

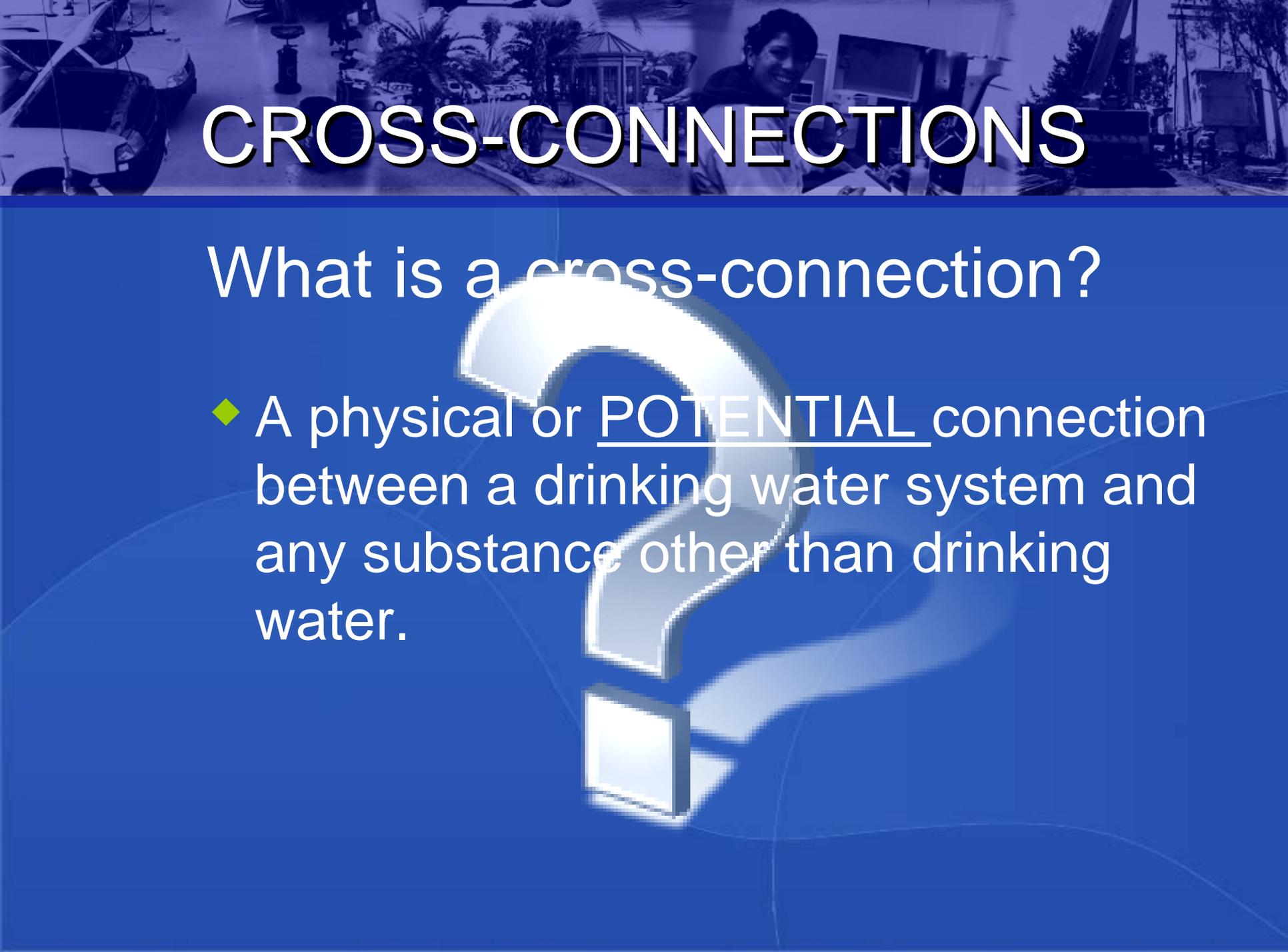


Cross-Connection Control



Protecting the potable water supply from contamination.

CROSS-CONNECTIONS



What is a cross-connection?

- ◆ A physical or POTENTIAL connection between a drinking water system and any substance other than drinking water.



