TOWN OF BELLINGHAM

DEPARTMENT OF PUBLIC WORKS

Public Water System ID# 2025000

DRINKING WATER QUALITY AND CONSUMER INFORMATION REPORT
CALENDAR YEAR 2015

We are utilizing the electronic distribution method. This allows us to compile a much more thorough report at a lower cost to our customers.

Introduction

This is the annual water quality report card that we prepare and make readily available to our customers and the public. It contains information about the Bellingham water supply system and important information about the quality of the drinking water we distribute to our customers. If you read it each year, THANK YOU.

I suggest that everyone read the entire report, but if pressed for time, I hope you will at least scan the 2015 Water Quality Summary, which begins on Page 5 and details the results of our most recent water quality analysis.

In July 2011 we detected bacteria at one of our sources. That triggered a dramatic change in the way we treat water that is distributed to our customers. We were facing regulatory requirements to add continuous disinfection and monitoring, chronic dirty water problems, and increasing concerns about health effects of exposure to manganese in drinking water. These factors lead us to consideration of a comprehensive approach and to the decision that it was not wise to just meet the minimum requirements. In October of 2012 the Town voted to proceed with a $15.4 million project to construct town wide filtration. This project was completed in 2015. Now all of the water that we pump from our wells goes to a filtration plant before it is pumped into the distribution system and to our customers. Our two plants filter out iron and manganese reducing the dirty water issue, disinfect the water to reduce the risk of bacteria exposure, and balance the acidity to reduce the exposure to lead and copper for our water customers.

The $15.4 million project included construction of a new filtration plant on Wrentham Road, upgrading our existing filtration plant on Hartford Ave, and installing many miles of water transmission mains to transport all water to the plants for treatment. The project was financed with the assistance of a Massachusetts Drinking Water State Revolving Fund low interest rate loan of $13.1 million.

The Town of Bellingham Department of Public Works (DPW) is committed to providing our customers with high-quality drinking water that meets or surpasses state and federal standards for quality and safety. The Town has made significant investments in our facilities (pumping stations, filtration plants, and standpipes), and annually performs thousands of dollars' worth of water quality tests to ensure that we provide sufficient quantities of safe drinking water.

Bellingham water is safe to drink. The tasks the Bellingham DPW must perform as a public water supplier under the Federal Safe Drinking Water Act insure that to be the case. We are pleased to compile this annual report that summarizes the 2015 calendar year water quality testing and hope it reassures our customers of the safety of our tap water.

If you want to know more about the Bellingham water supply system, have any questions about the report, or would be interested in volunteering to help with our water education programs, please call Donald DiMartino, Director of the Bellingham Department of Public Works, at 508-966-5813. The DPW office is located at 26 Blackstone Street beside the Fire Station.

Our customers are also encouraged to participate in discussions about the water system and water quality issues by attending meetings of the Board of Selectmen, which are held the first and third Mondays of each month at 7:00 PM in the municipal center. Meeting agenda items, minutes, and special workshops regarding the water system are posted on the town website.

Where does Bellingham get its drinking water and is it treated?

The Town of Bellingham's drinking water supply system includes 16 groundwater wells, eight pumping stations, three storage tanks, approximately 98 miles of water main, and 60 miles of water services.

Twelve wells, which are controlled by four pumping stations, are located in the southern part of Town; they draw water from the Blackstone River basin's underground aquifer. The Wrentham Road Filtration Plant went on line in September of 2015. It filters and treats water from these Blackstone River basin wells.

Four wells, each operated by its own pumping station, are located in the northern part of Town; they draw water from the Charles River basin's underground aquifer. In November the Hartford Ave Filtration Plant went into full operation and treats water from these Charles River basin wells.

The Hartford Ave and Wrentham Road Filtration plants are primarily designed to remove iron and manganese. Iron & Manganese Removal is removed by oxidation and filtration. These minerals are often present in groundwater at levels that can discolor the water, or cause it to take on unpleasant odors or tastes. Even though the water may still be safe to drink, it is preferable that the iron and manganese be removed. Removal generally requires a two-step process of oxidation and filtration. Oxidation is accomplished by adding oxidizing chemicals to the water. Oxidation causes the dissolved iron and manganese that is our raw water to form in tiny particles. At the Hartford Ave plant we oxidize with chlorine and potassium permanganate, while at Wrentham Road we only need to add Chlorine. At both plants we also add Caustic Soda to increase the pH to enhance oxidation process. Once particles have formed, the water passes through special filters consisting of material that is specifically designed to capture iron and manganese particles. We have four filters at Wrentham Road and six at Hartford Ave. On a routine schedule each filter is backwashed with high flow and air wash cycles to clean the filters.

