

AUBURN WATER SYSTEM, INC

3097 LOCKE LN
CRESTVIEW, FL 32536
850-682-1258 OR 850-682-3413 ~ FAX 850-398-6643



BACKFLOW / CROSS CONNECTION CONTROL PROGRAM

Policy/Rules and Regulations

Amended 01/18/2022

REVISED 8/19/24

SECTION 1 – Purpose, Responsibility, Authority

1.1 PURPOSE:

1.1.1 To protect the public Potable Water supply of Auburn Water System Inc., (AWS) and its Members from the possibility of Contamination or Pollution by containing within the Member’s internal distribution system(s) or the Member’s private water system(s), such contaminants or pollutant which could Backflow by Backpressure or Back Siphonage into the community water supply system.

1.1.2 To promote the elimination or control of Cross Connection(s) between the Member’s on-site Potable Water system(s) and Non-Potable Water systems, plumbing fixtures, industrial piping systems, and irrigation.

1.1.3 To provide for the maintenance of a continuing program of Cross Connection Control which will systematically and effectively prevent the Contamination or Pollution of the AWS Potable Water supply.

1.2 RESPONSIBILITY

AWS shall authorize measures for the protection of the Potable Water Distribution System from Contamination or Pollution. If, in the judgment of the General Manager or his/her designee, an Approved Backflow Prevention Assembly is required at the AWS service connection to any Member’s Property, for safety of the Water System, the General Manager or his/her designated agent shall assure notice is provided in writing to said Member to install such an Approved Backflow Prevention Assembly at the Member’s expense. Failure, refusal or inability on the part of the Member to install the Approved Backflow Prevention Assembly by the required date shall constitute grounds for discontinuing water service to the Property until Approved Backflow Prevention Assembly have been properly

installed. Upon discovery of any unprotected Cross Connection(s) that pose a Hazard-System may require immediate action including termination of service to protect the public health. Reconnection may be allowed only after proper Backflow protection is installed. Only AWS Approved certified Backflow technicians shall test any Approved Backflow Prevention Assembly. The cost for testing shall be at the Member's expense. AWS shall maintain records of the installation, inspection/testing, and repair of Backflow protection devices being required at or for service connections from AWS to a Members Property.

1.3 **AUTHORITY**

The Rules and Regulations of AWS relating to Cross Connection Control are adopted and implemented pursuant to the requirements of Sections 403.850-403.864, Florida Statutes, the Safe Drinking Water Act and rules adopted pursuant thereto by the Florida Department of Environmental Protection - Florida Administrative Code, Chapter 62-555.360.

SECTION 2 - Definitions

2.1 **DEFINITIONS**

1. **Air Gap.** The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of said vessel. An Approved Air Gap shall be at least double the inside diameter of the supply pipe, measured vertically, above the top of the rim of the vessel and, in no case less than one inch, when an Air Gap is used at the service connection to prevent the Contamination or Pollution of the public Potable Water system, an emergency bypass may be installed around the Air Gap system and an Approved Reduced Pressure Principle Assembly shall be installed in the bypass system.
2. **Approved.** Accepted by the authority responsible as meeting an applicable specification stated or cited in these rules and regulations, or as suitable for the proposed use.
3. **Approved Backflow Prevention Assembly.** shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association entitled: AWWA C510-89 Standard for Double Check Valve Assembly, AWWAS C511-89 Standard for Reduced Pressure Principle Assembly and AWWA C512-15 for Pressure Vacuum Breaker Assembly, and have met the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of California established by "Specification of Backflow Prevention Assemblies" – section 10 of the most current issue of the Manual for Cross Connection Control. Said AWWA and FCCC & HR standards and specifications have been adopted by AWS. Final approval shall be evidenced by a Certificate of Approval issued by an Approved testing laboratory certifying full compliance with said AWWA and FCCC & HR standards and specifications. Utilized to prevent Backflow.
4. **Auxiliary Water Supply.** Any water supply on or available to the Property other than the purveyor's Approved public Potable Water supply. These auxiliary waters may include water from another purveyor's public Potable Water supply or any

natural source(s) such as a well, spring, river, stream, harbor, etc., or Reuse or Reclaimed Water or industrial fluids. These waters may be polluted or contaminated or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

