



Cross-Connection Control Plan
For
South Blount County Utility District

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I. Introduction

A. Goal

The goal of the South Blount County Utility District is to supply safe water to each and every customer under all foreseeable circumstances. Each instance where water is used improperly so as to create the possibility of backflow threatens the health and safety of our customers and threatens our chances of realizing this goal. The possibility of backflow due to improper use of water within the customer's premises is especially significant, because such cross-connections may easily result in the contamination of our public water supply. The only protection against such occurrences is the elimination of such cross-connections or the isolation of such hazards from the water supply lines by properly installed approved backflow prevention devices.

B. Plan of Action

The South Blount County Utility District is determined to take every reasonable precaution to see that cross-connections are not allowed to contaminate the water being distributed to its customers. This cross-connection plan outlines a program of action designed to control cross-connections within the area served by the utility. This plan is intended to be a practical guide for safeguarding the quality of water distributed from becoming contaminated or polluted through backflow.

II. Authority for Controlling Cross-Connections

A copy of the Policy is attached to this plan. This Policy prohibits cross-connections within the water system, authorizes the system to make inspections of the customer's premises, requires that cross-connection hazards be corrected and provides for enforcement.

III. Program to be Pursued

The South Blount County Utility District will establish an active on-going cross-connection program. This program is to be a continuing effort to locate and correct all existing cross-connection hazards and to discourage the creation of new problems. Safeguarding the quality of water being distributed to our customers is a high priority concern of the management of the South Blount County Utility District.

A. Staffing

The South Blount County Utility District has designated an individual to see that the program to control cross-connections is pursued in an aggressive and effective manner. It is proposed that ample time will be devoted to the program to ensure its effectiveness. Additional personnel will be added as is deemed necessary.

B. The South Blount County Utility District will visit the premises of all customers likely to have cross-connections. The various water users within the premises will be investigated to determine if backflow can occur. Follow-up visits will continue until the threat of backflow has been corrected. In addition, routine visits will be made periodically to determine if backflow prevention measures are maintained, and are functioning properly and that new cross-connections have not been created.

C. Public Awareness Efforts

The South Blount County Utility District recognizes that it is important to inform its customers of the health hazards associated with cross-connections and to acquaint them with the program being pursued to safeguard the quality of water being distributed. The water system will seek to acquaint the customers with the health hazards associated with cross-connections in an effort to get their cooperation by:

1. Publishing education material in the paper annually.
2. Make education material available in public areas of the utility office.

D. Customer's Responsibility

Cross-Connections, created and maintained by the customer for his convenience, endanger the health and safety of all who depend upon the public water supply. Therefore, the customer who creates a cross-connection problem shall bear the expense of providing necessary backflow protection and for keeping the protective measures in good working order.

E. Enforcement

Where cross-connections exist, South Blount County Utility District will require the problem to be eliminated or isolated by a properly installed, approved backflow prevention device to prevent the possibility of backflow into the distribution system. Such protective measures will include, where internal corrections do not fully protect the water system, a backflow protection device on the customer's water service line ahead of any water outlets. Every effort will be made to secure the voluntary cooperation of the customer in correcting cross-connection hazards. If voluntary corrective action cannot be obtained within 30 days, water service will be discontinued, for the protection of the health and safety of the other customers; however, this time period may be shortened depending upon the degree of hazard involved.

IV. Scheduling Inspections

The selection of existing premises for cross-connection surveys will be made on the basis of suspected hazard. In general, those customers suspected of having the most hazardous cross-connections will be investigated first. Investigations shall continue until all premises considered likely to have cross-connection problems have been investigated. Follow-up visits will be made to ensure that all customers having problems are in compliance.

Timeframe for Routine Inspections	
High Hazard Sites	Quarterly
Medium Hazard Sites	Bi-annually
Low Hazard Sites	Annually

V. Procedures for Inspections

The South Blount County Utility District will make every effort to inform customers of potential problems at their facilities. Inspections will involve the customer's entire internal water delivery system. The findings will be reported to the owner or occupant in writing along with a request for needed corrective actions necessary to properly protect the public water system.