Chlorine is vital to insure proper oxidation to optimize filtration, but it is also a disinfectant. We must discharge plant effluent with residual chorine levels established by regulation to provide protection against bacterial contamination.

The Caustic Soda increasing the process pH is not just for the oxidation. It is helping us meet another regulatory requirement to control internal corrosion in the water system and reduce the lead and copper exposure for our drinking water customers.

The DPW has detailed maps showing these facilities and flyers about the treatment plant project. Anyone who would like to see a map or obtain a copy should contact the DPW.

What measures are taken to insure that our water sources are protected?

In 2002, the Massachusetts Department of Environmental Protection (MassDEP) issued a draft of our Source Water Assessment and Protection (SWAP) Report. The SWAP program was established under the Federal Safe Drinking Water Act and it requires that every state inventory land uses within the recharge areas of all public water supply sources, assess the susceptibility of drinking water sources to be contaminated from these uses, and publicize the results to provide support for improved protection.

Some of the land uses that exist within our recharge areas include: auto body & repair shops, salvage yards, an old landfill, railroad tracks, hazardous material storage, industries and industrial parks, large quantity hazardous waste generators, and underground storage tanks. There are others but these are considered the highest threats.

A hard copy of our SWAP report is available upon request from the DPW (508-966-5813) or online at www.bellinghamma.org/Pages/BellinghamMA_DPW/swap.pdf. The report notes that all of our sources have a high susceptibility of future contamination. Unfortunately, MassDEP has not had the funding to update the report and some of the information is not current; however, it still contains a wealth of information about our source waters and potential risks to its quality.

It is impossible to eliminate all threats from past and present land use, but we have established protective land use restrictions that dramatically reduce our exposure to certain contaminants. We are well equipped to prevent future land uses that could further increase our susceptibility to aquifer contamination. Our key regulations include Board of Health Floor Drain Regulations, Water Resource Protection Bylaws, and the Water Resource District Zoning Map. The Bylaws and Maps are available online at the Town's Website www.bellinghamma.org.

Our Zone II drinking water well recharge areas extend into Medway, Franklin, Milford, and Wrentham and are all protected by local bylaws except in Milford. Annually, we send a letter to the Town of Milford asking them to add our Zone II to their water protection district and some progress has been made, but to date our Zone II areas within the borders of the Town of Milford do not have bylaw or zoning protection.

Is our water pure?

No. Pure water would be only hydrogen and oxygen, the compound H_2O. 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. Sources of drinking water (tap water and bottled water) include rivers, lakes, reservoirs, streams, and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals and radioactive materials, and can be polluted by animal and human activity. More information on contaminants and potential health effects can be obtained by calling the US Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants** -which can be naturally occurring or be the result of oil and gas production and mining activities.

If our water is not pure, what is in it?

The answer to this question is the main purpose of this report. On Pages 5 and 6, you will see a section titled **The 2015 Water Quality Summary**. It provides the complete list of the contaminants detected in the water we provided to our customers in 2015. The list contains only the contaminants that were detected at levels above the "detection limit," which is the lowest concentration of a substance that today's laboratory technology can detect. We collected 920 water samples in 2015. Those samples were analyzed by Massachusetts-certified labs for 88 various contaminants. The Water Quality Summary also reports detections of contaminants that we were not required to monitor for in 2015, but were detected during the most recent sampling round within the last five years. The date of sample collection is noted on the table. The frequency of monitoring is determined by MassDEP.

The contaminants on our MassDEP sampling schedule include total coliform bacteria, free chlorine residual, inorganic contaminants (IOCs), total trihalomethanes (TTHM), haloacetic acids (HAA5), radionuclides, nitrate, nitrite, tetrachloroethylene (PCE), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), iron, manganese, arsenic, sodium, and perchlorate.

