

TITLE 64  
LEGISLATIVE RULE  
BUREAU FOR PUBLIC HEALTH

SERIES 15  
CROSS-CONNECTION CONTROL AND BACKFLOW PREVENTION

**§64-15-1. General.**

1.1. Scope. -- This legislative rule governs cross-connection control and backflow prevention for public water systems. This rule should be read in conjunction with W. Va. Code §§16-1-9, 16-1-9a, 16-1-17 and 16-1-18. The W. Va. Code is available in public libraries and on the Legislature's web page: <http://www.legis.state.wv.us/>.

1.2. Authority. -- W. Va. Code §§16-1-4, 16-1-9 and 16-1-9a.

1.3. Filing Date. -- April 29, 2004.

1.4. Effective Date. -- March 13, 2004.

1.5. Repeal of former rule. -- This legislative rule repeals and replaces the Department of Health rule, "Cross-Connection and Backflow Prevention," 64CSR15, effective April 1, 1976.

**§64-15-2. Application and Enforcement.**

2.1. Application. -- This legislative rule applies to any owner, operator or customer of a public water system.

2.2. Enforcement. -- This rule is enforced by the Secretary of the Department of Health and Human Resources.

**§64-15-3. Definitions.**

3.1. Air Gap Separation. -- A physical separation between the free-flowing discharge end of a water supply pipe and the flood level rim of a vessel open to the atmosphere having a minimum unobstructed vertical distance between the supply pipe equal to twice its inside diameter or one inch, whichever is greater.

3.2. Approved. -- Accepted by the Commissioner as being suitable for the proposed

use.

3.3. Approved Backflow Prevention Assembly. -- A double check valve assembly, reduced pressure backflow prevention assembly, other devices or methods approved by the Commissioner for preventing backflow.

3.4. Auxiliary Water Supply. -- Any water source or system available within the building or premises other than the community public water system, including, but not limited to individual wells, springs and cisterns. A private water storage tank supplied by a community public water system is considered an auxiliary water supply unless its design meets the most current minimum design standards required for storage tanks for community public water systems, and the water contained in them is potable.

3.5. Backflow. -- The unintentional reversal of the normal direction of flow within a piping system.

3.6. Commissioner. -- The Commissioner of the Bureau for Public Health or his or her designee.

3.7. Cross-Connection. -- Any physical connection or other arrangement through which a backflow of liquids, gases or other substances into a public water system may occur.

3.8. Degree of Hazard. -- The potential risk to health and potential adverse effects upon the public water system based on the probability of backflow occurring and the type or nature of the contaminant.

3.9. Double Check Valve Assembly. -- An arrangement or device consisting of two (2) single independently acting watertight check valves with connections for testing the watertightness of each check valve.

3.10. Flood Level Rim. -- The edge of the

vessel or receptacle from which water overflows.

3.11. Health Hazard. -- Any condition, device or practice that in the judgment of the Commissioner creates or may create a danger to the health and well-being of the water customer.

3.12. Interchangeable Connection. -- An arrangement or device that allows the alternate but not simultaneous use of two (2) sources of water.

3.13. Low-Suction Pressure Cut-Off Controller. -- An arrangement or device designed to shut off a pump when the pressure at the suction side of the pump falls below a specified level.

3.14. Person. -- An individual, partnership, association, syndicate, company, firm, trust, corporation, government corporation, institution, department, division, bureau, agency, or any entity recognized by law.

3.15. Potable Water. -- Water free from impurities in amounts sufficient to cause disease or harmful physiological effects, with bacteriological, chemical, physical and radiological quality conforming to applicable regulations and standards of the bureau for public health.

3.16. Public Water System. -- A public water system is any water supply or system that regularly supplies or offers to supply water for human consumption through pipes or other constructed conveyances, if serving at least an average of twenty-five individuals per day for at least sixty days per year, or which has at least fifteen service connections, and shall include: (1) Any collection, treatment, storage, and distribution facilities under the control of the owner or operator of the system and used primarily in connection with the system; and (2) Any collection or pretreatment storage facilities not under such control which are used primarily in connection with the system. A public water system does not include a system which meets all of the following conditions: (1) Which

consists only of distribution and storage facilities (and does not have any collection and treatment facilities); (2) Which obtains all of its water from, but is not owned or operated by a public water system that otherwise meets the definition; (3) Which does not sell water to any person; and (4) Which is not a carrier conveying passengers in interstate commerce.

