

WATER LEAKS HOW MUCH THEY CAN COST

What is the cost of a water leak? The answer to this question is not a simple one. Several variables effect what a leak will cost such as the length of time the leak lasts; the size of the leak; and the water system pressure.

A typical individually metered residential customer uses approximately 5,000 to 6,000 gallons of water per month. In addition, the sewer bill is based on water usage. Hence, the incremental cost of 1,000 gallons of water and sewer use is \$5.40 for water and \$3.50 for sewer (2013 rates), for a total cost of \$8.90. This total cost equals 9/10ths of 1 cent per gallon.

A leak can be costly and can add up quickly. Shown below is a chart which demonstrates how a small leak can develop into a large cost.

Size of Leak	Gallons per DAY (60 psi)	Cost per DAY at .009 per gallon	Gallons per WEEK (60 psi)	Cost per WEEK at .009 per gallon	Gallons per MONTH* (60 psi)	Cost per MONTH at .009 per gallon
1/16"	360	\$3.24	2520	\$22.68	10,800	\$97.20
1/8"	3,096	\$27.87	21,672	\$195.05	92,880	\$835.92
3/16"	8,424	\$75.82	58,968	\$530.72	252,720	\$2274.48
1/4"	11,324	\$101.92	79,268	\$713.42	339,720	\$3057.48
5/16"	14,952	\$134.57	104,664	\$941.98	448,560	\$4037.04

WHERE TO CHECK FOR LEAKS

- Toilets-this is the most common cause for a high water bill. It is an unseen, often unheard leak that goes down the sewer. To check a toilet for leaks if the toilet has a tank, put some food coloring dye into the tank and wait 15 to 20 minutes without flushing. If the food coloring appears in the bowl, there is a leak. A property owner may have to perform a test several times. Toilet leaks can be erratic.
- Outdoor hoses
- Pipes that provide water to plumbing fixtures
- Faucets and spigots-indoors and outdoors
- Shower heads
- Water-using appliances such as clothes washers, dishwashers, and ice makers
- Irrigation systems
- Siphon back-up sump pumps

2013 Annual Drinking Water Quality Report for the Town of Williamsburg



Town of Williamsburg Water Department
413-268-8430

Water Utility ID # MA 1340000

Water & Sewer Commission Members

William Turner-Acting Chair

Kenneth Taylor

James Hyslip

Jerry Roberge-Clerk

Eric Cerreta

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. 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 Unquomunk 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 William Turner, Acting Chairman, at (413) 268-8405 or (413) 268-8430.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhme) 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.



COMMUNITY PARTICIPATION

You are invited to participate in our public meetings and voice your concerns about your drinking water. The Water & Sewer Department has 5 Elected members and they meet every other week, except in June, July and August when meetings are held once monthly. Most 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

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 - Five (5) bacteria samples were taken each month.

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

ppm - parts per million

ppb - parts per billion

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.



A cross-connection is a permanent or temporary piping arrangement which can allow drinking water to become contaminated during a backflow situation. A backflow situation can occur when the water in your pipes goes backwards, due to unusual high demand conditions within the water distribution system such as water main breaks or a fire. You may not know when a backflow situation is occurring, therefore it is important to avoid creating a cross-connection between the water system and a hazardous chemical or biological substance. To do your part to ensure water safety:

- ◆ Do not use the garden hose sprayer to apply insecticides or fertilizers to your lawn
 - ◆ Do not use the garden hose to clear a blockage in the sewer system
 - ◆ Do not leave the hose in a bucket while you are washing your car or flushing the radiator
 - ◆ Do not submerge the hose in the pool while filling
- Please contact the Water Department if you have any questions about potential cross-connection situations.



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 November and December 2013 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.

Some people r

WATER QUALITY TESTING RESULTS

Regulated Contaminate (Units)	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources of Contamination
Nitrate (ppm)	12/3/13	0.84 (Well #1)	N/A	10.0	10.0	N	Animal Waste Fertilizer Septic Systems
Nitrate (ppm)	12/3/13	0.80 (Well #2)	N/A	10.0	10.0	N	Animal Waste Fertilizer Septic Systems
Perchlorate	9/30/13	ND	ND	2.0	N/A	N	Rocket Propellants Fireworks, Munitions, Flares
Magnesium*	12/3/13	ND	ND	0.0020	0.05 SMCL		Naturally Occuring

* This was a baseline test for our system

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).

	Highest # Positive in a month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform November 2013	2	1	0	Y	Naturally Present in the Environment
Total Coliform December 2013	9	1	0	Y	Naturally Present in the Environment
Fecal Coliform or E.coli	0	*	0	N	Human and animal fecal waste

**Compliance with the Fecal Coliform/E.coli MCL is determined upon additional repeat testing.*

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 79 samples for coliform bacteria. In that time, seventeen (17) 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.

HOW MUCH WATER DOES IT TAKE TO....?

Brush your teeth? 2 to 5 gallons

Take a shower or bath? 17-24 gallons

Use the dishwasher? 8-15 gallons

Run the washing machine? 35-50 gallons vs 15-30 gallons
with a HE machine (each load)

Wash the car? 50 gallons

WAYS TO SAVE WATER

Turn off the faucet while you brush your teeth or shave-You'll save between 4 and 10 gallons each day!

Take shorter showers-You'll conserve 5 to 10 gallons of water per minute!

Never use your toilet as a trash can-you waste gallons of water with each flush!

Check your toilet regularly for leaks-a leaking toilet can waste up to 100 gallons per day!

Run your dishwasher only when full!

Avoid unnecessary washing and rinsing before loading the dishwasher!

Run the washing machine only when full!

Use soap and water from a bucket when washing your car; and use a hose with a shut-off nozzle for rinsing!

	ACTION LEVEL	90TH PERCENTLE	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



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 Town of Williamsburg 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 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

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.

