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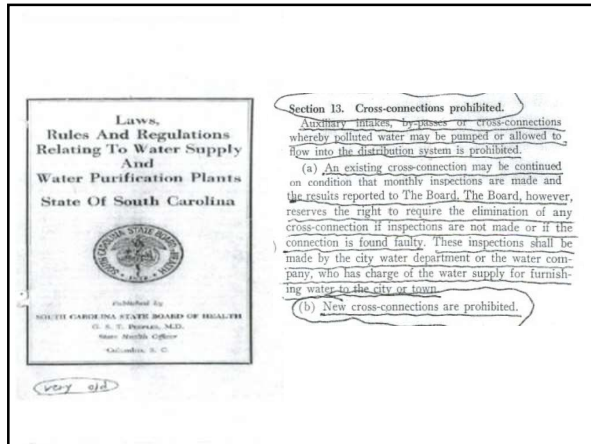
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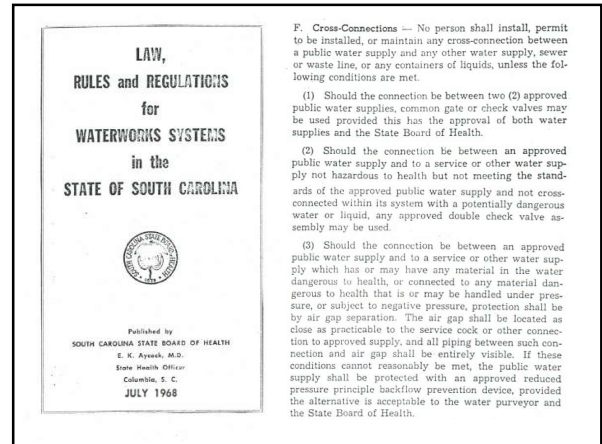
Tester Type	Tester No.	Name	Employer	Address	Phone	Expires	
Tester 1	11128821	Locher, Matthew T	Ev Plumbing Systems, Inc	714 Pender/Hwy	Goftree, SC 29042	888-488-8887 12/31/21	
	11128822	Locher, James T	Lowndes/Wilkes Ave	P.O. Box 1208	Goftree, SC 29042	888-488-8888 08/30/22	
	11128823	Morris, Jake E	Ingleton Py Design, Llc	1227 Honeyflow Island Rd	Summerville, SC 29152	888-423-2579 03/31/23	
	11128824	Proffitt, Charles S	D & S Plumbing	2920 Green Tree	Goftree, SC 29042	888-488-8887 03/31/23	
	11128825	Phelan, Andrew	Alan Pipe Production, Inc.	239 Roberts Rd	Summerville, SC 29152	314-435-2280 03/31/24	
	11128826	Shawhan, James M	Shawhan Backflow	191 Roberts Rd	Goftree, SC 29042	888-488-2383 08/30/22	
	11128827	Whitson, Tadde E	Whitson Plumbing	210 Mackay Terrace	Goftree, SC 29041	888-884-8871 12/31/21	
	Tester 2						
	Inspector	11288124	Cabaret, Robert P	D & S Plumbing	2111 Earl Park Dr	Charleston, SC 29178	803-374-6188 03/31/24
		112181421	Keen, Dennis W	D & S Ingelton	10881 Langley Dr	Charleston, SC 29168	803-380-3480 08/30/21
Tester 3							
Manufacturer's Agent		11388223	Adams, Deborah R		P.O. Box 947	Charlestonfield, SC 29178	843-423-8538 03/31/23
	11388224	Ryan, Steven C	Char Environmental Services	P.O. Box 284	Palmyra, SC 29154	843-888-8881 12/31/22	
	11388225	Shawhan, Henry W	Shawhan Plumbing	848 Tappan	Summerville, SC 29152	843-488-2511 08/30/22	
	11388226	Johnson, Anthony J JR	Johnson Backflow Prevention	425 Blenheim Dr	Charleston, SC 29026	843-423-4233 12/31/21	
	11388227	Ryan, Randy J	Ryan Plumbing & Electric	P.O. Box 947	Charlestonfield, SC 29178	843-423-8538 08/30/22	
Tester 4							
Manufacturer's Agent	114887421	Herring, Jonathan W		120 Grand St	Monroeville, SC 29110	803-458-4520 03/31/23	
	114887422	Hill, James B		P.O. Box 385	Summerville, SC 29148	803-488-7923 03/31/23	
	14887423	Lambert, Michael	UP Flow Production	1175 Laurel Lake Rd	Monroeville, SC 29110	704-414-1741 12/31/22	
	114887424	Stankovic, David M	Water Works Backflow Testing & Rep.	1802 Camp Street Dr	Monroeville, SC 29110	803-478-8888 08/30/21	
	Tester 5						
Tester 6							

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Section 13. Cross-connections prohibited.
Any unified, bypass or cross-connections whereby polluted water may be pumped or allowed to flow into the distribution system is prohibited.
 (a) An existing cross-connection may be continued on condition that monthly inspections are made and the results reported to The Board. The Board, however, reserves the right to require the elimination of any cross-connection if inspections are not made or if the connection is found faulty. These inspections shall be made by the city water department or the water company, who has charge of the water supply for furnishing water to the city or town.
 (b) New cross-connections are prohibited.



