

### 2.3.4. - Backflow Prevention Rules and Regulations Pertaining to Sites With Both AW Potable Water and Auxiliary Water

- A. Auxiliary Water means a water from a source other than AW's potable water supply, or mixture of water and anything else, from any source, which is pressurized for any purpose, use, treatment, or disposal on or available to a site served by AW's potable water system.

The presence of auxiliary water on a site also served by AW's potable water system requires that a backflow prevention assembly be installed at all City water service connections to the site in order to prevent the auxiliary water from contaminating AW's potable water system.

Table 2.3.4. A. includes a partial list of common auxiliary water sources that may be found on sites also serviced by AW's potable water system, the containment backflow protection required at the service points, and the isolation backflow protection required at the point of supply where AW's potable water is used as a backup to an auxiliary water source. The table describes the minimum approved backflow protection required at sites using auxiliary water. These requirements apply to all AW customers. Note that backflow preventers approved for higher levels of protection may be used in place of the minimum required backflow preventer described below:

AG = Air Gap. Approved for all hazards, but its use is not always practical. AG's are the best, or highest level of backflow protection.

RP = Reduced Pressure Zone Backflow Prevention Assembly (also known as RPZ). Approved for all hazards where an air gap would be impractical (exception: sewer). An RP is the best level of approved protection after an Air Gap.

DC = Double Check Backflow Prevention Assembly (also known as DCVB or DCVA). Approved for low hazards only. A DC provides the lowest level of approved protection.

**Table 2.3.4. A.**

		Containment Backflow Protection Required At			Isolation Backflow Protection Required at Point of Supply
List of Pressurized Auxiliary Water Sources and Uses (1)		Domestic Water Meter (2), (3)	Irrigation Water Meter (3)	AW Service to Private Fire Mains (4), (5), (6)	Where Austin is used as Back-up to Auxiliary Water Source
Lake/River Water		RP	RP	RP	RP
Well Water		RP	RP	RP	RP
Rainwater Harvesting		RP	RP	RP	RP
Reclaim Water	used on property	RP	RP	DC	AG
	used in building	RP	RP	RP	AG
Gray Water, Re-Irrigation, Disposal		RP	RP	RP	AG
Other Water Supply (7)		RP	RP	RP	AG

Table Notes:

- (1) All auxiliary water use sites are required to have a Customer Service Inspection performed in addition to the annual operational test of the backflow assemblies.
- (2) Backflow prevention assemblies installed at potable water meters require attention to thermal expansion.
- (3) Backflow prevention assemblies installed at potable and irrigation water meters in conjunction with an auxiliary water source are required to have an annual backflow assembly operational test.
- (4) New backflow prevention assemblies installed in existing fire systems may result in the need to re-calculate fire system design specifications due to backflow preventer pressure losses.
- (5) Backflow prevention assemblies installed in un-metered fire systems are required to be detector assemblies.
- (6) DCs installed on fire systems at reclaimed water use sites are required to have a semiannual operational test.
- (7) Other includes any and all other defined auxiliary waters not listed in this chart and/or any combination of 2 or more auxiliary waters.

B. Reclaimed Water means reclaimed municipal wastewater that is under the direct control of the AW treatment plants, satellite facilities, or a treatment plant with which AW contracts, and that has been treated to a quality that meets or exceeds 30 Texas Administrative Code, Chapter 210 requirements. Reclaimed Water is water which, as a result of treatment of wastewater by a public agency, is suitable for a direct beneficial use or a controlled use that would not otherwise occur.

Because reclaimed water is the product of a final stage of a wastewater treatment process, it is prohibited by the plumbing code from connection or contact at any time for any reason with potable water.

The following rules are intended to insure the prevention of cross contamination of potable water with reclaimed water and other auxiliary waters. All measurements shall be made from the pipe's outside diameter.

1. Pressurized auxiliary water piping shall be separated from potable water piping by a horizontal distance of at least ten (10) feet or any piping within ten (10) feet shall be sleeved.
2. Auxiliary water pipes shall not be run or laid in the same trench as potable water pipes. A ten (10) foot horizontal separation shall be maintained between buried pressurized reclaimed and potable water piping.

3. Buried potable water pipes crossing auxiliary water pipes shall be laid a minimum of twelve (12) inches above the auxiliary water pipes and the auxiliary water piping shall have a minimum twenty (20) foot sleeve centered on the potable water pipe.
4. Auxiliary water irrigation (the edge of the soaking of the applied reclaim water) shall stop ten (10) feet from potable water irrigation heads.
5. Operational or tailwater controls shall be provided to preclude discharge of auxiliary water from irrigation sites.
6. Auxiliary systems shall be designed so that the irrigation spray does not reach any privately owned premises outside the designated irrigation area or reach public drinking fountains.
7. A forty (40) foot protected zone shall be established around a drinking fountain installed in an open field of auxiliary water irrigation. A twenty (20) foot radius of drip irrigation around the drinking fountain surrounded by a twenty (20) foot radius of shrub bubblers shall establish the forty (40) foot protected zone. Pop-up spray heads and rotary heads on auxiliary water systems cannot be installed closer than their radius to any potable water outlet and/or protected zones.
8. Hose bibs on reclaimed water systems and hose connections to reclaimed water systems are not permitted
9. Water for housekeeping in areas served with auxiliary water shall be provided from the city potable water source protected by an RPZ at the water meter and/or at the branch off the private potable drinking water system. The line shall be sleeved from the RPZ to an in-ground lockable service box labeled "NON-POTABLE CITY WATER - DO NOT DRINK." The hose connection in the box shall be a unique connection such as a bayonet stab/twist style with the hose permanently connected to the bayonet without use of garden hose threads. The water valve shall require a special key for valve operation.
10. Hose bibs through and outside the walls of buildings on sites using auxiliary water shall have RPZ water protection on the lines serving the hose bibs. All the hose bibs shall be in locked boxes, and may be supplied from a single RPZ, and the piping and locked boxes themselves shall be labeled "NON-POTABLE CITY WATER - DO NOT DRINK." All hose bib boxes and the water valves themselves shall require a special key for access and operation.

(Rule No. R161-18.10, 9-14-2018)