

PICO WATER DISTRICT CROSS-CONNECTION CONTROL PROGRAM

1.0 Responsibility and Scope of Program.

The Pico Water District ("District") adopts this Program to protect the public water supply from contamination. This Cross-Connection Control Program shall include, but not be limited to, the following elements:

- (a) These operating rules;
- cross- (b) The conducting of surveys to identify Water User premises where connections are likely to occur;
- (c) The provision of backflow protection by the Water User at the User's connection or within the User's premises or both;
- (d) The provision of at least one person trained in cross-connection control to carry out the cross-connection Program;
- (e) The establishment of a procedure or system for testing backflow preventers;
- backflow (f) The maintenance of records of locations, tests, and repairs of preventers.

2.0 Definitions.

In addition to the definitions in Section 4010.1 of the Health and Safety Code, the following terms are defined for the purpose of this Chapter:

- (a) "Approved Water Supply" is a water supply whose potability is regulated by a State or local health agency.
- (b) "Auxiliary Water Supply" is any water supply other than that received from a public water system.
- (c) "Air-gap Separation (AG)" is a physical break between the supply line and a receiving vessel.
- the (d) "AWWA Standard" is an official standard developed and approved by American Water Works Association (AWWA).
- (e) "Cross-Connection" is an unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur, shall be considered to be cross-connections.
- (f) "District" is the Pico Water District.
- (g) "Double Check Valve Assembly (DC)" is an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the water tightness of each check valve.
- (h) "Health Agency" means the California Department of Public Health Services.
- (i) "Reclaimed Water" is a wastewater which as a result of treatment is suitable for uses other than potable use.

- (j) "Reduced Pressure Principle Backflow Prevention Device (RP)" is a backflow preventer incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.
- (k) "User Connection" is the point of connection of a User's piping to the District's facilities.
- (l) "Water User" or "User" is any person obtaining water from a public water supply.

3.0 Evaluation of Hazard.

The District shall evaluate the degree of potential health hazard to the public water supply which may be created as a result of conditions existing on a User's premises. The District, however, shall not be responsible for abatement of cross-connections which may exist within a User's premises. As a minimum, the evaluation should consider the existence of cross-connections, the nature of materials handled on the property, the probability of a backflow occurring, the degree of piping system complexity and the potential for piping system modification. Special consideration shall be given to the premises of the following types of Water Users:

- (a) Premises where substances harmful to health are handled under pressure in a manner which could permit their entry into the public water system. This includes chemical or biological process waters and water from public water supplies which have deteriorated in sanitary quality.
- (b) Premises having an auxiliary water supply, unless the auxiliary supply is accepted as an additional source by the District and is approved by the Health Agency.
- (c) Premises that have internal cross-connections that are not abated to the satisfaction of the District or the Health Agency.
- (d) Premises where cross-connections are likely to occur and entry is restricted so that cross-connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.
- (e) Premises having a repeated history of cross-connections being established or re-established.

Where the Water User is engaged in the handling of especially dangerous or corrosive liquids or industrial or process waters, the District may require the Water User to eliminate certain plumbing or piping connections as an additional precaution and as a protection to the backflow prevention devices.

4.0 User Supervisor.

The District may, at its discretion, require an industrial Water User to designate a User supervisor when the Water User's premises has a multi-piping system that conveys various types of fluids, some of which may be hazardous and where changes in the piping system are frequently made. The User supervisor shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the Water User's pipelines and equipment.

5.0 Approval of Backflow Preventers.

Backflow preventers required by this Program shall have passed laboratory

and field evaluation tests performed by a recognized testing organization which has demonstrated its competency to perform such tests to the District, or to the Health Agency.

6.0 Construction of Backflow Preventers.

- (a) Air-gap Separation. An Air-gap separation (AG) shall be at least double the diameter of the supply pipe, measured vertically from the flood rim of the receiving vessel to the supply pipe; however, in no case shall this separation be less than one inch.
- (b) Double Check Valve Assembly. A required double check valve assembly (DC) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Double Check Valve Type Backflow Preventive Devices which is herein incorporated by reference.
- (c) Reduced Pressure Principle Backflow Prevention Device. A required reduced pressure principle backflow prevention device (RP) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Reduced Pressure Principle Type Backflow Prevention Devices which is herein incorporated by reference.

