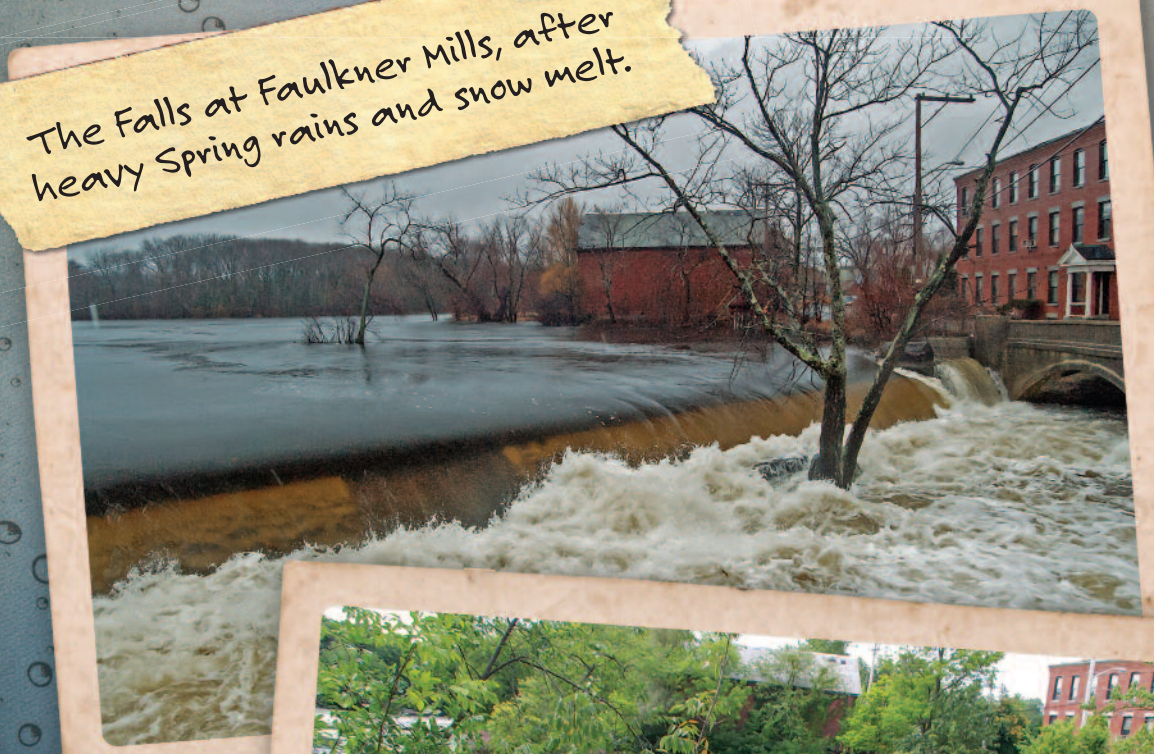
Town of Billerica

Department of Public Works

Water Division PWS ID 3031000



The Falls at Faulkner Mills, after heavy Spring rains and snow melt.

The Falls at Faulkner Mills in June.

Annual Water Quality Report

January 1, 2013–December 31, 2013

Town of Billerica
Department of Public Works
Water Division

WHO WE ARE AND HOW TO CONTACT US:

John McGovern, *Superintendent*
Ralph McClellan, *Asst. Superintendent*
John Sullivan, *Treatment Chemist*
Robert Boulé, *Backflow/Cross Connection*
Edward McLaughlin, *Distribution Supervisor*
Gerard Garabedian,
Operations Maintenance Specialist
MaryAnn Rafferty, *Senior Clerk*

270 Treble Cove Rd
West Billerica, MA 01862
Phone: 978-671-0957
Fax: 978-671-0911
Business Hours 8:30 am – 3:30 pm

TO OUR NON-ENGLISH SPEAKING CUSTOMERS:

Within this report is important information regarding the quality of your drinking water. Please have this report translated.

DO YOU NEED TO REPORT A WATER EMERGENCY?

