

The North Charlestown Water System Quality Report 2016

This report is produced yearly by the Charlestown Water Department to keep our customers apprised of the quality of water in our system and how we operate.

Who We Are:

Charlestown Water Department
173 Main Street
Charlestown NH. 03603

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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.

Our Water Source:

All of North Charlestown's water is ground water. There are two wells supplying the system, they are located off Rt. 12A near the Little Sugar River. We also have a 250,000 gallon storage tank on Wheeler Rand Rd.

Providing Safe Water:

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 two hundred tests are performed each year at different locations and for different parameters.

Why do we test for contaminants?

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.

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 Hotline.

You can get Involved:

You may call your Water Department between 6:00 AM and 2:30 PM at 603-826-5387 or leave us a message.

You may attend a Selectboard meeting on the first and third Wednesday of each month.

You may call the Town Office at 603-826-4400.

Please report any pollution situation you may know of, Groundwater protection is up to everyone. Keeping our wells safe from contaminates is a job we all should take part in.

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In 2015, the State of New Hampshire Department of Environmental Services tested North Charlestown's wells for Nitrates and all were below detectable limits.

Lead & Copper: testing was performed in 2015 on five prearranged sites throughout North Charlestown with the highest results being well under the EPA limits.

The copper EPA limit is 1.3mg/l. The highest test result out of five sites was 0.113mg/l.

The lead EPA limit is 0.15mg/l. The highest test result out of five was 0.002mg/l.

We will test again in 2018.

The Graff showing copper is sampled from the source well.

Past Results: Calculated in a 90th percentile

<u>Year</u>	<u>Lead</u>	<u>Copper</u>	
2015	0.002	0.110	mg/l
2012	0.003	0.063	mg/l
2009	0.006	0.078	mg/l
2006	0.004	0.080	mg/l
2003	0.005	0.112	mg/l
2000	0.006	0.280	mg/l

Arsenic: The reduction system has reduced the arsenic contamination to 7 ppb below the maximum allowed of 10 ppb.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

We test each quarter for arsenic at the source wells.

<u>2015</u>	<u>Well #1</u>	<u>Well #2</u>	
Quarter 1	0.007	0.007	mg/l
Quarter 2	0.007	0.007	mg/l
Quarter 3	0.007	0.008	mg/l
Quarter 3	0.007	0.008	mg/l

Average for the year is 7 parts per billion or 0.007mg/l

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 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.

Well 1 & 2 are at the same site:

Ratings are high being bad; low being good.

Received 3 high ratings for: highways, septic, agricultural lands

Received 2 medium ratings for: possible contamination source, animals

Received 7 lows ratings for: other category

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

Water System Ordinance:

The Town of Charlestown has adopted a document called the Water Use Ordinance. This ordinance 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.

Town of North Charlestown

PWS ID # 0411020

Contaminant	Level Detection Well # 1	Level Detection Well # 2	Unit of Measure	Violation	MCL	MCLG	Date of Detect	Origin
Arsenic	7	7	ppb	N	0	10	7/23/2015	Erosion of natural deposits, runoff from orchards
Nitrate	<0.5	<0.5	ppm	N	10	10	7/23/2015	Erosion of natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Copper	0.003	0.005	ppm	N	1.3	AL=1.3	8/7/2013	Corrosion of household plumbing systems, Erosion of natural deposit, leaching from wood preservatives
Barium	0.009	0.008	ppm	N	2	2	8/7/2013	Erosion of natural deposits, Discharge of drilling waste, discharge from metal refineries
Chlorine	0.25	0.25	ppm	N	4	4	Daily	Water additive used to control microbes

This table shows all the chemicals we have detected in the water supply over the last five years of sampling hundreds of parameters.

These are not violations or high levels they are merely detects of a regulated substance in the past five years.

Abbreviations: ppm: = parts per millions, ppb: = parts per billion, pci/l: = picocurie per liter.

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.

MCL: = maximum contaminant level the highest allowable level of a contaminant in drinking water

AL: = action level, or the concentration of a contaminant which, when exceeded triggers treatment or other requirement which a water system must follow.

Nitrate: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and if untreated may die. Symptoms include shortness of breather and blue-baby syndrome.

Copper: Copper is an essential nutrient, but some people who drink 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 suffer liver or kidney damage. People with Wilsons Disease should consult their personal doctor.

Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Arsenic: (5 ppb – 10 ppb) While your drinking water meets EPA's standards for arsenic, it does contain very levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic form drinking water. EPA continues to research the health effects of lows levels of arsenic, which is mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Chlorine: Some people who use water containing chlorine well in excess of the MCDL 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.