

# **Cross-Connection Control Requirements for protection of the potable water supply Backflow Devices and/or Assembly Standards**

## **Potable water locations where backflow assemblies could be installed:**

Commercial, Fire sprinkler systems (commercial & residential), Reclaimed Residential Irrigation or based on degree of hazard on site.

Hazard: (Toxic), required assembly RPBA standard ASSE 1013

Hazard: (Non-toxic), required assembly DCVA standard ASSE 1015)

All backflow prevention devices or assemblies shall be installed at meter connection or property line or side of home for residential irrigation and shall meet standards of: American Water Works Association (AWWA), (Foundation for Cross Connection Control & Hydraulic Research of Southern California (FCCCHR of SC)) or American Society of Sanitary Engineers (ASSE).

ASSE -1001 Atmospheric-Type Vacuum Breakers (AVB)

ASSE -1020 Pressure-Type Vacuum Breakers (PVB)

ASSE -1011 Hose Bib Vacuum Breakers (HBVB)

ASSE -1013 Reduced-Pressure Principle, Backflow Assembly (RPBA)

ASSE -1015 Double Check Valve Assembly (DCVA)

ASSE -1047 Reduced Pressure Detector Check Assembly (RPDCA)

ASSE -1048 Double Check Detector Check Assembly (DCDCA)

## **Potable Commercial Accounts:**

*All commercial connections, Minimum Double Check Valve Assembly. (ASSE 1015)*

Commercial, toxic chemical used on site:

RPBA (ASSE 1013)

Commercial, non-toxic chemicals used on site:

DCVA (ASSE 1015)

Commercial Irrigation

RPBA (ASSE 1013)

Master meter connections

DCVA (ASSE 1015)

## **Dedicated Fire lines:**

The following are typical as per the **Cross-Connection Control Program Manual (CCCPM)**

### *Minimum Type of Protection*

Class 1, \*DCDCA ASSE -1048 Double Check Detector Check Assembly. A closed automatic fire protection system with no potable piping without a pump connection, having 20 heads or less;

Class 2, \*DCDCA ASSE -1048 Double Check Detector Check Assembly. A closed automatic fire protection system with pump connection;

Class 3, DCDCA (ASSE 1048) A closed automatic fire protection system with pump connection and an auxiliary water supply on or available to the premises; or an auxiliary water supply which may be located within 1,700 feet of the pump connection;

Class 4, RPDCA (ASSE 1047) A closed automatic fire protection system with a closed pressure tank or DCDCA (ASSE 1048) supply (this class may have a jockey pump interconnected with the domestic water supply and/or an air compressor connection);

Class 5, RPDCA (ASSE 1047) A closed automatic sprinkler system interconnected with an auxiliary water supply;

Class 6, Fire protection system used for the combined purposes of supplying the automatic sprinklers, hose lines, fire hydrants and standpipes and being used for industrial purposes.

RPDCA (ASSE 10 47)(a) Self-draining fire hydrants on premises presenting a health or system hazard (i.e., chemical plants, petroleum storage plants, bulk storage yards, stockyards, sewer plants or similar facilities) where ground seepage of toxic materials may occur.

DCDCA (ASSE 1048) (b) Self-draining fire hydrants on premises presenting a non-health hazard (i.e., parks, play fields or similar facilities) where ground seepage of non-health-hazard materials may occur.

A backflow prevention assembly shall be required in all premises not described in the previous sections. \* All existing fire suppression systems being modified or upgraded shall have provision for any additional head loss caused by the required backflow preventer in the modification design. New fire suppression systems shall comply with the CCCPM manual.

## **Residential or commercial**

Homes or buildings:

HBVB (ASSE 1011)

Irrigation, chemicals added:

RPBA (ASSE 1013 or (PVB ASSE 1020)

Reclaimed, on domestic water meter

DCVA (ASSE 1015)

Auxiliary wells or water etc. not connected

DCVA (ASSE 1015)

Auxiliary wells or water etc. connected

RPBA (ASSE 1013)