

Types of Hazard	Air Gap	Reduced Pressure Backflow Preventer	Double Check Valve Assembly	Atmospheric Vacuum Breaker	Pressure Vacuum Breaker	Backflow Preventer with Intermediate Vent	Comments
1. Food Processing	X	X	X*				* If no health hazard exists
2. Laboratories	X	X	X*				* If no health hazard exists
3. Fixtures with hose threads on inlets	X	X	X	X			In addition to an air gap separation, all fixtures that have a threaded hose type connection shall at a minimum, be equipped with a AVB.
4. Hospitals, Mortuaries, Clinics	X	X					
5. Plating Facilities	X	X					
6. Irrigation Systems	X	X		X*	X**		Each case should be evaluated individually.
							* An AVB can be used if no backpressure is possible and no health hazard exists.
							** Pressure Vacuum Breakers can be installed if back pressure is not possible
7. Systems or Equipment Using Radioactive Material	X	X					
8. Submerged Inlets	X	X		X*			* If no health hazard exists and no back pressure is possible
10. Valved outlets or fixtures with hose attachments	X	X		X*			Each case should be evaluated individually
							* If no health hazard exists and no back pressure is possible
11. Commercial Laundries and Dry Cleaners	X	X					
12. Commercial Dishwashing Machines	X	X		X*			* If no health hazard exists
13. High and Low Pressure Boilers	X	X*					* If chemicals are added
14. Low Pressure Heating Boilers						X	Residential and small commercial, having no chemicals added
15. Photo Processing Equipment	X	X					
16. Reservoirs – Cooling Tower Re-circulating							
	X	X					
<b>17. Fire Protection Systems: For cross connection control, fire protection systems may be classified on the basis of water source and arrangement of supplies as follows:</b>							

a. <u>Class 1</u> : Direct connection from public water system mains only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains	X	X	X				A backflow prevention assembly does not have to be installed on existing fire protection systems installed prior to March 21, 1997, provided that the fire protection system is registered with the public water system, equipped with a UL listed alarm check valve that is properly maintained in accordance with NFPA 25.
b. <u>Class 2</u> : Same as Class 1 except booster pumps may be installed in connections from the street.	X	X	X				A backflow prevention assembly does not have to be installed on existing fire protection system installed prior to March 21, 1997, provided that the fire protection system is registered with the public water system and equipped with a UL listed alarm check valve that is properly maintained in accordance with NFPA 25. Alarm check maintenance records must be available for inspection by the Department, its designee or the public water system
c. <u>Class 3</u> : Direct connection from public water system mains, plus one or more of the following: elevated storage tanks; fire pumps taking suction from aboveground covered reservoirs, or tanks; and pressure tanks. These systems may or may not have fire department connections.	X	X*	X*				* RPBP or DCVA contingent on evaluation of auxiliary supply and on-site system.
d. <u>Class 4</u> : Directly supplied from public water system mains, similar to Class 1 and Class 2 with an auxiliary water supply dedicated to fire department use and available to the premises, such as a non-potable water source located within 1700 feet of the fire department connection, (FDC).	X	X*					* RPBP on evaluation of auxiliary supply and on-site system.
e. <u>Class 5</u> : Directly supplied from public water system mains, and interconnected with auxiliary supplies, such as pumps taking suction from reservoirs exposed to	X*	X*					* RPBP or air gap contingent on evaluation of auxiliary supply and on-site system.
f. <u>Class 6</u> : Combined industrial and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks.	X	X*				X	* RPBP contingent on evaluation of on-site water system.

h. Residential fire protection systems for other than those described in Table 22-1-19.g.	X	X	X				Non testable devices and flow through systems should be used whenever possible. Systems are typically designed and installed in accordance with NFPA 13D: "Installation of Sprinkler systems in One and Two Family Dwellings and manufactured homes." These systems are authorized to use food grade antifreeze with no additional requirements when potable piping (PB, CPVC, and copper tube) is employed. If non-grade antifreeze is utilized, the system may be classified as a class 5. If a fire department connection is used, the requirements for a class 1 or 2 apply.
20. Solar Energy Systems	X	X	X				Fire protection system in this category shall comply with the requirements set forth in class 1 through 4 as appropriate.
21. Single Jacketed Heat Exchangers	X	X				X*	Residential and small commercial having no chemicals or only USP Glycenne added to water
	X	X					Each case should evaluated individually