Bellingham applied for a waiver to reduce the sampling requirements for perchlorate. MassDEP approved the waiver because the sources are not at risk of contamination. The last samples for perchlorate, reported below, were found to meet all applicable US EPA and MassDEP standards.

We did not need to perform costly Microscopic Particular Analysis (MPA) tests in 2015 because we completed a series of these tests on several of our wells in 2013. MPA testing was done to verify that the water from our groundwater wells is not under the influence of surface water. All tests showed that the soils in our aquifers are acting as a natural filter and that the water we pump is groundwater and is less likely to be affected by some particular contaminants that can occur in reservoirs, lakes, or rivers.

There are allowable or safe levels of contaminants in water. How are these levels determined?

To ensure that tap water is safe to drink, the United States Environmental Protection Agency (US EPA) prescribes regulations and the Massachusetts Department of Environmental Protection (MassDEP) administers regulations that limit the amounts of certain contaminants allowed in water provided to public water systems customers. The USEPA sets Maximum Contamination Levels, Maximum Contamination Level Goals, Action Levels, and defines allowable testing procedures for over 160 water contaminants. Food and Drug Administration (FDA) and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that provide the same protection for public health.

The US EPA and MassDEP are continuously studying contaminants that may be found in drinking water. Monitoring for new contaminants is proposed whenever a potential health risk is identified and when technology is available to yield reliable analytical results. The US EPA Unregulated Contaminant Monitoring Rule (UCMR) program is part of this effort. Bellingham has participated in this program over the last several years. UCMR results are noted in this report on sheets 5 and 6.

Regulations require that we include the following IMPORTANT paragraph:

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 system disorders, some elderly, and some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Below are some important definitions and abbreviations that will help you understand the 2015 Water Quality Summary that appears on the following pages.

- **MCL – Maximum Contamination Level**: The highest level of a contaminant in drinking water. MCLs are set as close to the MCLGs (see below) as feasible using the best available treatment technology.
- **MCLG – Maximum Contamination 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.
- **Action Level**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **90th Percentile**: Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the action level to determine lead and copper compliance.
- **ppm** is the abbreviation for parts per million. Parts per million is the same as milligrams per liter (mg/L) which is the scientific unit of measure for most contaminants.
- **ppb** is the abbreviation for parts per billion. A part per billion is the same as micrograms per liter (ug/L) which is the scientific unit of measure for some contaminants.
- **pCi/L** is the abbreviation for picocuries per liter (a measure of radioactivity)
- **Highest RAA**: Highest running annual average of four consecutive quarters
- **Monthly %** is the percent of a month's system samples that indicate a presence of Total Coliform Bacteria.
- **MRDL - Maximum Residual Disinfectant Level:** MRDL is the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG** is the abbreviation for Maximum Residual Disinfectant Level Goal. MRDLG is the level of drinking water disinfectant below, which there is no known or expected risk to health. MRDLGs do not reflect the benefit of the use of disinfectants to control microbial contaminants.
- **SMCL – Secondary Maximum Contaminant Level:** These standards are developed to protect the aesthetic qualities of drinking water and are not health based.
- **ORSG – Mass Office of Research and Standards Guideline:** This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.
- **Unregulated Contaminants:** Unregulated contaminants are those contaminants for which the USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the USEPA in determining their occurrence in drinking water and whether future regulation is warranted. UCMR3 contaminants were sampled as part of the third cycle of the Unregulated Contaminant Monitoring Rule.

The 2015 Water Quality Summary

The water quality information presented in the following tables is from 2015 or from the most recent round of testing done in accordance with the regulations. Only the detected contaminants are shown.

