

A close-up photograph of a glass of lemon water with ice cubes and a chrome faucet with water dripping. The glass is on the left, and the faucet is on the right. The background is blurred. A diagonal line runs across the image from the top right to the bottom left.

**Presented By**  
**Dartmouth Water Division**

ANNUAL  
**WATER  
QUALITY  
REPORT**

WATER TESTING PERFORMED IN 2016

Este relatório contém a informação importante sobre sua água bebendo. Tenha-o por favor traduzido por um amigo ou por alguém que o compreende e o pode o traduzir para você.

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## Continuing Our Commitment

Once again we proudly present our annual water quality report.

With a focus on customer service and efficient operations, we continue to strive for excellence through new water quality programs that will ensure reliable drinking water supplies for years to come. To maintain our commitment to you, we routinely collect and test water samples every step of the way, from the source waters right to your home or business, checking purity and identifying potential problems. We work with only state-certified laboratories that perform the required testing to maintain our quality-assurance program. Staffed by highly trained scientists and technicians, these labs have the latest and most sophisticated instruments and can measure substances down to one part per billion! We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

This edition covers all testing completed from January through December 2016. We remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users. Please visit our annual open house, held at the beginning of May, when we celebrate National Drinking Water Week.

Dartmouth Water is a division of the Department of Public Works under DPW Director David T. Hickox. For more information about this report, or for any questions relating to your drinking water or this report, please call Steven M. Sullivan, Water and Sewer Superintendent, at (508) 999-0742.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for 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 the water poses a health risk.



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. Substances 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may 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 which may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Community Participation

The Board of Public Works meets monthly. If you are interested in discussing water department issues with the Board, please call the Department of Public Works at (508) 999-0740 and ask to be added to the agenda.

## Source Water Assessment Program

The Massachusetts Department of Environmental Protection (MADEP) has prepared a Source Water Assessment Program (SWAP) report for the water supply sources serving this water system.



The Source Water Assessment and Protection (SWAP) program assesses the susceptibility of Public Water Supplies to potential contamination by microbiological pathogens and chemicals.

**Dartmouth:** The SWAP Report recommends that Dartmouth establish a Wellhead Protection Committee and also commends Dartmouth for taking an active role in promoting source protection measures in the Water Supply Protection Areas. The SWAP report recommends that

we continue to monitor Zone I and remove all non-water-supply activities. The report also recommends that we educate residents on ways they can help in protecting drinking water sources, and work with emergency response teams to ensure they are aware of the stormwater drainage in Zone II. Residents can help protect sources by practicing good septic system maintenance, supporting water supply protection initiatives at town meetings, properly disposing of hazardous household chemicals during hazardous materials collection days, and limiting pesticide and fertilizer use. The complete SWAP report is available at the Water Division on Allen Street and online at [www.state.ma.us/dep/brp/dws/](http://www.state.ma.us/dep/brp/dws/). For more information, call Steven Sullivan at (508) 999-0742.

**New Bedford:** A susceptibility ranking of “high” was assigned to the New Bedford Water Division using the information collected during the assessment by MADEP. The complete SWAP report is available at the Water Division Office, 1105 Shawmut Avenue, New Bedford. For more information, contact Charles Kennedy at (508) 763-2231.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 [www.epa.gov/lead](http://www.epa.gov/lead).

## About Our Violation

The Dartmouth Water Division exceeded the locational running annual average (LRAA) for TTHMs. The exceedance occurred in November 2016. At one location, the average was reported at 81.18 ppb. We believe that this occurred because, during the 2016 drought, we did not flush the hydrants in town, which made the numbers escalate. We will be flushing once again in the Spring and Fall of 2017. In addition, the Town is collecting additional samples to set a baseline for all areas in town. With these data, sound decisions can be made with the help of our consultants to determine the best option to reduce TTHMs in our system. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

## Where Does My Water Come From?

Dartmouth's water is supplied from 14 groundwater, gravel-packed or naturally developed wells, and one pumping station. Wells A, B, C, F-1, and F-2 have a combined capacity of 1,555 gallons per minute (gpm). These wells are located in the area of 299 Chase Road. Wells D, E-1, and E-2 have a combined capacity of 1,550 gpm. These wells are located in the area of 687 Chase Road. Wells V-1, V-2, V-3, Panelli-1, Panelli-2, Panelli-3, and Panelli Well Field 4 have a combined capacity of 1,820 gpm. These wells are located in the area of 579 Old Westport Road. The Route Six well is inactive. A copy of the map on which the wells are located is available at the Water Division office at 751 Allen Street.

