	No	0.40	0.03 - 0.40	2017	NTU	N/A	TT	Soil runoff
Copper <sup>2</sup>	No	90 <sup>th</sup> %= 0.233	N/A	2016	ppm	1.3	AL=1.3	Corrosion of household plumbing systems
Fluoride	No	0.63 Avg.	0.383 - 0.805	2017	ppm	4	4	Erosion of natural deposits; Water additive
Lead <sup>2</sup>	No	90 <sup>th</sup> %= 3.77	N/A	2016	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	No	8.35	N/A	2017	ppm	N/A	N/A	Erosion of natural deposits; Used in some home water treatment systems
Total Trihalomethanes (TTHM)	No	59 Avg. <sup>3</sup>	30 - 75	2017	ppb	N/A	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	52 Avg. <sup>3</sup>	28 - 85	2017	ppb	N/A	60	By-product of drinking water disinfection
Total Organic Carbon <sup>4</sup>	No	1.17 Avg.	1.07 - 1.27	2017	ppm	TT	TT	Naturally present in the environment
Chlorine	No	1.76 Avg.	1.0 - 2.0	2017	ppm	MRDLG 4	MRD 4	Water additive used to control microbes
Nitrate	No	0.507	N/A	2017	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<i>Cryptosporidium</i> <sup>5</sup> (Source Water Only)	No	0.042 Avg	0 - 0.20	2017	oocysts/L	0	TT	Naturally present in the environment

<sup>1</sup>Turbidity is a measure of the cloudiness or haziness of the water. CUB monitors turbidity because it is a good indicator of the effectiveness of our filtration system. In 2017, CUB met the treatment technique requirement for turbidity with 99.9% of samples below the turbidity limit of 0.15 NTU.

<sup>2</sup> During the most recent sampling of lead and copper, **none** of the 30 households sampled contained concentrations exceeding the action levels. 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. CUB 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 two 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>.

<sup>3</sup>Highest Locational Running Annual Average (LRAA): The highest average concentration at a particular location for four consecutive quarters.

<sup>4</sup>CUB met the treatment technique requirements for Total Organic Carbon.

<sup>5</sup> *Cryptosporidium* is a microbial pathogen found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. In 2017, the monitoring of our source water indicated the presence of *Cryptosporidium* prior to filtration. The principle source of *Cryptosporidium* contamination is believed to be animals, both domestic and wild. The ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Current test methods are unable to determine if *Cryptosporidium* is viable or capable of causing disease. Symptoms of cryptosporidiosis include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome illness within a few weeks. However, immuno-compromised people, elderly, infants and small children, may be at a greater risk. Immuno-compromised individuals are encouraged to seek advice 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).