Regulated Contaminant (Unit of Measurement)	*Date(s) Collected*	Highest Result or Highest RAA	*Range Detected*	*MCL or MRDL*	*MCLG or MRDLG*	*Violation (Y/N)*	*Possible Sources of Contamination*
Inorganic Contaminants							
Nitrate (ppm)*	May, June & August 2015	4.0	0.26 – 4.0	10	10	*N*	*Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits*
Barium (ppm)	May, June & August 2015	0.12	0.0 – 0.12	2	2	*N*	*Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits*
Perchlorate (ppb)	August & September 2015	0.34	0 – 0.34	2	----	*N*	*Rocket propellants, fireworks, munitions, flares, blasting agents*
Volatile Organic Contaminants							
Xylene (total)	May, June & August 2015	0.66	0 – 0.66	10,000	10,000	*N*	*Discharge from petroleum factories; Discharge from chemical factories*
Radioactive Contaminants							
Radium 226 & 228 (pCi/L) (combined values)	May & August 2015	2.08	0.16 – 2.08	5	0	*N*	*Erosion of natural deposits*
Gross Alpha Activity	May, June & August 2015	4.15	0 – 4.15	15	0	*N*	*Erosion of natural deposits*
Disinfectants and Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)**	Quarterly	66	3 - 112	80	-----	*N*	*Byproduct of drinking water chlorination*
Haloacetic Acids (HAA5) (ppb)	Quarterly	50	0 – 78	60	-----	*N*	*Byproduct of drinking water disinfection*
Chlorine (ppm) (free)	40 per Month	0.57	0 – 2.00	4	4	*N*	*Water additive used to control microbes*

***About Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

****About Total 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.

Bacteria Information

Each month we collect at least 40 tap water samples for total coliform bacteria as an indicator that other potentially harmful bacteria, along with a source and treated water sample at each active well and filtration plant. Bacterial testing requirements for public drinking water are very strict. All samples that show the presence of total coliform bacteria are automatically tested for possibly harmful *E. coli*, a fecal indicator. Confirmation sampling indicated that we did not detect these potentially harmful *E. coli*, in any customer tap samples in 2015.

Bacteria	Total # Positive	Highest % Positive in a Month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform*	5	9%	>5%	0	Y	Naturally present in the environment
E. Coli	0	0%	**	0	N	Human and animal fecal waste

* Coliform are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. When coliform are found in more samples than allowed, this is a warning of potential problems.

** Compliance with the *E. coli* MCL is determined upon repeat testing.

Lead and Copper Information

	Date Collected	90th Percentile	Action Level (AL)	MCLG	Number of Samples	Number of Samples Above AL	Exceeded AL (Y/N)	Possible Source of Contamination
Lead (ppb)	2015	6	15	0	35	0	N	Corrosion of household plumbing
Copper (ppm)	2015	0.52	1.3	1.3	35	0	N	Corrosion of household 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. The Bellingham DPW is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, you can minimize the potential 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/safewater/lead.

Unregulated (UCMR) and Secondary Contaminants

Contaminant (Unit of Measurement)	Date(s) Collected	Range of Results Detected	Average Detected	SMCL	ORSG or EPA Health Advisory	Possible Source
Sodium (ppm)	May, June & August 2015	15 -100	48.5	----	20*	Natural sources; runoff from use of salt on roadways; by-product of treatment process
Iron (ppm)	May, June & August 2015	0 – 3.9	0.41	0.30	---	Erosion of natural deposits
Manganese (ppb)***	Quarterly 2015	2.1 – 960	174.2	50	300**	Erosion of natural deposits
Chromium-6 (ppb)	May, June & August 2015	0 – 1.5	0.21	---	---	Naturally occurring element used in plating, dyes, wood preservation

* Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the levels of sodium in their drinking water where exposures are being carefully controlled.

** US EPA and MassDEP have established public health advisory levels for manganese to protect against concerns of neurological effects. The highest average for a single source (Well # 12 Cliff Road) was 71 ppb.

*** Manganese: Manganese is a naturally occurring mineral found in rocks, soil and groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ppb parts per billion. In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese. Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for longer than 10 days. The ORSG differs from the EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than 6 months of age to children up to 1 year of age to address concerns about children's susceptibility to manganese toxicity. See: EPA Drinking Water Health Advisory for Manganese https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards Guideline (ORSG) for Manganese http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/mangorsg.pdf.

Why doesn't tap water taste better?

To meet the extensive safe drinking water quality standards, most public water suppliers must add treatment chemicals to their source water. We adjust the pH (acidity) of the water for corrosion control and add potassium permanganate for iron and manganese removal and filtration enhancement. We also add chlorine for disinfection. We have to add a sufficient amount of chlorine at the filtration plants to maintain good disinfectant residuals at the outskirts of the system. These chemicals work very well to make tap water safe, but they can affect the water's taste and odor.

