

**WE ARE PLEASED TO REPORT THAT THE CHARLES TOWN UTILITY BOARD MET ALL FEDERAL AND STATE WATER STANDARDS FOR THE REPORTING YEAR 2021.**

**Additional Information**

All other water test results for the reporting year 2021 were non-detectable.

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 **Charles Town Utility Board** 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 drinking 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

**A copy of this report may be provided to you upon request at our office during regular business hours or may be downloaded from our website located online at: <http://www.ctubwv.com/index.cfm/reports-information/ccr/>**



**Charles Town Utility Board**

661 South George Street, Suite 101  
Charles Town, WV 25414

# CHARLES TOWN Utility Board

## 2021 Annual Drinking Water Quality Report

PWS# WV3301905

## Why am I receiving this report?

In compliance with the Safe Drinking Water Act Amendments, the **Charles Town Utility Board** is providing its customers with this annual water quality report. This report explains where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The information in this report shows the results of our monitoring for the period of January 1st to December 31st, 2020 or earlier if not on a yearly schedule.

If you have any questions concerning this report, you may contact **Kristen M. Stolipher, (304) 725-2316**. If you have any further questions, comments or suggestions, please attend any of our regularly scheduled board meetings held on the **2nd and 4th Wednesday** of every month at **4:00 p.m.** in the **Charles Town Utility Board office, Charles Town, WV**.

## Where does my water come from?

Your drinking water source is **surface** water from the Shenandoah River.

## Source Water Assessment

A Source Water Assessment was conducted in 2003 by the West Virginia Bureau for Public Health (WVBPH). The intake that supplies drinking water to the **Charles Town Utility Board** has a higher susceptibility to contamination, due to the sensitive nature of surface water supplies and the potential contaminant sources identified within the area. This does not mean that this intake will become contaminated; only that conditions are such that the surface water could be impacted by a potential contaminant source. Future contamination may be avoided by implementing protective measures. The source water assessment report that contains more information is available for review or a copy will be provided to you at our office during business hours or from the WVBPH 304-558-2981.

## Why must water be treated?

All drinking water contains various amounts and kinds of contaminants. Federal and state regulations establish limits, controls, and treatment practices to minimize these contaminants and to reduce any subsequent health effects.

## Contaminants in Water

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits of contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these 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 Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of 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 include:

**Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**Inorganic contaminants**, such as salts and metals, that can be naturally-occurring, or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, farming.



**Pesticides and herbicides**, that 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**, that can be naturally-occurring or the result of oil and gas production and mining activities.

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 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).

Our water system has an estimated population of 15,220 and is required to test a minimum of 15 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

The following tables list all of the drinking water contaminants which were detected during the 2021 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1- December 31, 2021. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

## Regulated Contaminants

### Microbiological Contaminants

Contaminant	Violation Y/N	Level Detected	Unit of Measure	MCLG	MCL	Likely Source of Contamination
Coliform (TCR)	N	No detected results were found in the calendar year of 2021	ppm	0	Systems that Collect Less Than 40 Samples per Month - No more than 1 positive monthly sample	Naturally present in the environment

### Inorganic Contaminants

Contaminant	Collection Date	Highest Value	Range (low/high)	Unit of Measure	MCL	MCLG	Likely Source of Contamination
Antimony, Total	4/26/2021	0.048	0.023 - 0.048	ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Barium	4/26/2021	0.028	0.0249 - 0.028	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	4/26/2021	1.7	1.1 - 1.7	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	4/26/2021	0.7	0.1 - 0.7	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	3/8/2021	1.4	0.87 - 1.4	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate-Nitrite	2/24/2020	1.2	1.2	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

### Disinfection Byproducts

Contaminant	Sample Point	Monitoring Period	Highest LRAA	Range (low/high)	Unit	MCL	MCLG	Likely Source of Contamination
TOTAL HALOACETIC ACIDS (HAA5)	147 WEST HALL DRIVE, TUSCAWILLA HILLS	2021	44	13.4 - 62.8	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	BOUNDARY STREET	2021	50	12 - 67.1	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	MOOSE LODGE	2021	22	15 - 29.9	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	NORTH WEST MAIN STREET	2021	47	22.4 - 46.8	ppb	60	0	By-product of drinking water disinfection
TTHM	147 WEST HALL DRIVE, TUSCAWILLA HILLS	2021	44	14.2 - 57	ppb	80	0	By-product of drinking water chlorination
TTHM	BOUNDARY STREET	2021	43	13.5 - 57	ppb	80	0	By-product of drinking water chlorination
TTHM	MOOSE LODGE	2021	43	14.1 - 59	ppb	80	0	By-product of drinking water chlorination
TTHM	NORTH WEST MAIN STREET	2021	43	9.5 - 53	ppb	80	0	By-product of drinking water chlorination

Contaminant	Monitoring Period	Violation	MPA	MPA Units	RAA	RAA Units	Likely Source of Contamination
Chlorine/Chloramines Maximum Disinfection Level	12/01/2021 - 12/31/2021	N	2	MG/L	1.7	MG/L	Water additive used to control microbes