(ie: water main break, loss of water, damaged fire hydrant) Please call the Water Treatment Facility at **978-671-0957**; we are staffed 24 hours a day 365 days a year.

ABOUT THIS REPORT

Do you have comments or suggestions? If you have information you would like to see in our Annual Water Quality Report or suggestions on how to improve it please let us know. We welcome your feedback!

More information is available inside this report on the details of water restrictions.

Written and compiled by: Carolyn Capodilupo

Designed by: Christina Capobianco
Simple Affinity Designs
www.simpleaffinity.com

Welcome to our Annual Water Quality Report!

While this report is required under the Federal Safe Drinking Water Act we are happy to update our customers on what is happening with your drinking water. We hope that you find this report not only helpful but easy to read and comprehend.

Some sections have language that is required by either EPA or DEP we cannot change the format but make every attempt to "translate" the information so that it is easily understandable.

We are frequently asked why we send out this annual report. Our annual Water Quality Report is not only an efficient tool for communicating with our customers it is also ***required*** under the Federal Safe Drinking Water Act.

This report also allows us to meet several other requirements of law; Massachusetts Department of Environmental Protection (MA DEP) Water Withdrawal Permit, Consumer Education, MA DEP CMR 22.22 Cross Connection Control Education and under the Clean Water Act, the Environmental Protection Agency (EPA) Phase II National Pollutant Discharge Elimination System (NPDES) public education and outreach requirements. As you can see the information within this report covers a multitude of State and Federal requirements all within one report and one mailing, while keeping you the water consumer informed on the quality of your drinking water.

Our employees were very productive this year. Some of the tasks keeping them busy;

- The Water Distribution Crew installed new water main pipe; inspected fire hydrants, repaired and/or replaced broken fire hydrants.
- Work within the Treatment Facility kept the Treatment Team busy with scheduled maintenance, system additions, upgrades and repairs.
- The Laboratory Staff was kept busy monitoring the water quality and participating in several studies to improve the safety of drinking water.

Water Division Productivity

Water Treatment Staff repaired and re-installed a 5 million gallon per day Finished Water Pump. This pump is critical equipment as it pumps the water from the treatment plant to the standpipes for distribution.

A 1000 gallon day tank and scale for Aluminum Sulfate were installed. This allows Treatment Operators to more accurately apply the correct dose for this treatment method.

During the months of January and February the Granular Activated Carbon was replaced in Filter numbers 4 and 5 to improve water quality.

A Sample Station was constructed for sampling and monitoring the Clear Wells, this structure securely houses monitoring equipment and is set up for automated sample collection.

Water Division Laboratory personnel participated and passed an on-site Department of Environmental Protection Certification audit. Laboratory personnel also conducted four quarters of sampling and analysis of Billerica's source water and finished water. Lab personnel also responded to customer inquiries and complaints about water quality.

5 million gallon per day finished water pump.

Four quarters of sampling and analysis was conducted for Emerging Threat Contaminants as part of the EPA's current round of screening testing (UCMR3). You can read more about this on page 8 of this report.

A Lead and Copper study was conducted during the warm weather months involving 30 residences in Town. Results of this study can be found on page 5 of this report.

Both Treatment and Laboratory personnel were called on following a traffic accident on Route 3-A which involved a diesel fuel spill. Treatment personnel rapidly deployed booms at the river intake station to prevent any fuel from entering the system. Lab personnel sampled and analyzed the River water for evidence of contamination (none was detected). It was determined the amount of fuel spilled was small and did not enter the storm drain system.

Water Conservation Public Education Outreach continued with Lab personnel participating in the Annual Health and Wellness Fair. Educational materials were distributed along with outdoor water conserving devices.

Staff also attended the Yankee Doodle Homecoming weekend with a booth where indoor water conserving devices, educational materials and reusable water bottles were distributed.

Laboratory staff also attended Minuteman Technical High School in Lexington twice for Career Day events. Minuteman offers training in Environmental Sciences and graduates may work in the Water and Wastewater fields.

