

Backflow Preventive Devices

Appendix I: Assessment of Hazards and Selection of Assemblies

The following table lists many common hazards. It is not an all-inclusive list of the hazards which may be found connected to public water systems.

| Premises Isolation - Description of Premises | Assessment of Hazard | Required Assembly |
|--|-----------------------------|--------------------------|
| Aircraft and missile plants | Health | RPBA or AG |
| Animal feedlots | Health | RPBA or AG |
| Automotive plants | Health | RPBA or AG |
| Breweries | Health | RPBA or AG |
| Canneries, packing houses and rendering plants | Health | RPBA or AG |
| Commercial car wash facilities | Health | RPBA or AG |
| Commercial laundries | Health | RPBA or AG |
| Cold storage facilities | Health | RPBA or AG |
| Connection to sewer pipe | Health | RPBA or AG |
| Dairies | Health | RPBA or AG |
| Docks and dockside facilities | Health | RPBA or AG |
| Dye works | Health | RPBA or AG |
| Food and beverage processing plants | Health | RPBA or AG |
| Hospitals, morgues, mortuaries, medical clinics, dental clinics, veterinary clinics, autopsy facilities, sanitariums, and medical labs | Health | RPBA or AG |
| Metal manufacturing, cleaning, processing, and fabrication plants | Health | RPBA or AG |
| Microchip fabrication facilities | Health | RPBA or AG |
| Paper and paper products plants | Health | RPBA or AG |
| Petroleum processing or storage facilities | Health | RPBA or AG |
| Photo and film processing labs | Health | RPBA or AG |
| Plants using radioactive material | Health | RPBA or AG |
| Plating or chemical plants | Health | RPBA or AG |
| Pleasure-boat marinas | Health | RPBA or AG |
| Private/Individual/Unmonitored Wells | Health | RPBA or AG |
| Reclaimed water systems | Health | RPBA or AG |

| | | |
|---|-----------|------------|
| Restricted, classified or other closed facilities | Health | RPBA or AG |
| Rubber plants | Health | RPBA or AG |
| Sewage lift stations | Health | RPBA or AG |
| Sewage treatment plants | Health | RPBA or AG |
| Slaughter houses | Health | RPBA or AG |
| Steam plants | Health | RPBA or AG |
| Tall buildings or elevation differences where the highest outlet is 80 feet or more above the meter | Nonhealth | DCVA |

Internal Protection - Description of Cross Connection

Assessment of Hazard

Required Assembly

| | | |
|--|--------------------------|--------------|
| Aspirators | Nonhealth† | AVB |
| Aspirator (medical) | Health | AVB or PVB |
| Autoclaves | Health | RPBA |
| Autopsy and mortuary equipment | Health | AVB or PVB |
| Bedpan washers | Health | AVB or PVB |
| Connection to industrial fluid systems | Health | RPBA |
| Connection to plating tanks | Health | RPBA |
| Connection to salt-water cooling systems | Health | RPBA |
| Connection to sewer pipe | Health | AG |
| Cooling towers with chemical additives | Health | AG |
| Cuspidors | Health | AVB or PVB |
| Degreasing equipment | Nonhealth† | DCVA |
| Domestic space-heating boiler | Nonhealth† | RPBA |
| Dye vats or machines | Health | RPBA |
| Fire-fighting system (toxic liquid foam concentrates) | Health | RPBA |
| Flexible shower heads | Nonhealth† | AVB or PVB |
| Heating equipment Commercial Domestic | Nonhealth† Nonhealth† | RPBA DCVA |
| Hose bibbs | Nonhealth† | AVB |
| Irrigation systems with chemical additives | Health | RPBA |

| | | |
|--|----------------------|-------------------|
| without chemical additives | Nonhealth† | DCVA, AVB, or PVB |
| Kitchen equipment - Commercial | Nonhealth† | AVB |
| Lab bench equipment | Health or Nonhealth† | AVB or PVB |
| Ornamental fountains | Health | AVB or PVB |
| Swimming pools Private | Nonhealth† | PVB or AG |
| Public | Nonhealth† | RPBA or AG |
| Sewage pump | Health | AG |
| Sewage ejectors | Health | AG |
| Shampoo basins | Nonhealth† | AVB |
| Specimen tanks | Health | AVB or PVB |
| Steam generators | Nonhealth† | RPBA |
| Steam tables | Nonhealth† | AVB |
| Sterilizers | Health | RPBA |
| Tank vats or other vessels containing toxic substances | Health | RPBA |
| Trap primers | Health | AG |
| Vending machines | Nonhealth† | RPBA or PVB |
| Watering troughs | Health | AG or PVB |

NOTE: AG = air gap; AVB = atmospheric vacuum breaker; DCVA = double check valve backflow prevention assembly; PVB = pressure vacuum breaker; RPBA = reduced-pressure principle backflow prevention assembly.

*AVBs and PVBs may be used to isolate health hazards under certain conditions, that is, backsiphonage situations. Additional area of premises isolation may be required.

†Where a greater hazard exists (due to toxicity or other potential health impact) additional area protection with RPBA is required.