

# CHARLESTOWN WATER DEPARTMENT

173 MAIN STREET  
CHARLESTOWN, NH 03603  
603-826-5387  
FAX – 603-826-3709  
www.charlestown-nh.gov

## Charlestown Water Quality Report 2018 PWSID #0411010

### Our Safe Water and It's Source

#### MISSION STATEMENT

*We are committed to providing you with safe, high quality drinking water and service to back it up. We monitor and control the systems 24 hours a day, 7 days a week, to ensure a quality product is produced and delivered to your home or business*

Past Results:  
Calculated in a 90<sup>th</sup>  
percentile

<u>Year</u>	<u>Lead</u> <u>Copper</u>
2017	1 ppb 0.54 mg/l

We will test ten more sites in quarter Two 2018.

All of Charlestown's water is ground water. There are two wells supplying the system. One on North Hemlock Road is called Clay Brook (Reference # 001) it produces about 380 gallons of water per minute. The other wells are off Lovers Lane Road and are known as Bull Run#1 (Reference # 002) producing 200 gallons per minute and Bull Run # 2 (Reference # 005) producing 500 gallons per minute

We have some of the best water quality in the State of New Hampshire. We have passed all of our State and Federal water quality standards for the history of our

testing. We test for various parameters on a regular basis, including chemicals, organic matter, bacteria, inorganic matter and radiological; over one hundred tests are performed each year at different locations and for different parameters.

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 Safe Drinking Water Hotline at 1-800-426-4791

#### You Can Get Involved

Please report any pollution situation you may know of, Ground water protection is up to everyone. Keeping our wells safe from contaminates is a job we all should take part in. You can call the Water Department – 603-826-5387, attend a Selectboard meeting, which are held the 1<sup>st</sup> & 3<sup>rd</sup> Wednesday of each month, or call the Town Offices – 603-826-4400.

### Lead and Copper

Testing was performed in 2017 on twenty prearranged sites throughout Charlestown with the highest results being well under the EPA limits.

Copper: EPA Action Limit is 1.3mg/l

Lead: EPA Action Limit is 15 ppb

#### Source Water Assessment Report:

The State of New Hampshire Department of Environmental Services has prepared a Source Water Assessment Report for the sources serving this community's water system and assessing the sources vulnerability to contamination. The results of the assessment, prepared on 4/12/02 updated in 2015 are as follows.

Twelve susceptibility ranking

criteria were used: detects, intake, KCSs, PCSs, highway & railroads, pesticides, septic, urban land, agricultural land, animals, lagoons, dry discharge, sanitary radius, tropic status.

#### Clay Brook Well: North Hemlock

Ratings are high being bad, low being good

Received 2 high ratings for:

agricultural land and pesticides

Received 1 medium rating for:

animals

Received 9 low ratings for: other

category

#### Bull Run Wells: Lovers Lane Rd.

Received 4 high ratings for:

urban land, agriculture land,

pesticides, sanitary radius

Received 3 medium ratings for:

possible contamination source,

highway/RR, pesticides

Received 5 low ratings for: other

**Well Head Protection Program** is active and we monitor activity within the Well Head Protective Radius. Maps are available at the town office. PCS stands for Poetical Contamination Source; we have identified each source in our well head protection area and monitor them yearly or more as needed. The complete Assessment Report is available at the Water Department or Town office.

The State of New Hampshire Department of Environmental Services web site

[www.des.nh.gov/dwgb](http://www.des.nh.gov/dwgb)

#### Water System Ordinance:

The Town of Charlestown has a document called the Water Use Ordinance. This document governs the water system and is used as a guide to protect the user/customer and the Town. Copies are available at the Water Department or Town office.

## Health Effects Language

### Are Precautions Necessary?

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk for 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 Water

### Chlorine:

Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

### Copper:

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

### Lead:

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)

### TTHM Trihalomethanes:

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

### Requirements/Violations:

We are required to monitor your drinking water for specific contaminants on a regular basis.

### Drinking Water:

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 include:

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 storm water 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 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, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug

Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Town of Charlestown  
PWS ID # 0411010

These tables show all the chemicals we have detected in the water supply over the last five years of sampling hundreds of parameters.

### Regulated Inorganic Contaminants

Contaminant	Level Detection Clay Brook	Level Detection Bull Run #1	Level Detection Bull Run # 2	Unit of Measure	Violation	MCL	MCLG	Date of Detect	Origin
Arsenic	<1	1	<1	ppb	N	10	10	08/17/2016	Erosion of natural deposits, runoff from orchards
Nitrate	1.3	0.5	1	ppm	N	10	10	07/11/2017	Erosion of natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Copper	0.025	<0.001	<0.001	ppm	N	1.3	AL=1.3	08/17/2016	Corrosion of household plumbing systems, Erosion of Natural deposit, leaching from wood preservatives
Barium	0.005	0.002	0.002	ppm	N	2	2	08/17/2016	Erosion of natural deposits, Discharge of drilling waste, discharge from metal refineries.

### Unregulated Contaminants

Contaminant	Level Detection Clay Brook	Level Detection Bull Run # 1	Level Detection Bull Run # 2	Unit of Measure	Violation	Reason for Sampling
Manganese	0.005	<0.005	<0.005	Mg/l	N	Yearly State Requirement
Sodium	7	32	33	Mg/l	N	Yearly State Requirement

### Volatile Organic Contaminants

Contaminant	Railroad St.	Main St.	Unit of Measure	Violation	MCL	MCLG	Date of Detect	Origin
Total THM's	8.7	8.6	ppb	N	80	N/A	07/12/2017	By-product of drinking water disinfection with chlorine
Total HAA5's	ND	ND	ppb	N	60	N/A		By-product of drinking water disinfection with chlorine
Chlorine	0.30	0.40	ppm	N	MRDL 4	4	Daily	Water additive used to control microbes

PWS ID# 0411010

## Radioactive Contaminants

Contaminant	Level Detection Clay Brook	Level Detection Bull Run # 1	Level Detection Bull Run # 2	Unit of Measure	Violation	MCL	MCLG	Date of Detect	Origin
Compliance Gross Alfa	0.5	0.3	ND	pCi/L	N	15	0	08/17/2016	Erosion of natural deposits
Uranium	ND	0.7	0.7	Ug/l	N	30	0	08/17/2017	Erosion of natural deposits

## Lead and Copper

Contaminant (Units)	Action Level	90 <sup>th</sup> percentile Sample Value *	Date	# of sites above AL	Violation Yes/No	Likely Source of Contamination	Health Effects of Contaminant
Copper (ppm)	1.3	0.54ppm	04/2017	0	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Lead (ppb)	15	1.0ppb	04/2017	0	NO	Corrosion of household plumbing systems, erosion of natural deposits	(15 ppb in more than 5%) 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).  (above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

## Abbreviations

BDL: Below Detection Limit, mg/L: milligrams per Liter, NA: Not Applicable, ND: Not Detectable at testing limits, NTU: Nephelometric Turbidity Unit, pCi/L: picoCurie per Liter, ppb: parts per billion, ppm: parts per million, RAA: Running Annual Average, TTHM: Total Trihalomethanes, UCMR: Unregulated Contaminant Monitoring Rule, ug/L: micrograms per Liter