5. **Backflow.** The undesirable reversal of flow in a Potable Water distribution system as a result of a negative pressure or Backpressure.
6. **Backpressure.** A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler or any other means that may cause a Backflow.
7. **Back Siphonage.** The flow of water, liquids or other mixtures of substances into the distributing 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.
8. **Contamination.** An impairment of a Potable Water supply by the introduction or admission of any foreign substance that degrades the water quality or creates a Health Hazard.
9. **Cross Connection.** A connection between any part of a Potable Water system and any other medium containing substances in a manner that could allow such substances to enter the Potable Water system. Substances may be gases, liquids or solids, such as chemicals, waste products, steam, water from other sources (Potable and Non-Potable), or any substance that could change the color, odor or chemical content of the water or introduce harmful chemicals, bacteria or other contaminants.
10. **Cross Connection Controlled.** A connection between a Potable Water system and a Non-Potable Water system, or other medium, with an Approved Backflow Prevention Assembly properly installed that will continuously afford the protection warranted from the medium to the public water supply.
11. **Cross Connection Control by Containment.** The installation of an Approved Backflow Prevention Assembly at the water service connection to any Member's Property by the Member, where it is physically and economically unfeasible to find, permanently eliminate or control all Cross Connection(s) on the Member's Property.
12. **Distribution System.** Shall mean and refer to the network of conduits used for the delivery of water from AWS to the Member's System.
13. **Double Check Valve Assembly.** An Approved assembly of two independently operating check valves with two tightly closing shut-off valves installed immediately upstream of the number 1 check valve and immediately downstream of the number 2 check valve , plus properly located test cocks for the testing of each check valve. The entire assembly shall meet the design and performance specifications and approval of a recognized and system Approved testing agency for Backflow prevention assemblies, as specified in Section 2.1 - number 3 - Approved Backflow Prevention Assembly. To be Approved by AWS, these assemblies shall be readily accessible for in-line maintenance and testing. Double Check Valve Assembly are only allowed to be used on a fire line or for a residential meter over one inch, provided the size is the only hazard.
14. **Dual Check Backflow Prevention Device.** A device used for residential service connections one-inch or less in size. This device is installed below grade in the meter box connected directly to the downstream side of the meter.

15. **Hazard – Degree of** - The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the Potable Water system.
 - a. **Hazard – Health.** A cross connection or potential cross connection involving any substance that could, if introduced in the Potable Water system, cause death, illness, spread disease, or have a high probability of causing such effects.
 - b. **Hazard – Plumbing.** A plumbing type cross connection in a Member’s Potable Water system that has not been properly protected by an Approved vacuum breaker, Air Gap separation or Backflow prevention assembly. Unprotected plumbing Cross Connection(s) are considered a Health Hazard.
 - c. **Hazard – Non-Health.** A cross connection involving any substance that generally would not be a Health Hazard but which would constitute a nuisance or be aesthetically objectionable if introduced into the Potable Water system, such as odor or color.
 - d. **Hazard – System.** An actual or potential threat of severe damage to the physical properties of the public Potable Water system or the Member’s Potable Water system or of a pollutant or contaminate which could have a prolonged effect on the quality of the Potable Water in the system.
16. **Industrial Fluids** A fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration to constitute a health risk, Pollution, System Hazard or Plumbing Hazard if introduced into a public water supply. This may include, but not be limited to: polluted or contaminated waters; all types of process waters and “used waters” originating from the Member’s Potable Water system which may have deteriorated in bacteriological and/ or chemical quality; chemicals in fluid form, plating acids and alkali’s; circulated cooling waters connected to an open cooling tower and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; unsafe natural water such as from well, springs, streams, rivers, bay, harbors, seas, irrigation canals or systems used in an industrial process. Any oils, gases, glycerin, paraffin, caustic and acid solutions and other liquid or gaseous fluids used in industrial or other purposes or for firefighting purposes.
17. **Member.** Shall mean and refer to the customers of AWS.
18. **Member’s System.** Shall mean and refer to those parts of the facilities beyond the termination of the Utility System Distribution System which are utilized in conveying utility delivered potable water to points of service.
19. **Non-Potable Water.** Water that is not safe for human consumption or which according to recognized standards is of questionable quality. This may also include private water supplies which have not been tested and approved by health authorities for consumption.
20. **Pollution.** The presence of any foreign substance in water which tends to degrade its quality so that it constitutes a Health Hazard or impair the usefulness of the water.
21. **Potable Water.** Any water that is safe for human consumption as prescribed by the public health authority having jurisdiction.
22. **Reduced Pressure Principal Assembly.** An assembly of two independently operating Approved check valves with an automatically operating differential relief valve between the two check valves, two tightly closing shut off valves on either side

