Hi Kevin,

I am not much of a talker in big groups, but I did want to provide some comments to today's discussion.

- Excerpt from Title 17:
  - Sec. 7604, Table 1, Type of Backflow: (c) Recycled water (1) Premises where the public water system is used to supplement the recycled water supply. AG (Air Gap)
  - http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/lawbook/RWregulations_20140618.pdf (pg. 10)
  - If potable water is used to supplement (backup supply) the recycled system and would use the same piping, the potable water needs to be air gapped into a holding tank. SBWR requires this type of protection for customers that wish to use recycled water and have potable serve as a backup/alternative supply, per Title 17.
- RP Backflows
  - Recycled Water Irrigation Systems- SBWR requires recycled water systems to have RP backflows if there is a fertigation system - a direct injection of fertilizer (like what Mr. Bernard said).
  - Recycled Water Industrial Systems - If there is no air gap into a cooling tower, holding tank, etc. then SBWR requires an RP backflow device

Potential Economic Impacts:

- Cross-Connection tests conducted by a certified specialists (AWWA Certification is required in the SBWR Service Area) can be quite expensive, especially if the system is large/complex. I will find out some costs for other sites, but for a golf course in our service area, the recent cross-connection test was approximately $20,000.
- In addition to the initial cross-connection test before occupancy, dual-plumbed facilities require cross-connection tests every 4 years. These tests are costly and invasive (need access to all water fixtures on-site).
- RP backflows - 3/4" (typical residential meter) $200. If recycled water will be used for irrigation at an HOA, the potable water meters will need an RP backflow. If there were no recycled water, there would be no RP backflow on the potable water system.
  - RP backflows result in a pressure loss of about 5-10 psi. This can be a factor on the potable and/or fire system if this was not taken into account during the design phase.
- Need for interconnection of the recycled and potable water systems:
  - SBWR considers its recycled water system as an "interruptible" service which is why we highly recommend (and when we revise our Rules & Regulations we will require it) that all dual plumbed facilities and cooling tower customers to install a potable back up system. This adds costs because to have a potable back system and meet code/regulations, you must: install a break tank (holding tank)

with a code-approved air gap and install a booster pump (since the water coming out of the tank will not be pressurized).

- "Interruptible Service"
  - For Example: In the event of an earthquake, multiple water mains will rupture and agencies will be scrambling to fix potable water mains to restore service to businesses and residents. I assume recycled water main repair would not be a priority and may take much longer to bring back online. For dual-plumbed/cooling tower customers that rely on only recycled water as their source of water, this could be problematic.

Thank you for the opportunity to be a part of this process and group, I sincerely appreciate the experience and look forward to the upcoming weeks.

Thanks again (and to Kyle, Beth and Carla),

Pedro

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