### Total Organic Carbon

Collection Date	Required Removal Ratio	Highest Value / Range	MCLG	MCL	Likely Source of Contamination
12/1/2021	1 RATIO	3.3 / 1.3 - 3.3	NA	TT	Naturally present in the environment

### Copper and Lead

Contaminant	Monitoring Period	90th Percentile	Range	Unit of Measure	AL	Sites Over AL	Likely Source of Contamination
Copper, Free	2021	0.0509	0 - 0.578	ppm	1.3	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	2021	1.14	0 - 33.0	ppb	15	1	Corrosion of household plumbing systems; erosion of natural deposits

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Turbidity						
Contaminant	Violation Y/N	Monitoring Period	Highest Value	Unit of Measure	TT Requirement	Likely Source
Turbidity	N	07/2021	0.280	NTU	In any month, at least 95% of the samples must be less than 0.3 NTU	Soil Runoff

### Radiological Contaminants

Contaminant	Violation Y/N	Collection Date	Highest Value	Range (low/high)	MCL	MCLG	Typical Source
GROSS ALPHA, EXCL. RADON & URANIUM (pCi/L)	N	3/8/2021	0.224	0.224	15	0	Erosion of natural deposits

### Secondary Contaminants Non Health Based Contaminants-No Federal Maximum Contaminant Level (MCL) Established

Contaminant	Collection Date	Highest Value	Range (low/high)	Unit	SMCL
ALKALINITY, TOTAL	12/1/2021	146	0.62 - 146	MG/L	10000
CALCIUM	2/15/2017	42.7	23.6 - 42.7	MG/L	
CALCIUM	10/10/2017	36.2	36.2	MG/L	
CALCIUM	3/31/2021	81.6	39.2 - 81.6	MG/L	
CALCIUM HARDNESS	7/1/2020	117	117	MG/L	
CARBON, TOTAL	11/1/2021	8.8	1.3 - 8.8	ppm	10000
CHLORIDE	2/24/2020	3.5	3.5	MG/L	250
CONDUCTIVITY @ 25 C UMHOS/CM	7/21/2021	370	155 - 370	UMHO/CM	
CRYPTOSPORIDIUM	6/6/2018	1	0 - 1		
GIARDIA LAMBLIA	8/8/2018	1	0 - 1		1
HARDNESS, CALCIUM MAGNESIUM	12/29/2021	187	1.1 - 187	MG/L	
HARDNESS, TOTAL (AS CaCO3)	1/15/2020	346	75 - 346	MG/L	
NICKEL	4/26/2021	0.00043	0.0003 - 0.00043	MG/L	0.1
ORTHOPHOSPHATE	6/23/2021	2.75	2.03 - 2.75	MG/L	
PH	7/7/2021	7.9	7.3 - 7.9	SU	8.5
PHOSPHATE, TOTAL	1/18/2018	1.78	1.45 - 1.78	MG/L	
SILICA	3/31/2021	2.045	0.213 - 2.045	MG/L	
SODIUM	3/8/2021	7.47	6.42 - 7.47	MG/L	1000
SULFATE	3/8/2021	14	12.4 - 14	MG/L	250
TEMPERATURE (CENTIGRADE)	7/21/2021	27.8	5.6 - 27.8	C	

### VIOLATIONS - the 2021 calendar year, we had the below noted administrative violation(s) of drinking water regulations.

Compliance Period	Analyte	Comments
12/30/2020 - 1/27/2021	TOTAL HALOACETIC ACIDS (HAA5)	FAILURE SUBMIT OEL REPORT FOR HAA5
2/14/2021	PUBLIC NOTICE	PUBLIC NOTICE RULE LINKED TO VIOLATION
5/13/2021	PUBLIC NOTICE	PUBLIC NOTICE RULE LINKED TO VIOLATION
8/14/2021	PUBLIC NOTICE	PUBLIC NOTICE RULE LINKED TO VIOLATION
10/3/2021	PUBLIC NOTICE	PUBLIC NOTICE RULE LINKED TO VIOLATION

\* During the reporting period there were no required health effects violation notices.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical and mental development. Children could show deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

### Water Quality Data Table Definitions

Terms and abbreviations used in the table or report:

- **Maximum Contaminant Level Goal (MCLG):** the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** the "Maximum Allowed" MCL is 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.
- **Secondary Maximum Contaminant Level (SMCL):** recommended level for a contaminant that is not regulated and has no MCL.
- **Action Level (AL):** the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.
- **Treatment Technique (TT):** a required process intended to reduce levels of a contaminant in drinking water.
- **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.
- **Non-Detects (ND):** lab analysis indicates that the contaminant is not present.
- **Parts per Million (ppm):** or milligrams per liter (mg/l)
- **Parts per Billion (ppb):** or micrograms per liter (µg/l)
- **Picocuries per Liter (pCi/L):** a measure of the radioactivity in water.
- **Millirems per Year (mrem/yr):** measure of radiation absorbed by the body.
- **Monitoring Period Average (MPA):** An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly and yearly.
- **Nephelometric Turbidity Unit (NTU):** a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.
- **Running Annual Average (RAA):** an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.
- **Locational Running Annual Average (LRAA):** Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.