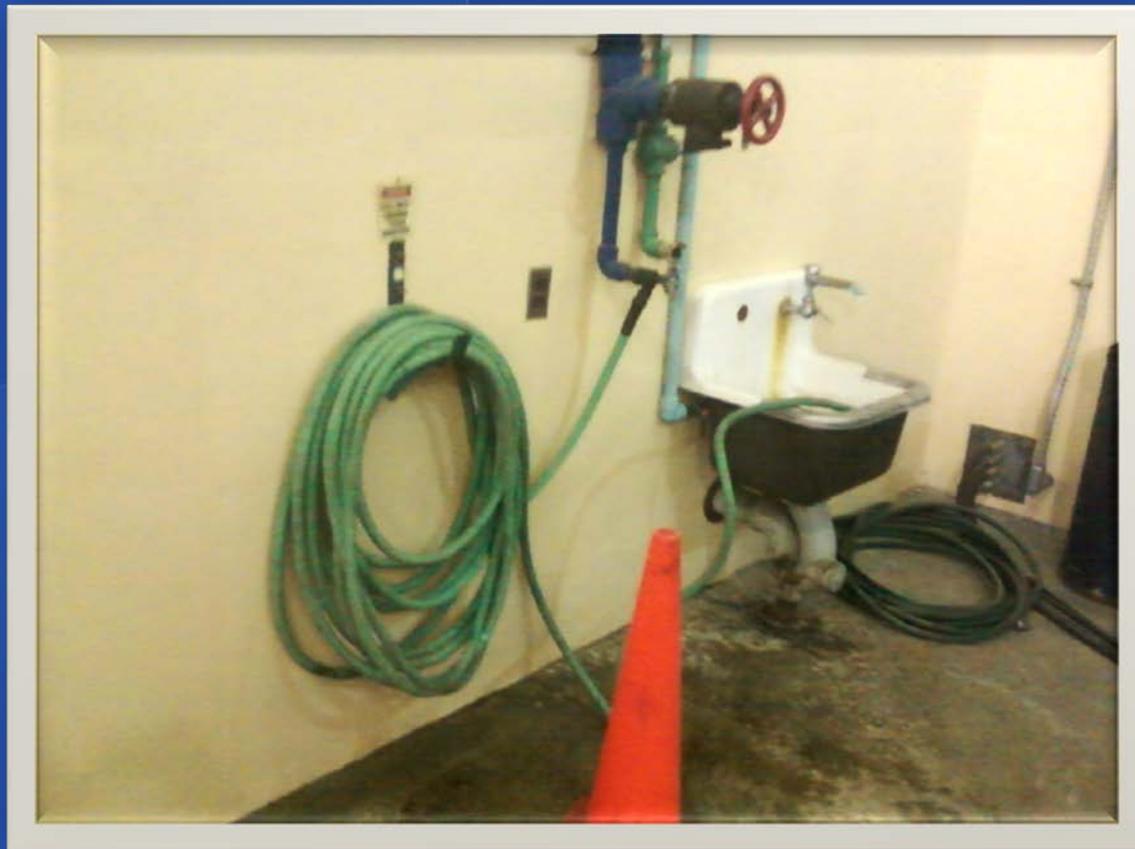
What does the Cross-Connection Office do?

- ◆ Monitor all known backflow devices and make sure they are tested annually;
- ◆ Review plans for new projects, remodels and changes of use to make sure required protection is included, installed and tested;
- ◆ Supervise the installation of fire lines and make sure backflows comply and are tested;
- ◆ Investigate any cross connection incidents;
- ◆ Report to the State Health Agencies re: compliance with monitoring and any incidents.

