



## **CROSS-CONNECTION CONTROL PROGRAM**

### **Personal Care Services Backflow Prevention Requirements**

#### **BACKGROUND**

Barber shops, hair and nail salons, and spa and massage facilities are typical businesses that offer personal care services. These types of businesses may also be using water in ways that could potentially contaminate both the internal and public drinking water systems in the event of a backflow incident. Backflow is the undesirable reversal of flow of non-potable water or other liquids, gases or substances into the potable water distribution system through a direct or indirect connection. This unapproved connection is known as a cross-connection.

#### **COMMON POTENTIAL CROSS-CONNECTION HAZARDS IN PERSONAL CARE SERVICES FACILITIES:**

These types of equipment items may pose a cross-connection hazard (depending upon installation and configuration):

- Sink basins
- Foot baths
- Whirlpool tubs
- Laundry machines
- Fire sprinkler systems
- Landscape irrigation systems
- Building heating and cooling systems (e.g. cooling towers, heat exchangers, boilers).

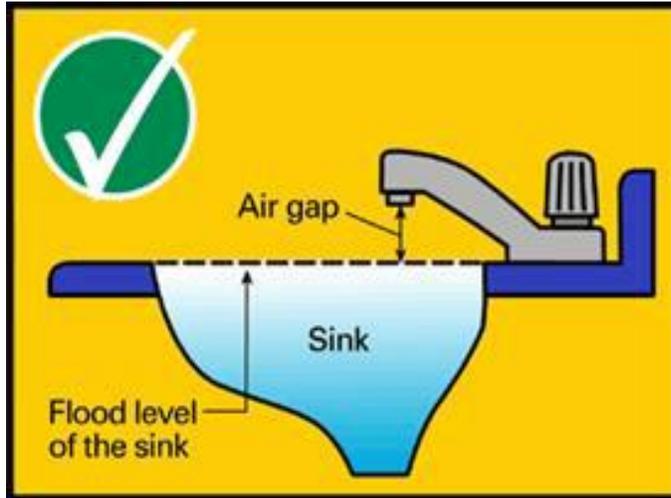
#### **NON-TESTABLE BACKFLOW PROTECTION DEVICES**

There are several ways to protect against contamination by backflow. The simplest type of protection is an air-gap which is a physical break between the water supply line and the flood-level rim of the basin. A good example of an air-gap is a hand-washing sink. If you were to leave the faucet running the water would spill out over the basin rather than submerge the faucet. This design prevents potentially contaminated or polluted water in the sink basin from making contact with the potable water coming out of the faucet.

Many commercial sinks, laundry machines and basins have an air-gap. An air-gap must be two times the diameter of the outlet pipe and never less than one inch (1") (See Figure 1 below). Air-gaps should be unobstructed and not be by-passed by attaching a hose or another type material to the end of the outlet pipe.



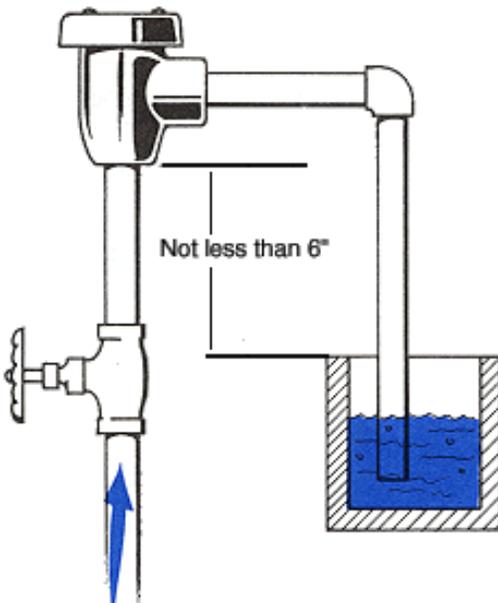
**Figure 1 – Air gap**



Another commonly used form of backflow protection in Personal Care Facilities is the Atmospheric Vacuum Breaker (AVB), which is illustrated below. In order to work properly, the AVB must be at least six (6”) inches higher than any downstream piping and cannot be under pressure for greater than twelve of any twenty-four hour period. AVBs do not need to be annually tested by a County-certified Backflow Prevention Assembly Tester, but they should be examined at least annually to ensure they are still functioning properly.

If the equipment items in your facility have an AVB properly installed or an air-gap, additional backflow prevention may not be required.

**Atmospheric Vacuum Breaker  
Typical Installation**



**TESTABLE BACKFLOW PREVENTION ASSEMBLIES**

Another form of backflow prevention is the use of Backflow Prevention Assemblies (BPAs). There are several different types of BPAs. They are typically installed either at the water meter or on the waterline supplying water to the equipment item that is a hazard. San Mateo County CrossConnection Control Program maintains an inventory of these types of assemblies. These are required to be tested upon installation and annually thereafter by a San Mateo County-certified Backflow Prevention Assembly Tester.

**Figure 2 – Atmospheric Vacuum Breaker (AVB)**



SAN MATEO COUNTY HEALTH  
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## **SAN MATEO COUNTY CROSS CONNECTION CONTROL PROGRAM**

The San Mateo County Environmental Health Division works with a number of water purveyors within the County to implement and enforce a cross-connection control program as required by the State Water Resources Control Board Drinking Water Division. For Water Agency Members of the San Mateo County Cross-Connection Control Program, surveys are conducted at facilities or services to determine potential threats to public health and safety. To eliminate the cross connection or threat to public health, BPAs may be required to be installed at the water service connection as well as internally in order to abate health hazards. For more information about the San Mateo County CrossConnection Control Program, please call (650) 372-6200 or visit <http://smchealth.org/crossconnection>.