Barnstable Fire District Water Department

2012 Annual Water Quality Report

Barnstable, Massachusetts
508-362-6498
MASSDEP PWSID # 4020000

What's the Quality of My Water?

The Barnstable Fire District Water Department is pleased to share this water quality report with you. It describes to you, the customer, the quality of your drinking water. This report covers January 1 through December 31, 2012. The Barnstable Fire District Water Department strives to comply with the strict regulations of both the State of Massachusetts and the U.S. Environmental Protection Agency (EPA), which requires all water suppliers to prepare reports like this every year.

In 2012 our water department distributed 181,034,000 gallons of water to our customers. Our water source is groundwater pumped from five gravel-packed wells which are located throughout the District. The Phinney's Lane Well. The Breed's Hill Wells. The Route 132 Wells.

Barnstable treats your water by adding KOH to adjust the pH to a neutral 7.0. Town zoning laws limits and/or prohibits certain uses of the land surrounding the well fields and recharge areas.

As required by the 1996 Safe Drinking Water Act Amendments, the Massachusetts Department of Environmental Protection (DEP) completed a source water assessment plan (SWAP) for Barnstable Fire District. The report states that the District relies on four groundwater wells to supply its customers with drinking water. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. The rating reflects the potential for contamination of source water, not the existence of contamination. A full report is available for viewing online at http://www.mass.gov/ dep/water/drinking/swapreps.htm or contact the Barnstable Fire District water office at 508-362-6498 for more information on this report.

If you have any questions about this report or concerning your water utility, please contact Jon R. Erickson, Superintendent, by calling 508-362-6498 or by writing to this address: PO Box 546, Barnstable, MA 02630-0546. Also, you are welcome and encouraged to attend our regular Board of Water Commissioners meetings the 1st Tuesday of each month at 4:00 PM at the Water Department Office (1841 Phinney's Lane).

Board of Water Commissioners: David A. Jones, Chairman; Evelyn G. Bassett, Member; Stephen F. Whitmore, Member

Emerging Contaminants in Public Drinking Water Wells

The water department is taking a pro-active role in determining the absence or presence of EDCs (Endocrine Disrupting Compounds) in the drinking water of the Village. In 2009, our water department along with eight others on Cape Cod partnered with the Silent Spring Institute allowing them to sample our wells. These samples were tested for a wide range of organic wastewater compounds (OWCs), including pharmaceuticals and personal care products (PPCPs), hormones, herbicides, organophosphate flame retardants and perfluorinated chemicals. We also measured nitrate and boron, which are both typically present at elevated concentrations in wastewater. These samples were analyzed at Underwriters Laboratories in Indiana. Please contact our water department if you have any questions or concerns regarding the impacts and possible solutions to these emerging compounds or for a detailed analysis report.

The U.S. Environmental Protection Agency (EPA) wants you to know:

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. Food and Drug Administration regulations establish limits for contaminants in bottled water that 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 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 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.

2012 Monitoring Results for Barnstable Fire District Water Department

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 trans plants, 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 drinking water from their health care providers. EPA/CD 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).*

Contaminant	Unit	MCLG Health Goal	MCL EPA's Limits	Level Detected	Range Detected	Violation (Yes / No)	Year[1] Sampled	Potential Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria	Positive / Negative	0	1 positive monthly sample	0	NA	**NO**	2012	Naturally present in the environment.
Turbidity [2]	NTU	NA	TT	0.6	ND - 0.60	NO	2012	Soil Runoff.
Inorganic Contaminants								
Nitrate	ppm	10	10	1.1	ND-1.1	NO	2012	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
Perchlorate	ppb	NA	2	0.16	ND - 0.16	NO	2012	Rocket propellants, fireworks, munitions, flares, blasting agents.
Disinfection By - Products								
Total Haloacetic Acids (HAA5)	ppb	N/A	60	1.8	ND-1.8	NO	2012	By product of drinking water disinfection
Total Trihalomethane (TTHM)	ppb	N/A	80	13	1.4-13	NO	2012	By product of drinking water disinfection
Radioactive Contaminants								
Gross Alpha	pCi/L	N/A	15	1.40	-0.34-1.40	NO	2012	Erosion of Natural Deposits
Radium – 226	pCi/L	N/A	5	0.23	0.06-0.23	NO	2012	Erosion of Natural Deposits
Radium – 228	pCi/L	N/A	5	0.57	0.15-0.57	NO	2012	Erosion of Natural Deposits
Lead and Copper								
Copper[1]	ppm	1.3	1.3 = AL	0.69 (90th percentile) All sites below AL		NO	2010	Corrosion of household plumbing systems. Erosion of natural deposits. Leaching from wood preservatives.
Lead [1,3]	ppb	0	15 = AL	8.0 (90th percentile) 1 site above AL		NO	2010	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants								
Chlorine	ppm	MRDLG = 4	MRDL = 4	1.6 Average	1.4 - 1.8	NO	2012	Water additive used to control microbes.

Non-Regulated Substances: Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Substance	Unit	Level Detected	Range Detected	Year[1] Sampled	Potential Source of Contamination
Chloroform	ppb	3.1	ND – 3.1	2012	By-product of drinking water disinfection.
Manganese	ppm	.040	ND-.040	2012	Naturally present in rocks and soil.
Sodium	ppm	33	15 - 33	2012	Naturally present in the environment.
Sulfate	ppm	10	6.6 - 10	2012	Runoff / leaching from natural deposits. Industrial wastes.

Definitions

Maximum Contaminant Level (MCL): 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. *Maximum Contaminant Level Goal (MCLG):* 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. *Maximum Residual Disinfectant Level Goal (MRDLG):* 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. *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. *Action Level (AL):* The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow. *Treatment Technique (TT):* A required process intended to reduce the level of a contaminant in drinking water. *90th Percentile:* 90% of samples are equal to or less than the number in the chart. *NTU (Nephelometric Turbidity Units):* A measure of clarity. *NA:* Not applicable. *pCi/L (picocuries per liter):* a measure of radioactivity. *ND:* Not detectable at testing limits. *PPB (parts per billion):* micrograms per liter (ug/l). *PPM (parts per million):* milligrams per liter (mg/l). *CDC:* Centers for Disease Control. *EPA:* Environmental Protection Agency.

Notes:

[1] The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

[2] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

[3] 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 Barnstable Fire District Water Department 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 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*.

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.

For public health and safety the Department has been chlorinating the water supply since August 2011.

Landlords, please forward to your tenants. This also can be viewed at the District's web site: *http://www.barnstablefiredistrict.com.*

Este relatório contém informações muito importantes sobre a água potável. Queira traduzir, ou falar com alguém que compreende-lo.