COMMUNITY RESOURCES AGENCY

David B. Gonzalves, CBO
Director

Administration - Building – County Surveyor - Engineering – Environmental Health – Fleet Services - GIS – Housing - Planning – Roads – Solid Waste

48 W. Yaney Avenue, Sonora
Mailing: 2 S. Green Street
Sonora, CA 95370
(209) 533-5633
(209) 536-1622 (Fleet)
(209) 533-5616 (fax)
(209) 533-5909 (fax – EHD)
(209) 588-9064 (fax – Fleet)
(209) 533-5698 (fax - Roads)
www.tuolumnecounty.ca.gov

Backflow Protection Requirements for Retail Food Facilities

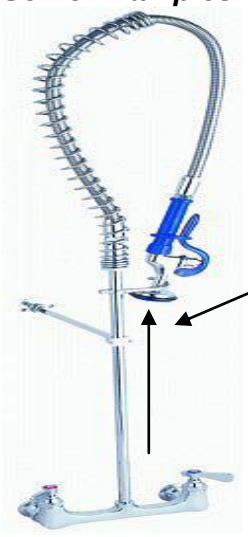
What is backflow?

Backflow protection prevents any possible connection between potable (drinkable/safe) water and non-potable water (non-drinkable/waste water). Backflow can result from reverse pressure that could be due to a loss of pressure in the supply main (back-siphonage), or by the flow from a customer's pressurized system through an unprotected cross-connection (backpressure). A cross-connection occurs when it is possible for non-potable water to come in contact with the potable drinking water system.

Backflow requirements

A backflow prevention assembly must be installed to prevent backflow from occurring. It is important that the backflow prevention assembly work with the particular hydraulic conditions, complies with the California Health and Safety Code (California Retail Food Code)/Uniform Building and Plumbing Codes. Our Division maintains a list of approved backflow preventers.

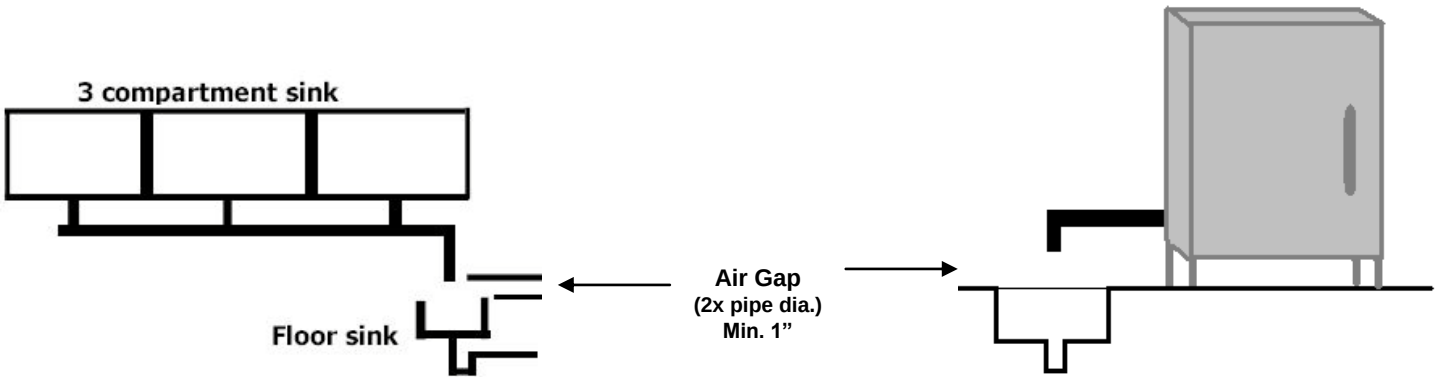
Some Examples:



Air Gaps:

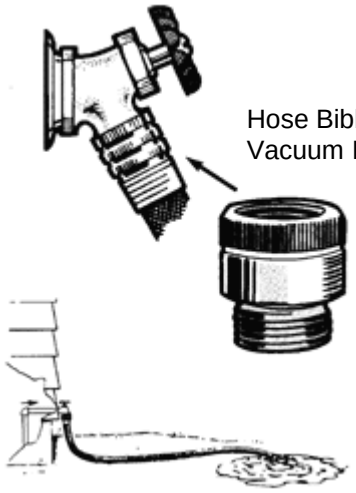
An air gap is the most reliable backflow prevention device. It is the physical separation of the potable and non-potable water supply systems by an air space. The vertical distance between the supply pipe and the top of the floor sink shall be twice the diameter of the water supply inlet and may not be less than 1”.