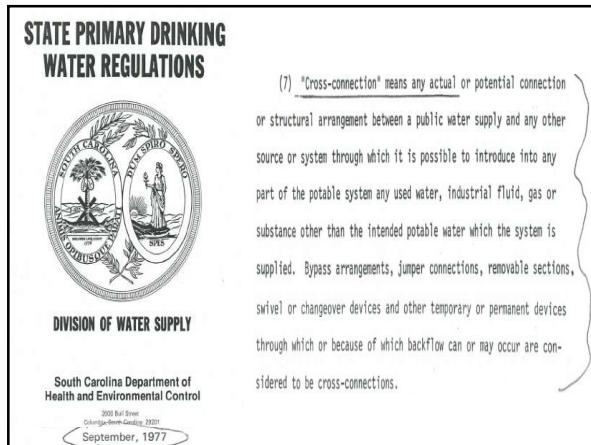
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F. Cross-Connections — No person shall install, permit to be installed, or maintain any cross-connection between a public water supply and any other water supply, sewer or waste line, or any containers of liquids, unless the following conditions are met.

(1) Should the connection be between two (2) approved public water supplies, common gate or check valves may be used provided this has the approval of both water supplies and the State Board of Health.

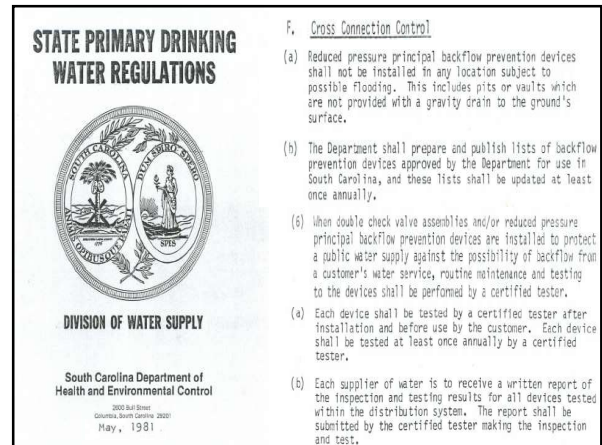
(2) Should the connection be between an approved public water supply and to a service or other water supply not hazardous to health but not meeting the standards of the approved public water supply and not cross-connected within its system with a potentially dangerous water or liquid, any approved double check valve assembly may be used.

(3) Should the connection be between an approved public water supply and to a service or other water supply which has or may have any material in the water dangerous to health, or connected to any material dangerous to health that is or may be handled under pressure, or subject to negative pressure, protection shall be by air gap separation. The air gap shall be located as close as practicable to the service cock or other connection to approved supply, and all piping between such connection and air gap shall be entirely visible. If these conditions cannot reasonably be met, the public water supply shall be protected with an approved reduced pressure principle backflow prevention device, provided the alternative is acceptable to the water purveyor and the State Board of Health.



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(7) "Cross-connection" means any actual or potential connection or structural arrangement between a public water supply and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas or substance other than the intended potable water which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices and other temporary or permanent devices through which or because of which backflow can or may occur are considered to be cross-connections.



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F. Cross Connection Control

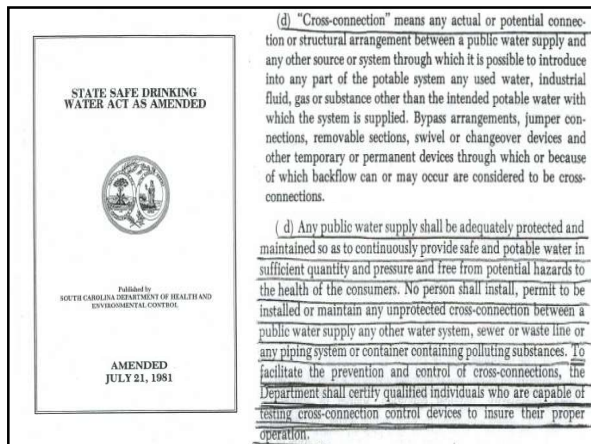
(a) Reduced pressure principal backflow prevention devices shall not be installed in any location subject to possible flooding. This includes pits or vaults which are not provided with a gravity drain to the ground's surface.

(b) The Department shall prepare and publish lists of backflow prevention devices approved by the Department for use in South Carolina, and these lists shall be updated at least once annually.

