

TABLE DEFINITIONS

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

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

Total Coliform - Ten (10) bacteria samples were taken each month. Results on all tests were zero (0).

90th Percentile - Out of ten (10) homes sampled, nine (9) were at or below this level

ppm - parts per million

ppb - parts per billion



2010 Annual Drinking Water Quality Report For the Town of Williamsburg



**Town of Williamsburg
Water Department
268-8430**

**Chairman: Walter Kellogg
268-7579**

**Water Utility ID#
MA 1340000**

**Town of Williamsburg Water Department
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Haydenville, MA 01039**

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Meeting the Challenge

We are once again proud to present to you our annual water quality report. This report covers all testing completed from January 1, 2010 through December 31, 2010. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.



For more information about this report or for any questions relating to your drinking water, please call Walter "Sam" Kellogg, Chair-Williamsburg Water & Sewer Commission, at 413-268-8430 or send an email to watersewercommission@burgy.org

Where Does My Water Come From and How Is It Protected?

Our water supply comes from ground water at the South Street pumping station. At our South Street site, we have two wells, treatment facilities, and storage tanks. We treat water with sodium hydroxide to adjust the pH to help make the water less corrosive to the distribution system and to the plumbing in the homes. We own all the land in the Zone #1 area and a large portion in Zone #2. This helps to protect your water supply from contaminants. The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) Report for water supply source(s) serving this water system. The SWAP Report notes the key issues of the activities in the Zone 1, Residential uses, transportation corridors, agricultural activities and Comprehensive Wellhead Protection Planning in the water supply protection area. The SWAP Report recommends beaver control, prohibiting all non-water supply activities, ensuring that all residents upstream are aware of Best Management practices with respect to household hazardous materials and lawn chemicals, protecting the floor drain located in the well house, no storage of pesticides, fertilizer or road salt within Zone 1. Williamsburg Water & Sewer Commission plans to address the protection recommendations by working on educating the residents to BMP, monitoring the beaver activity, monitoring the livestock on neighboring properties, and working on a Comprehensive Wellhead Protection Plan. We also have purchased property within the Zone II area recently to help ensure protection of our water supply. Residents can help protect sources by: practicing good septic system maintenance, supporting water supply protection initiatives at the next Town Meeting, taking hazardous household chemicals to hazardous materials collection days, limiting pesticide and fertilizer use and using buffer strips to prevent animals from accessing Unquom Brook and prevent pasture runoff. The complete SWAP Report is available at the Town Clerk's Office or online at www.burgy.org. If you have any health concerns relating to the information in this report, we encourage you to contact your health care provider. For more information about this report, or for any other questions relating to your drinking water, please call Walter Kellogg, Chairman, at (413) 268-7579 or (413) 268-8430.

What is 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 (e.g. boilers), systems containing chemicals (e.g. 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 (e.g. main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking 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. Fertilizers, cesspools or garden chemicals may contaminate garden hoses that are left laying on the ground. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continually jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. 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 on the U.S.

E.P.A.'s website at

www.epa.gov/safewater/crossconnection.html.

You can also call the Safe Drinking Water Hotline at (800) 426-4791

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All 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.

The 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 mineral, and in some cases, radioactive material. It can pick up substances resulting in the presence of animals or from human activity. Contaminants that may be present in source water include:

Microbial Contaminants-such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants-such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, Industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides-which may come from a variety of sources such as agricultural, urban storm water runoff, and residential uses.

Organic Chemical Contaminants-including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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

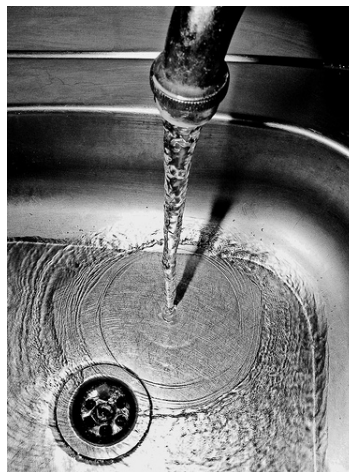
LEAD AND COPPER

	ACTION LEVEL	90 TH PERCENTILE	NUMBER OF SAMPLES	NUMBER OVER LIMIT	TEST DATE
LEAD	15 ppb	.0073	10	0	6/21/10
COPPER	1.3 ppm	0.63	10	0	6/21/10

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

Copper

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. **Flush your tap for 30 seconds to two minutes before using tap water.** Additional information is available from the Safe Drinking Water Hotline at 800-426-4791.



