



**DESTIN WATER USERS, INC.
BACKFLOW/CROSS CONNECTION PROGRAM
Rules and Regulations**

SECTION 1 - CROSS CONNECTION CONTROL – GENERAL POLICY

1.1 **PURPOSE** The purpose of this rule is:

- 1.1.1 To protect the public potable water supply of Destin Water Users and its customers from the possibility of contamination or pollution by containing within the property owner's internal distribution system(s) or the property owner's private water system(s) such contaminants or pollutants which could backflow by backpressure or backsiphonage into the community water supply system; and
- 1.1.2 To promote the elimination or control of existing cross connections, actual or potential, between the property owner's on-site potable water system(s) and non-potable water systems, plumbing fixtures, industrial piping systems, and irrigation; and
- 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 all potable water systems.

1.2 **RESPONSIBILITY**

The General Manager of Destin Water Users, Inc. shall be responsible for the protection of the community potable water distribution system from contamination or pollution. If, in the judgement of said general manager an approved backflow prevention assembly is required at the community's water service connection to any property owners premises, for the safety of the water system, the general manager or his designated agent shall give notice in writing to said **property owner to install such an approved assembly or assemblies at his own expense; and failure, refusal or inability on the part of the property owner to install said assembly or assemblies immediately shall constitute grounds for discontinuing water service** to the premises until such assembly or assemblies have been properly installed.

1.3 **AUTHORITY**

These Rules and Regulations of Destin Water Users, Inc., relating to cross connection control are adopted and implemented pursuant to the requirements of Sections 403.850 - 403.864, Florida statutes, and Florida 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 **General Manager.** The General Manager of Destin Water Users, Inc. is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of these rules and regulations.
- 2.2 **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.
- 2.3 **Auxiliary Water Supply.** Any water supply on or available to the premises 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 used 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.
- 2.4 **Backflow.** The undesirable reversal of flow in a potable water distribution system as a result of a cross connection.
- 2.5 **Backpressure.** A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler or any other means that may cause backflow.

- 2.6 **Backsiphonage.** The flow of water or other liquids, 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.
- 2.7 **Backflow preventer.** An assembly or means designed to prevent backflow.
- 2.7.1 **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 by-pass may be installed around the air-gap system and an approved reduced pressure principle assembly shall be installed in the by-pass system.
- 2.7.2 **Reduced Pressure Principle Assembly.** An assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, 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. The assembly shall operate to maintain the pressure in the zone between the two check valves at a level less 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. To be approved these assemblies shall be readily accessible for in-line maintenance and testing and shall be installed in a location where no part of the assembly will be submerged. The assembly shall be installed no less than twelve (12) inches or higher than thirty (30) inches above flood plane.
- 2.7.3 **Double Check Valve Assembly.** An assembly of two independently operating approved check valves with tightly closing shut-off valves on each side of the check valves, 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. To be approved these assemblies shall be readily accessible for in-line maintenance and testing. Double check assemblies may be installed in a pit, with prior written approval of the Cross Connection Control Department of Destin Water Users, Inc. Otherwise the assembly shall be installed no less than twelve (12) inches or higher than thirty (30) inches above flood plane.
- 2.7.4 **Pressure vacuum breaker assembly.** An approved pressure vacuum breaker assembly consisting of a check valve either spring loaded or internally weighted and a spring loaded air inlet valve, installed as a unit between two tightly closing resilient seated shutoff valves and fittings with properly located resilient-seated test cocks. (This assembly meets health hazard applications where no possibility of backpressure exists.)
- 2.8 **Contamination.** An impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality and creates a health hazard.
- 2.9 **Cross-Connection.** A connection or a potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the potable water system. Other substances may be gases, liquids or solids, such as chemicals, waste products, steam, water from other sources (potable and non-potable), or any matter that may change the color or add odor to the water.
- 2.10 **Cross-Connections - Controlled.** A connection between a potable water system and a non-potable water system with an approved backflow prevention assembly properly installed that will continuously afford the protection commensurate with the degree of hazard.
- 2.11 **Cross-Connection Control by Containment.** The installation of an approved backflow prevention assembly at the water service connection to any property owner's premises where it is physically and economically infeasible to find and permanently eliminate or control all actual or potential cross-connections within the property owner's water system; or, it shall mean the installation of an approved backflow prevention assembly on the service line leading to and supplying a portion of a property owner's water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of cross-connection.