(c) When double check valve assemblies and/or reduced pressure principal backflow prevention devices are installed to protect a public water supply against the possibility of backflow from a customer's water service, routine maintenance and testing to the devices shall be performed by a certified tester.

(d) Each device shall be tested by a certified tester after installation and before use by the customer. Each device shall be tested at least once annually by a certified tester.

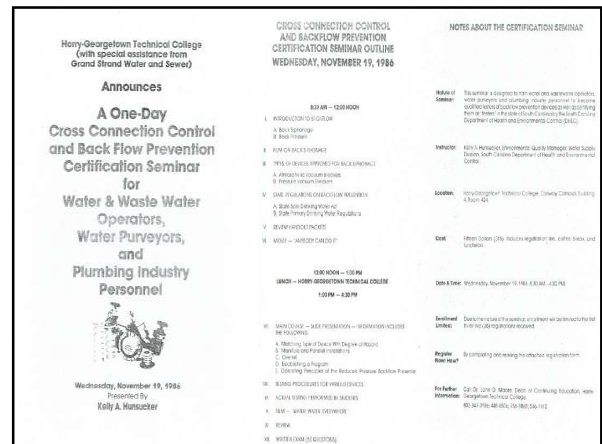
(e) Each supplier of water is to receive a written report of the inspection and testing results for all devices tested within the distribution system. The report shall be submitted by the certified tester making the inspection and test.



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(d) "Cross-connection" means any actual or potential connection or structural arrangement between a public water supply and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas or substance other than the intended potable water with which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices and other temporary or permanent devices through which or because of which backflow can or may occur are considered to be cross-connections.

(d) Any public water supply shall be adequately protected and maintained so as to continuously provide safe and potable water in sufficient quantity and pressure and free from potential hazards to the health of the consumers. No person shall install, permit to be installed or maintain any unprotected cross-connection between a public water supply any other water system, sewer or waste line or any piping system or container containing polluting substances. To facilitate the prevention and control of cross-connections, the Department shall certify qualified individuals who are capable of testing cross-connection control devices to insure their proper operation.



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ANNOUNCES
A One-Day Cross Connection Control and Back Flow Prevention Certification Seminar for Water & Waste Water Operators, Water Purveyors, and Plumbing Industry Personnel

WEDNESDAY, NOVEMBER 19, 1986

8:30 AM - 12:00 PM

1. INTRODUCTION TO COURSE
 A. Role of Backflow
 B. Backflow Prevention

2. TYPES OF BACKFLOW PREVENTION DEVICES
 A. Atmospheric Vacuum Breakers
 B. Pressure Vacuum Breakers

3. DOUBLE CHECK VALVE ASSEMBLY
 A. Double Check Valve
 B. Double Check Valve with Pressure Vacuum Breaker

4. REDUCED PRESSURE PRINCIPLE DEVICES
 A. Reduced Pressure Principle Device
 B. Reduced Pressure Principle Device with Air Gap

5. TESTING PROCEDURES
 A. Testing Procedures
 B. Testing Procedures

6. TESTING PROCEDURES FOR REDUCED PRESSURE PRINCIPLE DEVICES
 A. Testing Procedures
 B. Testing Procedures

7. TESTING PROCEDURES FOR DOUBLE CHECK VALVE ASSEMBLY
 A. Testing Procedures
 B. Testing Procedures

8. TESTING PROCEDURES FOR AIR GAP
 A. Testing Procedures
 B. Testing Procedures

9. TESTING PROCEDURES FOR OTHER DEVICES
 A. Testing Procedures
 B. Testing Procedures

10. TESTING PROCEDURES FOR OTHER DEVICES
 A. Testing Procedures
 B. Testing Procedures

NOTES ABOUT THE CERTIFICATION SEMINAR

Objectives: To provide a day-long seminar for water operators, water purveyors, and plumbing industry personnel on the installation, maintenance, and testing of backflow prevention devices.

Instructor: Kelly A. Hunsicker, Director, Water & Waste Water Division, South Carolina Department of Health and Environmental Control.

Location: Henry-Georgetown Technical College, Orangeburg, South Carolina.

Cost: Free. (There is a charge for materials and a charge for lunch.)

Date & Time: Wednesday, November 19, 1986, 8:30 AM - 12:00 PM.

Enrollment: Space is limited. Enrollment is on a first-come, first-served basis.

Registration: Registration is required. Registration forms are available at the seminar location.

For Further Information: Call Kelly A. Hunsicker, Director, Water & Waste Water Division, South Carolina Department of Health and Environmental Control, 1601 Park Road, Orangeburg, South Carolina 29117.

South Carolina Department of Health and Environmental Control
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Brief Summary: CCC Regulations R.61-58.7 (F) from 1960'S - 1994.