Water Division Exhibit at Yankee Doodle Weekend.

Water Division News

Our Leak Detection Program continued with 25 leaks detected and repaired in the water distribution system.

Water Division Distribution Staff repaired 38 water main breaks during 2013. Seventy six hydrants were changed out and four hydrants were added to the system. The Sewer contractor replaced seven hydrants.

In May the water main on Ravine Rd was extended 345 feet in anticipation of the reconstruction of Allen Rd.

In August, the 12" water main on Bridle Rd was extended 342 feet from Bernard St to Hancock St in anticipation of the paving of Hancock Street. A new 6 inch water main was installed on Hancock Street.

AC pipe was replaced with Ductile iron pipe on sections of Gray Street, Patten Road, and Senna Terrace.

The water main on Dyer Street which had a high failure rate was replaced as was the main on Letchworth Ave which was increased from 6" to 12" to increase the capacity.

Our certified Laboratory personnel provided Bacteriological sampling and analysis support to ensure the newly installed sections of pipe provides safe drinking water to the residents of Dyer St and Letchworth Ave.

Routine Hydrant flushing was conducted as was hydrant inspections.

Hydrant Flushing

Water Division Exhibit at Health & Recreation Fair

Water Conservation In Today's World

With worldwide climate changes and abnormal weather patterns, conserving water and changing how we use water is an ongoing challenge.

Public Water Suppliers are faced with increasing demands for water. Our water sources are not unlimited and in some places have become reduced and even nonexistent. It is very important that we review how we use water and take steps to use water responsibly. Federal and State regulations are becoming more stringent on how we are permitted to withdraw water from our source and how our customers may use treated water.

The Town of Billerica is faced with additional conditions being set by the government in order to withdraw water from the Concord River. One such condition is that we are required to restrict non-essential outdoor water use. The water restrictions are based on our residential gallons per capita day (RGPCD) water use. This is the amount of water used per person per day in a calendar year. Currently the RGPCD is set at 65.

We are required by Mass Department of Environmental Protection to implement **SEASONAL LIMITS ON NON ESSENTIAL WATER USE.**

From May 1st through September 30th
Nonessential outdoor water use is allowed TWO DAYS per week before 9 am and after 5 pm. Wednesday and Saturday are the designated days for allowable Nonessential outdoor water use.

Nonessential outdoor water uses that are subject to mandatory restrictions include:

- Irrigation of lawns via sprinklers or automatic irrigation systems;
- Washing of vehicles, except in a commercial car wash or as necessary for operator safety; and
- Washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary to apply surface treatments such as paint, preservatives, stucco, pavement or cement.

Hayden Coffey, granddaughter of G. Garabedian watering the garden.

The following uses may be allowed when mandatory restrictions are in place:

- Irrigation to establish a new lawn and new plantings during the months of May and September;
- Irrigation of public parks and recreational fields by means of automatic sprinklers outside the hours of 9 am and 5 pm; and
- Irrigation of lawns, gardens, flowers and ornamental plants by means of a hand held hose.

Water uses NOT subject to mandatory restrictions are those required:

- For health or safety reasons;
- By regulation;
- For the production of food and fiber;
- For the maintenance of livestock; or
- To meet the core functions of a business (for example, irrigation by golf course as necessary to maintain tees, greens, and limited fairway watering, or irrigation by plant nurseries as necessary to maintain stock).

Tips to Conserving Water Outdoors

- Reduce your lawn area. Plant a rock garden or reduce lawn area with shrubs and low water use plants.
- Train your lawn to develop deep roots. Deep rooted grass requires less watering and can withstand longer periods without water. Water your lawn one inch per week this can be determined by using a rain gauge. Rain gauges are available in our Outdoor Water Conservation Kits.
- Avoid watering on windy days and at midday when evaporation is highest. Early morning is best to reduce the loss of water from evaporation.
- Use a spray nozzle on your garden hose. Spray nozzles shut off water when not being used, never let your hose run when not in use.
- Plant warm season grass such as Bermuda grass, it uses less water than cool season grass such as Ryegrass. There are several drought tolerant grass varieties available.
- Use low water or drought tolerant plants in your garden. Native species do best and adapt to our climate using less water. Ask your local nursery for recommendations or pick up a plant list at the Water Division, 270 Treble Cove Rd.
- Develop zones for your irrigation system based on your plant's needs. Make sure your irrigation system has a rain sensor so that you don't waste water running your system in the rain.