- 2.12 **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.
- 2.12.1 **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.
- 2.12.2 **Hazard - Plumbing.** A plumbing type cross-connection in a consumer's potable water system that has not been properly protected by an approved vacuum breaker, air-gap separation or backflow prevention assembly. Unprotected plumbing type cross-connections are considered to be a health hazard.
- 2.12.3 **Hazard – non-health.** A cross connection or a potential 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.
- 2.12.4 **Hazard - System.** An actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.
- 2.13 **Industrial Fluids System.** Any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution or plumbing hazard if introduced into an approved 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 public potable water system which may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalies; circulated cooling waters connected to an open cooling tower and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; oils, gases, glycerin, paraffins, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for fire- fighting purposes.
- 2.14 **Pollution.** The presence of any foreign substance in water which tends to degrade its quality so as to constitute a non-health hazard or impair the usefulness of the water.
- 2.15 **Water - Potable.** Any water that is safe for human consumption as prescribed by the public health authority having jurisdiction.
- 2.16 **Water – Non-potable.** Water that is not safe for human consumption, or which according to recognized standards is of questionable quality.
- 2.17 **Water - Reclaimed.** Shall mean water which, as a result of treatment of wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur, and is not safe for human consumption.
- 2.18 **Water - 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 property owner's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There should be no unprotected takeoffs from the service end of the meter. There should be no unprotected takeoffs from the service line ahead of any meter or backflow prevention assembly located at the point of delivery to the property owner's water system. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.
- 2.19 **Water - Used.** Any water supplied by a water purveyor from the public potable water system to a consumer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

SECTION 3 - REQUIREMENTS

3.1 Water System.

- 3.1.1 The water system shall be considered as made up of two parts: The Utility System and the Customer System.
- 3.1.2 Utility System shall consist of the source facilities and the distribution system; and shall include all those facilities of the water system under the complete control of the utility, up to the point where the customer's system begins.
- 3.1.3 The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.

3.1.4 The distribution system shall include the network of conduits used for the delivery of water from the source to the customer's system.

3.1.5 The customer's system shall include those parts of the facilities beyond the termination of the utility distribution system which are utilized in conveying utility delivered domestic water to points of use.

3.2 **Policy.**

3.2.1 No water service connection to any premises shall be installed or maintained by the water purveyor unless the water supply is protected as required by state laws and regulations and the Destin Water Users Rules and Regulations. Service of water to any premises 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 a backflow prevention assembly has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

3.2.2 The property owner's system should be open for inspection at all reasonable times to authorized representatives of Destin Water Users to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the general manager shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the property owner has corrected the condition(s) in conformance with State and County statutes and ordinances relating to plumbing and water supplies and regulations adopted pursuant thereto.

3.2.3 At no time will an approved backflow assembly restrict the flow of water in either a domestic potable water or dedicated fireline service.

3.2.3.A. In the case of both commercial and domestic water service the bore of the backflow assembly shall be no smaller than the full flow bore of the measuring device (meter).

3.2.3.B. In the case of dedicated firelines, the backflow assembly's bore will be the same diameter as the required tap, as per state and local fire statutes.

3.2.4 An approved backflow prevention assembly shall be installed on each service line to a customer's water system at or near the property line, or in a location approved by the general manager or his/her designee, but, in any case before the first branch line leading off the service line wherever the following conditions exist:

3.2.4.A In the case of premises having an auxiliary water supply which is not or may not be of safe bacteriological or chemical quality and which is not acceptable as an additional source by the general manager, the public water system shall be protected against backflow from the premises by installing an approved reduced pressure backflow prevention assembly on the service line.

3.2.4.B In the case of premises on 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 premises by installing an approved reduced pressure backflow prevention assembly on the service line. This shall include the handling of process waters and waters originating from the utility system which have been subject to deterioration in quality.

3.2.4.C In the case of premises having (1) internal cross-connections that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes making it impracticable or impossible to ascertain whether or not dangerous cross-connection exist, the public water system shall be protected against backflow from the premises by installing an approved reduced pressure backflow prevention assembly on the service line.

3.2.5 The type of protective assembly required under subsections 3.2.4.a,b, and c shall depend upon the degree of hazard which exists as follows:

3.2.5.A In the case of any premises where there is an auxiliary water supply as stated in subsection 3.2.4.A of this section and it is not subject to any of the following rules, the public water system shall be protected by an approved reduced pressure principle backflow prevention assembly.

3.2.5.B In the case of any premises 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 an approved reduced pressure principle assembly.