of the check valves, plus properly located test cocks for the testing of the check and relief valves. The entire assembly shall meet the design and performance specifications and approval of a recognized and system Approved testing agency for Backflow prevention assemblies as specified in Section 2.1 - number 3 - Approved Backflow Prevention Assembly. The assembly shall operate to maintain the pressure in the zone between the two check valves at a level lower than the pressure on the community water supply side of the assembly. At cessation of normal flow, the pressure between the two check valves shall be less than the pressure on the water supply side of the assembly. In case of leakage of either of the check valves, the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere.

23. **Pressure Vacuum Breaker Assembly.** A pressure vacuum breaker (PVB) shall contain an independently operating, internally loaded check valve and an independently operating, loaded air-inlet valve located on the discharge side of the check valve. In addition, the PVB assembly shall have an inlet and outlet resilient seated, fully ported shutoff valves and two properly located test cocks. The entire assembly shall meet the design and performance specifications and approval of a recognized and system Approved testing agency for Backflow prevention assemblies as specified in as specified in Section 2.1 - number 3 - Approved Backflow Prevention Assembly.
24. **Property.** Shall mean and refer to a tract of land with its component parts (as buildings); also, a building or part of a building usually with its appurtenances (as grounds or easements).
25. **Reclaimed Water.** Shall mean wastewater which, as a result of treatment, is suitable for direct beneficial use, or a controlled use that would not otherwise occur, but is deemed unsafe for human consumption.
26. **Re-Used Water.** Any water supplied by a water purveyor from the public Potable Water system to a Member's System after it has passed through the point of delivery and it is no longer under the control of the water purveyor.
27. **Utility System.** Shall mean and refer to the core facilities and the distribution systems of the Water System; and shall include all those facilities of the Water System under the complete control of the Water System, up to the point where the Member's System begins.
28. **Service Connections.** The terminal end of a service connection from the public Potable Water system; i.e., where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the Member's System. If a meter is installed at the end of the service connection, then the Member's service connection shall mean the downstream end of the meter. There shall be no unprotected connections from the service line upstream of any meter. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public water system.
29. **Water System.** Shall mean and refer to the Auburn Water System, Inc. and its Members.

SECTION 3 – Policy/Rules and Regulations

3.1 POLICY.

3.1.1 No water service connection to any Property shall be installed or maintained by the water purveyor unless the water supply is protected as required by Federal, State and local laws and regulations as well as the requirements of this policy. Service of water to any Property shall be discontinued by the water purveyor if a Backflow prevention assembly required by these rules and regulations is not installed, tested and maintained, or if it is found that an Approved Backflow Prevention Assembly has been removed, by-passed, or if an unprotected cross connection exists on the Property. Service will not be restored until such conditions or defects are corrected.

