

SECTION D.2

POLICY FOR CROSS-CONNECTION CONTROL

033005

D.2.1 GOVERNING AGENCIES:

D.2.1.1 Florida Regulations: The State of Florida applied for and was granted primacy over the State's water programs under the authority of the Florida Safe Drinking Water Act, Chapter 403.850 - 403.864 Florida Statutes. In January 1975, the State of Florida adopted Florida Administrative Code Chapter 17 - 22 (Public Drinking Water Systems). The regulation went into effect in November 1977. The Florida regulations were revised in November 1987 to address the topics of cross-connection control and backflow prevention and incorporated more specific language than the language that was contained in the federal regulations.

The Florida Regulation (Chapter 17 - 22. F.A.C.) was revised again in January 1989, and renumbered as Florida Administrative Codes 17 - 550, 17 - 555, and 17 - 560. The Florida Department of Environmental Regulation (DER) was given rule-making enforcement authority for these regulations. The Department of Environmental Regulation's name was changed, it is now known as the Florida Department of Environmental Protection (DEP).

The Florida regulations were once again revised and renumbered in August 1994, and titled Rule 62-550, 62-555, and 62-560 Florida Administrative Codes (FAC). Florida Department of Environmental Protection (DEP) continues to have rule making and enforcement authority for these regulations.

Rule 62-550.200(22) F.A.C. (22) "CROSS-CONNECTION" means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

Rule 62-555.360(1) F.A.C. (1) Cross-connection, as defined in Rule 62-550.200, F.A.C., is prohibited. However, a person who owns or manages a public water system may interconnect to another public water system if that system is operated and maintained in accordance with this chapter.

Rule 62-555.360(2) F.A.C. (2) Community water systems, and all public water systems that have service areas also served by reclaimed water systems regulated under Part III of Chapter 62-610, F.A.C., shall establish and implement a routine cross-connection control program to detect and control cross-connections and prevent backflow of contaminants into the water system. This program shall include a written plan that is developed using recommended practices of the American Water Works Association set forth in *Recommended Practice for Backflow Prevention and Cross-Connection Control*, AWWA Manual M14, as incorporated into Rule 62-555.330, F.A.C.

Rule 62-555.360(3) F.A.C. (3) Upon discovery of a prohibited cross-connection, public water systems shall either eliminate the cross-connection by installation of an appropriate backflow prevention device acceptable to the Department or shall discontinue service until the contaminant source is eliminated.

Rule 62-555.360(4) F.A.C. (4) Devices shall be installed in agreement with and under the supervision of the supplier of water or his designated representative (plumbing inspector, etc.) at the consumer's meter, at the property line of the consumer when a meter is not used, or at a location designated by the supplier of water or the Department.

All rules cited above may be found at the Florida Department of Environmental Protection web site:
<http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm>

D.2.1.2 Authority: The intent of this policy is to establish parameters and procedures for eliminating existing cross-connections and preventing future cross-connections within the New Port Richey water system. The City of New Port Richey Land Development Code has adopted these Utility Standards by reference and provides legal authority for the enforcement of these standards. The Department of Environmental Regulation Rules and Regulations, Chapter 62-555 Florida Administrative Code provides legal authority for establishing a cross-connection control program.

D.2.1.3 Enforcement: The City of New Port Richey Public Works Department is granted authority to inspect any and all water service connections serviced by the Utility and take appropriate action to ensure the potable integrity of the system. The City is given the legal right to immediately disconnect any customer from the system if the service is determined to constitute a high hazard cross-connection.

D.2.1.4 Cross-Connection Detection and Prevention: This policy will include the establishment of a routine program to detect and prevent cross-connections. Water services and cross-connection control assemblies and devices will be subject to regular inspection. When any cross-connection violation becomes known, the Public Works Department will deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with City codes and state and local statutes relating to plumbing and water supplies and the regulations adopted pursuant thereto. If the physical break is accomplished by removal of the meter, the customer will be required to pay a re-installation fee before resumption of service.

D.2.2 DEFINITIONS:

D.2.2.1 Backflow: A reverse flow condition, created by a difference in water pressures, which causes water to flow back into the distribution pipes of a potable water supply from any source or sources other than an intended source caused by backsiphonage or back pressure.

D.2.2.2 Backflow Prevention Assembly: Any mechanical assembly, method or means that would prohibit the backflow of water or any other substance into the potable water supply.

D.2.2.3 Backpressure: A condition in which the pressure in the downstream plumbing system is greater than the supply pressure in the potable distribution system.

