Cross-Connection and Backflow Prevention Policy

System Name: **Doddridge County PSD** PWS#: **WV3300902**

Address: **99 Court Street, Suite 130** City/Town: **West Union** State: **WV** Zip : **26456**

Overview: Doddridge County PSD/WV3300902 recognizes that Cross-Connections and Backflow Conditions in a public water system and/or 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 health and the public water system served by Doddridge County PSD/WV3300902 from the possibility of contamination or pollution by isolating within its customer's internal distribution water system(s), such contaminants or pollutants that could backflow due to back-pressure or back-siphonage into the public water system.

B. To promote the elimination and/or control of cross-connections and backflow conditions, actual or potential, within a customer's internal distribution water system(s), non-potable systems, plumbing fixtures and processes; and

C. To provide for the maintenance of a continuing program of cross-connection and backflow prevention control which will effectively prevent the contamination or pollution of the public and/or customer's water system(s) from cross-connections and backflow conditions.

II. Authority

A. By the Federal Safe Drinking Water Act of 1974 and 1996 amendment, 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. Doddridge County PSD/WV3300902, 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 backflow from back-pressure or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of the Water Purveyor, an approved backflow preventer assembly 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 preventer assembly at each service connection to his premises. The customer shall, within ninety (90) days, install such approved assembly, or assemblies, at his own expense, and failure or refusal, or inability on the part of the customer to install said assembly or assemblies within ninety (90) days, shall constitute grounds for discontinuing water service to the premises until such assembly or assemblies have been properly installed.

IV. Definitions

A. Approved: Accepted by the Water Purveyor as meeting an applicable specification stated or cited in the WV Department of Health 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 or water source, on or available, to a customer's premises other than the water purveyor's approved public water system.

D. Backflow: The undesirable reversal of water flow or introduction of other liquids, mixtures or substances, caused by a pressure differential in the distribution pipes of a potable water system.

E. Backflow Preventer: A device or assembly or means designed to prevent backflow in a potable water system. Most commonly categorized as air gap, atmospheric vacuum breaker, barometric loop, double check with intermediate atmospheric vent, double check valve assembly, hose bibb vacuum breaker, pressure vacuum breaker, reduced pressure principal assembly, and residential dual check.

E1. 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.

E2. Atmospheric Vacuum Breaker: A device which prevents backflow by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

E3. 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.

E4. Double Check Valve Assembly: An assembly of two (2) independently operating spring-loaded check valves with tightly closing shut-off valves on each side of the check valves, and properly located test cocks for the testing of each check valve.

E5. Double Check Valve with Intermediate Atmospheric Vent: A device having two (2) spring loaded check valves separated by an atmospheric vent chamber.

E6. Hose Bibb Vacuum Breaker: A device attached to a hose bibb and which acts as an atmospheric vacuum breaker.

E7. Pressure Vacuum Breaker: An assembly containing an independently operated spring-loaded check valve and an independently operated spring-loaded air inlet valve located on the discharge side of the check valve. The assembly includes tightly closing shut-off valves on each side of the valves and properly located test cocks for the testing of the check and air valve.

E8. Reduced Pressure Principal 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.

E9. Residential Dual Check: A device consisting of two (2) spring loaded, independently operating check valves. Generally employed immediately downstream of the water meter to act as a fixture isolation device.

F. Backpressure: A condition in which the customer's system pressure is greater than the water purveyor's system pressure.

G. Back-Siphonage: The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water system from any source other than the primary source caused by the sudden reduction of pressure or negative pressure in the potable water system.

H. Community Water System: A public water system that serves at least 25 residents year around or that has 15 service connections serving year around residents.

I. Containment (external protection): A method of backflow prevention which requires a backflow preventer assembly be installed after the meter and prior to any water service entrance.

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

K. Cross-connection: Any physical (direct or indirect) connection between the public water system and an unapproved water supply or other source of contamination or pollution.

L. 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.

M. Degree of Hazard: The degree of hazard is the potential risk to public 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 or pollutant. A health hazard is any condition, device or practice which creates or may create a danger to health and wellbeing 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 water quality or adversely affect the public water system.

N. 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.

O. Fixture Isolation (internal isolation): A method of backflow prevention where a backflow preventer is located to control a cross -connection or potential source of contamination at an in-plant or facility piece of equipment or process located other than at a water service entrance.

P. Owner: Any person who has legal title to, or license to operate, or resides in a property or facility which is supplied drinking water from a public water system. Also, may be referred to as a customer.

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

R. Pollutant: A foreign substance, if permitted to enter the public water system, will degrade potable water quality so as to constitute a moderate hazard, or impair the usefulness of the water to a degree which does not create an actual hazard to the public health, but which does adversely and unreasonably affect (appearance or color, odor, taste, etc.) the water for domestic use.

S. Potable Water: Water that is considered safe for human consumption as described by the West Virginia Bureau for Public Health.
T. 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. Also, may be known as a water purveyor.

U. 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.

V. Water Service Entrance: That point in the customer's water system beyond the sanitary control of the public water system (water purveyor), generally considered to be the outlet end of the water meter and always before any unprotected branch water line.

W. West Virginia Bureau for Public Health (WVBPH): An agency of the West Virginia Division of Health and Human Resources.

