

# Village of Wilmette

## Cross Connection Fact Sheet

### *What is a cross connection?*

Normally, your water supply is under 35 to 40 pounds pressure in your home. On rare occasions, this pressure is interrupted—perhaps by a water main break in the street, a power failure, fire fighters battling a nearby blaze, or some other interruption in water service—and water flows back into the system. When the water flows back it is called “back-siphonage” or “backflow”. If this water is mixed with hazardous chemicals or bacteria, it can become dangerous. *A cross connection is any water supply connection that doesn't protect us from backflow or back-siphonage.*

Here are a few examples of common household cross connections:

- A hose in your garden is submerged in polluted or contaminated water
- A heating boiler with treatment chemical added to prevent internal corrosion, is connected directly to the water supply for make-up water
- An underground lawn sprinkler system is directly connected to the water supply system for irrigation
- A swimming pool, with a direct connection with the water system for filling

In all of these examples, a sudden drop in water pressure could draw contaminants – chemical fertilizer, soapy water or even bacteria -- back into your pipes and your drinking water supply. Any of these contaminants could be hazardous to your health if ingested.

The best way to prevent this potential contamination is to eliminate the cross connection. This could mean simply making sure that you never leave a hose submerged in a tub of water or that you never apply fertilizer to your lawn with a hose-aspirator device. In some cases (such as the lawn sprinkling system example noted above) the cross connection cannot be eliminated. If so, an approved cross-connection device is needed to protect the public water supply.

### *What kinds of devices are approved?*

There are basically five types of devices that are approved by the EPA for protection from cross connections:

1. Physical air gaps
2. Atmospheric vacuum breakers (including hose bib vacuum breakers)
3. Pressure-type vacuum breakers
4. Double check valve assemblies
5. Reduced pressure principle backflow preventers (RPZ)

Some of these devices—such as the hose bib vacuum breakers—are available at local hardware and plumbing supply stores and can be easily installed by the resident on outside spigots. Other devices, such as the RPZ, will require the services of a licensed plumber. The type of device to use depends upon the risk level involved and the type of connection with the water supply. Before installing any device, you should consult with your plumber to make sure the device chosen meets the application.

### *Cross Connection Control*

As required by federal and state laws, the Village Code, Ordinance # 92-O-90 prohibits any cross connections with the public water system unless it is installed in accordance with the Illinois Plumbing Code and with proper cross-connection control devices. The Ordinance also requires that owners of properties who have RPZ type devices installed for cross connection control have an annual test performed by a licensed certified plumber and the test results submitted to the Village.

If you have questions concerning inspections, what type of device to use or any other questions about the Village's Cross Connection Control Program please call the Water Plant Meter Shop at 847-853-7537.