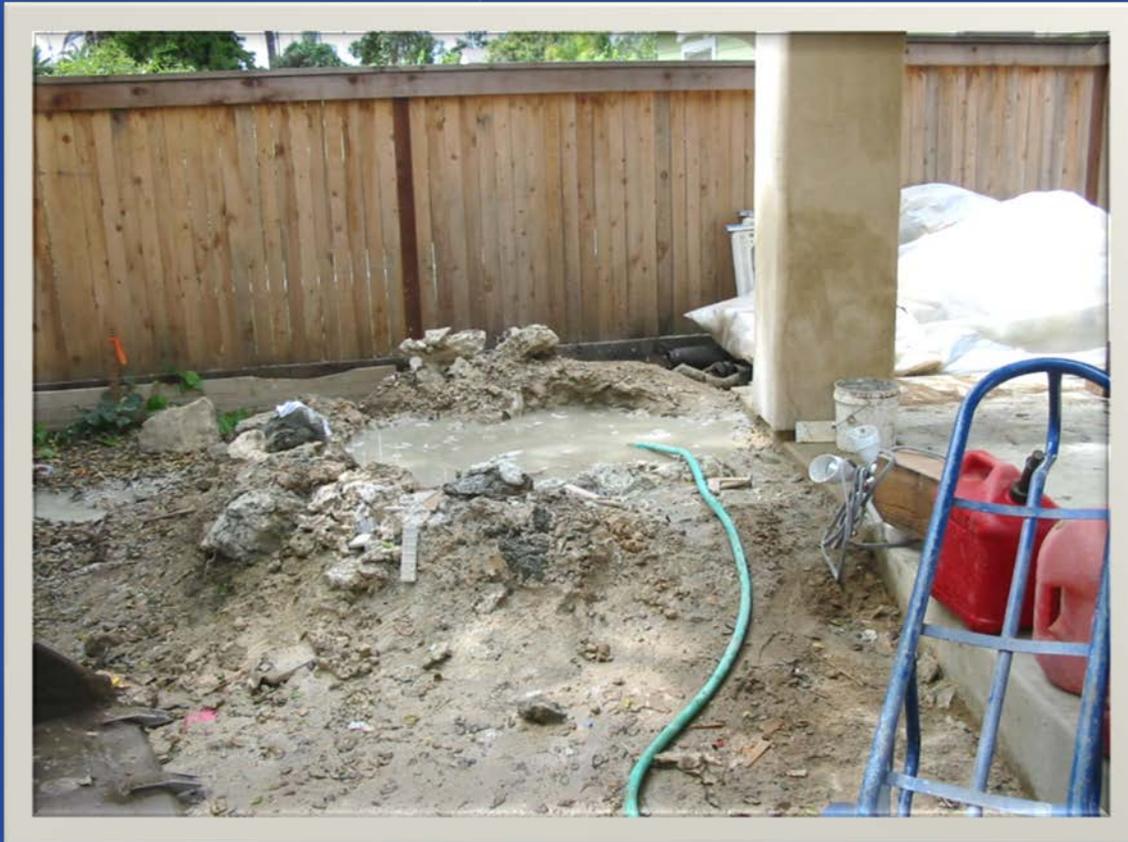
DEGREE OF HAZARD

LOW HAZARD	HIGH HAZARD
Pollutant	Contaminant
NON-Health Hazard	Will Make you sick
Affects Aesthetics (Taste, Color, Odor)	Cause Death
LETHAL HAZARD	
Special Category that has been reserved for sewage and radioactive materials.	

BACKSIPHONAGE



Submerged Inlet



BACKSIPHONAGE

An example of a submerged inlet found at a construction site in Santa Barbara.

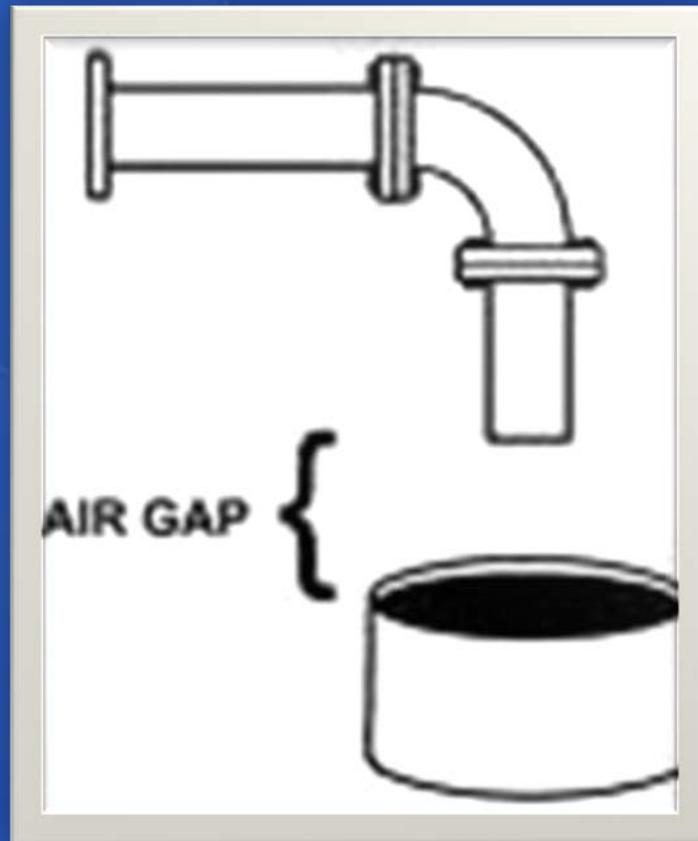


AIR GAP

A physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.