3.17. Reduced Pressure Backflow Prevention Assembly. -- A device containing a minimum of two (2) independently acting check valves, an automatically operated pressure differential relief valve located between the two (2) check valves and watertight valves located at each end of the assembly, with connections for testing the operation of the device.

3.18. Severe Health Hazard. -- A hazard to the health of the user that could reasonably be expected to result in significant morbidity or death.

3.19. Unprotected Cross-Connection -- Any cross-connection with no approved backflow prevention assembly, air gap separation, double check valve assembly, or reduced pressure backflow prevention assembly installed.

3.20. Water Customer. -- The owner or person in charge of any building or premises supplied by or in any manner connected to a community public water system.

3.21. Water Service Line. -- A pipe or water line, with or without a meter and valves, through which the water customer conveys the water from the public water system to the initial point of use.

**§64-15-4. Cross-Connections.**

4.1. No person shall install or maintain an unprotected cross-connection in a public water system.

4.2. The public water system shall not install a water service connection to any premises where a violation of Subsection 4.1 of

this rule exists.

4.3. After giving written notice to the water customer with an opportunity for administrative due process, the public water system shall discontinue water service to any premises:

4.3.a. Where an unprotected cross-connection or unauthorized connection exists;

4.3.b. Where a required backflow prevention method has been removed or bypassed; or

4.3.c. When the public water system is denied entry to the water customer's premises to confirm compliance with this rule.

4.4. When the public water system finds deficiencies in a water customer's premises, as listed in Subsection 4.3 of this Section, the public water system shall:

4.4.a. Ensure that the public water system ceases water service to those premises until the deficiencies are corrected; and

4.4.b. Notifies the owner, person occupying or in charge of the premises of the findings and orders that the cross-connection be removed or that an approved backflow prevention method be installed prior to water service resuming.

**§64-15-5. When Protection Is Required.**

5.1. Each water service line requires installation of an approved backflow prevention method when the public water system determines that either an actual or potential health hazard, or other degradation of the public water system, including the following, exists:

5.1.a. On premises that have unprotected internal cross-connections that the public water system determines are not correctable or that have intricate plumbing arrangements that make it impractical to determine whether unprotected cross-connections exist;

5.1.b. On premises where it is impossible or impractical to make a cross-connection survey because of security requirements or other prohibitions or restrictions;

5.1.c. On premises that have a repeated history of unprotected cross-connections; and

5.1.d. On others specified by the public water system.

5.2. Each water service line, including but not limited to, the following types of facilities, requires installation of an approved backflow prevention method, unless investigation by the public water system determines that no actual or potential health hazard, or other degradation of the public water system exists:

5.2.a. Hospitals, mortuaries, clinics, nursing homes, and animal hospitals;

5.2.b. Laboratories;

5.2.c. Sewage treatment plants, sewage pumping stations, and storm water pumping stations;

5.2.d. Chemical plants, dyeing plants, metal plating industries, and tanneries;

5.2.e. Petroleum processing or storage plants;

5.2.f. Slaughterhouses, poultry processing plants, and food or beverage processing plants;

5.2.g. Piers, docks, and waterfront facilities;

5.2.h. Photo development plants;

5.2.i. Car washes and laundromats;

5.2.j. Public swimming pools;

5.2.k. Farms when they use water for

reasons other than household purposes; and

5.2.1. Other facilities specified by the community public water system.

**§64-15-6. Type of Protection and Circumstances When Protection Is Required.**

6.1. The type of protection required under this rule depends on the degree of hazard that exists or may exist, as determined by the public water system and shall involve the installation of either:

6.1.a. An approved air gap separation when the public water system determines that contamination with substances could cause a severe health hazard;

6.1.b. An approved air gap separation or approved reduced pressure principle backflow prevention assembly when the public water system determines that contamination with substances could cause a health hazard; or

6.1.c. An approved double-check valve assembly, approved reduced pressure principal backflow prevention assembly, or an approved air gap separation when the public water system determines that contamination with substances could degrade the water quality of the public water system.

