

# **Cross-Connection Control Plan**

## **Big Pine Community Services District**

### **Section 1 -- Purpose**

The purpose of this plan is to protect the potable water supply from the possibility of contamination or pollution by isolating such contaminants or pollutants that could backflow into the potable water system; and to promote the elimination or control of existing cross connections, actual or potential, between the potable water system and non-potable water systems and plumbing fixtures; and to provide for the maintenance of a continuing program of cross-connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

As water is transported from the treatment facility to the customer, opportunities exist for unwanted substances to contaminate it. One common means for such contamination is by backflow of non-potable fluids through cross-connections into the potable water system. All users of the system, and workmen associated with the system, must be aware of this problem and constantly alert to any connection to the system which may allow such a cross-connection and what preventative measures can be taken to ensure a safe, potable water supply.

### **Section 2 --Definitions**

#### **Air-Gap**

The unobstructed vertical distance through free atmosphere between the lowest point of a water supply outlet and the flood level rim of the fixture or assembly into which the outlet discharges. These vertical, physical separations must be at least twice the diameter of the water supply outlet, but never less than 1 inch (25 mm).

#### **Approved**

Accepted by the authority responsible as meeting an applicable specification stated, or as suitable for the proposed use.

#### **Auxiliary Water Supply**

Any water supply on or available to the premises other than the approved potable water supply. These auxiliary waters may include water from another potable water supply or any natural source such as a well, spring, river, stream, harbor, etc., or "used waters" or "industrial fluids". These waters may be polluted, or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

#### **Backflow**

The undesirable reversal of flow in a potable water distribution system as a result of a cross-connection.

#### **Backflow Preventer**

An assembly or means that prohibits backflow into the potable water supply.

#### Backpressure

A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, air/steam pressure, or any other means, which may cause backflow.

#### Backsiphonage

Backflow caused by a negative or reduced pressure in the supply piping.

#### Backflow Preventer

An assembly or means designed to prevent backflow.

##### A. Air Gap

The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet, never less than 1-inch.

##### B. Reduced-Pressure Backflow-Prevention Assembly

The approved reduced-pressure principle backflow-prevention assembly consists of two (2) independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two (2) tightly closing resilient-seated shutoff valves as an assembly and equipped with properly located resilient-seated test cocks.

##### C. Double Check Valve Assembly

The approved double check valve assembly consists of two (2) internally loaded check valves, either spring loaded or internally weighted, installed as a unit between two (2) tightly closing resilient-seated shutoff valves and fittings with properly located resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (that is, a pollutant).

#### 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.

#### Cross-Connection

A connection or 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 or nonpotable), or any matter that may change the color or add odor to the water.

## Cross-Connections -- Controlled

A connection between a potable water system and a non-potable water system with an approved backflow-prevention assembly properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

## Hazard, Degree of

The term is derived from an evaluation of the potential risk to the 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 into the potable water supply, cause death, illness, spread disease, or have a high probability of causing such effects.

### B. Hazard -Plumbing

A plumbing-type cross connection in a consumer's potable water system that has not been properly protected by an approved air gap or an approved backflow-prevention assembly.

### C. Hazard –Non-health

A cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable, if introduced into the potable water supply.

### D. Hazard -System

An actual or potential threat of severe damage to the physical properties of the potable water system or the consumer's potable water system or of a pollution or contamination that would have a protracted effect on the quality of the potable water in the system.

## Industrial Fluid System

Any system containing a fluid or solution that 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 potable water system that may have deteriorated in sanitary quality; chemicals in fluid form; contaminated natural waters, such as wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, and so forth; oils, gases, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other purposes.

## Pollution

The presence of any foreign substance in water that tends to degrade its quality so as to constitute a non-health hazard or impair the usefulness of the water.

#### Service Connection

The terminal end of a service connection from the potable water supply, that is, where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the customer's water system. There should be no unprotected takeoffs from the service line ahead of any backflow-prevention assembly located at the point of delivery to the customer's water system.

#### Water – Non-potable

Water that is not safe for human consumption or that is of questionable quality.

#### Water - Potable

Water that is safe for human consumption as described by the public health authority having jurisdiction.

#### Water Purveyor

Owner of the source facilities, treatment facilities, and the distribution system providing potable water to customers.

#### Water-Used

Any water supplied by a water purveyor from a 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 – Policy**

- A. No water service connection shall be installed or maintained by the water purveyor unless the water supply is protected as required by California laws and regulations. Service of water to any customer shall be discontinued by the water purveyor if a required backflow-prevention assembly is not installed, tested, and maintained, or if it is found that a backflow-prevention assembly has been removed, bypassed, or if an unprotected cross connection exists. Service will not be restored until such conditions or defects are corrected.
- B. Both the water purveyor's system and any customer's system shall be open for inspection at all reasonable times to authorized representatives of the Big Pine Community Services District to determine whether cross-connections or other structural or sanitary hazards exist. When such a condition becomes known, the water purveyor shall deny or immediately discontinue service to the customer by providing for a physical break in the service line until the customer has corrected the condition in conformance with California statutes relating to plumbing and water supplies.
- C. Backflow-prevention devices shall be specified in accordance with the American Water Works Association (AWWA) Manual of Water Supply Practices, *Recommended Practice for backflow Prevention and Cross-Connection Control* (AWWA M14), current version, the Foundation for Cross Connection Control and

Hydraulic Research (FCC & HR) at the University of Southern California, and other nationally recognized standards setting agencies.

- D. Any backflow-prevention assembly required by California laws and regulations shall be a model and size approved by the California Code of Regulations, Title 17. The term "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 and has met completely the required laboratory and field performance specifications.
- E. It shall be the responsibility of the water purveyor to have certified inspection and operational tests made at least once per year for any backflow-prevention assemblies on the water purveyor's property. These inspections and tests shall be made at the expense of the water purveyor and shall be performed by a certified backflow tester. These assemblies shall be repaired, overhauled, or replaced at the expense of the water purveyor whenever said assemblies are found to be defective. Records of such tests, repairs, and overhaul shall be kept on file and shall be submitted to the California Department of Public Health.
- F. It shall be the responsibility of any customer utilizing potable water from the water purveyor who has backflow-prevention assemblies installed within their property to have certified inspections and operational tests made at least once per year. These inspections and tests shall be made at the expense of the customer and shall be performed by a certified tester. These assemblies shall be repaired, overhauled, or replaced at the expense of the customer whenever said assemblies are found to be defective. Records of such tests, repairs, and overhaul shall be kept on file and shall be submitted to the water purveyor.