Bellingham's water is safe to drink and it's also economical. The average cost for a gallon of bottled water from a store is $1.50 and the average cost for a gallon of safe tap water is $0.005. That means bottled water costs 375 times more than the safe water coming from your tap. If you want to remove the chlorine odor, you can fill a pitcher or jug with water and set it aside until the chlorine dissipates. You can then store it in your refrigerator to be used for drinking. There are also several products on the market that provide point of use filtering. Filtering systems with a charcoal element are very reliable at removing chlorine order. Be aware that any filtering system must be maintained in order to work properly. Filters must be replaced or risk being breeding grounds for bacteria.

How can drinking water become contaminated in the distribution system after being pumped from a clean source?

1. Stagnation & Discoloration

Water can deteriorate in the pipes before it gets to the tap. To avoid this, we routinely perform hydrant flushing, which cleans out any water that may be stagnating in the piping system and also removes iron and manganese particles that coat the walls of water pipes. Iron and manganese can cause severe water discoloration. Although our new filtration plants are now providing water with greatly reduced levels, years of iron and manganese build up still exists in our water distribution system. Hydrant flushing will eventually remove the majority of these deposits, but it could take a few years. We should be nearing the end of the dirty water era in Bellingham.

2. Corrosion (Lead and Copper)

Tap water can have high levels of lead and copper due to corrosion of internal plumbing pipes and fixtures. The regulations, known as the Lead and Copper Rule (LCR), require that we test samples from residential customer's water taps. This testing is performed to confirm our ability to control internal pipe and plumbing corrosion. The LCR is different from other USEPA regulations in that it uses an Action Level for the contaminant as opposed to a Maximum Contamination Limit. The way the LCR works is the Town must take residential first draw tap water samples from a specific list of homes that are the most likely to yield the highest lead and copper levels. The results are tabulated and the 90^{th} percentile is compared with the Action Level. If the result is below the Action Level, no additional action is needed. If the result is above the Action Level, additional action is required to reduce the customers' exposure to these contaminants.

In the early 1990s, when the LCR took effect, we were exceeding the Action Level. In 1996 we constructed corrosion control facilities to feed sodium hydroxide (caustic soda) and balance the pH of the water and address the problem. Our results have been below the Action Level ever since. We continue to feed caustic soda at our two filtration plants which have replaced our corrosion control facilities. Since the mid 1990's we have controlled the corrosion by adjusting the pH and thereby reducing our customer's exposure to lead and copper in drinking water to well below acceptable levels.

Modifications to the plumbing code have reduced the amount of lead allowed in any plumbing fixture; however, these changes are relatively new. Older buildings plumbing fixtures are likely to contain lead. Drinking water regulations and plumbing code modifications have made significant advances in the reduction of Americans' exposure to lead in their drinking water.

3. Cross Connections - Backflow

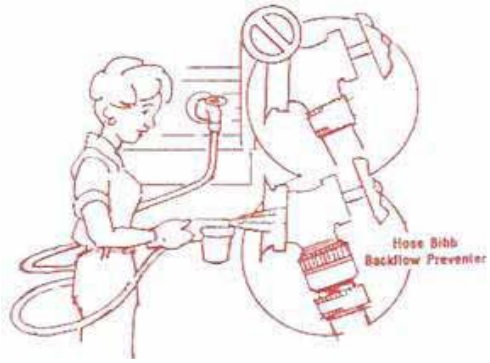
The drinking water supply system can be contaminated if water from a customer's building flows back into the water supply system. This can occur if the water main pressure drops and the interior building plumbing is not properly installed. Backflow occurs through a building's plumbing via a cross connections, which is a connection between a drinking water pipe and a non-potable source. Pollution can come from your own home. For instance, if you hook up a hose to a fertilizer sprayer and the water pressure drops suddenly (such as from a water main break or hydrant use in town) the fertilizer may be sucked back into the drinking water pipes through the hose.

While the potential for backflow through a cross connection seems remote, the consequences can be severe. Cross connection backflow has the greatest potential for contaminating YOUR water to the degree it can cause immediate illness or death. Imagine taking a drink of water that is laced with pesticides, lawn chemicals, or pool chemicals.