6.2. When the public water system does not approve any point of connection between a public water system and an auxiliary water supply, the water customer shall install an approved air gap separation or an approved interchangeable connection with a reduced backflow prevention assembly.

6.3. When a water customer installs a booster pump on the premises served by a public water system, or on the service line to the premises, the customer shall install a check valve on the discharge and a low-suction pressure cut-off controller designed to shut off the booster pump when the pressure in the service line on the suction side of the pump drops to twenty (20) pounds per square inch

gauge or less.

6.4. On premises where backflow prevention assemblies are required by this rule, and the public interest requires continuous uninterrupted service, the water customer shall install two (2) approved backflow prevention assemblies in parallel and shall properly valve them to permit continuous operation, or service to the premises shall be from two separate water service lines each protected by an approved backflow prevention assembly.

6.5. Water customers that are open to the public shall be required to install internal backflow prevention methods as part of the public water system's approved backflow prevention program in Section 8 of this rule.

**§64-15-7. Backflow Prevention Assemblies.**

7.1. The public water system shall approve installation of an approved backflow prevention assembly at a location and in a manner that best facilitates testing and servicing in accordance with the approved cross connection and backflow prevention program in Section 8.2. of this rule.

7.2. The water customer shall purchase, install, maintain and test any backflow prevention assembly according to this rule.

7.3. When any approved backflow prevention assembly is found to be defective, the water customer shall immediately notify the public water system of any defect and within ten (10) days shall repair, overhaul, replace, and test the assembly again at the water customer's expense.

**§64-15-8. Plans, Surveys, Investigations and Testing.**

8.1. The water customer shall provide the public water system with all drawings, plans, specifications and other data related to the backflow prevention assemblies so that the public water system can ensure the water customer's compliance with this rule.

8.2. The public water system shall establish a cross-connection and backflow prevention program approved by the Commissioner.

8.3. The water customer shall furnish information on water use practices for facilities within the water customer's premises, including plumbing diagrams, drawings, or plans, at the request of the public water system.

8.4. The water customer on any premises that under this rule require the installation of backflow prevention assemblies, is responsible for getting the assemblies inspected and for the cost of the required inspections.

8.4.a. The water customer shall ensure that a person certified by the Commissioner as a certified backflow assembly tester inspects and tests the backflow prevention assemblies upon installation and at least every twelve (12) months after that; and

8.4.b. The certified backflow assembly tester shall provide records of all inspections and tests to the public water system within 15 days of the inspection or test.

8.5. The public water system shall maintain records of all inspections, surveys, tests and corrective actions taken, for a period of at least two (2) years and provide the information to the Commissioner upon request.

8.6. The public water system shall request permission from a potential water customer to inspect the premises and dwellings formerly served by individual wells when the public water system believes unprotected cross-connections may exist. If the potential water customer does not allow the inspection, the refusal will be grounds not to supply water service.

8.7. No provisions of this rule shall relieve the water customer of the responsibility for conducting surveys of water use practices on his or her premises to determine whether there are actual or potential unprotected cross-connections.

8.8. Requirements of this rule shall be in accordance with all applicable guidelines contained in the West Virginia Bureau for Public Health Manual, EW-114, "Cross-Connection and Backflow Prevention Manual," 2002.

**§64-15-9. Enforcement.**

9.1. This rule is enforced under W. Va. Code §§16-1-6, 16-1-9, 16-1-9a, 16-1-17, 16-1-18 and other applicable Code provisions.

**§64-15-10. Penalties.**

10.1. Any person who violates any provision of this rule or orders issued under this rule is subject to injunction, criminal prosecution, and criminal, civil and administrative fines, all as provided in W. Va. Code §§16-1-9, 16-1-9a, 16-1-17 and 16-1-18.

**§64-15-11. Administrative Due Process.**

11.1. Those persons adversely affected by the enforcement of this rule may request a contested case hearing in accordance with the Division of Health rule, "Rules and Procedures for Contested Case Hearings and Declaratory Rules," 64 CSR 1.