

# Mecklenburg County Environmental Health

## Cross-Connections and Backflow Preventers

### What is a cross connection?

A cross-connection occurs when the clean water supply becomes connected to dirty water or another source of contamination. If backflow in a cross-connection happens, the dirty water or other contaminants can be sucked back into the clean water supply. This can contaminate the clean water supply and make people sick.

One of the most common causes of cross-connections are faucets with hoses. For example:



If there was any water in this sink, it would be a cross-connection. The hose in the barrel is definitely a cross-connection.

### How does backflow happen?

- **Siphonage** occurs when a temporary drop in water pressure occurs and water is sucked into the mains water pipeline. For example, if the fire department hooks the fire truck up to a fire hydrant in front of your building, the water pressure in your building will drop. If you have a cross-connection when this happens, contaminants could be pulled back into the main water supply.
- **Backpressure** occurs when pressure in your water supply is greater than the pressure at the main water supply and water is forced back into the main water supply system. For example, if you have an outside hose with water in it and it is a hot day, the water in the hose can build up enough pressure to push water back into your water supply. If there is a cross-connection when this happens, contaminants can be pushed back into your clean water supply.

## How can you prevent a cross-connection?

- **Air gap.** Disconnect all hoses when not in use.
- **Backflow preventer.** Connect a backflow preventer to all hoses. See examples below.



## Where Can I Get A Backflow Preventer?

You may purchase a backflow preventer at most hardware and plumbing supply stores.