Water Quality Summary | Public Water Supplier ID #3031000

The water quality information presented in these table(s) is from the most recent round of testing done in accordance with the regulations. All data shown with the exception of Lead & Copper was collected from January 1, 2013 through December 31, 2013.

Regulated Contaminants

SUBSTANCE	MCL (MRDL)	MCLG (MRDLG)	HIGHEST AMOUNT DETECTED	RANGE DETECTED LOW—HIGH	TYPICAL SOURCE
Chlorine (ppm)	4	4	2.46	0.22–2.46	Water additive to control microbes
Fluoride (ppm)	4	4	1.3	0.9–1.3	Water additive which promotes strong teeth
Nitrate (ppm)	10	10	0.58	0.51–0.58	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits
Nitrite (ppm)	1	–	0.046	ND–0.046	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits
Barium (ppm)	2	2	0.017		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Perchlorate (ppb)	2	–	0.59		Rocket propellants, fireworks, munitions, flares, blasting agents

TURBIDITY DAILY COMPLIANCE (NTU)	TT	LOWEST % OF SAMPLES	HIGHEST DETECTED DAILY VALUE	MONTHLY COMPLIANCE	TYPICAL SOURCE
1.0	1.0	100%	0.12	At least 95%	Soil Runoff

Monthly Turbidity compliance is related to specific treatment techniques (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

Disinfection By-Products Monitoring

SUBSTANCE	MCL	ANNUAL RUNNING AVERAGE	RANGE DETECTED LOW—HIGH	TYPICAL SOURCE
Total Trihalomethanes TTHMs (ppb)	80	28	12–41	Byproduct of drinking water disinfection
Haloacetic Acids HAA5s (ppb)	60	14	4.8–24	Byproduct of drinking water disinfection
Bromate (ppb)	10		ND–0.008	By-product of drinking water chlorination
Disinfection of drinking water is one of the major public health advances of the 20th century. However, sometimes the disinfectants can react with naturally occurring materials in the water to form unintended byproducts, which may pose health risks. EPA recognizes the importance of removing microbial contaminants while simultaneously protecting the public from disinfection byproducts, and has developed regulations to limit the presence of these byproducts. For more information, see http://www.epa.gov/safewater/mdbp.html				
Total Organic Carbon	TT Annual Average % Removed = 71%			Naturally present in the environment

DEFINITIONS AND NOTES:

AL Action Level. The concentration of a contaminant which if exceeded triggers treatment or other requirements that a water system must follow.

MCL Maximum Contaminant Level. MCLs are the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG's 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. MCLG's allow for a margin of safety.

SMCL Secondary Maximum Contaminant level. These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

ORSG Massachusetts Office of Research and Standards Guidelines. 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.

NTU Nephelometric Turbidity Units / **MDL** Method Detection Limit

ND Not Detected / **TT** Treatment Technique

ppm parts per million / **ppb** parts per billion

Unregulated and Secondary Contaminants

Unregulated Contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether further regulation is warranted.

