The History of South Carolina Cross-Connection Control

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aka:
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A few Unique Items to SC Program

- Tester Certification is tracked by Tester Name and Company
- Type of Gauges are tracked at the state level
- By State Law We Must Print List All Current Testers by Counties (Now Located on Our SC DHEC Webpage)
- We Have Four Types of Tester Certifications
- SC DHEC is the Certifying Agency in SC and conducts the Initial Certification Courses

Tester Classifications

1 - General Tester
Testers who provides tester services to the general public

2 - Limited Tester
Testers who test for just their employer and not the general public

3 - Inspector Tester
Tester who is normally involved in the management of a backflow prevention program and does not sell their services to the general public

4 - Manufacturer's Agent
To my knowledge we do not use this type currently...
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1) 1960's - existing cross connections are allowed as long as monthly inspections are made by the public water system and it is reported to the SCDHEC Board. New cross connections are prohibited.

2) 1968 - Low hazard cross connections must be protected by DCVA and high hazard cross connections must be protected by Air Gap and/or RPPA.

3) 1970 - A connection between two public water systems can be separated by a common gate valve or check valve as long as both public waters systems and DHEC agree.

4) 1981 – If bacteriological or chemical monitoring results, complaints from individuals, or sanitary survey findings indicate the need, DHEC may require a public water supply to develop and carry out a program for the detection, elimination and prevention of cross connections.

5) 1981 - DCVA's and RPPA's are required to be tested upon installation and annually thereafter.

6) 1981 - DHEC shall certify qualified individuals who are capable of testing cross connection control devices to ensure their proper operation.

7) 1982-1994 (No major changes during this time frame).

1995 to Present

Fire Line Sprinkler Systems

State Primary Drinking Water Regulations

Create Recertification Centers

State Primary Drinking Water Regulations

F. Cross Connection Control

(a) Each certified tester’s license shall expire three (3) years from the date of issue. In order to renew this certification for three (3) more years, the tester shall come before a designated person approved by the department and shall successfully complete a written examination with a passing score of 70%, and perform the prescribed test on an approved reduced pressure principal backflow prevention assembly using the tester’s own differential pressure gauge. The gauge must be accurate within 2% of full scale or ±0.3 pounds per square inch differential (PSID). Any gauge found to be inaccurate or malfunctioning will be required to be calibrated or repaired as needed to bring it into compliance before certification will be renewed. Certified testers will also be required to test an approved double check valve assembly by two (2) methods which are approved by the Department.

F. Cross Connection Control

(10) Where provided, pressure vacuum breakers shall be installed at a minimum of 12" inches above the highest downstream piping and shall not be subject to backpressure.
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The Public can Effect Change

What can happen when Constituents & State Representatives truly do not understand the risks of Cross-Connections

STATE PRIMARY DRINKING WATER REGULATIONS
AS AMENDED APRIL 20, 2005
R.41-58.7(f)

F. Cross Connection Control

(2) Low Hazard Cross Connections

A connection between an approved public water system and another water source not hazardous to health but not meeting the standards of the approved public water system and not cross-connected within its system with a potentially dangerous substance shall be considered a low hazard category cross connection. At a minimum, an approved Double Check Valve Assembly or Pressure Vacuum Breaker must be installed on a low hazard cross connection except as provided for in section 3 below.

(a) Low hazard residential lawn irrigation systems – Such public water systems which have low hazard residential irrigation systems directly or indirectly connected to them public water system must have a written and hazard residential lawn irrigation system cross connection control policy. This policy must be documented in writing and must be approved by the governing body of the public water system. The policy must specify the minimum acceptable device for low hazard residential lawn irrigation systems. The minimum acceptable device for low hazard residential lawn irrigation systems is a residential dual check. If a water system specifies another backflow prevention assembly as the minimum acceptable protection for those cross connections, the policy must be approved by the governing body of the public water system with the opportunity being provided for public comment and participation. The written policy must:

(i) Identify the type of backflow prevention device or assembly that is required to be installed on low hazard residential lawn irrigation system connections;

(ii) Establish a schedule for the required set of residential dual checks if these are the devices designated by the policy as minimum acceptable protection for low hazard residential lawn irrigation systems. The minimum testing frequency must be specified in the policy and appropriate records must be maintained to verify compliance with the established testing requirements.

(iii) Establish a schedule for the required change out of residential dual checks if these are the devices designated by the policy as minimum acceptable protection for low hazard residential lawn irrigation systems. The minimum change out frequency must be specified in the policy and appropriate records must be maintained to verify compliance with the established change out requirements.

(b) High hazard residential lawn irrigation systems – Any residential lawn irrigation system that includes chemical addition, or is also connected to another water source which is not an approved public water system, shall be considered a high hazard cross connection and must meet the requirements of paragraph (4) below.
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In summary: Cross Connection Control Regulations R.61-58.7 (F) from 1995 – Present.

- 1995 - All fire line sprinkler systems in SC must be protected with the minimum of a double check valve assembly. Any fire sprinkler system that includes antifreeze, foaming agents, or has an auxiliary water supply must be protected with a reduced pressure principal assembly.
- 1995 - created procedures for the recertification exam (written & wet lab) for backflow assembly testers. Differential gauge must be check for accuracy every 3 years at the recert lab.
- 1995 - established 10 recertification centers throughout SC to carry out and implement the written & wet lab exam.
- 2002 – the installation & testing requirements of a pressure vacuum breaker.
- 2005 – every public water system in SC must adopt and implement a residential lawn irrigation sprinkler policy. Testing versus change out, what is the best approach.
- 2018 – No longer allow the Vertical Tube Test
- 2018 – to the present, few changes during this time frame. Updates to webpage.

Certification Classes

- We hold about 9 classes Annually. COVID 19 has limited our class sizes so we will hold more in 2021.
- COVID has also led us to thinking outside our normal process and starting this year, we will reciprocate with UF TREED & NCRWA. Only new 2021 certifications are reciprocated. We still must issue the certification.
- Certification Classes have evolved as well. They were 1-day, then went to 2-day, then to 3-day and this year moved to 4-day courses to align more with national programs. Schedules for classes w/registrations are posted on our webpage.

Webpage is updated Monthly

Contact Us

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