- ◆ Best type of protection
- ◆ 2 times the pipe diameter, never less than 1 inch
- ◆ Problem no longer under pressure
- ◆ Fill on a cistern
- ◆ Designed to protect against serious hazards, contaminants and pollutants

AIR GAP



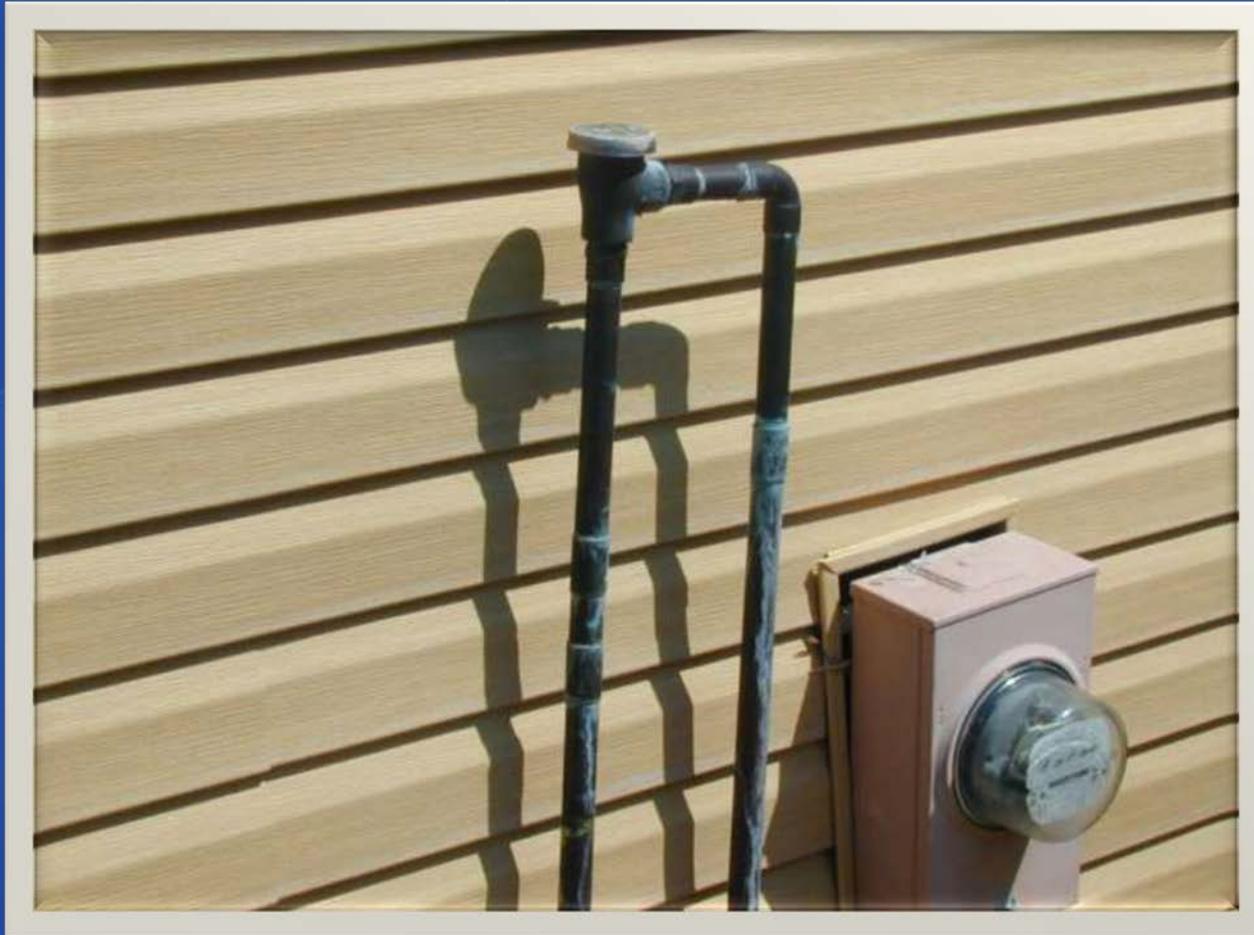


ATMOSPHERIC VACUUM BREAKER

An assembly containing an air inlet valve, a check seat and an air inlet port.