- 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.
- 1968 - Low hazard cross connections must be protected by DCVA and high hazard cross connections must be protected by Air Gap and/or RPPA.
- 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.
- 1976 - Bypass arrangements, jumper connections, removable sections, swivel or changeover devices and other temporary or permanent devices through which or because of which backflow can or may occur are considered to be cross connections.
- 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.
- 1981 - DCVA's and RPPA's are required to be tested upon installation and annually thereafter
- 1981 - DHEC shall certify qualified individuals who are capable of testing cross connection control devices to ensure their proper operation.
- 1982-1994 (No major changes during this time frame).

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1995 to Present

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STATE PRIMARY DRINKING WATER REGULATIONS
AS AMENDED JULY 28, 1995
R.61-58.7(F)

Fire Line Sprinkler Systems

(6) Fire line sprinkler systems, except those in the high hazard category shall be protected by an approved double check valve assembly. High hazard fire sprinkler systems shall include, but not be limited to: antifreeze systems, foam systems, systems charged from or tied into ponds, lakes, streams, or any water source other than the approved public water supply. High hazard category fire sprinkler systems shall comply with the requirements of Paragraphs (4) and (5) above.

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STATE PRIMARY DRINKING WATER REGULATIONS
AS AMENDED JULY 28, 1995
R.61-58.7(F)

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.

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Create Recertification Centers

Mr. David Zorn Zorn Consulting, LLC Orangeburg Area (803) 536-6387 or (803) 707-8153	Mr. Robert Bird Seneca Light & Water Oconee, Pickens, & Anderson Area (864) 885-1625 or (864) 916-1501	Mr. J.T. Johnson Johnson Backflow Prevention Cheraw Area (843) 557-4230
Mr. Harry Peart Rock Hill Area (803) 324-0927 or (803) 417-1014	Mr. Roderick Herring City of Columbia Columbia Area (803) 545-5876	Mr. Malcolm Cook City of Florence RR Florence Area (843) 666-3236
Mr. Don Soudles Charleston Water System Charleston Area (843) 727-6980	Mr. Matt McCoy/Mr. Charles Clincovoy Greenwood C.P.W. Greenwood Area (864) 942-8196	Mr. Brent Thomas Grand Strand Water & Sewer Auth Myrtle Beach/ Conway Area (843) 443-8214 or (843) 333-8955 Website: Click Here
Mr. Kenneth Davis Spartanburg Area, Clinics held at Inman Campobello Water (864) 208-6334 or (864) 578-6365		Mr. Cole Thomas Grand Strand Water & Sewer Auth Marion/Heary County Area 843-742-8955 colemanthomas@gwsa.com Website: Click Here


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STATE PRIMARY DRINKING WATER REGULATIONS
AS AMENDED MAY 24, 2002
R.61-58.7(F)

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

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STATE PRIMARY DRINKING WATER REGULATIONS
AS AMENDED APRIL 29, 2005
R.61-58.7(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.

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(3) Residential Lawn Irrigation Systems

(a) Low hazard residential lawn irrigation systems - Each public water system which has low hazard residential irrigation systems directly or indirectly connected to their public water system must have a written low 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 sprinkler systems. The minimum acceptable device for low hazard residential lawn sprinkler systems is a residential dual check. If a water system specifies another backflow prevention assembly as the minimum acceptable protection for these cross connections, the policy must be approved by the governing body of the public water system with due 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 testing of double check valve assemblies, or other testable assembly, if testable assemblies are 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.

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(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 checked 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

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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 TREEO & 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.

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Webpage is updated Monthly

Cross Connection Control & Backflow Prevention

Law and Regulation | Program | Certification | Recertification | Upcoming Workshops | Links | Certified Testers | Contact

The Cross Connection Control/Backflow Prevention program is a state-mandated program designed to protect the public's drinking water from contamination by identifying and eliminating cross connections.

- **Law**
6-64-20 (1) and 64-55-40 (3) State Safe Drinking Water Act
- **Regulation**
Cross Connection Control
Entire State Primary Drinking Water Regulations - See Section R.61-58.7 (F)
Lawn Irrigation Sprinkler - Policy Letter
Vertical Tube Test Procedure No Longer Allowed - Policy Letter
- **Program**
Every public water system must initiate and maintain a viable cross connection control program. This is accomplished by separating the distribution system for ungrouted cross connections. Once identified, these connections can be controlled through the proper use of backflow prevention assemblies. The

Share This Resource

Downloads & Links

- Backflow Device Test Report Form-Sample
- Approved Backflow Prevention Assemblies SC
- Backflow Recertification Study Guide 2021
- Backflow Assembly Field Test Procedures
- EPA Cross-Connection Control Manual
- 50 Questions on Backflow

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Contact Us

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Columbia, SC 29201
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foxsc@dhec.sc.gov

SERGEANT BACKFLOW

Stay Connected

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