

SECTION V
CROSS-CONNECTION CONTROL

CROSS-CONNECTION CONTROL

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V. CROSS CONNECTION CONTROL:

1. DEFINITIONS:

- A. Unless a different meaning plainly is required, the definitions found in WAC 246-290-010 now in effect or as subsequently amended or reenacted are hereby adopted by reference as if set forth in full herein.
- B. CCS is defined as the Cross Connection Control Specialist of the Silver Lake Water & Sewer District or delegated representative.
- C. Owner is defined as any person or entity with interest in the title to the property and/or a customer of the District.

D. Acronyms for Backflow Assemblies:

AG: Air Gap
AVB: Atmospheric Vacuum Breaker
DCVA: Double Check Valve Assembly
RPBA: Reduced Pressure Backflow Assembly
RPDA: Reduced Pressure Detector Assembly (fire systems)
SVBA: Spill Resistant Vacuum Breaker Assembly
PVBA: Pressure Vacuum Breaker Assembly

E. Other definitions:

(the) District: The Silver Lake Water & Sewer District
BAT: Backflow Assembly Tester
RCW: Revised Code of Washington
WAC: Washington Administrative Code
WSDOH: Washington State Department of Health
USC/FCCCHR: University of Southern California Foundation for Cross Connection Control and Hydraulic Research
AHJ: Authority Having Jurisdiction
UPC: Uniform Plumbing Code
TI: Tenant Improvement

2. PURPOSE AND SCOPE:

- A. This Section establishes minimum standards for the District to protect the public potable water supply from possible contamination or pollution due to backflow or backsiphonage from an owner's private internal system into the public potable water system.
- B. This Section establishes minimum cross-connection control operating policies and requirements for installation, testing, and maintenance of

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approved backflow assemblies and describes (other) annual inspection requirements for existing and new backflow assemblies.

- C. The purpose of this Section is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this Section. This Section is applicable to all connections to the Silver Lake Water & Sewer District water system.

3. AUTHORITY:

- A. This Section is authorized by The Federal Safe Drinking Water Act of 1974 (and Amendments of 1996), the statutes of the State of Washington Title 43 RCW and WAC 246-290-490.

4. RESPONSIBILITY:

- A. The District CCS will be responsible for administering the provisions of this Section.
- B. Proper installation of required backflow assemblies shall be a condition of water service from the District's water supply system to any premises upon which the potential for backflow into the District system exists. Water service may be discontinued or refused until corrective action is taken in accordance with this Section.
- C. Upon installation of an approved backflow assembly, the owner shall contact the District requesting inspection of said assembly or assemblies.
- D. Upon approval of the installation by the District, the owner shall have the assembly or assemblies tested by a State of Washington certified BAT and shall submit a copy of the test report to the District in accordance with this Section.
- E. The owner shall be subject to all applicable inspection and permitting fees. All tests and reporting by a certified BAT shall be at owner's expense.

5. FAILURE TO COMPLY – VIOLATIONS – PENALTIES:

- A. Any person, firm, or corporation who willfully violates any provisions or requirements of this Section shall be subject to discontinuance of supply of District water to the service connection to the site where the violation exists and discontinuance of service shall remain in effect until corrective action has been completed in accordance with District standards.

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6. REQUIREMENTS:

GENERAL

- A. Compliance with the provisions of this Section shall be a condition of receiving or to continue receiving the District's water supply. It is unlawful for any person to allow any contaminants or pollutants to backflow from their facility and/or property into the District distribution system.
- B. All domestic connections, except for single family and multi-family connections shall require the installation of an approved RPBA at the service connection or alternate location as approved by the District. The RPBA shall be installed, inspected and tested in accordance with the provisions of this Section.
- C. All multi-family (other than duplexes) connections require at a minimum, the installation of a DCVA at the service connection or alternate location as approved by the District. The DCVA shall be installed, inspected, and tested in accordance with the provisions of this Section.
- D. All fire service connections except for single family residences and duplexes shall require the installation of an RPDA or RPBA at the service connection or alternate location as approved by the District. The RPDA or RPBA shall be installed, inspected, and tested in accordance with the provisions of this Section. All fire service connections shall be a dedicated and metered connection to the water main. Fire service connections shall be equipped with either an RPDA or RPBA depending upon service size (see II-4 General Standards). A DCVA may be allowed for single-family fire systems if the District CCS determines that a low hazard exists.
- E. All irrigation services, other than single family (private) systems shall be a dedicated and metered connection to the water main. A minimum of a DCVA shall be installed at the service connection. Any irrigation system, including single family, that uses chemical injection of any kind shall be isolated from the District's water system by an approved RPBA at the service connection (no exceptions). All backflow installations shall be installed, inspected, and tested in accordance with the provisions of this Section.
- F. Single Family residences having hard plumbed irrigation systems shall apply one of the following means of backflow protection to protect the District's water supply: DCVA, AVB, PVBA, or SVBA. Protection shall be installed, inspected, and tested in accordance with the provisions of this Section.

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- G. The District requires that the public water supply be protected from contamination from cross connections. The owner shall be responsible for water quality beyond the District service meter. This responsibility includes proper installation, annual testing and maintenance of required backflow assemblies as provided in this Section. Fixture isolation assemblies shall be installed in accordance with the UPC and/or AHJ as a condition of service.

TENANT IMPROVEMENTS

- H. All TIs that require any modification of the potable water or sewer internal plumbing shall require upgrade of the water and sewer systems to current District standards at the service connection, or alternate location as approved by the District that shall be installed, inspected, and tested in accordance with the provisions of this Section.

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- I. For premises existing prior to the start of this program, the District will perform evaluations and inspections of plans and/or premises and inform the owner by letter of any corrective action deemed necessary, the method of achieving the correction and the time allowed for the correction to be made. A maximum of 60 days will be allowed; however, this time period may be adjusted by the District CCS depending upon all reasonable factors including but not limited to the performance history of the backflow assembly and the degree of hazard involved.
- J. Premises are subject to inspection on or after the expiration date of required action to correct a cross-connection. Water service to premises that fail to comply with the District's request shall receive written notice, via registered mail and regular mail, postage prepaid, that water service to the premise will be terminated within a period not to exceed 30 calendar days. In the event the owner informs the District of extenuating circumstances as to why the correction has not been completed, the District may grant a time extension up to but not exceeding an additional 30 days.
- K. If the District determines at any time that a serious threat to the public health exists; the water service may be terminated immediately, provided, however, that notice will be posted on the premises affected at the time said service is terminated and the proper AHJ is notified of the action.
- L. Inspection may be done during the initial installation and during on-site reviews of existing installations.

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OWNER

- M. An easement shall be provided to the District for access to all backflow assemblies required to protect the public potable water supply from possible contamination.
- N. When a test identifies a backflow assembly is not properly functioning, the owner shall correct the malfunction and have the assembly inspected and re-tested or replaced until proper backflow protection is restored.
- O. The owner shall be responsible for the elimination or protection, of all cross-connection on their premises.
- P. The owner after notification by the District shall, at their expense, install any and all required backflow assemblies.
- Q. The owner shall, at their expense, be responsible for having all backflow assemblies tested:
 - 1. At the time of installation;
 - 2. Annually after installation or more frequently in cases of repeated failure to meet test criteria;
 - 3. After an assembly is repaired, reinstalled or relocated; or
 - 4. An air gap is re-plumbed or replaced by a District approved assembly. The test shall be performed by a Washington State certified BAT. The results of the tests shall be reported within 30 days to the District CCS on a form provided by or approved by the District.
- R. The owner shall immediately notify the District CCS of any malfunction of the approved backflow assembly that is revealed by periodic testing. The required repair or replacement of said assembly(ies) shall be completed within 30 days.
- S. The owner shall inform the District of any proposed modifications to their plumbing that creates a possible cross-connection and also any existing cross-connections of which the owner has actual knowledge but has not been found by the District.
- T. The owner shall install only backflow prevention assemblies from the current list of Washington State approved assemblies (WSDOH Publication # 331-137) as it exists now or as hereinafter changed, modified, amended, reenacted or recodified.