D.2.2.4 Backsiphonage: Reversed flow of any liquid caused by a partial vacuum (any pressure less than atmospheric pressure) in the potable distribution system.

D.2.2.5 Combined Water System: System which provides both drinking water and water for fire protection.

D.2.2.6 Containment (policy): The policy is to confine potential contamination caused by a cross-connection within the facility where it arises by installing a backflow prevention assembly at the meter or service connection where no meter is used.

D.2.2.7 Contamination: An impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality of the water supply by creating a health hazard.

D.2.2.8 City: The City of New Port Richey Public Works Department, New Port Richey, Florida.

D.2.2.9 Cross-Connection: Any arrangements of pipes, fittings, fixture, or devices that connects a non potable system to a potable water system through which backflow could occur (an unprotected connection).

D.2.2.10 Cross-Connection Control: The enforcement of an ordinance or other legal statement regulating cross-connections and the use of assemblies, devices, methods and procedures to prevent contamination of a potable water supply through cross-connection.

D.2.2.11 Degree of Hazard: The danger posed by a particular substance or set of circumstances. Generally, a low degree of hazard is one that does not affect health, however may be aesthetically objectionable. A high degree of hazard is one that could cause a serious illness or death.

D.2.2.12 Direct Connection: Any arrangement of fittings, pipes, fixtures, or devices that connects a potable water supply directly to a non potable source.

D.2.2.13 Distribution System: Piping system owned and operated by the water purveyor for the purpose of providing potable water to the community.

D.2.2.14 Fire System: Water system designed for the sole purpose of providing water for fire protection.

D.2.2.15 Indirect Connection: Any arrangement of pipes, fittings, or fixtures that indirectly connects a potable water supply to a non potable source in which another act, set of circumstances or condition is required to complete the connection.

D.2.2.16 Isolation (policy): To confine a potential source of contamination at a fixture or outlet that is within the system being served.

D.2.2.17 Non Potable Water: Any water of an unknown quality that may contain objectionable pollution, contamination, minerals, or infective agents and is considered unsafe and/or unpalatable for drinking. Non potable water is considered a high degree of hazard.

D.2.2.18 Potable Water: Water of a known quality and is safe for human consumption as described by the health authority having jurisdiction.

D.2.2.19 Potable Water System: Water system designed for the primary purpose of providing drinking water.

D.2.2.20 Thermal Expansion: The physical growth of water or any

other liquid when heated.

D.2.2.21 Venturi Principle: As the velocity (speed) of water increases, the pressure decreases, when this condition occurs it can induce a vacuum within a distribution system.

D.2.2.22 Water Purveyor: The owner or operator of a public, potable waterworks system that is engaged in producing and/or distributing potable water for domestic use.

D.2.3 CROSS CONNECTION-CONTROL REQUIREMENTS:

D.2.3.1 Service Connections: All connections to the City system shall be designed, installed, and maintained in a manner to prevent contamination of the distribution system. A backflow prevention assembly may be required at the service connection as a method of on-site containment.

D.2.4 BACKFLOW PREVENTION ASSEMBLIES AND APPLICATIONS:

D.2.4.1 Air Gap (AG): The unobstructed vertical distance through free atmosphere between the lowest opening from any pipe or outlet supplying water to a tank, plumbing fixture, or other device, and the flood-level rim of the receiving receptacle.

D.2.4.2 Reduced Pressure Zone (RPZ) Assembly: This assembly may be utilized in a high hazard situation when either backpressure or backsiphonage may occur.

D.2.4.3 Double Check Valve Assembly (DCVA): This assembly may be used in a low hazard situation when backsiphonage may occur.

D.2.4.4 Pressure Vacuum Breaker (PVB): This assembly may be utilized in a high hazard situation when backsiphonage may occur. This assembly is used primarily with lawn irrigation systems.

D.2.4.5 Atmospheric Vacuum Breaker (AVB): This may not be used in the City of New Port Richey's distribution system.

D.2.4.6 Dual Check Valve (DCV): This may not be used in the City of New Port Richey's distribution system.

D.2.5 INSTALLATION OF BACKFLOW PREVENTION DEVICES:

D.2.5.1 Location: The primary location for all backflow assemblies shall be on the customer's side of the water meter, in-line with the water service at the service connection. Alternate locations must be approved by the City of New Port Richey.

D.2.5.2 Installation: The consumer is responsible for installation of any and all required backflow prevention assemblies. The installation must be in accordance with the manufacturer's requirements and City specifications.