- 3.2.5.C In the case of any premises 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 an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.
- 3.2.5.D In the case of any premises where there are "uncontrolled" cross-connections, either actual or potential, the public water system shall be protected by an approved reduced pressure principle backflow prevention assembly at the service connection.
- 3.2.5.E In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the public water system shall be protected against backflow from the premises by an approved reduced pressure principle backflow prevention assembly and it shall be installed on each service to the premises.
- 3.2.5.F In the case of a dedicated fireline tap whether for fire sprinklers and/or hydrants, the public water system shall be protected by an approved double detector check backflow prevention 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 fireline downstream of the backflow assembly. If a dedicated fireline 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 assembly with detector check is required.
- 3.2.5.G In the case of irrigation supplied by a public potable water system as described in section 2.15, the public water system shall be protected with the minimum of an approved pressure vacuum breaker assembly. If any alternate source of water is cross connected, an immediate upgrade to an approved reduced pressure assembly is required. The installation requirements of the pressure vacuum breaker are very critical to its operational characteristics. If the installation requirements as mandated by AWWA cannot be met specifically, an immediate upgrade in protection to a reduced pressure assembly is required. If any chemicals are to be injected into the system (e.g., chemigation) an immediate upgrade in protection to a reduced pressure assembly is required.
- 3.2.5.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 ASSE approved hose bib vacuum breaker installed. If the pool's air gap does not meet AWWA installation requirements, an immediate repair will need to be performed, or a reduced pressure backflow assembly will be required.
- 3.2.5.I In the case of any property(s), other than single family dwellings, which utilizes reclaimed water for any purpose, an approved reduced pressure backflow 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 point of service on the potable water.
- 3.2.5.J Destin Water Users will furnish and install an in-line dual check backflow preventer on all metered residential potable water services which are one (1) inch in diameter or less. All residential potable water services larger than one (1) inch are required to be protected by an approved reduced pressure backflow prevention assembly, which will be installed at the point of service. The responsibility for purchasing, installing, testing and maintaining said assembly is that of the property owner.
- 3.2.6 As per the Florida contracting statutes chapter 489, all backflow assemblies are required to be installed by a licensed contractor with the following exemptions (chapter 489.103):
- A. "Allows you, as the owner of the property, to act as your own contractor with certain restrictions, even if you do not have a license."
 - B. "Or an employee of the owner as defined as a person who receives compensation from and is under the supervision and control of an employer who regularly deducts the FICA and withholding tax and provides workers compensation, all as prescribed by law.
 - C. "Any work or operation of a casual, minor or inconsequential nature in which the aggregate contract price for labor, materials and all other items is less than \$1,000.
- 3.2.7 Any backflow prevention assembly required herein shall be of a model and size approved by the general manager. The term "approved backflow prevention assembly" shall mean an assembly that has been manufactured and installed in full conformance with the standards established by the American Water Works Association entitled:

AWWA C510-89 Standard for Double Check Valve Backflow Prevention Assembly, and
AWWA C511-89 Standard for Reduced Pressure Backflow Prevention Assembly
and have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of California established by "Specifications of Backflow Prevention Assemblies"-Sec 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 Destin Water Users. 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. The following testing laboratory has been qualified by Destin Water Users to test and certify backflow preventers:

Foundation for Cross Connection 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 Destin Water Users. Backflow preventers which may be subjected to backpressure or backsiphonage 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 test or qualifications. It is also required that all backflow prevention assemblies will have replaceable seats. Destin Water Users reserves the right to disapprove any assembly in this purveyor system, which is otherwise approved, but has a chronic and excessively high failure rate.

- 3.2.8 It shall be the duty of the property owner at any premises where backflow prevention assemblies are installed to have a certified inspection/test upon installation and operational inspection/tests made at **least once per year** thereafter. In those instances where the general manager deems the hazard to be great enough he may require certified inspections at more frequent intervals. **These inspections and tests shall be at the expense of the property owner and shall be performed by a certified tester approved by the General Manager of Destin Water Users, Inc.** In an effort to offset the costs involved with maintaining this mandated program, Destin Waters Users shall charge the following fees for inspections and testing:

For all assemblies smaller than 2 inches in bore diameter \$25.00

For all assemblies 2 inches and larger in bore diameter \$50.00

It shall be the duty of the general manager to see that these timely tests are made. Destin Water Users shall notify the customer(s) in advance and in writing as to when the tests are to be undertaken. If a certified tester other than Destin Water Users is to perform the test/inspection, Destin Water Users shall be notified immediately upon receiving the test notice so that a representative may witness the tests if it is so desired. **These assemblies shall be repaired, overhauled or replaced by and at the expense of the property owner whenever assemblies are found to be defective.** Records of such tests, repairs and overhaul shall be kept and made available to the general manager. In the case of any backflow assembly(s) failing the annual test/inspection, a twenty-one (21) day period to bring the assembly to a passing condition will be issued and indicated on the test form. The reasons for the failure and recommended options to bring the assembly to a passing status will also be included on the test form. At the end of this twenty-one day period the assembly will be re-tested / re-inspected. If the needed repairs or replacements have not been performed, a written notice will be issued and an additional ten-day (10) grace period shall be granted. A second follow-up test/inspection will be performed at the end of the ten-day period. If the assembly has not been brought to a passing status, a final notice will be issued to the account holder, by way of a certified letter. This notice will include a final grace period of ten (10) days. If the assembly has not been brought to a passing status by the end of the ten-day final notice period, pursuant to Florida Administration Code 403.850- 403.864, The Department of Environmental Regulations 62-555.360 and Destin Water Users Rules and Regulations for Cross Connection Control, the procedure for discontinuing water service shall begin. Water service shall be discontinued until such time that the assembly has been brought to a passing status.

- 3.2.9 All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved assemblies for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the inspection and maintenance requirements of these rules and regulations, be excluded from the requirements of these rules so long as the general manager is assured that they will satisfactorily protect the utility system. Whenever the existing assembly is moved from the present location or requires more than minimum maintenance, or when the general manager finds that the maintenance constitutes a hazard to health, the unit shall be replaced, at the cost of the property owner, by an approved backflow prevention assembly meeting the requirements of this section.
- 3.2.10 Any breach or other violation of this Amendment to the Rules and Regulations of Destin Water Users, Inc., relating to Cross Connection Control shall be deemed to be a violation of such Rules and Regulations, and thereby subject to the remedies and penalties therein.