3.1.2 The Member's System shall be open for inspection at all reasonable times to check if any Cross Connection or other sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the General Manager or his/her designee, shall deny or immediately discontinue service to the Property by providing for a physical break in the service line until the Member has corrected the condition(s) in conformance with Federal, State and local statutes and ordinances relating to plumbing and water supplies and regulations adopted pursuant thereto. Refusal by a Member to allow an inspection shall be considered prima facie evidence of the existence of Cross Connection(s), thereby requiring the installation of an Approved Reduced Pressure Principal Assembly at the service connection directly downstream of the meter or the disconnection of service.

3.1.3 At no time will an Approved Backflow Prevention Assembly restrict the flow of water in either a Potable Water or dedicated fire line.

3.1.3.a In the case of both commercial and residential water service, the bore of the Backflow Preventer/Prevention Assembly shall be no smaller than the full flow bore of the measuring device (meter).

3.1.3.b In the case of dedicated fire lines, the Backflow /Prevention Assembly's bore will be the same diameter as the required tap, as per state and local fire statutes.

3.1.4 An Approved Backflow Prevention Assembly shall be installed on each service line to a Member's System directly downstream of the meter at or near the Property line by the Member, or in a location approved by the General Manager or his/her designee, but, in all cases, before the first branch line leading off the service line whenever the following conditions exist:

3.1.4.a In the case of a residential or commercial Property having access to a Reclaimed Water or Re-Used water which is not or may not be safe for human consumption and which is not acceptable as an additional source by the General Manager or his/her designee, the public water system shall be protected against Backflow or potential Backflow, from the Property by the Member installing an

Approved reduced pressure Backflow prevention assembly on the service line directly downstream of the meter.

3.1.4.b In the case of properties that are classified as commercial or which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against Backflow from the Property by the Member installing an Approved Reduced Pressure Principal Assembly on the service line directly downstream of the meter. This shall include the handling of process waters and waters originating from the Utility System which have been subject to deterioration in quality.

3.1.4.c In the case of Property having (1) internal Cross Connection(s) that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the Property is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous Cross Connection(s) exist, the public water system shall be protected against Backflow from the Property by the Member installing an Approved Reduced Pressure Principal Assembly on the service line directly downstream of the meter.

3.1.4.d AWS will furnish and install a Dual Check Backflow Prevention Device on all residential Potable Water services that are one inch in diameter or less. All residential Potable Water services larger than one inch will require either a Reduced Pressure Principal Assembly or a Double Check Valve Assembly, installed directly downstream of the meter, depending on the level of hazard.

3.1.5 The type of protective assembly required under subsections 3.1.4a, b, c, and d shall depend upon the degree of hazard which exists as follows:

3.1.5.a In the case of a residential Property that utilizes an irrigation well for irrigation only and has no known Cross Connection(s) the General Manager may approve the use of a Dual Check Backflow Prevention Device installed at the service connection. The Member will have to agree to a full inspection of their Property to determine that there is no Cross Connection(s). This service can be provided by AWS or a licensed plumber at the Member's expense. If the member hires a licensed plumber, the report shall be provided to the System. The Member will also be required to sign an agreement stating that they will not create a Cross Connection(s) between the potable supply line and the irrigation well. Such agreement would need to be renewed should the Property change owners or should the name on the account be changed. A new inspection shall be required at that time.

3.1.5.b In the case of any Property where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water

system, the public water system shall be protected by the Member installing an Approved Reduced Pressure Principal Assembly on the service line directly downstream of the meter.

3.1.5.c In the case of any Property where there is any material dangerous to health which is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by the Member installing an Approved Reduced Pressure Principal Assembly on the service line directly downstream of the meter. Examples of Property where these conditions may exist include but are not limited to, sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries, plating plants, veterinary offices, film processing labs, hair salons, lumber mills and any situation determined by the General Manager or his/her designee to be a Health Hazard.