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- U. Any owner having a private well or other private water source desiring to connect to the Districts' water supply shall de-commission the well per WAC 173-160-381 as it exists now or as hereinafter changed, modified, amended, reenacted or recodified.
- V. The owner shall provide District personnel access to premises for cross connection inspection at the District's request. Failure to provide access to inspect facilities shall be grounds for termination of water service and/or installation of appropriate backflow assembly behind the meter by District crews at the owners' expense.

7. INSTALLATION AND TESTING - MINIMUM REQUIREMENTS:

- A. Minimum requirements for the testing of all backflow assemblies shall be in accordance with the Backflow Prevention Assemblies Field Test Procedure Approved for Use in Washington State, published July 1998 including subsequent revisions, adopted by reference herein. A copy is available for viewing at the District Headquarters.
- B. Backflow assemblies shall be installed in meter boxes, vaults, or "hot boxes" if greater than 2-inch diameter unless otherwise approved by the District. Vaults shall have adequate clearances and depths to allow for inspection and testing. Assemblies that cannot be easily and readily inspected shall be relocated and re-plumbed as directed by the District. The owner shall contact the District for applicable installation requirements and standards.
- C. All bypass lines parallel to a line on which an approved backflow assembly is installed shall have an approved backflow assembly installed that offers the same level of protection as the assembly required by the District on the main line.

8. BACKFLOW ASSEMBLIES:

- A. Classifications of backflow assemblies include but are not limited to: RPBA, RPDA, DCVA, SVBA, or PVBA of make, model, and size included on the current approved backflow assemblies list approved by WSDOH (Publication # 331-137) as it exists now or as hereinafter changed, modified, amended, reenacted or recodified. Washington State has adopted the USC/FCCCHR list of approved backflow assemblies. CD copies of the approved assemblies are available at the discretion of WSDOH. Call or check WSDOH website for availability. At this writing, this list is only available to members and affiliates of USC/FCCCHR. All major backflow assembly manufacturers display their USC approvals on

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their respective websites and product literature. Consult manufacturer's data before purchasing any backflow assemblies.

- B. Any existing backflow assembly in use, but not currently listed by the WSDOH can continue to be used providing all the following conditions are met:
 - 1. The assemblies were included on the WSDOH list of approved backflow assemblies at the time of installation;
 - 2. The assemblies have been properly maintained;
 - 3. The assemblies are functioning properly based on inspection by the District and testing by a certified BAT;
 - 4. The degree of protection of the District's water system is commensurate with the degree of hazard as determined by the District CCS and the provisions of this Section.
- C. When an unlisted assembly does not meet the above conditions, is moved, or cannot be repaired using spare parts from the original manufacturer, the assembly shall be replaced by an assembly currently listed as approved by the WSDOH.

9. APPLICABILITY:

- A. The provisions of this Section are applicable to all connections to the District water supply.

10. ADMINISTRATIVE PROCEDURES:

- A. In order to carry out the provisions of the District Cross Connection Control policies, rules and procedures set forth in this Section, the District has an ongoing compliance program based upon but not limited to the following criteria: proper management of system connections; effective customer education; accurate recordkeeping and notification; Development plan review and inspections of new connections; and periodic inspection of existing connections.
- B. Minimum Requirements
 - 1. These District requirements are provided for clarification and any disagreement between the requirements listed below and requirements listed elsewhere in this Section, the more restrictive shall govern.