A. Pre-arranged Surveys

Since some customers may need to make preparation for a visit, these customers will be notified that a survey is being scheduled. Arrangement will be made in advance for someone, who is knowledgeable about the facilities plumbing, to accompany the inspector during the survey.

B. Unannounced Visits

The South Blount County Utility District plans to make unannounced visits to some facilities. These visits will be made where (1) no difficulty is expected in locating the occupant or a knowledgeable representative, (2) where unannounced visits will not be disruptive, (3) where advanced warning could result in an unrealistic picture of typical water usage.

C. Field Visit Procedures

During the investigation, a detailed survey sheet will be completed. This sheet will explain problem areas and recommendations to correct these problems (See appendix). A follow-up letter will be sent to each customer inspected (See appendix).

D. Follow-up Visits and Re-inspections

Follow-up visits will be made as needed to assist the customer and to assure that corrective action has been taken.

E. Installation of Backflow Prevention Devices

The South Blount County Utility District will provide each customer who is required to install a backflow device with a complete set of installation requirements. *Any installation or repair of a device shall be made by a State certified backflow preventer plumber and said plumber shall be in compliance with the local government's code.* The system's representative will inspect each installation before it is approved.

F. Technical Assistance

The system will offer assistance as needed to ensure compliance.

VI. Protective Measures Required

A. The South Blount County Utility District will evaluate the customer's entire internal water delivery system and make a determination of the best means to prevent cross-connection. Where the survey reveals that internal devices may be used to remove the hazard, the water system will take this into consideration and will discuss this with the customer.

B. Main-line Protection

Main-line protection or protective devices on the customer's service line, will be required on all premises where the water system has reservations that anything less could compromise the goal of the water system to deliver safe water under all unforeseeable circumstances to all of its customers.

C. Acceptable Protective Devices

All backflow prevention devices used for the protection of the water system must be of a make and model acceptable to the South Blount County Utility District and the Division of Water Supply. Installation must meet the minimum standards of the South Blount County Utility District and the Division of Water Supply.

VII. Installation and Testing of Protective Measures

A. Approval of New Installations

All new installations must be inspected and approved by the South Blount County Utility District.

B. Routine Inspection and Testing of Protective Measures

To assure that all devices are functioning properly, the South Blount County Utility District will make routine inspections at least annually by a State certified tester.

C. Routine Re-visits

Re-visits will be made to ensure that no new hazards have been created and that no protective device has been altered or bypassed. Where service line protection is not in place, a complete inspection of the customer's facility will be made.

D. Re-inspection of Other Premises

Premises where no cross-connection existed will be routinely re-inspected if there is a probability that a cross-connection could occur in the future.

VIII. Premises Requiring Maximum Protection Measures

A. Where cross-connections are found which pose an extreme hazard of immediate concern, the cross-connection inspector shall require immediate corrective action to be taken. In the case of non-compliance, immediate steps will be taken to discontinue water service until corrective action is taken.

Examples		
High Hazard Conditions	Moderate Hazard Conditions	Low Hazard Conditions
Sewage pumps	Swimming pools	Sinks
Boilers	Baptismal founts	Hose bibs
Cooling towers		
Photographic developers		
Chlorinators		
Sterilizers		
Sprinkler systems		
Toxic Solution Tank		

IX. Testing of Protective Devices

All devices will be tested at least annually by a State certified backflow tester.

A. Routine Testing of Devices

All reduced pressure backflow devices, double check valves and double detector checks will be tested and a report completed by a trained State certified tester in keeping with the following criteria:

1. Immediately following installation
2. At least annually and more frequently in high hazard cases
3. Any time a device has been partially disassembled for cleaning or repairs
4. Where it is apparent that the device may not be functioning properly

B. Repairs

Following repairs, a protective device will require testing and a report completed to ensure that it is operating properly. This testing is to be performed by a State certified tester. The owner will bear all cost associated with repairs and testing of devices.

C. Official Tests

Representatives of the South Blount County Utility District will perform routine tests of protective devices. The owner will bear the burden of the cost of these tests as set by South Blount County Utility District.

D. Prior Arrangements for Testing

When possible prior arrangements will be made for a mutually agreeable time for testing of devices.

E. Parallel Units

Where the customer cannot readily accommodate interruptions of water service for testing, parallel units should be installed.

