

REGULATION NO. 11

BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL

11.00 General

A backflow device is a precautionary device approved by the State Water Resources Control Board, Division of Drinking Water and the University of Southern California (USC) Hydraulic Research Section that provides protection from hazards getting back into the District's treated water system. Such types of hazards could be a separate irrigation system on a property, a business that uses chemicals, a property with a sewage lift station, or an unknown potential. All of the proceeding hazards are considered "high hazard" situations and require what is known as a reduced pressure backflow device. Reduced pressure (RP) backflow devices have a reduced zone in the center of the device with two independent working check valves that prevent water from flowing back into the water system. This device is required per State Health Code Title 17.

11.01 Purpose

1. To protect the public potable water supply, provided by the Tuolumne Utilities District (District), from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the consumer's private water system(s) such contaminants or pollutants which could backflow into the public water system; and,
2. To promote the elimination or control of existing cross-connections, actual or potential, between the consumer's in-plant potable water system(s) and non-potable water system(s), plumbing fixtures and industrial piping systems; and,
3. To provide for the maintenance of a continuing Program of Cross-Connection Control this will systematically and effectively prevent the contamination or pollution of all potable water system.

11.02 Responsibility

The General Manager who oversees the Operations Manager 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. The Operations Manager will oversee the backflow prevention and cross-connection control program at the District. If, in the judgment of the Operations Manager, an approved backflow prevention assembly is required (at the customer's water service connection) for the safety of the water system, he (the Operations Manager) or his designated agent shall give notice in writing to said customer to install such an approved backflow prevention assembly(s) at specific location(s) on his premises. The customer shall immediately install such approved assembly(s) at the customer's own expense. Failure, refusal or inability on the part of the customer to install, have tested, and maintain said assembly(s) within thirty (30) days shall constitute a ground for discontinuing water service to the premises until such requirements have been satisfactorily met. The District has the option to have the assembly(s) tested at the customer's expense.

The District's ownership of and responsibility for operation and maintenance of facilities shall end at the discharge side of water meters that are installed by the District, and at the underground fitting prior to the inlet side of the fire sprinkler check valve assemblies. If there is an underground valve on the District's side of the fire sprinkler check valve assembly within 40' of the assembly, the District's responsibility shall end at the underground valve.

11.02.1 Chain of Command:

General Manager
Operations Manager
Water Master
Distribution Foreman/Cross-Connection Specialist
Administrative Coordinator
Utility Worker/Tester
Utility Worker/Tester

11.03 Definitions

Approved

Accepted by the Operations Manager as meeting an applicable specification stated or cited in this ordinance, or as suitable for the proposed use.

Auxiliary Water Supply

Any water supply on or available to the premises other than the purveyor's approved public water supply will be considered as an auxiliary 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, raw water ditch, gray water, spring, river, stream, harbor, etc. These waters may be contaminated or polluted or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

Backflow

The reversal of the normal flow of water caused by either back pressure or backsiphonage.

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 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 diameter of the supply pipe, measured vertically, above the overflow rim of the vessel; and in no case less than one inch.

b. **Reduced Pressure Principle Assembly**

An assembly of two independently acting approved check valves together with a hydraulically operating, mechanically independent differential pressure relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located test cocks and tightly closing shut-off valves at each end of the assembly. The entire assembly shall meet the design and performance specifications as determined by a laboratory and a field

evaluation program performed by a recognized testing agency which has demonstrated their competency to perform such tests to the State Water Resources Control Board, division of Drinking Water for backflow prevention assemblies. The assembly shall operate to maintain the pressure in the zone between the two check valves at an acceptable level less than the pressure on the public 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 public water supply side of the device. 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 must be readily accessible for in-line testing and maintenance and be installed in a location where no part of the assembly will be submerged.

c. Double Check Valve Assembly

An assembly of two independently operating approved check valves with tightly closing shut-off valves on each end 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 as determined by a laboratory and field evaluation program performed by a recognized testing agency which has demonstrated their competency to perform such tests to the State Water Resources Control Board, Drinking Water Division for backflow prevention assemblies. To be approved, these assemblies must be readily accessible for in-line testing and maintenance.

d. Detector Check Valve Assembly

A double check valve assembly (See c. above) designed for fire sprinkler systems, which includes a bypass line with a separate backflow prevention device and a meter for registering low flows.

Backpressure

The flow of water or other liquids, mixture or substances under pressure into the distribution pipes of a potable water supply system from any source or sources other than the intended source.

Backsiphonage

The flow of water or other liquids, mixture or substances into the distribution pipes of a potable water supply from any source other than its intended source caused by the reduction of pressure in the potable water supply system.