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2. All non-residential domestic water services shall be isolated from the public water system by an approved RPBA at the domestic service connection or at an alternate location acceptable to the District.
3. Fire services shall be isolated from the Public water system by an approved RPBA or RPDA at the service connection or at an alternate location acceptable to the District.
4. Premises having an auxiliary water supply (such as an active well(s)) shall be de-commission per WAC 173-160-381 prior to connecting to the District water system.
5. All Multi-family services (other than duplexes) shall have a DCVA installed at the service connection.
6. Non-residential irrigation services shall be separately metered and shall have an approved DCVA installed at the service connection. Irrigation systems that use chemical injection shall be isolated from the District's water system by an approved RPBA at the service connection.
7. Residential irrigation systems where compressed air is introduced shall have a minimum of an approved DCVA installed at the connection to the irrigation system (AVB systems are not adequate for protection of the public system where compressed air is introduced into the water system).
8. Residential Irrigation systems, which do not fall into the prior category, may have an approved PVBA installed on the system, or properly installed AVB for each zone. AVB installations are subject to periodic inspection by the District CCS.
9. Premises with water features (ponds) directly or indirectly connected to the District's system shall install a District approved AG at the fill point to the water feature, regardless of any upstream backflow protection. AG's will be annually inspected by the District CCS.

C. Compliance Inspection of Existing Buildings, Structures, and Grounds

1. An ongoing inspection program has been established by the District to locate and address cross connection potential to the District's system with priority given on the basis of risk to public health and is conducted as outlined below. The District CCS may perform additional inspections as needed.

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2. The District CCS periodically surveys residential meter routes, looking for irrigation systems, or signs thereof, responds to tips from customers, monitors locate requests, and uses other means with the goal that all connections to the District's water system be in compliance with State and District regulations. The District relies on plan review and premise isolation procedures established in this Section to properly protect the Public potable water system from other hazards posed by commercial, fire, and multi-family connections. Systems without required cross connection protection when identified, shall be brought into compliance by the owner.
3. The District relies on annual test reports to ensure existing irrigation installations are in compliance. The District will endeavor to send notices of the deadline of required annual backflow assembly tests. It is the responsibility of the property owner to submit the annual Backflow Assembly Test Report in a timely manner (within 30 days) with or without notice from the District. Property owners who fail to provide annual test results certifying backflow assembly is in compliance with State and District regulations are identified and tracked until satisfactory compliance is achieved or water service is terminated.
4. The District shall respond to customer taste and odor complaints in a prompt and professional manner, understanding that these complaints may be indicative of possible contamination due to a temporary or continuing cross connection event with the Public water system. Should a cross connection be identified, it will be tracked until satisfactory compliance is achieved or water service is terminated.

D. Residential Education and Awareness

1. The District periodically sends educational pamphlets and/or bill stuffers to all of the water system customers. These include, but are not limited to, the following subjects:
 - a) Home Irrigation Safety;
 - b) Residential Fire Sprinkler Systems;
 - c) Health hazards associated with hose connections (chemical sprayers, radiator flush kits, etc.), utility sinks and other household dangers.

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2. The District also endeavors to provide informational handouts and presentations on cross connections at community events, school programs and with information at District Headquarters.

E. Registering of Certified Backflow Assembly Testers

1. The District maintains a list of Washington certified BATs to provide to customers. Persons or organizations wishing to be added to this list are required to provide the District with copies of the following:
 - a) Proof of current certification by the State of Washington as a BAT for each person authorized to perform tests.
 - b) Proof of current annual calibration for all testing equipment.
 - c) Proof of current liability insurance in an amount not less than one million dollars.
 - d) Any person providing backflow assembly testing service in the District service area must possess a current BAT certification, current test instrument calibration and all other licenses, permits or certifications required by law.

F. Record keeping and tracking of assemblies

1. The District meets the record keeping requirements of the State to allow effective monitoring and tracking of customer compliance with the annual backflow assembly testing requirements. The general content of the District's records include the following information on each backflow assembly includes but is not limited to:
 - Service address
 - Business name (if applicable)
 - Specific location of each assembly
 - Initial inspection information for each location
 - Initial installation date
 - Water line size
 - Water pressure
 - Test results for all check valves
 - Assembly information (type of assembly, manufacturer, size, serial #, model, and date of test)

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- Complete testing history (initial and final test results for each year with: pass/fail, test type, date, tester's name and certification #)
- Hazard protected (downstream process)
- Repair history
- Test kit information
- Testers contact and certification information