7.0 Location of Backflow Preventers.

- (a) Air-gap Separation. An air-gap separation shall be located as close as practical to the User's connection and all piping between the User's connection and the receiving tank shall be entirely visible unless otherwise approved in writing by the District.
- (b) Double Check Valve Assembly. A double check valve assembly shall be located as close as practical to the User's connection and shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance.
- (c) Reduced Pressure Principle Backflow Prevention Device. A reduced pressure principle backflow prevention device shall be located as close as practical to the User's connection and shall be installed a minimum of twelve inches (12"') above grade and not more than thirty-six inches (36"') above grade measured from the bottom of the device and with a minimum of twelve inches (12"') side clearance.

Plans for backflow preventer installation must be approved by the District prior to installation. All costs of installation shall be borne by the Water User.

8.0 Type of Protection Required.

The type of protection that shall be provided to prevent backflow into the public water supply shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of protective device that may be required (listed in an increasing level of protection) includes: Double Check Valve Assembly-(DC), Reduced Pressure Principle Backflow Prevention Device-(RP), and an Air-gap Separation-(AG). The Water User may choose a higher level of protection than required by the District. The minimum types of backflow protection required to protect the public water supply, at the Water User's connection to the premises, with various degrees of hazard are given in Table 1. Situations which are not covered in Table 1 shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by the District.

TABLE 1

TYPE OF BACKFLOW PROTECTION REQUIRED

	Degree of Hazard	Minimum Type of Backflow Prevention
(a)	Sewage and Hazardous Substances	AG
(1)	Premises where the public water system is used to supplement the reclaimed water supply.	AG
(2)	Premises where there are wastewater pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP be provided in lieu of an AG if approved by the health agency and District.	AG
(3)	Premises where reclaimed water is used and there is no interconnection with the potable water system. A RP may be provided in lieu of an AG if approved by the health agency and District.	AG
(4)	Premises where hazardous substances are handled in any manner in which the substances may enter the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and District.	AG
(5)	Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.	RP
(b)	Auxiliary Water Supplies	
(1)	Premises where there is an unapproved auxiliary water supply which is interconnected with the public water system. An RP or DC may be provided in lieu of an AG if approved by the health agency and District.	AG
(2)	Premises where there is an unapproved auxiliary water supply and there are no interconnections with the public water system. A DC maybe provided in lieu of an RP if approved by the Health Agency and District.	RP
(c)	Fire Protection Systems	
(1)	Premises where the fire system is directly supplied from the public water system and there is an unapproved auxiliary water supply on or to the premises (not interconnected).	DC
(2)	Premises where the fire system is supplied from the public water system and interconnected with an unapproved auxiliary water supply. An RP may be provided in lieu of an AG if approved by the Health Agency and District.	AG
(3)	Premises where the fire system is supplied from the public water system and where either elevated storage tanks or fire pumps which take suction from private reservoirs or tanks are used.	DC
(d)	Dockside Watering Points and Marine Facilities	
(1)	Pier hydrants for supplying water to vessels for any purpose.	RP
(2)	Premises where there are marine facilities.	RP
(e)	Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that do not exist.	RP
(f)	Premises where there is a repeated history of cross-connections being established or re-established.	RP

- (a) The District shall assure that adequate maintenance and periodic testing are provided by the Water User to ensure their proper operation. All testing shall be performed at the Water User's expense.
- (b) Backflow preventers shall be tested by persons who have demonstrated their competency in testing of these devices to the District or Health Agency.
- (c) Backflow preventers shall be tested at least annually or more frequently if determined to be necessary by the Health Agency or District. When devices are found to be defective, they shall be repaired or replaced in accordance with the provisions of this Program and at the expense of the Water User.
- (d) Backflow preventers shall be tested immediately after they are installed, relocated or repaired and not placed in service unless they are functioning as required.
- (e) The District shall notify the Water User when testing of backflow preventers is needed. The notice shall contain the date when the test must be completed.
- (f) Reports of testing and maintenance shall be maintained by the District for a minimum of three years.