SECTION 11

CONTROL OF BACKFLOW AND CROSS CONNECTIONS

11.01 GENERAL

No water service connection to any premises shall be installed or maintained by the District unless the public water supply is protected as required by State regulations and the requirements stated herein. This regulation supplements and does not supersede local plumbing regulations, codes or ordinances, or State Department of Health Services Regulations relating to water supplies.

11.02 PURPOSE OF THIS SECTION

A. To protect the public potable water supply of the District from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants which could backflow into the public water systems.

B. To promote the elimination or control of existing cross-connections, actual or potential, between the customer's in-plant potable water system(s) and non-potable water system(s), plumbing fixtures and industrial piping system.

C. 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 District's potable water system.

11.03 DISTRICT RESPONSIBILITY

The District shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. If, in the judgment of said District, an approved backflow prevention assembly is required on the customer's water service connection for the safety of the water system, the District shall give notice in writing to said customer to install such an approved backflow prevention assembly. District shall not be responsible for any loss or damage directly or indirectly resulting from or caused by the proper, improper, or negligent installation, operation, use, repair or maintenance of, or interfering with, any protective device by any customer or any other person.

11.04 CUSTOMER RESPONSIBILITY

It shall be the responsibility of each customer at their own expense to furnish, install, and keep in good working order and safe condition, any and all protective devices. Once notified of the need to install a backflow prevention assembly, the customer shall immediately install such approved assembly at the customer's own expense; and failure, refusal or inability on the part of the customer to install, have tested and maintain said assembly shall constitute a ground for discontinuing water service to the premises until such requirements have been satisfactorily met.

Customer to maintain adequate heat source to backflow prevention assembly housing in order to prevent cold weather from affecting the operation of the assembly.

11.05 REQUIREMENTS

A. Water System

1. The water system shall be considered as made up of two parts; the utility system and the customer system.

2. Utility system shall consist of the source and 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. 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. In the absence of any other contractual relationship, the customer's system begins at the outlet of the District's meter.

B. Policy

1. No water service connection to any premises shall be installed or maintained by the District unless the water is protected as required by State laws and regulations and this ordinance. Service of water to any premises shall be discontinued by the District if a backflow prevention assembly required by this ordinance 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.

2. The customer's system shall be open for inspection at all reasonable times to authorized representatives of the District and County Health Departments to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the District shall 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 in conformance with State, County and District regulations relating to plumbing and water service.

3. An approved backflow prevention assembly shall also be installed on each service line to a customer's water system at or near the property line or immediately inside the building being served; but in all cases, before the first branch line leading off the service line wherever the following conditions exist:

   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 District, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line appropriate to the degree of hazard.

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 backflow prevention assembly in the service line appropriate to the degree of hazard.

c. In the case of premises having (1) internal cross-connection that cannot be permanently corrected or 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-connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line.

4. The type of protective assembly required under subsections B. 1, 2 & 3, shall depend upon the degree of hazard which exists as follows:

a. In the case of any premises where there is an auxiliary water supply as stated in subsection B.3.a. of the section and it is not subject to any of the following rules, the public water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly.

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 double check valve assembly.

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 air-gap separation or an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage plumbing stations, chemical manufacturing plants, hospitals, mortuaries or plating plants.

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 air-gap separation or an approved reduced pressure principle backflow prevention assembly at the service connection.

e. In the case of any premises where, because of the 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 either an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly on each service to the premises.

5. Any backflow prevention assembly required herein shall be a model and size approved by the District. 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 have met completely the laboratory and field performance specifications, testing and certifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California.

11.06 CONTROL OF BACKFLOW AND CROSS CONNECTIONS

A. The protection required to prevent backflow into the public water system shall be commensurate with the degree of hazard that exists on the customer's premises. The types of backflow prevention assemblies that may be required include:

Double Check Valve Assembly	(DC)
Reduced Pressure Principle Assembly	(RP)
Air Gap Separation	(AG)

B. The District shall maintain a list of the minimum types of backflow protection required at specific facilities. Those facilities or situations which are not listed shall be evaluated on a case by case basis and the appropriate type of protection shall be as determined by the District. The list will be available for public inspection at the office of the General Manager during normal business hours.

11.07 INSTALLATION REQUIREMENTS FOR BACKFLOW PREVENTION ASSEMBLIES

Customers with services which require backflow protection assemblies shall purchase approved devices and pay all costs associated with installation of the appropriate size and type of device. New installations shall be installed under private contract at the customer's expense. Existing facilities determined to need backflow protection will be retrofitted with the appropriate device under private contract at the customer's expense. All new installations shall be completed and tested prior to obtaining a certificate of occupancy.

A. Air-Gap Separation (AG)

1. An air-gap separation shall be located on the water customer's side of, and as close to, the service connection as is practicable.

2. All piping from the service connection to the receiving tank shall be above grade and visible unless otherwise approved by the District.

3. There must be no outlet, tee, tap, take-off or connection of any sort, to or from the supply pipeline, between the service connection and the air-gap separation.

B. Reduced Pressure Principle Assembly (RP) and Double Check Valve Assembly (DC)

1. RP and DC devices to be installed above ground on the water customer's side of, and as close to, the service connection as is practicable, unless otherwise approved by the District.

2. RP and DC to be installed a minimum of twelve inches (12") above finished grade and not more than thirty-six (36") above finished grade as measured from the bottom of the assembly, and shall be readily accessible for maintenance and testing.

3. There shall be no outlet, tee, tap, take-off or connection of any sort, to or from the supply pipeline, between the service connection and the backflow prevention assembly.

4. RP and DC devices shall be housed in a heated structure such that it will be kept from freezing and with adequate drainage. If a separate housing is not practicable, the device must be installed within the structure being served, in such a manner that it is readily accessible for inspection and testing. Care should be taken to place the device in an area which will not be adversely affected when the RP relief port opens during a backflow condition.

   It is the customer's responsibility to provide drainage capable of removing maximum flow discharged through the device according to manufacturer's specifications.

   In all cases the location of the device must be approved by the District.

5. RP shall be installed such that no part of the assembly will be submerged during normal operating and weather conditions.

11.08 TESTING AND MAINTENANCE

The District requires that each backflow prevention assembly be tested annually to assure proper operation. In instances where a hazard is deemed great enough, testing may be required at more frequent intervals. The customer shall bear all costs of device testing. The cost of any maintenance required as a result of inspections or testing is the responsibility of the customer. Maintenance work shall be performed by the owner or the owner's representative. Records of inspections, testing or repairs shall be kept by the District and made available to the California Department of Health Services.

The District will notify the customer when tests are required and supply the necessary test forms and instructions. These forms will be completed by the certified backflow prevention tester and returned to the District by the date indicated. Testers shall be certified by the AWWA, California-Nevada Section. Test procedures shall be those recommended by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

11.09 NON-COMPLIANCE

If, following an inspection and/or testing a device is found to be in non-compliance, the customer shall be notified and given fourteen (14) days to correct the deficiency after which time the inspection will be repeated.

The District shall cause discontinuance of water service if a backflow prevention device has failed to be tested properly or properly maintained or installed as required by the District.

Notification of intent to terminate water service shall be commensurate with the hazard to public health and may be delivered to the tenant, owner, or both as the situation requires.

11.10 ADMINISTRATIVE FEES

The District shall charge an annual fee for the record keeping and notification requirements. Charges are as set forth in EXHIBIT "A", WATER RATES.