3.1.5.d In the case of any Property where there are uncontrolled Cross Connection(s), an Approved Reduced Pressure Principal Assembly on the service line directly downstream of the meter shall be provided by the Member. The Member is responsible for the proper installation and maintenance of the Backflow device.

3.1.5.e In the case of any Property where, because of security requirements or other prohibitions or restrictions, makes it impossible or impractical to make a complete in plant Cross Connection(s) survey, the public water system shall be protected against Backflow by the Member installing a Reduced Pressure Principal Backflow Prevention Assembly on the service line directly downstream of the meter.

3.1.5.f In the case of a dedicated fire line tap whether for fire sprinklers and/or hydrants, the public water system shall be protected by an Approved PVB or Reduced Pressure Principal Assembly. If a hydrant is to be present on any project, other than single family residences, the hydrant is to be installed on the dedicated fire line downstream of the Backflow /Prevention Assembly, by the Member. If a dedicated fire line is to have any substance (e.g., antifreeze or dry chemicals) present other than Potable Water, an immediate upgrade in protection to a Reduced Pressure Principal Assembly is required.

3.1.5.g In the case of irrigation supplied by AWS, AWS shall be protected with the minimum of a PVB or a Reduced Pressure Principal Assembly installed at the Cross Connection(s). If any alternate source of water is cross connected, an immediate upgrade to an Approved Reduce Pressure Principal Assembly is required. If any chemicals are to be injected into the system (e.g., chemigations), an immediate upgrade in protection to a Reduced Pressure Principal Assembly is required.

3.1.5.h In the case of pools that are protected with an Approved Air Gap, all potable hose bibs within 100 feet of the pool and pumping systems will be required to have an American Society of Safety Engineers (“ASSE”) Approved hose bib vacuum

breaker installed. If the pool's Air Gap does not meet America Water Works Association ("AWWA") installation requirements, an immediate repair will need to be performed, or a Reduced Pressure Principal Assembly installed on the service line directly downstream of the meter will be required.

3.1.5.i In the case of any Property(s), which utilizes Reclaimed Water for any purpose, an Approved Reduced Pressure Principal Assembly will be required either as a new installation or as a retro fit. The assembly will be required to meet all AWWA installation requirements and shall be installed at the at the service connection to the Potable Water supply (i.e. directly behind the water meter).

3.1.6 As per the Florida contracting statutes chapter 489, all Backflow assemblies are required to be installed by a licensed plumbing contractor with the following exception (chapter 489.103):

3.1.6.a The owner of the Property may install any required Backflow assemblies on his/her Property, with certain restrictions, without a contractor's license.

3.1.6.b An employee of a Property owner may install any required Backflow assemblies on his/her owner's Property with "employee" being defined as a person who receives compensation from and is under the supervision of the Property owner and said Property owner regularly deducts FICA, applicable taxes and provides workers compensation as required by law.

3.1.6.c Any such assembly or maintenance in which the aggregate contract price for labor, materials and other items is less than \$1000.00.

3.1.7 Any Backflow prevention assembly required herein shall be of a model and size approved by the General Manager or his/her designee.

3.1.8 The following testing laboratory has been qualified by AWS to test and certify Backflow Preventer: Foundation for Cross Connection(s) Control and Hydraulic Research University of Southern California, University Park, Los Angeles, CA 90089. Testing laboratories, other than the laboratory listed above, will be added to an approved list as they are qualified by AWS. Backflow Preventers which may be subjected to Backpressure or Back Siphonage that have been fully tested and have been granted a certificate of approval by said qualified laboratory and are listed on the laboratory's current list of "Approved Backflow Prevention Assemblies" may be used without further qualifications.

3.1.9 It is also required that all Backflow prevention assemblies will have replaceable seats. AWS reserves the right to disapprove any assembly in this purveyor system, which is otherwise approved, but has a chronic and excessively high failure rate.

