Annual

WATER
QUALITY
REPORT

Reporting Year 2013

Presented By
Milford Water Company

PWS ID#: 2185000

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Este relatório contem 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

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you. Please visit our Web site for updates: www.milfordwater.com.

Source Water Assessment

As part of the Source Water Assessment Program (SWAP), the MA Department of Environmental Protection conducted assessments of our drinking water sources in 2002 for the purpose of determining susceptibility of each drinking water source to potential contamination. The assessment susceptibility for Milford Water was reported to be high based upon the presence of at least one high-threat land use within our protective areas. The complete SWAP report is available at the company's office and online at www.mass.gov/dep/water/drinking/2185000.pdf.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, 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.

Where Does My Water Come From?

The Milford Water Company provides treated water from five different sources. Our Dilla Street facilities purify water from the Charles River, the Echo Lake reservoir, the Dilla Street wells and the Clark's Island wells. Our company also maintains a facility off Depot Street that purifies water collected from five wells located along Godfrey Brook. All of our wells are constructed in sand-and-gravel aquifers with depths ranging from 22 feet to 52 feet. Due to this relatively shallow nature, it is critical that we protect our resources against contamination. Our distribution system contains more than 100 miles of pipes, three water storage tanks, and three pumping stations that deliver approximately 1 billion gallons of water each year. Because each of our five sources of supply cannot alone provide the volume of water needed by our customers, each is used during different times of the year. One single source cannot usually be identified for every customer because we blend the water before purification and also during delivery. We have the ability to obtain mutual aid from the towns of Bellingham, Holliston, Hopkinton, and Medway for providing water to meet our short-term customer needs.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

- Turn off the tap when brushing your teeth.

- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call David L. Condrey, Manager, at (508) 473-5110, or send an e-mail to the company at milfordwater@milfordwater.com.

What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

About Our Violation

We continuously monitor your water for turbidity at our Dilla Street Water Treatment Facility (WTF). Turbidity is an indicator that tells us whether we are effectively filtering the water supply to meet drinking water standards. While the regulatory standard for drinking water is 1 turbidity unit, Milford Water Company normally achieves a level of less than 0.3 units; however, for a period of approximately 5 hours on August 13, 2013, our monitoring equipment indicated that the turbidity levels at the WTF were greater than 1 turbidity unit. The source of the elevated turbidity was shut down and the situation was resolved.

Inadequately treated or inadequately protected water may contain disease-causing organisms. Although turbidity has no health effects, it can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

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 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/safewater/lead.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor 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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2013	15	0	7.2	ND–7.2	No	Erosion of natural deposits
Asbestos (MFL)	2011	7	7	0.19	0.19–0.19	No	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	2013	2	2	0.037	0.014–0.037	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	2013	5	5	800	ND–800	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chlorine (ppm)	2013	[4]	[4]	1.52	0.02–1.52	No	Water additive used to control microbes
Combined Radium (pCi/L)	2013	5	0	0.8	ND–0.8	No	Erosion of natural deposits
Haloacetic Acids [HAA]–Stage 1 (ppb)	2013	60	NA	21	0.8–58.9	No	By-product of drinking water disinfection
Haloacetic Acids [HAA]–Stage 2 (ppb)	2013	60	NA	8.4	5.3–8.4	No	By-product of drinking water disinfection
Nitrate (ppm)	2013	10	10	2.28	0.11–2.28	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2013	2	NA	0.38	ND–0.38	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks and explosives.
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2013	80	NA	70	11.1–85.8	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	23.3	13.8–23.3	No	By-product of drinking water disinfection
Total Organic Carbon (ppm)	2013	TT	NA	2.31	0.098–2.31	No	Naturally present in the environment
Turbidity[1] (NTU)	2013	TT=1 NTU	NA	5.00	0.04–5.00	Yes	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT=95% of samples <0.3 NTU	NA	77	NA	Yes	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.22	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	5	2/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2013	200	NA	100	ND–100	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2013	250	NA	113	43–113	No	Runoff/leaching from natural deposits
Color (Units)	2013	15	NA	<5	<5–<5	No	Naturally-occurring organic materials
Copper (ppm)	2013	1.0	NA	0.05	ND–0.05	No	Corrosion of household plumbing systems; Erosion of natural deposits
Iron (ppb)	2013	300	NA	150	ND–150	No	Leaching from natural deposits; Industrial wastes
Manganese[2] (ppb)	2013	50	NA	98	ND–98	No	Leaching from natural deposits
pH (Units)	2013	6.5-8.5	NA	7.38	6.92–7.38	No	Naturally occurring
Sulfate (ppm)	2013	250	NA	14	4–14	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2013	500	NA	212	68–212	No	Runoff/leaching from natural deposits
Zinc (ppm)	2013	5	NA	0.55	0.28–0.55	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromochloromethane (ppb)	2013	4	ND–4	By-product of drinking water disinfection
Chloroform (ppb)	2013	3.6	ND–3.6	By-product of drinking water disinfection
Sodium[4] (ppm)	2013	29.6	13.1–29.6	Naturally present in the environment, storm water runoff.

[1] 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.

[2] 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. MADEP has set a health advisory limit for manganese at 300 ppb.

[3] Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

[4] 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.

Definitions

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

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

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. Secondary MCLs (SMCLs) are established to regulate the aesthetics of drinking water (i.e., taste and odor).

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.

MFL (million fibers per liter): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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).

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