

City of Bellaire

DEVELOPMENT SERVICES

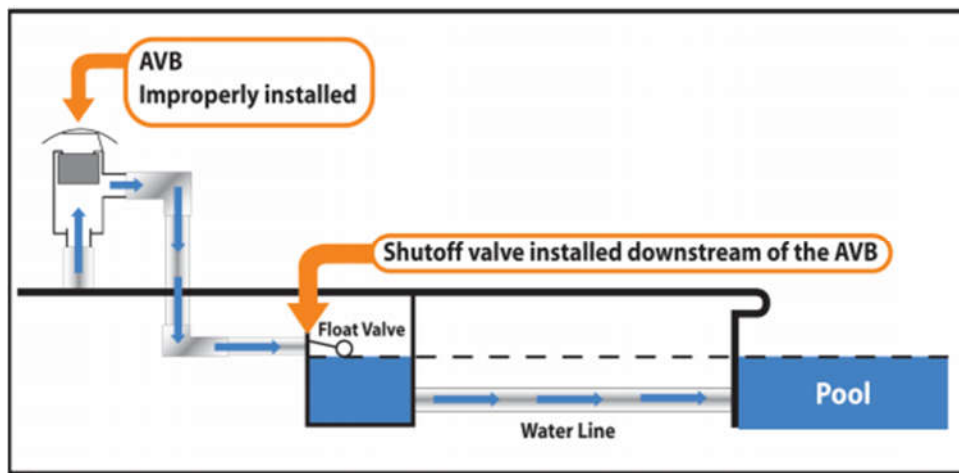
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AGREEMENT REGARDING THE TYPE OF BACKFLOW DEVICE UTILIZED FOR POOLS AND SPAS

I certify that I am the homeowner at _____ (print address),
and the following company, _____, will be acting as the General
Contractor for the Swimming Pool/Spa.

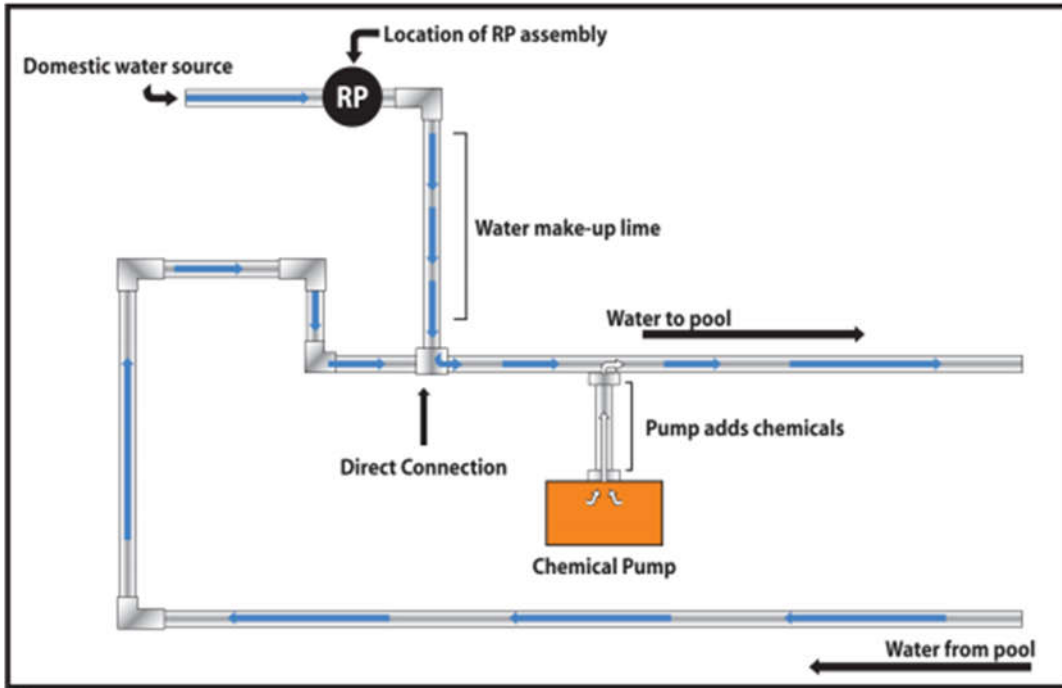
Swimming pools, spas, decorative foundations and even fishponds are all sites where common backflow issues occur. For the purposes of this article the term, “pool” will be used, even though the concepts should apply to any of these uses. A water line is used to fill the pool, or as a water make-up line to make-up for evaporation and loss of water through splashing. However, the level of backflow protection may not always be consistent. Since a pool is open to the atmosphere, and the potential for contamination evident, it must be considered a health hazard. It is true that some swimming pools are kept very clean and the water is tested regularly. However, the quality of this water is not on the same level as drinking water. Additionally, administrative authorities do not want to allow water back into their system that has not been under their sanitary control. Some pools can become very unsanitary through lack of maintenance; additionally fishponds will contain animal waste. Since pools and the like are considered to constitute a health hazard; we know what level or protection is acceptable. An air gap, reduced pressure principle assembly (RP), pressure vacuum breaker assembly (PVB), spill-resistant vacuum breaker assembly (SVB) or an atmospheric vacuum breaker assembly (AVB) would all provide adequate protection, but they will not all work under the same hydraulic conditions. For many uses the air gap is impractical, but under these circumstances, the air gap has its place. If the water make-up line is feeding into the main reservoir of the pool, it is possible to use an air gap to protect the potable water supply. Depending upon the circumstances, this can be very practical. For pools with diving boards, the air gap line can be installed under the diving board, where it is out of the way and easy to have a proper air gap. However, most public swimming pools have been removing their diving boards for safety and liability reasons, and the once well protected air gap becomes exposed.

