

CROSS-CONNECTION AND BACKFLOW PREVENTION PROGRAM/POLICY FOR:

System Name: Wilderness Public Service District PWS#: 3303405

Address: PO Box 37 City/Town: Mount Nebo State: WV Zip Code: 26679

The Wilderness Public Service District recognizes that Cross-Connections and Backflow Conditions either existing or potential in a public water system and/or a customer's water distribution system pose a threat to the public health and the environment. Therefore, the following program and articles of policy apply to our public water system (Water Purveyor) and to our customer's water distribution system(s) (Owner).

I. Purpose

- A. To protect the public potable water supply served by Wilderness Public Service District from the possibility of contamination or pollution by isolating, within its customers internal distribution system, such contaminants or pollutants which could backflow or back-siphon into the public water system.
- B. To promote the elimination or control of existing cross-connections, actual or potential, between its customers in-plant potable water system, and non-potable systems.
- C. To provide for the maintenance of a continuing program of cross-connection control, which will effectively prevent the contamination or pollution of all potable water systems by cross-connection.

II. Authority

- A. By the Federal Safe Drinking Water Act of 1974, and the Code of West Virginia Chapter 16, Article 1 and Public Health Laws, WV Bureau for Public Health Chapter 1, Article 5B, the water purveyor has the primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public potable water system.
- B. Wilderness Public Service District, Rules and Regulations, adopted.

III. Responsibility

The Water Purveyor shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of the Water Purveyor, an approved backflow device is required at the water service connection to any customer's premises, the Water Purveyor, or his delegated agent, shall give notice in writing to said customer to install an approved backflow prevention device at each service connection to his premises. The customer shall, within 90 days, install such approved device, or devices, at his own expense, and failure or refusal, or inability on the part of the customer to install said device or devices within ninety (90) days, shall constitute a ground for discontinuing water service to the premises until such device or devices have been properly installed.

IV. Definitions

A. Approved

Accepted by the Water Purveyor as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed purpose.

B. Assembly

A backflow preventer usually consisting of a combination of approved check valve components and additional instrumentation including approved shutoff valves and test cocks.

C. Auxiliary Water Supply

Any water supply on or available to the premises other than the purveyor's approved public potable water supply.

D. Backflow

The flow of water or other liquids, mixtures or substances, under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

E. Backflow Condition(s)

Any set of circumstances, actual or potential that could be construed to create a cross-connection allowing for backflow of a contaminant or pollutant to enter a potable water system.

F. Backflow Preventer

A device or means designed to prevent backflow or back-siphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, atmospheric vacuum breaker, hose bib vacuum breaker, residential dual check, double check with intermediate atmospheric vent, and barometric loop.

F1. Air Gap

A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

F2. Atmospheric Vacuum Breaker

A device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

F3. Barometric Loop

A fabricated piping arrangement rising at least thirty-five (35) feet at its topmost point above the highest fixture it supplies. It is utilized in water supply systems to protect against back-siphonage.

F4. Double Check Valve Assembly

An assembly of two (2) independently operating spring loaded check valves with tightly closing shutoff valves on each side of the check valves, and properly located test cocks for the testing of each check valve.

F5. Double Check Valve with Intermediate Atmospheric Vent

A device having two (2) spring loaded check valves separated by an atmospheric vent chamber.

F6. Hose Bibb Vacuum Breaker

A device which is permanently attached to a hose bib and which acts as an atmospheric vacuum breaker.

F7. Pressure Vacuum Breaker

A device containing one or two independently operated spring loaded check valves and an independently operated spring loaded air inlet valve located on the discharge side of the check or checks. The device includes tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing of the check valve(s).

F8. Reduced Pressure Principle Backflow Preventer

An assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of the check valves and the relief valve.

F9. Residential Dual Check

An assembly of two (2) spring loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device.

G. Backpressure

A condition in which the owner's system pressure is greater than the supplier's system pressure.

H. Back-Siphonage

The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

I. Community Water System

A public water system that serves at least 25 residents year round or that has 15 service connections serving year round residents.