Lead and 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 your home's plumbing. Williamsburg's Water Commission 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 two minutes before using the 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

MCL VIOLATIONS

We are committed to providing you with the best water quality available. However some contaminants that were tested last year did not meet all applicable health standards regulated by the state and federal government. Due to contaminant violations of total coliform bacteria during the months of September and October 2010 our system took the following corrective actions:

- We collected additional samples.
- We announced public notification by newspaper, posting notices etc.
- We chlorinated the wells

Our water system and MassDEP monitor and record the effectiveness of actions taken in response to contaminant violations. The health effect statement for this contaminant is listed below.

Health Effects Statements

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.



WATER QUALITY TESTING RESULTS

The water department has received reduced sampling frequency waivers for volatile organic contaminants, synthetic organic contaminants, and inorganic contaminants. These waivers were granted due to low or no detection of these contaminants in previous monitoring.

Regulated-Contaminant (Units)	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Nitrate (ppm)	11/18/10	0.43 (Well #1)	N/A	10.0	10.0	N	Animal Waste Fertilizer Septic Systems
Nitrate (ppm)	11/18/10	0.40 (Well #2)	N/A	10.0	10.0	N	Animal Waste Fertilizer Septic Systems
Perchlorate	9/7/10 & 10/5/10	1.101 ppb (Well #2)	0.062-2.14 ppb (Well #2)	2 ppb	N/A	N	Rocket Propellants, fire-works, munitions, flares, blasting agents

Important Health Information

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 may be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. 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 (800-426-4791).

Drinking Water Violations

Our water system violated a drinking water standard in September 2010. We, the Williamsburg Water & Sewer Commission, are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the period from July 1 through September 30, 2010 we did not complete all monitoring for perchlorate and, therefore, cannot be sure of the quality of our drinking water during that time. This was not an emergency. If it had been, you would have been notified immediately. Water sampling for perchlorate was performed by the Williamsburg Water & Sewer Commission on September 7, 2010. The analytical result of the sample from the primary well was 2.14 parts per billion (ppb). The Massachusetts Maximum Contaminant Level (MCL) for perchlorate is 2.0 ppb. When we obtain a sample result exceeding the MCL, we are required to analyze a confirmation sample within 24 hours of being notified of the sampling result. Although our lab did not notify us about the result until September 27, 2010, we did not collect the confirmation sample until October 5. The concentration in our confirmation sample was 0.062 ppb and the average of our original and confirmation samples was 1.101 ppb.

Perchlorate interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development and could cause brain damage and other adverse effects, particularly in fetuses and infants. Perchlorate is chemical widely used as an oxidizer in fireworks, blasting agents and other industrial products. For most of the population, consumption of water containing perchlorate levels less than 18 ppb is considered safe. However, sensitive populations, such as pregnant or nursing women, children up to the age of 12 and individuals with hypo-thyroidism should avoid consuming water with perchlorate concentrations greater than 2 ppb. Perchlorate has the potential to affect growth and development and could cause brain damage and other adverse effects, particularly in fetuses and infants.

Since the average of our original and confirmation samples was less than the MCL, the perchlorate results for this well are currently not of concern. However, since these results are higher than we have observed in the past, the Massachusetts Department of Environmental Protection is requiring us to change our monitoring schedule from once annually to quarterly, at least until the end of June 2011, so that we can closely watch any potential trends. Perchlorate was not detected in samples collected in both February and April 2011. These results indicate that current concentrations of perchlorate in our drinking water are well below Massachusetts Drinking Water Standards.

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 your faucet in your home for leaks. Just a slow drip can waste from 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons a 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 your taps and appliances that use water. Then check the meter after 15 minutes. If it moved, you have a leak.

NATURALLY OCCURRING BACTERIA

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested 75 samples for coliform bacteria. In that time, seven (7) samples in a two month period came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for e-coli bacteria. E-coli is present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for E-coli to be present in water in any concentration. Our tests indicate no E-coli is present in our water.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25% of bottled water is actually just bottled tap water (40% according to government estimate).

The U.S. Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters make them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70% of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1400 annually. The same amount of tap water would cost 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.



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COMMUNITY PARTICIPATION

You are invited to participate in our public forum and voice your concerns about your drinking water. The Water & Sewer Department has 5 Elected members and they meet every other Wednesday, except in June, July and August when meetings are held once monthly. All meetings begin at 7:00 PM in the Town Office Building at 141 Main Street, Haydenville, MA. You may call the Town Office at (413) 268-8430 for scheduled meeting dates. Information is also available @ www.burgy.org

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the DEP has a website (www.mass.gov/dep) that provides complete and current information on water issues in Massachusetts, including valuable information about our watershed.