SECTION 4 – Installation & Testing/Repair & Maintenance

4.1 Installation & Testing

4.1.1 Double Check Valve Assembly Installation. Generally installed 12 to 18 inches above grade but has to be at least 12 to 36 inches above ground, drainage system, or flood elevation. Permission must be given before installation for any pit installation. We do not allow pit installations in low lying areas subject to flooding or in known flood plains. This Backflow shall be installed in a location approved by AWS personnel. The device shall be installed in a location with no surrounding obstructions within two-foot of the device, i.e. trees, plants, shrubs or permanent/temporary structures.

4.1.2 Pressure Vacuum Breaker Assembly Installation. The pressure vacuum breaker (“PVB”) must be installed at least 12 inches above the highest downstream outlet on the Member’s System. It must be installed vertically (with inlet on the bottom), it prevents Back Siphonage only, not Backpressure. PVB’s are not allowed with chemical irrigation or where Backpressure is a potential threat, or with alternative water supplies. PVB’s cannot be installed in pit installations. PVB’s must be installed at the Cross Connection(s) made on the Member’s potable service line from the meter to the house, on the irrigation/Cross Connection(s) line. The device shall be installed in a location with no surrounding obstructions within two-foot of the device, i.e. trees, plants, shrubs or permanent/temporary structures

4.1.3 Reduced Pressure Principal Assembly Installation. To be Approved these assemblies shall be readily accessible for inline maintenance and testing and shall be installed in a location where no part of the assembly will be submerged and generally installed 12 to 18 inches above the ground but has to be at least 12 to 36 inches above the ground drainage system, or flood elevation. Pit installations are not allowed. It must be installed in a location approved by AWS personnel. The device shall be installed in a location with no surrounding obstructions within two-foot of the device, i.e. trees, plants, shrubs or permanent/temporary structures.

4.1.4 Approved Backflow Preventer/Prevention Assembly testers are required to be certified by the University of Florida TREEO Center.

4.1.5 Approved test procedures utilized by AWS are described in the University of Florida TREEO Center manual on Backflow Prevention Theory and Practice chapter six pages 132-160.

4.1.6 Commercial properties with an Approved Backflow Prevention Assembly shall be tested upon installation and annually thereafter. The test fees will be at the Member’s expense.

4.1.7 Residential properties with an Approved Backflow Prevention Assembly shall be tested upon installation and at a minimum biennially thereafter. The test fees will be at the Member’s expense.

4.1.8 All services with an Approved above ground testable Backflow Prevention Assembly, shall be protected from extreme weather conditions, i.e. Freezing temperatures. The Member is responsible for the cost, installation and maintenance of the protective cover. The Member is also responsible for the removal of the protective cover to allow AWS personnel to inspect and test the Approved Backflow Prevention Assembly. A notice shall be sent to the Members notifying them of the required inspection and test. If the protective cover has not been removed to allow for inspection and testing, the Backflow Technician shall remove the cover. AWS is not responsible or liable for any accidental damage that may occur to the protective cover or the Approved Backflow Prevention Assembly during the process of removing the protective cover, testing the device or the reinstallation of the protective cover or insulation.

4.2 REPAIR & MAINTENANCE

4.2.1 All Commercial properties are required to have an Approved Reduced Pressure Principal /Prevention Assembly. The cost of installation, testing, maintenance, repair or replacement shall be at the Member's expense.

4.2.2 All residential properties that require an Approved Backflow Prevention Assembly shall be installed, tested, maintained, repaired or replaced at the Member's expense.

4.2.3 On residential properties, AWS shall install, replace, repair and maintain all required Dual Check Backflow Prevention Device. AWS shall replace/refurbish all required Dual Check Backflow Prevention Devices on a ten-year rotation.

NOTE: All fees associated with this policy can be found on the Annual Rate & Fee Schedule.