SUBSTANCE	SMCL	ORSG	LOWEST RANGE DETECTED	HIGHEST RANGE DETECTED	TYPICAL SOURCE
Sulfate (ppm)	250		5	37	Natural sources
Manganese (ppb)**	50			36	Erosion of natural deposits
Chloride (ppm)	250			110	Run-off from road de-icing, use of inorganic fertilizers landfill leachates, septic tank effluents, animal feeds, industrial effluents, irrigation drainage and seawater intrusion in coastal areas.
Sodium (ppm)*		20	83	96	Natural sources; runoff from roadway salt; by-product of treatment process

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

***EPA has established a lifetime health advisory (HA) of 300 ppb for manganese to protect against concerns of potential neurological effects, and a one-day and 10-day HA of 1000 ppb for acute exposure.*

Unregulated Volatile Organics

SUBSTANCE	MDL	LOWEST RANGE DETECTED	HIGHEST RANGE DETECTED	TYPICAL SOURCE
Chloroform (ppm)	0.50	2	13	Byproduct of drinking water chlorination
Bromodichloromethane (ppb)	0.50	4.2	14	Byproduct of drinking water chlorination
Chlorodibromomethane (ppb)	0.50	2.9	8.5	Byproduct of drinking water chlorination
Bromoform (ppb)	0.50	ND	1.6	Byproduct of drinking water chlorination

EPA has not established drinking water standards for Unregulated Contaminants and as such they do not have a MCL. The purpose of Unregulated Contaminant monitoring is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Water Quality Studies Performed By Laboratory

In June of 2013 the Billerica Water Laboratory conducted a Lead and Copper study which involved 30 residences. These residents collected samples of water from their tap after a specified time of no use. The samples were then collected and analyzed for Lead and Copper. This study could not be completed without their cooperation for which we are very grateful. The results of this study are posted below:

SUBSTANCE	DATE(S) COLLECTED	90TH PERCENTILE	ACTION LEVEL	NUMBER OF SITES SAMPLED	NUMBER OF SITES ABOVE ACTION LEVEL	TYPICAL SOURCE
Lead (ppb)	6/13–8/13	1.7	15	30	0	Corrosion of household plumbing; erosion of natural deposits.
Copper (ppb)	6/13–8/13	40	1300	30	0	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservative.

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

Lead in Drinking Water *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. Billerica Water Division 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 1-800-426-4791 or at http://www.epa.gov/safewater/lead*

Where Does Our Drinking Water Come From?

The Town of Billerica uses water from the Concord River to provide our drinking water. The water that our system pumps and treats is known as surface water.

The Watershed above our point of intake is over 400 square miles and lies in all or part of 27 cities and towns. Within that watershed area there are several land use types that have been identified as potential sources of contamination in the source water.

AGRICULTURAL LAND USES INCLUDE: Fertilizer Storage or Use, Landscaping, Nurseries, and Pesticide Storage or Use.

COMMERCIAL LAND USES INCLUDE: Airports, Service Stations, Bus & Truck Terminals, Dry Cleaners, Medical Facilities, Printing Shops, and Research Laboratories.

INDUSTRIAL LAND USES INCLUDE: Electronic Manufacturers, Hazardous Materials Storage, and Machine/Metal Working Shops.

RESIDENTIAL LAND USES INCLUDE: Fuel Storage, Lawn Care/Gardens, and Septic Systems.

MISCELLANEOUS LAND USES INCLUDE: Above Ground Storage Tanks, Oil or Hazardous Material Sites, Large, Small and Very Small Hazardous Waste Generators, Industrial Wastewater Treatment Facilities and Transportation Corridors.

Source Water Assessment Report (SWAP)

What is SWAP? The Source Water Assessment and Protection Program (SWAP), established under the Federal Safe Drinking Water Act, require every state to: Inventory land uses within the recharge areas of all public water supply sources; assess the susceptibility of drinking water sources to contamination from these land uses; and publicize the results to provide support for improved protection.

What is My System's Ranking?

A susceptibility ranking of high was assigned to this system using the information collected during the assessment by DEP. Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area. A source's susceptibility to contamination does not imply poor water quality.

The SWAP Report for Billerica is available at:
http://www.mass.gov/eea/docs/dep/water/drinking/swap/nero/3031000.pdf

How Is My Water Treated To Make It Safe?