J. Containment (external protection)

A method of backflow prevention which requires a backflow prevention device at the water service entrance.

K. Contaminant

A substance that will impair the quality of the water to a degree that it creates a serious health hazard to the public leading to poisoning or the spread of disease.

L. Cross-connection

Any actual or potential connection between the public water supply and a source of contamination or pollution.

M. Customer

A customer is described as a billing unit or service connection to which drinking water is delivered by a public water system. A customer may also be identified as an owner.

N. Degree of Hazard

The degree of hazard is the potential risk to health and the potential adverse effects upon the public water system based on the probability of backflow occurring and the type or nature of the contaminant. A health hazard is any condition, device or practice which creates or may create a danger to health and well being of the water consumer. A severe health hazard is any health hazard (contaminant) that could be expected to result in significant morbidity or death. A non-health hazard (pollutant) is any condition that could degrade the quality or adversely affect the public water system.

O. Device

A single body backflow preventer with one or two check valves that cannot be tested and does not have shut off valves or test cocks.

P. Fixture Isolation (internal isolation)

A method of backflow prevention in which a backflow preventer is located to control a cross connection at an in-plant location rather than at a water service entrance.

Q. Owner

Any person who has legal title to, or license to operate or reside in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

R. Person

Any individual, partnership, company, public or private corporation, political subdivision or agency of the State Department, agency or instrumentality of the United States or any other legal entity.

S. Pollutant

A foreign substance, which if permitted to get into the public water system, will degrade its quality so as to constitute a moderate hazard, or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health, but which does adversely and unreasonably affect such water for domestic use.

T. Potable Water

Water that is safe for human consumption as described by the West Virginia Bureau for Public Health.

U. Public Water System

Includes the works, auxiliaries, for the collection, treatment, storage and distribution of drinking water from the source of supply to a customer's premises. May also be known as a water purveyor.

V. Water Purveyor

The Municipal Water Department, Water Board, Public Service District or other administrative authority invested with the authority and responsibility for a public water system.

W. Water Service Entrance

That point in the owner's water system beyond the sanitary control of the Water Purveyor, generally considered to be the outlet end of the water meter and always before any unprotected branch.

X. West Virginia Bureau for Public Health (WVBPH)

The State of West Virginia Bureau for Public Health

V. Administration

A. The Water Purveyor will operate a cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the WVBPH Cross-Connections and Backflow Prevention Regulations.

B. The Owner shall allow his property to be inspected for possible cross-connections and shall follow the provisions of the Water Purveyor's program and the WVBPH Regulations if a cross-connection is permitted.

C. If the Water Purveyor requires that the public supply be protected by containment, the Owner shall be responsible for water quality beyond the outlet end of the containment device and should utilize fixture outlet protection for that purpose. He may utilize local public health officials, or personnel from the Water Purveyor, or their designated representatives, to assist him in the survey of his facilities and to assist him in the selection of proper fixture outlet devices, and the proper installation of these devices.

VI. Requirements

A. Water Purveyor

1. On new installations, the Water Purveyor will provide on-site evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required and will perform inspection and testing.

2. For premises existing prior to the start of this program, the Water Purveyor 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. Ordinarily, ninety (90) days will be allowed. However, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in questions.

3. The Water Purveyor will not allow any cross-connection to remain unless it is protected by an approved backflow preventer which will be regularly tested to insure satisfactory operation.

4. The Water Purveyor shall inform the Owner by letter, of any failure to comply, by the time of the first re-inspection. The Purveyor will allow an additional fifteen (15) days for the correction. In the event the Owner fails to comply with the necessary correction by the time of the second re-inspection, the Water Purveyor will inform the Owner by letter, that the water service to the Owner's premises will be terminated within a period not to exceed five (5) days. In the event that the Owner informs the Water Purveyor of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Water Purveyor, but in no case will exceed an additional thirty (30) days.

5. If the Water Purveyor determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.
6. The Purveyor will begin initial premise inspections to determine the nature of existing or potential hazards. Initial focus will be on high hazard industries and commercial premises.
7. The Water Purveyor must report any backflow incident(s) occurring in the public water system as soon as possible but no later than twenty-four (24) hours after the incident to the WVBPH.