Purchased water from the City of New Bedford is treated at the Quittacas Water Treatment Plant and comes from a surface supply comprising five ponds.

The principal storage area is the Little Quittacas Pond, located in the Town of Rochester. The other ponds are Great Quittacas, Pocksha, Assawompsett, and Long Pond, situated in the towns of Freetown, Lakeville, and Middleboro. Treatment consists of conventional filtration, disinfection, corrosion control, and fluoridation. Dartmouth pumps the water into our system for a facility located on Faunce Corner Road with a maximum rate of 4,000 gallons per minute.



## Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Dartmouth Water Division		New Bedford Water		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2016	2	2	NA	NA	0.0074	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2016	[4]	[4]	0.027	ND-1.40	1.77 <sup>1</sup>	1.70-1.84 <sup>1</sup>	No	Water additive used to control microbes
Combined Radium (pCi/L)	2016	5	0	0.95	0.82-1.13	1.2	NA	No	Erosion of natural deposits
Haloacetic Acids [HAAs] (ppb)	2016	60	NA	28.25	9.1-28.8	39	22-51	No	By-product of drinking water disinfection
Nitrate (ppm)	2016	10	10	0.29	ND-0.55	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2016	2	NA	0.21	0.18-0.23	NA	NA	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	81.18	50-84.6	40	32-60	Yes	By-product of drinking water disinfection
Turbidity <sup>2</sup> (NTU)	2016	TT	NA	NA	NA	0.24	0.07-0.24	No	Soil runoff

### SECONDARY SUBSTANCES (NEW BEDFORD WATER)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Fluoride <sup>3</sup> (ppm)	2016	2.0	NA	0.8	0.6-0.8	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese (ppb)	2016	50	NA	20	13-28	No	Leaching from natural deposits

### UNREGULATED SUBSTANCES <sup>4</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Dartmouth Water Division		New Bedford Water		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Sodium <sup>5</sup> (ppm)	2016	44.4	NA	27	NA	Naturally occurring by-product of corrosion control Treatment

### UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3) <sup>4</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Dartmouth Water Division		New Bedford Water	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Chlorate (ppb)	2014	167	100-280	110 <sup>6</sup>	71-150 <sup>6</sup>
Chromium [Total] (ppb)	2013	0.4	0.4-0.4	0.29 <sup>7</sup>	ND-0.42 <sup>7</sup>
Chromium-6 (ppb)	2014	0.07	0.04-0.11	0.034	ND-0.057
Strontium (ppb)	2014	46	25-52	28	26-31
Vanadium (ppb)	2014	0.3	0.2-0.3	0.26	ND-0.35

<sup>1</sup>The New Bedford DPI-Water Division commenced treatment of its filtered water with combined chlorine as of November 4, 2002. A combination of chlorine and ammonia, it is measured in terms of total chlorine.

<sup>2</sup>Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

<sup>3</sup>The New Bedford DPI-Water Division started treating the drinking water with fluoride as of January 8, 2007, as directed by the New Bedford Health Department. The optimum dosage is 0.7 ppm. At this level it is safe, odorless, colorless, and tasteless. There are over 3.9 million people in 140 Massachusetts water systems and 184 million in the United States who receive the health and economic benefits of fluoridation.

<sup>4</sup>Unregulated contaminants are those for which the U.S. EPA has not established Drinking Water Standards. The purpose of monitoring unregulated contaminants is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

<sup>5</sup>The Massachusetts Department of Environmental Protection maintains a guideline level of 20 parts per million (ppm) for sodium.

<sup>6</sup>Sampled in 2016.

<sup>7</sup>Sampled in 2014.

## Definitions

**90th Percentile:** Out of every 10 homes sampled, 9 were at or below this level.

**AL (Action Level):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):**

Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**SMCL (Secondary Maximum Contaminant Level):** SMCLs are established to regulate the aesthetics of drinking water like appearance, taste and odor.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.