Records

Good records are invaluable in the water system's efforts to safeguard the quality of water being distributed against degradation from backflow through cross-connections. The South Blount County Utility District will maintain adequate records in their permanent files. These records will include inspection forms, periodic survey forms, re-survey forms, test results forms, agreements with customers, public education documentation and copies of correspondence with customers or the state.

Approved: _____
(Date)

By: _____
(District Manager)

Date: _____

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Survey Form

Facility: _____

Address: _____

Contact Name: _____

Type of facility: residential commercial industry church school other

The following potential cross connections were found:

- | | | |
|--|---|--|
| <input type="checkbox"/> private well | <input type="checkbox"/> swimming pool | <input type="checkbox"/> baptismal pool |
| <input type="checkbox"/> chemical tanks | <input type="checkbox"/> boiler | <input type="checkbox"/> automatic watering trough |
| <input type="checkbox"/> hose on sink | <input type="checkbox"/> sprinkler system | <input type="checkbox"/> irrigation system |
| <input type="checkbox"/> other (explain) | | |

Recommendations: _____

Person performing inspection: _____

Date of inspection: _____

Date of re-inspection: _____

Backflow Device Test Report

Service Address _____

Name of Premises _____ Location of Device _____

Device _____
 Manufacturer Model Size Serial Number

Test Kit _____
 Manufacturer Serial Number Date Certified

Inspection Letter – Satisfactory Survey

- RP
- CD
- PVB
- SPVB
- DCDA
- RPDA

Reduce Pressure Principal Assembly			
Double Check Valve Assembly			
Check Valve #1	Check Valve #2	Relief Valve	PVB/SPVB
Held at _____ PSID Leaked <input type="checkbox"/>	Backpressure test Closed tight <input type="checkbox"/> Leaked <input type="checkbox"/> In direction of flow Closed tight _____ PSID <input type="checkbox"/> Leaked <input type="checkbox"/>	Opened at _____ PSID Did not open <input type="checkbox"/>	Air Inlet opened at _____ PSID Did not open <input type="checkbox"/> Check valve held at _____ PSID Leaked <input type="checkbox"/>
Line Pressure _____ PSI	No. 2 Shutoff Valve: Closed tight <input type="checkbox"/> Leaked <input type="checkbox"/>	Backflow Device: Passed <input type="checkbox"/> Failed <input type="checkbox"/>	
Date _____ Time _____ Certified Tester # _____ Tested by (signature) _____ Print Name _____ Your Signature certifies that all information provided on this section is correct.			

Comments: _____

Inspection Letter – Satisfactory Survey

Date: Month 00, 0000

Customer Name
123 Industrial Drive
My Town, TN 33333

RE: Inspection Results for Possible Cross Connections.

On *Date of Inspection*, the South Blount County Utility District conducted an inspection of your facilities for possible cross connections that might pose a hazard to the public water system.

No unprotected cross connections were noted during the inspection. The facility is currently in compliance with our Policy and requires no additional protection against possible backflow.

If you relocate your place of business, modify existing plumbing, or place new water using equipment into operation please notify our cross connection inspector, *Inspector Name and Phone Number*.

The friendly, cooperative manner encountered during the inspection was greatly appreciated.

Sincerely,

Inspection Letter – Unsatisfactory Survey

Date: Month 00, 0000

Customer Name
123 Industrial Drive
My Town, TN 33333

RE: Inspection Results for Possible Cross Connections.

On *Date of Inspection*, the South Blount County Utility District conducted an inspection of your facilities for possible cross connections that might pose a hazard to the public water system. These cross connections represent a danger to the public health and thus they must be isolated from the public water supply. *My Utility* and the Tennessee Department of Environment and Conservation regulations mandate that *My Utility* require backflow prevention devices where these situations exist.

You are required by our Policy to install a Reduced Backflow Preventer located so that it will isolate the production area of your facility from the public water supply. This device must be installed within 30 days.

Information on approved models and the installation of the device is enclosed. Please call our cross connection inspector, *Inspector Name and Phone Number*, should you have any other questions. Your cooperation and assistance in this matter is greatly appreciated.

Sincerely,