

Interest in Backflow Prevention – Cross Connection Control in Kansas is High

Kansas Rural Water Association (KRWA) provides training sessions throughout Kansas each year. These training sessions cover several aspects of operating a public water system or wastewater system.

This article will focus on backflow training in Kansas. In 2014 there were five opportunities for public water suppliers, private companies and others to attend backflow training sponsored by KRWA. These sessions were held at McPherson in February, Chanute in July, Liberal in September, Lawrence in October and at Topeka in December.

Those attending learned about standard practices of testing backflow prevention devices, the principles of cross-connection control and the methods and devices used to prevent backflow of undesirable substances into water distribution and plumbing systems.



A demonstration to competently test various backflow prevention devices is part of the exam that students must pass at KRWA's backflow prevention training program.

The first two days are available without charge. Those two days of training are intended to provide background information, the reasons for concern of potential cross connections and the problems that cross connections or backflow have caused. Those who would like to attend the training and become a certified backflow tester-repairman are required to attend the full four-day training. Those who were previously certified and needing to re-certify need only attend the last two days of the training.

In 2014 there were seventy-one (71) people who attended the training and passed the hands-on testing and written exam to become certified. Another sixty-three (63) attendees passed the same exam to maintain their certification. Twenty-six (26) attended the first two days to obtain more information on cross connection control. The exam includes a demonstration by the student of the ability to test various devices. On the written exam, students must score a 70 percent passing grade. A certificate of completion is issued by KRWA that verifies the carrier's successful completion of the training. In 2014 the passing rate on the exam was 100 percent.

Does a 100 percent pass rate imply that the testing is too easy? Absolutely not. It does indicate that the instructor spends the time necessary for all those



Shawn Ridgeway and Michael Garcia from ICD 307 review instructions on proper testing of devices at the backflow training in Topeka on December 4, 2014.

who attend to adequately understand what is being taught. And, it says that the students were interested and were proficient.

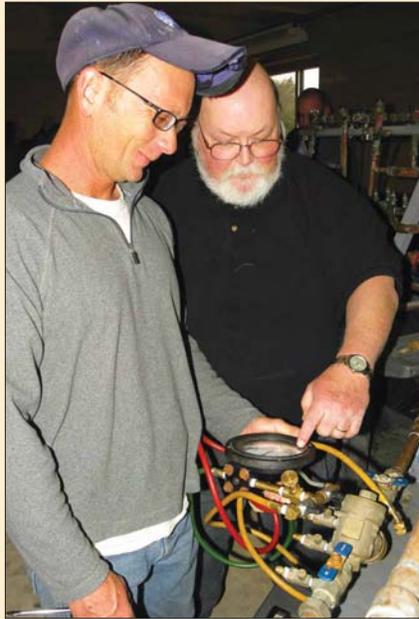
Terry Randles, Topeka, KS, is the trainer at KRWA-sponsored cross connection control training sessions. Terry is certified as an adult education instructor in plumbing and cross connection control by the State of Kansas Board of Education. Terry is also certified as a plumbing inspector through the International Plumbing and Mechanical Officials. He is a "Block Tested" Master Plumber and received apprentice training by the United Association, Plumbers and Pipefitters Local 249. Terry is employed by the city of Topeka as a Cross Connection Inspector.

Why the concern for cross connection control?

Every public water supplier in Kansas needs to be aware that they are responsible for the quality of water to the last free flowing tap in their system. Each public water supply is also required to have an approved Cross Connection Control ordinance or policy. The ordinance or policy must be kept on file and available for inspection by the Kansas Department of Health and Environment.

Also each public water system must have a viable cross connection control program. Having an approved ordinance or policy on paper on the shelf is not a control program. That is only the first step. Each system should have already educated customers about cross connection control and backflow prevention and should have inspected those who might have situations that are more apt to create cross connections. Public water system operators and owners should advise customers on the type of protection needed. This depends largely on what type of hazard the customer may have. Approved backflow prevention devices must be testable.

Having a dual check valve in a meter setter is not an approved backflow prevention device. Typically when new



Trainer Terry Randles provides excellent one-on-one instruction to one of the students at a recent backflow training class held at the Topeka Water Treatment Plant.

meter setters are installed most will be equipped with a check valve of some sort. A dual check valve can create a problem. A properly functioning dual check valve will not allow water to flow in reverse. This results in what is known as a "closed system". Those services with hot water heaters particularly pose problems. If there is no check valve, then as water in the user's system expands, water can be forced back into the public water system.

With the dual check valve the expansion must go somewhere else. You may have customers complaining that the relief valve on the hot water heater is leaking. Or there may be leaks at the faucets that continue to worsen. In a worst-case scenario the hot water heater could explode. That is why the relief valve should be checked periodically.

Every public water supply has the potential for cross connections. Example: One of the most prevalent is the outside hose bibb on a house. In the summer, homeowners often connect a garden hose to fill the small swimming

pool, water lawns or shrubs, etc. Hoses are frequently left submerged in pools or other locations. Suppose someone has added chemicals to the kids' pool. Then suppose a large water leak develops on the public water supply main. Such high demands on the public system can easily siphon the water back out of the pool into the homeowner's plumbing system and that of the public water system. How is that going to be removed? If the system had required a hose bibb vacuum breaker to be installed this situation should not occur.

It is due to worst-case scenarios actually happening that the regulations to restrict and eliminate backflow and back-siphonage were required in the first place.

This issue of The Kansas Lifeline carries the obituary of Alvin "Al" Hermesen. Al passed away last November. Al Hermesen was a nationally-known and recognized expert in cross connection control and backflow prevention. He taught this subject for KRWA and other organization from 1990 through 2000; more than 7,000 people attended those sessions. Terry Randles was mentored by Al Hermesen. Terry's presentations are filled with the same real life incidents and first-hand experiences as Al typically would explain. Terry, like Al, is a pleasure to listen to and to learn from.

Anyone who wants to learn more about cross connection control should not pass up this training. That is one reason that KRWA will continue to make the first two days of training available to anyone without cost. Check the KRWA Web site at www.krwa.net for sessions as they are developed.

Greg Duryea has worked for KRWA since 1993 as Technical Assistant. He holds a Class I water certification and is the certified operator for Sycamore Springs Resort in Brown County.