In 2013 the Billerica Water Division treated and delivered 1,631,929,000 gallons of water. Because our drinking water source is surface water, we require more treatment because we are directly exposed to the atmosphere and runoff from rain and melting snow. The Billerica Water Division uses a variety of treatment processes to remove contaminants from drinking water. Some of the methods used are described below:

Flocculation: This step removes dirt and other particles suspended in the water. Alum is added to the water to form tiny sticky particles called "floc," this attracts the dirt particles.

Sedimentation: The flocculated particles then settle out of the water, to the bottom of the settling basins.

Filtration: The water is then passed through filters to remove any remaining particles from the water. Filtration clarifies the water and enhances the effectiveness of disinfection.

Disinfection: To eliminate disease carrying organisms, it is necessary to disinfect the water. Our water is disinfected using Chloramines before it enters the distribution system to ensure that dangerous microbial contaminants are killed.

For persons who have fish or small reptiles, whether in a fish bowl or aquarium, Chloramines must be removed from the water to avoid fish kill. Please consult with your pet supplier for instructions on de-chlorinating the water.

Understanding the Language in this Report

Throughout this report you will see the word contaminant used frequently. This DOES NOT mean the water is contaminated or harmful; this term is used to describe the possibility of a contaminant being present in both source water and drinking water. Any substance detected in the drinking water is listed in the analysis tables.

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 infants can be particularly at risk from infections. These people should seek advice 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 Drinking Water Hotline (1-800-426-4791)

Sources of Drinking Water Contamination

Sources of drinking water (both tap 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, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, farming and mining.
- **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, storm water runoff and residential uses.
- **Organic Chemical Contaminants**, include synthetic and volatile organic chemicals that 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.

How Safe Is My Drinking Water?

Congress passed the Safe Drinking Water Act (SDWA) in 1974 to protect public health by regulating the nation's public drinking water supply and protecting sources of drinking water. SDWA is administered by the U.S. Environmental Protection Agency (EPA) and its state partners.

EPA has established pollutant-specific minimum testing schedules for public water systems.

If a problem is detected, immediate retesting requirements go into effect along with strict instructions about how the system informs the public. Until the system can reliably demonstrate that it is free of problems, the retesting is continued.

A network of government agencies monitor tap water suppliers and enforce drinking water standards to ensure the safety of public water supplies. These agencies include EPA, Mass. Dept. of Environmental Protection (DEP), Massachusetts Department of Public Health (DPH), and local public health departments.

What Problems Can Occur?

Actual events of drinking water contamination are rare, and typically do not occur at levels likely to pose health concerns. However, as development in our modern society increases, there are growing numbers of activities that can contaminate our drinking water. Improperly disposed-of chemicals, animals and human wastes, wastes injected underground. And naturally occurring substances have the potential to contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or that travels through an improperly maintained distribution system, may also pose a health risk. Greater vigilance by you, your water supplier, and your government can help prevent such events in your water supply.

Backflow/Cross Connection Program

For over 24 years Billerica has been protecting water consumers with its Backflow/Cross Connection Program.

A Cross connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping or equipment that allows the drinking water to come in contact with non-potable liquids, solids or gases (hazardous to humans) in the event of a backflow.

A backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system such as a boiler, is higher than the water pressure inside the water distribution line or when the pressure in the water system drops due to routine occurrences such as water main breaks, firefighting, or heavy water demand causing the water to flow backwards.

You can help prevent a cross connection by installing a hose bib vacuum breaker on every threaded water fixture. Buy appliances and equipment with a backflow preventer. Never attach a garden hose to a garden sprayer without the proper backflow preventer.

If you are the owner or manager of a property that is being used as a commercial, industrial or institutional facility you must have your property surveyed for cross connection. For more information or to schedule a cross connection survey please call Robert Boulé at 978-671-0957.