D.2.6 TESTING BACKFLOW PREVENTION ASSEMBLIES:

D.2.6.1 Requirements: All reduced pressure zone, double check valve assembly, and pressure vacuum breaker backflow prevention assemblies in commercial and multi-family installations will be tested annually by the utility customer. A

successful test of the assembly or assemblies shall be completed by a Certified Backflow Prevention Tester and the results sent to the City of New Port Richey Department of Public Works. All residential customers will have their backflow assemblies tested annually by a City of New Port Richey employee who is a Certified Backflow Prevention Tester. All tests performed shall be in accordance with procedures and guidelines established by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. A backflow prevention assembly will be considered noncompliant if the assembly fails to meet minimum requirements set forth by this agency.

D.2.7 MAINTENANCE OF BACKFLOW PREVENTION ASSEMBLIES:

D.2.7.1 Repairs: Repairs to backflow prevention assemblies will be the responsibility of the consumer. All repairs must be performed in accordance with manufacturer's recommendations and are subject to City inspection.

D.2.7.2 Re-inspection: All backflow assemblies will be re-inspected by the City following any repairs by the consumer.

D.2.7.3 Maintenance: The consumer will be required to maintain the backflow assembly and the surrounding area in a manner by which the assembly is both accessible and operational.

D.2.8 CROSS CONNECTION-CONTROL REQUIREMENTS:

D.2.8.1 Residential Potable Connections: Backflow prevention assemblies will not normally be required on potable residential service connections unless a hazardous situation exists or reuse water is provided. If reuse water is available and connected for residential irrigation, a double check valve assembly must be installed on the potable service connection.

D.2.8.1.1 Residential Potable Connections (Existing or New Well): All residential customers requesting potable water service where there is an existing on-site well shall be required to install a reduce pressure zone assembly on the potable service connection. If potable water is already on-site of a residential property and a new well is to be installed on-site, a reduced pressure zone assembly shall be installed on the potable water connection(s). Prior to the activation of new potable water service, the city shall be provided access to the property and shall verify that a physical disconnection from the well piping and the potable water piping has been completed.

D.2.8.2 Residential Irrigation Connections: All residential irrigation systems connected to potable water will require a backflow prevention assembly at the point of connection. Under normal conditions, a double check valve assembly or a pressure vacuum breaker will be adequate; however, if an on-site well exists, chemical injection is utilized, or a source of toxic contamination is present, a reduced pressure zone assembly will be required.

D.2.8.3 Multi Family Potable Connections: All multi-family potable water connections will require a reduce pressure zone assembly on the potable water service connection.

D.2.8.4 Commercial and Industrial Potable Connections: All commercial and industrial potable water connections will require a reduced pressure zone assembly installed at the potable water service connection.

D.2.8.5 Commercial and Industrial Irrigation Connections: All commercial and industrial irrigation potable water connections will require a

reduced pressure zone assembly at the potable service connection.

D.2.8.6 Commercial and Industrial Fire Sprinkler Connections: Any connection installed for the purpose of providing water service to a building fire sprinkler system must be protected by a double check detector assembly; however, if a booster pump system is installed on the fire line, a reduced pressure zone backflow preventer will be required.

D.2.9 RETROFITTING OF EXISTING SERVICES:

D.2.9.1 Requirements: Existing potable water service connections not equipped with a backflow prevention assembly will be retrofitted as required to comply with Section D.2.8 of this document.

D.2.9.2 Notification: The City will notify in writing each potable water customer not conforming to this policy. The notification letter will outline requirements and establish a deadline for compliance.

D.2.10 APPROVAL OF BACKFLOW PREVENTION ASSEMBLIES:

D.2.10.1 Approved Assemblies: Any assembly installed within the New Port Richey water system must meet the performance criteria set forth by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

D.2.10.2 Installation Approval: All backflow assembly installations will be inspected by the City subject to the specifications defined within the City of New Port Richey Utilities Standards for Design and Construction of Water and Wastewater Facilities.

D.2.11 PENALTIES:

D.2.11.1 Low Hazard Noncompliance: Any customer of the New Port Richey water system found to be in noncompliance with the requirements of this policy will be so notified in writing. A 30-day grace period will be established, during which time the consumer will modify the system to comply with this policy. Failure to comply could result in discontinued service and/or penalty fines.

D.2.11.2 High Hazard Noncompliance: If a high hazard backflow situation is detected, the connection will be immediately disconnected. The service will not be restored until the proper backflow assembly is installed and the source of contamination is eliminated.