



No Return Policy - Are Customers Returning Water to Your Municipal or Rural Water System

Does your water utility allow customers to return their water back to the city or rural water system? All utilities in Kansas now have a Cross Connection Control Program of some kind. Each program is unique and different in some ways. Some programs are as thick as a textbook while others are only a few pages long. The size is only relative to the amount of people your system serves. This does not mean, however, that the smaller communities are more or less susceptible to backflow incidences than the larger communities. Often, the larger communities have larger industrial hazards that could possibly come in contact with the community's drinking water. A backflow is the unwanted flow from a domestic, industrial or commercial piping system into the potable water distribution system.

So, what makes a cross connection control program efficient and effective? There are five (5) things that every program should have in order for it to be an effective document.

1. Authority. A cross connection control program is only as good as the authority that the document has in your community. I like to compare this to driving down the highway, the speed limit is only as good as the enforcement. If you choose to exceed the speed limit the best case enforcement scenario is that you get pulled over and you are ticketed by law

enforcement. Just like your cross-connection program, the best case scenario is you are able to fine or even shut a customer's water off that poses a threat to your community drinking water. A worse case scenario is that the authority to enforce those laws was not used, and someone get hurts in your system because of a backflow incident. Just like in my driving reference, the worse case scenario is becoming involved in a wreck and hurting yourself or someone else.

None of us want to shut someone's water off; that's a given. However, none of us want to have any part in someone getting sick or worse.

2. Backflow Preventers. Once a public water system has established the authority to mitigate and eliminate backflow in the system, the system has to have the tools to do so. Backflow preventers come in various types and sizes. Each type of device is unique in its own way and is great at doing its own individual job. However, not all backflow devices are created equal, so you want to make sure that the devices

that you are allowing to be used by customers are appropriate for the degree of hazard that is present.

Water systems typically allow the installation of one of five types of devices, depending on the assessed hazard and type of installation:

- ◆ Air gap
- ◆ Reduced pressure principle assembly
- ◆ Double check assembly
- ◆ Pressure vacuum breaker
- ◆ Spill resistant vacuum breaker

There are several approval agencies for backflow preventers. If you want to make it easier on yourself, you could allow devices from multiple agencies to be placed in your system. One example is "The American Society of Sanitary Engineering" (ASSE) that actually put the different devices in their lab and put those devices to the test. The Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (USC) does the same as the ASSE, with the exception that once the devices make it out of the lab study,

they are then placed into practical application in the field and those devices must function properly for an entire year. I will caution you to watch out for approvals from The American Water Works Association (AWWA), only because they do not actually approve devices. However, some companies have put the AWWA stamp on there and said it was approved.

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3. Certified Testers. As I previously mentioned, backflow devices are great at doing what they are designed to do. On that note, however, they are mechanical devices and we all know mechanical devices will fail – it’s just a matter of when. So, having trained and certified testers that go out into the system and test these devices is critical. There are few agencies in the State of Kansas that do offer Cross Connection and Backflow Prevention (CCBP) certification. I’m a tad partial to the training conducted by KRWA.

Many companies have certified backflow testers on staff, and it’s a great idea to require that whoever is testing to state their certification number and expiration date on their report form. In the state of Kansas certified testers must recertify every three years in order to maintain their license. As a utility you have the right to go so far as to see their certification to ensure that it is up-to-date.

4. Defensible Records. No one wants to see someone get hurt or worse in their community, especially if it was due to the water from your water system. However, if someone were to become critically ill or worse – and even if you did everything right, the water system could still be held liable. It is essential to be able to prove that the water



Jason DeHaven and Laverne Tripp of the city of Kechi test backflow preventers during a training session held in Salina in August 2020. Since January 1, 2019 through August 30, 2020, KRWA sponsored eight (8) four-day backflow and cross connection control training sessions. These were attended the first two days by 40 people for information only, 187 attended for full certification and 104 for recertification.

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system took every step possible to prevent a backflow incident.

Backflow incidents are not common, but they are not necessarily rare either. Thankfully, a majority of the time a backflow incident happens and no one even realizes it happened.

5. Education. As a utility that does not conduct backflow testing, system operators are not required to have a CCBP license. However, as a utility that is charged with providing safe clean drinking water to your community, it is a great idea to know what to look for in your system to avoid an incident.

Education does not mean just education of the utility staff members – it’s the education of the public as well. For example, if a water utility worker were to see a garden hose laying in a pool and no one around, it would be beneficial in the long run to help inform and educate that customer about the dangers that hose presents. If there were to be a break in the water main in front of the customer’s house, it’s possible that the entire pool could be siphoned out and into the public water system. Even a fire down the road and

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a fire truck connecting to the hydrant could cause enough negative pressure in the water main to pull a vacuum and siphon the water through the garden hose.

Many utilities have created a cross connection control program, simply to appease the regulation authority. Once created, they show it off at their sanitary survey, and then put it back on the shelf to wait for the next survey. To no fault of the operator, many communities across the state are shorthanded in their day-to-day duties as it is, and to add implementation of a cross connection to the worklist is unthinkable. However, it doesn’t have to consume any operator’s entire day.

Looking for those telltale signs of a possible backflow incident can make a huge difference in your community. The goal of every public water system has been and will always be to provide safe clean drinking water to every individual served by that system.

I am pleased to be a member of the “KRWA team”. I would be pleased to discuss backflow prevention and how to effectively implement such a program with any water district or city. Send an email to me at stewart@krwa.net or give me a call at 913/731-4004. KRWA also has informational brochures available for systems to provide to customers to help with education on the topic of backflow prevention.

Stewart Kasper joined KRWA staff in August 2020 as Technical Assistant/Trainer. He holds a Class IV operator certification for water and Class IV operator certification for wastewater in Kansas.



Prior to joining KRWA, he was water plant operator at Rural Water District No. 2, Miami County.

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