



Utilities Department List of Hazards and Corresponding Protection of the Public Water System

(Based on the State Water Resources Control Board Cross-Connection Control Policy Handbook)

Acronyms and Abbreviations

AG	Air Gap Separation
AVB	Atmospheric Vacuum Breaker Backsiphonage Prevention Assembly
BPA	Backflow Prevention Assembly
CCCPH	Cross-Connection Control Policy Handbook
CCR	California Code of Regulations
DC	Double Check Valve Backflow Prevention Assembly
DCDA	Double Check Detector Backflow Prevention Assembly
DCDA-2	Double Check Detector Backflow Prevention Assembly – Type II
PWS	Public Water System
RP	Reduced Pressure Principle Backflow Prevention Assembly
RPDA	Reduced Pressure Principle Detector Backflow Prevention Assembly
RPDA-2	Reduced Pressure Principle Detector Backflow Prevention Assembly – Type II
SWRCB	State Water Resources Control Board

Description of Hazards that require Backflow Protection

1. Boilers (**RP or AG**)
2. Hydroponics, Non-Commercial Greenhouse (**RP for premises containment or AG**)
3. Irrigation System with Underground Station Valves (**RP or AG**)
4. Potable Water Meters used for Non-Residential Irrigation or Landscaping (**RP or AG**)
5. Single Family Residents Irrigation Systems (**AVB**)
6. Potable Water Meters used for Residential Multi-Family (**RP or AG**)
7. Single Family Residents with at least 2 Accessory Dwelling Units (**RP or AG**)
8. Single Family Residents with a Water Meter greater than 1 ½" (**RP or AG**)
9. Photo lab, Darkroom (Non-Commercial) (**RP or AG**)
10. Solar Heating System, Heat Exchangers (**RP or AG**)



11. New Swimming Pool, Spa, or decorative ponds (**RP or AG**)
12. Work involving pools, spas, or decorative ponds that require a city permit (**RP or AG**)
13. Schools (**RP or AG**)
14. Home Based Businesses on a Commercial Scale (**RP or AG**)
15. Water Softener or Reverse Osmosis Systems with Discharge to the Sewer (**RP or AG**)
16. Industrial Operations Interconnected with the Drinking Water System (**RP or AG**)
17. Soda Machines (**DC**)
18. Pumps Connected directly to the Potable Water Supply (**RP or AG**)
19. Any Building greater than 3 stories (**RP or AG**)
20. Any Building on a hill where its highest water fixture is greater than 20 ft in elevation from the Public Distribution Line (**RP or AG**)
21. Parcel of Land that is greater than or equal to 5 acres (**RP or AG**)
22. Main Line from Potable Meter is greater than 200 ft (**RP or AG**)
23. Main Line travels through Parcel not owned or controlled by water user. Not including small strips of land such as parkways (**RP or AG**)
24. Rain Collection systems that are interconnection with the potable water system (**RP or AG**)
25. Irrigation injector systems (**RP or AG**)
26. Onsite Hazardous Materials that have the potential to contaminate the potable water system (**RP or AG**)

Description of Hazards that require an AVB

1. Swimming Pools, Spa filled manually by hose (**AVB** at hose bib)
2. Private Boat Moorage (**AVB** at hose bib)
3. Soaker Hoses (**AVB** at hose bib)
4. Hose Bib connections Without Premise Containment CPC 603.5.7 (**AVB**)
5. Home-Based Businesses (e.g., beauty salon, woodworking shop) where water use is essentially the same as normal residents (**AVB** at source of use)
6. Decorative Pond (**AVB** at hose connection or **RP** if fill system is directly connected to distribution system)
7. Livestock Watering Trough (**AVB** with proper air gap or **RP**)

Description of Fire Hazards

1. Low Hazard Fire Protection Systems (**DC** or **DCDA(2)**)
2. High Hazard Fire Protection Systems using Chemical Addition or Auxiliary Water supplies (**RP** or **RPDA(2)**)



APPENDIX D

HIGH HAZARD CROSS-CONNECTION CONTROL PREMISES

(Taken directly from SWRCB CCCPH for reference)

The list below identifies premises that require backflow protection provided by an air gap or a reduced pressure principle backflow prevention assembly, unless noted otherwise. The list below is not intended to be all-inclusive. A PWS, State Water Board, or local health agency may require an **AG**, **RP**, or both to protect a PWS from other hazards not listed below and identified in premises through the hazard assessment completed in CCCPH Chapter 3, section 3.2.1. A PWS may reduce or increase the minimum protection required for a previously hazard-assessed user premise following a hazard reassessment as described in CCCPH Chapter 3, section 3.2.1.

1. Sewage handling facilities
2. Wastewater lift stations and pumping stations
3. Wastewater treatment processes, handling, or pumping equipment that is interconnected to a piping system connected to a PWS (+)
4. Petroleum processing or storage plants
5. Radioactive material storage, processing plants or nuclear reactors
6. Mortuaries
7. Cemeteries
8. Sites with an auxiliary water supply interconnected with PWS (+)
9. Sites with an auxiliary water supply not interconnected with PWS
10. Premises with more than one connection to the PWS (++++)
11. Recycled water (++)(+++)
12. Recycled water interconnected to piping system that contains water received from a PWS (+)
13. Graywater systems, as defined in California Water Code Section 14876, that are interconnected to a piping system that is connected to a PWS
14. Medical facilities
15. Kidney dialysis facilities
16. Dental office with water-connected equipment
17. Veterinarian facilities
18. Chemical plants
19. Laboratories
20. Biotech facilities



21. Electronics manufacture
22. Dry cleaner facilities
23. Industrial or commercial laundry facilities
24. Metal-plating facilities
25. Business park with a single meter serving multiple businesses
26. Marine-port facilities
27. Car wash facilities
28. Mobile home park, RV park, or campgrounds with RV hookups
29. Hotels/motels
30. Gas stations
31. Fire stations
32. Solid waste disposal facilities
33. Pet groomers
34. Agricultural premises
35. Hazard assessment access denied or restricted
36. Railroad maintenance facilities
37. Incarceration facilities (e.g. prisons)
38. Temporary connections to fire hydrants for miscellaneous uses, including construction
39. Private water distribution mains
40. Drinking water storage tank overflow connected to a sump or storm drain (+)
41. Airports

(+) Premise isolated by **AG** only except as allowed through CCCPH Section 3.2.2(c)

(++) Dual-plumbed use areas established per CCR Title 22, Section 60313 through 60316.

(+++)
Residences using recycled water for landscape irrigation as part of an approved dual plumbed use area established pursuant to CCR Title 22, sections 60313 through 60316 shall use, at a minimum, a **DC**. If the water supplier is also the supplier of the recycled water, then the recycled water supplier may obtain approval of the local public water supplier or the State Water Board, to utilize an alternative backflow protection plan that includes an annual inspection of both the recycled water and potable water systems and an annual cross-connection test of the recycled water and potable water systems pursuant to subsection 60316(a) in lieu of any BPA.

(++++)
All connections must receive at least the same level of protection excluding fire protection when connected to the PWS distribution system (e.g. if one connection requires an **RP** then all connections must have RPs installed).