Some things you should do to prevent backflow at your home:

- The Bellingham DPW recommends the installation of backflow prevention devices, such as a low-cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town.
- Never submerge a hose in soapy water buckets, swimming pools, sinks, drains, or chemicals.
- For additional information on cross connections and our cross connection program, please contact Tom Ostrowski, Assistant DPW Director and Cross Connection Control Program Coordinator.

Hose Bid Vacuum Breaker (Backflow Preventer



To avoid backflow at non-residential customers' properties, the DPW administers the Cross-Connection Control Program. Under this program, commercial properties are routinely surveyed to be sure that special protective check valves are installed and maintained. The Cross-Connection Control Program and the Plumbing Code help to ensure that the risk from this form of system contamination is minimized or eliminated.

We had two new violations in 2015 and resolved a 2011 violation.

We exceeded the allowable 5% of our samples showing a presence of total coliform bacteria in September and October. In September we had 5 of 55 samples that had a presence of total coliform bacteria (9%). In October we had 3 of 49 samples that had a presence of total coliform bacteria (6%). Exceeding five percent in a month is a violation of the state drinking water regulations (310 CMR 22.05 (8)(a): Monthly Maximum Contaminant Level Violation).

We publicized the violations as directed by MassDEP. MassDEP approved a written notice informing all customers of the higher than 5% results. The notices were published as general ads in the Milford Daily News and Woonsocket Call on October 7th and November 9th. The notices were also posted to the Town website and noted on the Cable TV government scroll channel for several weeks.

We increased disinfectant feed rates and collected several additional samples that we analyzed. We flushed out the water mains in areas where we were experiencing samples with the presence of total coliform. We also performed a survey of our wells and pumping stations and submitted an Assessment Form (RTCR-1) to MassDEP. No cause of the unusually high number of total coliform detections was found. No further problems were encountered after October.

MassDEP issued a Notice of Noncompliance (NON-CE-15-5D080) that covered our total coliform violations in September and October. We received a Return to Compliance (RTC-CE-15-5D080) notice on November 30, 2015.

Please share this information and this report with all people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). For More Information or questions regarding this notice, please contact Don DiMartino, DPW Director 508-966-5813.

2011 Ground Water Rule Violation: On July 13, 2011, we received lab results indicating an E. coli bacteria detection at the Well #12 raw water sample collected on the July 11, 2011. That is a violation of the State Drinking Water Regulations GWR (310 CMR 22.26). This violation was resolved by our construction of permanent disinfection at our new water filtration plants. On May 18, 2015 we got MassDEP approval to reactivate Well #12 now with permanent disinfection and filtration at the Hartford Ave Filtration Plant and in November we received approval of our disinfection system; thereby resolving the violation.

Is our drinking water system prepared for a crisis?

The Bellingham DPW is well prepared to handle any kind of emergency, from natural disasters and power outages to terrorist attacks and pandemics.

Our system has many sources (wells) and auxiliary power capabilities. These redundancies make it hard to knock us out completely. We have studied our system's vulnerable points and routinely discuss water system security at the Bellingham Emergency Planning Committee (BEPC) meetings. The BEPC holds an annual table top exercise to test and critique our preparedness.

We also subscribed to an emergency phone call system. The "CODE RED" system can call every Bellingham phone number and deliver a specialized warning to all of our customers within five minutes. If a health hazard ever occurs, the DPW will utilize this system and every other practicable means to notify and protect our customers. We have used the CODE RED system to warn of relatively minor water main breaks and shut downs, system changes that may trigger dirty water at customer taps, as well as for routine activities like calling in our long list of snow plow vendors. We hope we never have to use this system to issue a boil water order or a do not drink order, but it is very comforting to know that we have the tool to help us protect the health of our customers in case of a major crisis.

I urge all customers, residents, and people who work in Bellingham to enter their cell phone numbers, text numbers and emails into the CODE RED system. CODE RED automatically picks up listed phone numbers but will not call a cell phone unless the information is added manually.

How to subscribe to CODE RED: If you have internet access you can add your number on line at www.bellinghamma.org, click on the link to "Sign Up For CODE RED" and fill in your information. If you do not have internet access, call the Bellingham DPW (508-966-5813) Monday through Friday, (7am – 3:30pm) and we will enter your information into the database.

Thank you for reading the 2015 Annual Water Quality Report. If you have any questions please call Don DiMartino at 508-966-5813.