Contamination

Means an impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual or potential hazard to the public health through poisoning or through the spread of disease.

Cross Connection

Any physical connection or arrangement of piping or fixtures between two otherwise separate piping systems, one of which contains potable water and the other non-potable water or industrial fluids of questionable safety, through which, or because of which, backflow may occur into the potable water system. This would include any temporary connections, such as swing connections, removable sections, four way plug valves, spools, dummy section of pipe, swivel or change-over devices or sliding multiport tube.

Cross Connection - 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.

Cross Connection Control by Containment

The installation of an approved backflow prevention assembly at the water service connection to any customer's premises where it is physically and economically infeasible to find and permanently eliminate or control all actual or potential cross-connection within the customer'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 customer's water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of the cross-connection.

Degree of Hazard

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.

a. Hazard - Health

Any condition, device or practice in the water supply system and its operation which could create, or in the judgment of the Operations Manager, may create a danger to the health and well-being of the water customer.

b. Hazard - Plumbing

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

c. Hazard - Pollution

An actual or potential threat to the physical properties of the water system or to the potability of the public or the customer's potable water system but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

d. Hazard - System

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

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, pollutional, 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 processed 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 alkalines, circulating 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, paraffin's, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for fire-fighting purposes.

Operations Manager

The Operations Manager or his designated agent is vested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this ordinance.

Pollution

Means the presence of any foreign substance (Organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

Water - Non-potable

Water which is not safe for human consumption or which is of questionable potability.

Water - Potable

Any water which, according to recognized standards, is safe for human consumption.

Water - Service Connection

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 customer's water system. If a meter is installed by the District 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 line ahead of any meter or any backflow prevention assembly located at the point of delivery to the customer'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.

Water - Used

Any water supplied by a Water Purveyor from a public potable water system to a customer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the Water Purveyor.

Water Well or Well

A water well is any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into the underground.

Well Inactive or Well Standby

A well not routinely operating, but capable of being made operable with a minimum effort.

11.04 Requirements for Backflow Prevention Devices

11.04.1 Water System

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

a. Utility System

The 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 District, up to the point where the customer's system begins.

1. Source

The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.

2. Distribution System

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

b. Customer's System

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

11.04.2 Policy

a. Service

No water service connection to any premises shall be installed or maintained by Tuolumne Utilities District unless the water supply is protected as required by State laws and regulations as described in Title 17 - Public Health Regulations

Relating to Cross Connections and this Water Ordinance. Service of water to any premises shall be discontinued by Tuolumne Utilities District if a backflow prevention assembly has been removed, by-passed or an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

b. Inspection

The customer's system shall be open for inspection at all reasonable times to authorized representatives of Tuolumne Utilities District, the State Water Resources Control Board, Division of Drinking Water, or the Tuolumne County Department of Environmental Health to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations exist. When such a condition becomes known, the Operations Manager 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(s) in conformance with the State statutes relating to plumbing and the water supplies and the regulations adopted pursuant thereto.

c. Surveys

1. District has determined specific industries that may pose an actual or potential backflow hazard to the public water supply. These industries are identified from lists of industries where cross-connections are likely to be found, as provided by the State of California, and the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research. From these lists, specific consumers in the District service area shall be identified by directories, mailing lists, associations and business licenses.

2. Survey

When possible, a request to survey the premises shall be made and a date and time agreed upon. Should the request to survey be denied, letters shall be sent directing installation of the appropriate backflow assembly based on knowledge of the specific industry.

Whenever a property is sold or transferred, an office survey will be required of the new property owners. An office survey will also apply towards a change in name or ownership, or changes of use to a District customer account.

During the office survey many factors are considered to determine if the consumer is or could be a potential hazard to the public water supply.

These include:

- Types of water on-site
- Uses of water on-site
- Types of water using equipment
- Condition of water using equipment
- Complexity of plumbing on-site, and the potential for alterations of that system
- Storage and use of hazardous materials on-site

All the factors found and recorded during the survey shall be considered in the determination of backflow prevention requirements.

Each consumer requiring a backflow prevention assembly shall be notified by letter. The consumer shall be informed of their responsibility to provide backflow protection and the type of backflow assembly required in accordance with Title 17 of the California Administrative Code.

Should it be determined that the consumer does not require a backflow prevention device, they shall be notified in person that no such assembly is required at this time.

d. Installation of Backflow Assemblies

Backflow prevention assemblies shall be installed in accordance with Section 7603, Title 17 of the California Administrative Code and District's approved schematics, and any deviation from these drawings shall have written TUD approval.