B. Owner

1. The Owner shall be responsible for the elimination or protection of all cross-connections on his premises.
2. The Owner, after having been informed by a letter from the Water Purveyor, shall at his expense, install, maintain, and test, or have tested, any and all backflow preventers on his premises.
3. The Owner shall correct any malfunction of the backflow preventer which is revealed by periodic testing.
4. The Owner shall inform the Purveyor of any proposed or modified cross-connections and also any existing cross-connections of which the Owner is aware, but have not been found by the Water Purveyor.
5. The Owner shall not install a bypass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operation for testing of the device(s) must supply additional devices necessary to allow testing to take place.
6. The Owner shall install backflow preventers in a manner approved by the Water Purveyor.
7. The Owner shall install only backflow preventers approved by the Water Purveyor or the WVBPH.
8. Any Owner having a private well or other private water source must have the approval of the Water Purveyor and the WVBPH if the well or source is cross-connected to the Water Purveyor's system. Permission to cross-connect may be denied. The Owner may be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the Water Purveyor's system.
9. In the event the Owner installs plumbing to provide potable water for domestic purposes which is on the Water Purveyor's side of the backflow preventer, such plumbing must have its own backflow preventer installed.

10. The Owner shall be responsible for the payment of all fees for permits, annual or semi-annual device testing, retesting in the case that the device fails to operate correctly, and second re-inspections for non-compliance with Water Purveyor or WVBPH requirements.

11. The Owner must maintain for a minimum of three (3) years records of installation and removal, all testing, repair and maintenance for all assemblies/devices in the Owner's water distribution system(s).

12. The Owner will report any backflow incident(s) occurring in their facility(ies)/building(s) as soon as possible but no later than twenty-four (24) hours after the incident to the Water Purveyor and to the WVBPH. Also, the Owner must maintain for a minimum of three (3) years all records and reports of all backflow incidents occurring in their facility(ies)/building(s). These records and reports are to be made available to the Water Purveyor and/or WVBPH upon request.

VII. Degree of Hazard

The Water Purveyor recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved backflow prevention device.

VIII. Existing In-Use Backflow Prevention Devices

Any existing backflow preventer shall be allowed by the Water Purveyor to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow preventer, or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, any existing backflow preventer must be upgraded to a reduced pressure principle device, or a reduced pressure principle device must be installed in the event that no backflow device is present.

IX. Periodic Testing

A. Backflow prevention devices shall be tested and inspected at least annually.

B. Periodic testing shall be performed by a WVBPH certified tester. This testing will be done at the owner's expense.

C. Any backflow preventer which fails during a periodic test will be repaired or replaced. When repairs are necessary, upon completion of the repair the device will be retested at owner's expense to insure correct operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than thirty (30) days after the test date will be established. The owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two (2) devices is an effective means of the owner insuring that uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.

D. Backflow prevention devices will be tested more frequently than specified in A. above, in cases where there is a history of test failures and the Water Purveyor feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests will be born by the owner.

X. Records

A. The Water Purveyor will initiate and maintain the following:

1. Master files on customer evaluations and/or inspections of cross-connections and backflow conditions.
2. Master files on all customer backflow preventer assemblies.
3. Master files on customer backflow preventer tests, repairs and replacement. Records for replaced backflow preventers shall be maintained for one (1) year after date of removal from service.
4. Records and reports of any backflow incident(s) occurring in the public or owner water systems shall be maintained for at least three (3) years after the date of the incident.
5. Copies of any of the above and other records and/or reports supplies to the WVBPH. This material shall be maintained for at least three (3) years after submission.

B. Upon request, the Water Purveyor will submit records of inspection and non-compliance surveys, tests results and/or corrective actions, and backflow incident reports to the West Virginia Bureau for Public Health.

This program and articles of policy as established will be enforced by:

John Scott Rader
Chief Plant Operator
January 20, 2005

Accepted and Approved January 20, 2005 by:

Charles L. Eary
Chairman

James L. McClung
Treasurer

L. Alan Whittington
Board Member