V. Administration

A. The Water Purveyor will establish, operate, and promote a cross-connection and backflow prevention 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 potential health hazards, and shall follow the provisions of the Water Purveyor's program.

C. If the Water Purveyor requires that the public water system be protected by containment, the Owner shall be responsible for the installation and maintenance of the required backflow preventer assembly(ies) and for water quality beyond the outlet end of the containment assembly(ies) and may utilize fixture isolation protection for that purpose. The Owner may also seek local public health officials, or personnel from the Water Purveyor or their designated representatives, or certified /licensed private sector personnel to assist him/her in a survey of their facility(ies) and to assist him /her in the selection of proper containment assemblies and/or fixture isolation devices, and the proper installation of these assemblies/devices.

VI. Requirements

A. Water Purveyor

1. On new installations, the Water Purveyor will conduct an on-site survey and/or review of plans in order to determine the type of backflow preventer assembly(ies), if any, that will be required based on across-connection(s) and the degree of health hazard(s).

2. For premises existing prior to the start of this program, the Water Purveyor will conduct an on-site survey and/or review of plans for actual cross-connections, potential health hazards, 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)/assembly(ies) already in place.

3. The Water Purveyor will not allow a cross-connection to remain unless it is protected by an approved air gap or backflow preventer assembly(ies) which must be regularly tested to insure satisfactory operation.

4. The Water Purveyor shall inform the Owner by letter, of any failure to comply prior to a follow-up survey. The Water Purveyor will allow an additional fifteen (15) days for the correction(s). In the event the Owner fails to comply with the necessary correction(s) after the second survey, 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(s) 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, water service will be terminated immediately.

6. The Water Purveyor will conduct initial and follow-up premise surveys to determine the nature of existing or potential health hazards. The main focus will be on high hazard industries and commercial premises.

7. The Water Purveyor must report to the WVBPH any backflow incident(s) occurring in the public water system as soon as possible but no later than twenty-four hours (24) after the incident.

B. Owner

1. The Owner shall be responsible for the elimination or protection in each water service line of all cross-connections, actual or potential health hazard(s), or other degradation to the public water system on his/her 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 preventer assemblies on his premises.

3. The Owner shall correct within ten (10) days any malfunction or defective backflow preventer assembly(ies) revealed by periodic testing or visual detection. This may also involve the removal and/or replacement of the backflow preventer assembly(ies). The Owner at his expense shall repair, overhaul, or replace and test the assembly again.

4. The Owner shall inform the Water Purveyor of any proposed or modified cross-connection(s) and also any existing cross-connection(s) of which the Owner is aware, but has not been found by the Water Purveyor.

5. The Owner shall not install a by-pass around any backflow preventer assembly unless there is a backflow preventer assembly of the same type on the bypass. Owners who cannot shut down operation for testing of the assembly(ies) must supply additional assemblies necessary to allow testing to take place.

6. The Owner shall install only backflow preventer assemblies approved by the Water Purveyor and/or the WVBPH.

7. The Owner shall install backflow preventer assemblies in a manner approved by the Water Purveyor and general industry standards.

8. Any Owner having a private well or other auxiliary water source must have the approval of the Water Purveyor 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 assembly 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 a backflow preventer assembly, such plumbing must have its own backflow preventer assembly installed.

10. The Owner shall be responsible for the payment of all fees for service, permits, periodic assembly testing, retesting in the case that a backflow preventer assembly fails to operate correctly, and follow-up surveys for non-compliance with Water Purveyor requirements.

11. The Owner must maintain records for a minimum of three (3) years 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 hours (24) 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 and potential health hazards. All threats will be classified by degree of hazard which will determine the requirements for the installation of approved backflow preventer assemblies.

VIII. Existing In-Use Backflow Prevention Devices

Any existing backflow preventer assembly 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 assembly, or there is 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 assemblies must be upgraded to a reduced pressure principle assembly, or a reduced pressure principle assembly must be installed in the event that no backflow preventer assembly is present.

IX. Periodic Testing

A. Backflow preventer assemblies shall be tested and inspected at the time of initial installation or first inspection and at least every twelve months thereafter.

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

D. Backflow preventer assemblies 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 and update for at least two (2) years unless otherwise stated, the following:

1. Records on customer surveys and customer cross-connections
2. Records on all customer backflow preventer assemblies and devices in service.
3. Records on customer backflow preventer inspections and test.
4. Records on customer repairs and replacements of backflow preventers.

5. Records of backflow preventers shall be maintained at least one (1) year after removal from service.
6. Records and reports of any backflow incident(s) occurring in the public or owner water system(s) shall be maintained for at least three (3) years after the date of the incident.
7. Copies of any of the above and other records and/or reports supplied to the WVBPH shall be maintained for at least three (3) years after submission.

B. The Owner will maintain and update a complete set of records on each of their backflow preventers from purchase to retirement. This will include:
1. All inspections, tests, repairs and overhauls.
2. These records of inspections, tests, repairs and overhauls will be submitted to the Water Purveyor upon request.

C. Upon request, the Water Purveyor will submit records of surveys, tests results, corrective actions, backflow incident reports and other pertinent information to the West Virginia Bureau for Public Health.

This policy was first read at the meeting of the Doddridge County Public Service District Board of Directors

on the _____day of _____2025

ATTEST

_____(Board Secretary)