- ◆ Approved for High Hazard use
- ◆ Protects against backsiphonage
- ◆ Does not protect against backpressure

ATMOSPHERIC VACUUM BREAKER





PRESSURE VACUUM BREAKER

An assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. Must be equipped with properly located resilient seated test cocks and tightly closing resilient seated shut off valves.

- ◆ Approved for high hazards
- ◆ Protects against backsiphonage
- ◆ No protection against backpressure

PRESSURE VACUUM BREAKER





DOUBLE CHECK VALVE

An assembly composed of two independently acting approved check valves including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

- Only used to protect against Low Hazard pollutant
- Not used for irrigation

DOUBLE CHECK VALVE



REDUCED PRESSURE PRINCIPAL ASSEMBLY

An assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. Shall have tightly closing resilient seated shutoff valves at each end and properly seated test cocks.

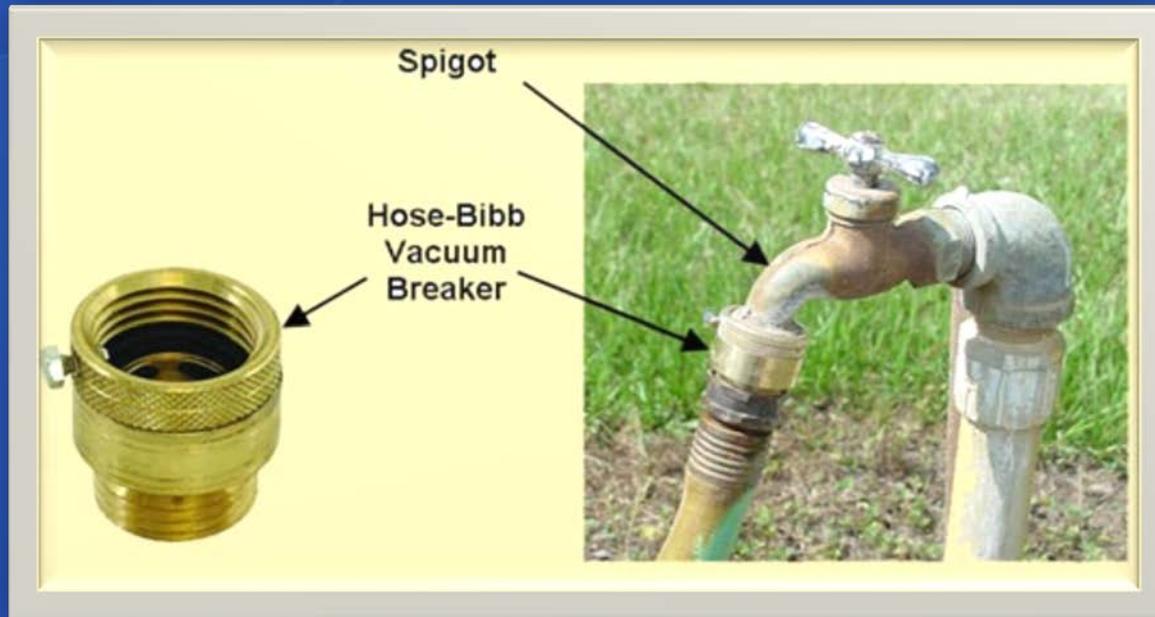
- ◆ Designed to protect against both backsiphonage & backpressure
- ◆ Designed to protect against both high and low hazards

REDUCED PRESSURE PRINCIPAL ASSEMBLY



Other Type of Protection: VACUUM BREAKER

A mechanical device which automatically vents a water line to the atmosphere when subjected to a partial vacuum, thus preventing backflow.





COMMON CROSS- CONNECTION ISSUES

- ◆ Hose bib with no vacuum breaker
- ◆ Hose bib installed on fire line backflow assembly before the bypass meter
- ◆ Device installed upside down
- ◆ Submerged hose & chemicals
- ◆ Reduced Pressure Principal Assembly leaking
- ◆ Device installed too low to the ground
- ◆ Device installed too high



ILLEGAL HOOK UP

Garden hose hooked up to the fire line backflow assembly.



UPSIDE DOWN INSTALLATION

Reduced Pressure Principal Assembly installed upside down and too close to the wall.



INSTALLED TOO LOW

Reduced Pressure Principal Backflow Assembly should be installed with relief valve opening point minimum 12 inches above grade.

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