An atmospheric vacuum breaker may be used with a submerged inlet as long as there are no shutoff valves downstream and the AVB is installed at least 6-inches above the overflow rim of the pool. This is ideal when there is a fill line below the rim of the pool. The AVB cannot be used when backpressure is present, nor may it be used under continuous pressure. So that the pool doesn't have to be filled manually, a common problem is created when the fill line is plumbed with an automatic float control valve. The float control valve will be placed in a location so that it can sense the water level in the pool, however, this is usually downstream of the AVB. The AVB will be kept under continuous pressure.



For this situation, it can be simply corrected by replacing the AVB with a PVB or SVB. The PVB may be used when the assembly will be subject to continuous pressure. There may be shutoff valves downstream, but the assembly still may not be subject to backpressure.

In situations where backpressure may be present, it is necessary to install a reduced pressure principle assembly. This may be the case when there is a recirculating system to supply a pool, waterfall, or fountain, and the water makeup line is directly connected to the recirculating system. In some larger pools, the pool chemicals are not manually added to the pool water, but rather, are injected or aspirated into the recirculating system. It would be necessary to use an RP when there is a water makeup line that is subject to backpressure.



To summarize, these pool type systems should be considered a health hazard as mentioned previously. Then, as with any system, a pool, spa, fountain, or fishpond, Cross Talk WINTER 2007 Page 5 more: swimming poll fill lines Top view of fishpond with hidden float control system Pool recirculating system with proper RP installation must be evaluated to determine if the crossconnection is subject to backpressure, or backsiphonage only. If the potable water line is subject to backpressure, an RP must be used. If not a vacuum breaker may be used. If the system is under continuous pressure a PVB, or SVB may be used; if under non-continuous use an AVB will provide the protection needed. It is necessary with any of the assemblies to ensure that the assembly is installed properly. If these guidelines are followed, proper protection will be provided.

Swimming Pool/Spa Company/Contractor:

Signed: _____ Date: _____

Printed Name: _____

Resident(s):

Signed: _____ Date: _____

Printed Name: _____

Signed: _____ Date: _____

Printed Name: _____