Ten Reasons to Choose Tap Water over Bottled Water

1. Bottled water is bad for the planet. Empty water bottles pollute our waterways and clog our landfills.
2. Tap water is safe to drink. By law public water suppliers must meet strict testing and water quality regulations. They must also notify the public if there's a health risk.
3. With tap water you know the source. Billerica's drinking water comes from the Concord River. A lot of bottled water comes from a public water supply. Some of it may get extra treatments and may be called "purified" but that is not always the case.
4. Tap water is much less expensive than bottled water. Americans get about 8 gallons of tap water for about a penny, on average. Bottled water is generally priced at $1.00 or more for 20 ounces!
5. Bottled water does not always taste better. Water can taste differently from brand to brand; it may also absorb an off taste from the plastic bottle.
6. It is easy to get great tasting tap water. Chilling water in the fridge in a glass container refreshes the flavor. Add a drop of lemon juice or a wedge of fresh lemon to enhance the taste. Use a water filtering pitcher or add a filtering device to your kitchen faucet.
7. Tap water is always there. Just turn on your tap and fill your glass! Buy reusable water bottles to carry water with you on the go or visit the Water Division at Yankee Doodle weekend or the Health and Recreation Fair for a free reusable bottle.
8. Fluoride in tap water can help your teeth. Fluoride is added to drinking water to help prevent tooth decay. Most bottled water is not fluoridated.
9. The Safe Drinking Water Act protects tap water. This federal law authorizes the EPA to set standards and enforce them for drinking water. The FDA oversees bottled water with some standards and limited powers of enforcement.
10. Testing requirements for tap water are strict and strictly enforced. DEP has stringent regulations for drinking water. Bottled water facilities aren't as tightly regulated.

UCMR3 Reporting

Under the Safe Drinking Water Act (SDWA) the US Environmental Protection Agency (EPA) has established Assessment Monitoring for Unregulated Contaminants called the Unregulated Contaminant Monitoring Rule (UCMR). Under this Rule data is collected for contaminants suspected to be present in drinking water but that do not have health based standards set under the SDWA.

We are now participating in the third UCMR which is called UCMR3. This will monitor for 21 chemical contaminants. We began this monitoring in 2013 and will continue through 2015. Sampling conducted in 2013 detected the following contaminants:

UCMR3 Results

CONTAMINANT	RANGE DETECTED LOW—HIGH	TYPICAL SOURCE
Chromium (ppb)	ND–0.05	Naturally occurring element; used in making steel and other alloys. Chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium (ppb)	100–140	Naturally occurring element; historically commercial use of Strontium has been in the faceplate glass of cathode tube televisions to blockx-ray emissions.
Vanadium (ppb)	ND–0.9	Naturally occurring elemental metal; used as Vanadium pentoxide which is a chemical intermediate and a catalyst.
Chromium, Hexavalent (ppb)	ND–0.51	Naturally occurring element; used in making steel and other alloys. Chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Chlorate (ppb)	340–520	Agricultural defoliant or desiccant; used in production of chlorine dioxide

Stormwater Pollution

What is Stormwater? Stormwater is the runoff water from rain and snow melt and has been identified by the EPA as the number one contributor to overland pollution of our streams, ponds, wetlands, lakes, rivers, and the ocean. Stormwater pollutants include litter, sand, road salt, bacteria and chemicals such as fertilizers and herbicides from lawns and oil and gas from cars. Run off from paved surfaces such as roads, parking lots, driveways, and rooftops, can contribute large amounts of polluted stormwater. To prevent flooding, parking lots and streets are often lined with storm drains to quickly move stormwater off the pavement. Storm drains have underground pipes that channel the stormwater directly to a nearby water body, whatever flows down a storm drain comes out in the closest wetland, stream, or pond, usually with little or no treatment.

Stormwater is one of the most difficult sources of water pollution to control. Following these tips will help prevent pollution and will help keep our waterways clean.

- Never put anything down a storm drain, including pet waste, motor oil, paint, litter, leaves or sand.
- Don't block storm drains with trash or debris.
- Try using organic lawn care products. Use fertilizer, pesticides and herbicides sparingly.
- Keep your car well maintained to prevent fluid leaks.
- Recycle motor oil, antifreeze, tires and batteries.
- Pick up after pets and dispose of droppings in the toilet or trash.
- Aim roof spouts away from paved surfaces or into a rain barrel.
- Dispose of paint, oil and other household chemicals at Billerica's Annual Household Hazardous Waste Drop Off Day.