All steam tables, ice machines and bins, food preparation sinks, display cases, soda fountains, espresso machines and other equipment that discharge liquid waste or condensate shall be drained through an air gap into an open floor sink. Grease traps are to have an air gap between the sink and the grease trap, rather than having the grease trap drain into a floor sink.



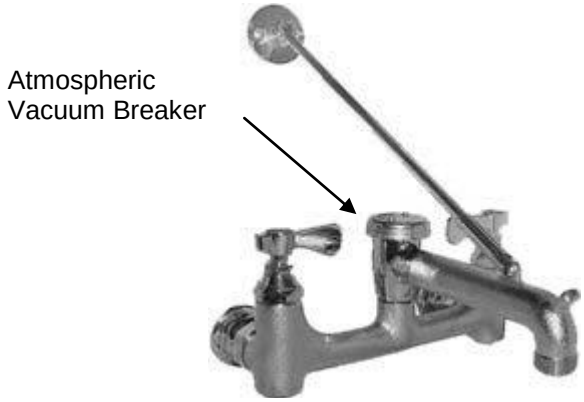
HOSE BIB VACUUM BREAKER

A hose bib vacuum breaker is a mechanical device attached at the faucet/spigot that prevents liquid at the end of a hose from being drawn back into the potable water supply. A hose bib vacuum breaker is required for threaded faucets or other fixtures where a hose could be attached, and are typically used outdoors. If a spray nozzle is used at the end of the hose, then a pressure vacuum breaker must be installed to properly protect against backflow.



ATMOSPHERIC VACUUM BREAKERS

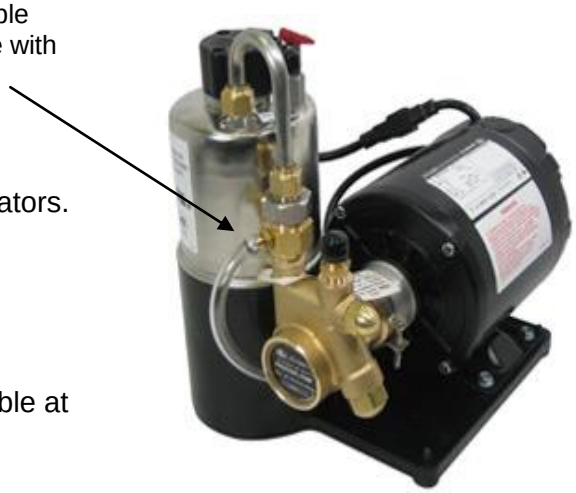
Atmospheric vacuum breakers are commonly seen at the janitorial sink and on commercial dishwashers. Atmospheric vacuum breakers use a vent and a check valve. The vacuum breaker depends on the water pressure to open the check valve and seal off the vent, permitting the water to flow. If there is a loss of pressure in the supply line, the check valve drops and seals the inlet while opening the vent and admitting air into the system to break the vacuum and prevent back-siphonage. An atmospheric vacuum breaker cannot be used if there are any shut-off valves (e.g., spray nozzles) installed downstream of its location.



VENTED DOUBLE CHECK VALVE

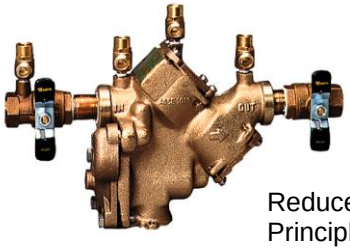
A vented double check valve (ASSE 1022) consists of two check valves with a release into atmosphere in between. The first check valve the incoming water goes through has a screen to prevent clogging. A vented double check valve is required on the incoming water line of all soda carbonators. A backflow from the carbonator into the incoming water line would be diverted by this valve. Any backflow could drain into the same floor sink the soda dispenser overflow drains to, provided there is a 1-inch air gap.

Vented Double Check Valve with Drain Line



REDUCED PRESSURE PRINCIPLE ASSEMBLY

A reduced pressure principle assembly is required for all soda carbonators. No copper is to be installed in the soda water line downstream of this assembly. A carbonator requires its own reduced pressure principle assembly, and splitting of the water lines to serve other equipment, such as coffee pots, is to be done upstream of this assembly. This assembly is to be installed at the height required by the manufacturer, with a minimum 12-inch clearance in front, and be visible and accessible at all times.



Reduced Pressure Principle Assembly