



Location: Echo Lake Reservoir, Hopkinton, MA.

What can I do to make sure my water supply is protected from cross connections?

At home:

- Contact the Milford Water Company to find out what you can do to prevent cross connection contamination incidents
- Survey your home to make sure you are not unknowingly creating a cross connection
- Have all changes to your plumbing system performed by a licensed plumber
- Do not attach any pesticide, chemical or other non-potable liquid applicator to your water line
- Install hose bibb vacuum breakers on all outside faucets. Hose bibb vacuum breakers isolate garden hose applications, protecting your drinking water supply from contaminants that could be drawn into your home through the hose

In general:

- Find out all you can about cross connection control from MassDEP, the Milford Water Company or your local plumbing inspector

Sources:

Protecting Drinking Water, Cross Connections. Boston, MA: Department of Environmental Protection, 1994. Print.
Cross Connection Control Information Brochure. Falmouth, MA: Falmouth Water Department. Print.

Where can I get more information on cross connections?

For more information please contact either:



Department of Environmental Protection
Division of Water Supply and Public Affairs Office
One Winter Street
Boston, MA 02108.
(617) 292-5770
www.mass.gov/dep



Milford Water Company
66 Dilla Street
Milford MA 01757
(508) 473-5110
www.milfordwater.com



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Cross Connections: Protecting Your Drinking Water

RESIDENTIAL



What you can do at home.

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Milford Water Company, Milford MA

Key Terms:

- **Cross Connection:** any actual or potential connection between a potable drinking water line and a piece of equipment or piping containing non-potable water (i.e. gas, industrial fluid, etc.)
- **Backflow:** reverse flow of harmful chemicals or bacteria back into a potable water supply
- **Water Contamination:** improper plumbing connections on private property that can contaminate the public water supply with harmful chemicals or bacteria

Why should I be concerned about cross connections?

An unprotected or inadequately protected cross connection in your home or work place could contaminate the drinking water not only in your residence, but in neighboring businesses and homes.

Severe illnesses and injuries—even deaths—have been caused by cross connection contamination events that could have been prevented. Unprotected and inadequately protected cross connections have been

known to cause outbreaks of hepatitis A, gastroenteritis, Legionnaire's disease, chemical poisoning, body lesions (exposure through bathing), damage to plumbing fixtures and explosions.



How can a cross connection contamination event occur?

Non-potable water or chemicals can contaminate the public drinking water supply as a result of backpressure or back-siphonage, two types of backflow. Backpressure occurs when the pressure in a system or set of equipment (such as an air conditioning unit) is greater than the pressure inside the drinking water line. Backsiphonage occurs when the pressure in the drinking water line drops due to fairly routine occurrences such as main breaks, nearby fires and unusually heavy water demands. **Contaminants are sucked out from the equipment or system and into the drinking water line.**



Have cross connections ever been a problem in Massachusetts?

Yes. One of the most severe incidents took place at a Massachusetts college, where the entire football team became infected with hepatitis A due to cross connection contamination at a drinking water fountain that was hooked up to an unprotected water line.

What types of potential cross connections can I encounter at home?

The outside watering tap and garden hose tend to be the most common sources of cross connections at residences. The garden hose creates a hazard when submerged in non-potable water such as a swimming pool, or when attached to a chemical sprayer for weed killing. Garden hoses left laying on the ground can also be contaminated by fertilizers, cesspools or garden chemicals. Other potential household cross connections can occur when lawn irrigation systems, boilers, dishwashers and other appliances are connected to plumbing. Home businesses such as photo labs and beauty salons can also be cross connection sources.

How is the drinking water supply protected from cross connections?

The best way to protect drinking water is to eliminate every cross connection. When this is not possible, drinking water lines are protected from cross connections by the installation of backflow preventers. Some backflow prevention devices required and regulated by the Massachusetts Department of Environmental Protection (DEP) include:

- Air gaps
- Double check valve assemblies
- Hose bibb vacuum breakers
- Reduced pressure zone assemblies
- Pressure vacuum breaker assemblies

Who is responsible for protecting the public drinking water supply?

In your neighborhood: The Milford Water Company is required to survey all industrial, commercial and institutional facilities to make sure all potential cross connections are identified and eliminated or protected by a backflow preventer. Controlling cross connections is a combined effort between home owners, the Water Company and plumbing and health officials.