Keeping stormwater clean is a community effort. Cleaning up pollutants on the land and taking good care of storm drains results in cleaner stormwater and cleaner water for boating, swimming, fishing, and wildlife.

For further information please visit the Town of Billerica Department of Public Works homepage at http://www.billericadpw.org and follow the link to Stormwater Management.

Keeping our waterways clean from pollution is extremely important. Multiple water suppliers use the same water ways for their drinking water supply. What enters our waterways ultimately ends up in our drinking water source water.

For example the Billerica Water Division uses the Concord River for our source water while Burlington Water uses the Shawsheen River and Tewksbury Water uses the Merrimack River. Keeping these waterways safe for use as drinking water sources, recreational purposes and ecological health is important to all of us.

Storm Drain is marked as draining to waterways.

TOWN OF BILLERICA
DEPARTMENT OF PUBLIC WORKS
WATER DIVISION
270 TREBLE COVE ROAD
BILLERICA, MA 01862

PRESORTED STD
U.S. POSTAGE PAID
N. BILLERICA, MA
PERMIT NO. 74

POSTAL CUSTOMER

Why Does the Water Division Send Out This Report Each Year?

Under the Federal Safe Drinking Water Act, we are required to compile our results of annual testing of the drinking water for our system. Within this report we have specific data that must be included regarding how your water is treated, what contaminants could potentially be in the water, what contaminants were detected in the water and at what level. We are also required to publish health effects language for anything we have detected in the water above the Maximum Contaminant Level.

The State Department of Environmental Protection (DEP) is the permitting authority for the amount of water we can withdraw from the Concord River. This is done by a water withdrawal permit, our permit is 9P-3-14-031.01. The DEP has set guidelines on per capita use of water at 65 gallons per person per day. Therefore it is necessary for us to educate our customers and consumers on the importance of water conservation. Each year we include tips and how to-s for our consumers to save water inside and outside their homes and businesses.

As authorized by the Clean Water Act, The Environmental Protection Agency (EPA) has mandated that certain communities such as Billerica must file for a permit under the Phase II National Pollutant Discharge Elimination System (NPDES) program. This permit controls water pollution by regulating point sources that discharge pollutants into water systems. As part of this permit, Billerica is required to create a Stormwater Management Plan that addresses public education and outreach, public involvement & participation, illicit discharge detection & elimination, construction site stormwater runoff control, post construction stormwater runoff control, and good housekeeping in municipal operations. We must protect our water source from pollution by managing the stormwater runoff that enters the river and its watersheds. We hope that you find our stormwater education pages helpful and informative.

Mass. Department of Environmental Protection 310 CMR 22.22 regulates the Commonwealth Cross Connection Controls. Part of our Public Water System's responsibility is to educate our customers on what cross connection is and how to prevent cross connections. We hope you find our cross connection information helpful.

Town of Billerica Rebate Program

The Town of Billerica Department of Public Works, Water Division offers a Rebate Program to Billerica Residents and businesses. The purpose of the Rebate Program is to change out non conserving fixtures with newer more water efficient fixtures and appliances. As a Public Water Supplier this will help us to reduce per person per day water use. Current building codes already require water conserving fixtures, so new construction is exempt from this program. The Rebate Program will help us to conserve water and will help you to save money.

Qualifying fixtures are toilets and urinals that must be minimum Water Sense certified, Energy Star rated or be a High Efficiency toilet or urinal. To find qualifying fixtures please visit the link below:

- http://www.epa.gov/watersense/product_search.html or for clothes washers http://www.cee1.org
- The rebate for qualifying toilets is $100.00 and for qualifying urinals is $25.00 each.
- The rebate for qualifying clothes washers is $225.00.
- The rebate for qualifying dishwashers is $100.00.

This program is available as funding allows.