1. Air-Gap Separation (AG)

The 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 by District in writing.

2. Double Check Valve Assembly (DC)

A double check valve assembly shall be located directly behind the meter and shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade in a manner where it is readily accessible for testing and maintenance unless otherwise approved by District in writing.

3. Reduced Pressure Principle Backflow Prevention Assembly (RPP)

A reduced pressure principle backflow prevention assembly shall be located directly behind the meter 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 in a manner where the assembly is readily accessible for testing and maintenance unless otherwise approved by the District in writing.

In no case shall a cut, tee, or tap be made between the user's meter and the backflow prevention assembly.

Any deviation of installation from the diagrams and descriptions provided, shall have written approval of the District prior to installation.

All backflow prevention assembly installations shall be initially inspected by the District to ensure with the requirements of the State Water Resources Control Board, Division of Drinking Water and the District.

e. Conditions Requiring Backflow Prevention Assemblies

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 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:

1. 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 State Water Resources Control Board, Division of Drinking Water, 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.
2. 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. This shall include the handling of process waters and waters originating from the utility system which have been subject to deterioration in quality.
3. 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. In the case of premises having a fire sprinkler system, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line.

f. Type of Protection Assemblies Required

The minimum types of backflow protection required to protect the community water supply at the user's water connection to premises with varying degrees of hazard are also given in Table 1.

The type of protective assembly required under subsection 'f' shall depend upon the degree of hazard which exists as follows:

1. In the case of any premises where there is an auxiliary water supply as stated in subsection 11.04.2 "e" "1" of this 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.
2. 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.

3. 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 **air-gap separation** or an approved **reduced pressure principle** backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plant, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries, and plating plants.
4. 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.
5. 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 either an approved **air-gap separation** or by an approved **reduced pressure principle** backflow prevention assembly on each service to the premises.
6. In the case of premises having a fire sprinkler system, the public water system shall be protected against backflow from the sprinkler system by an approved **detector check valve assembly**. If an anti-freeze material is used in the sprinkler system, the detector check assembly shall have reduced pressure principle backflow prevention on both the main line and the bypass line.

g. Approval of Backflow Prevention Assemblies

Any backflow prevention assembly required herein shall be a model and size approved by the State Water Resources Control Board, Division of Drinking Water. 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 entitled:

AWWA C506-84 Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices

and have met completely the laboratory and field performance specifications for the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California established by:

Specifications of Backflow Prevention Assemblies
Section 10 of the most current issue of the
MANUAL OF CROSS-CONNECTION CONTROL

Said AWWA and FCC&HR Standards and Specifications have been adopted by the Tuolumne Utilities District. Final approval shall be evidenced by a "Certificate

of Approval" issued by an approved testing laboratory certifying full compliance with the said AWWA standards and FCC&HR specifications.

The following testing laboratory has been qualified by Tuolumne Utilities District to test and certify backflow preventers:

Foundation for Cross-Connection Control
and Hydraulic Research
University of Southern California
University Park
Los Angeles, CA 90089-0231

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by the State Water Resources Control Board, Division of Drinking Water.

Backflow prevention devices which may be subjected to backpressure or back siphonage 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 qualification.

h. Installation of Backflow Prevention Devices

1. Backflow prevention devices shall be installed in a manner prescribed in Section 7603, Title 22 of the California Administrative Code. Location of the devices should be as close as practical to the user's connection. The District shall have the final authority in determining the required location of a backflow prevention device.

aa. Air gap separation (AG) - the air gap separation shall be located on the user's side of and as close to the service connection as is practical. All piping from the service connection to the receiving tank shall be above grade and be entirely visible. No water use shall be provided from any point between the service connection and the air gap separation. The water inlet piping shall terminate a distance of at least two (2) pipe diameters of the supply inlet, but in no case less than one (1) inch above the overflow rim of the receiving tank.

bb. Reduced pressure principle backflow prevention device (RP) - The approved reduced pressure principle backflow prevention device shall be installed on the user's side of and as close to the service connection as is practical. The device 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. The device shall be installed so that it is readily accessible for maintenance and testing. Water supplied from any point between the service connection and the RP device shall be protected in a manner approved by the District.

cc. Double check valve assembly (DC) - The approved 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. If a double check valve assembly is put below grade it must be installed in a vault such that there is a minimum of six inches (6") between the bottom of the vault and the bottom of the device so that the top of the device is no more than a maximum of eight inches (8") below grade, so there is a minimum of six inches (6") of clearance between the side of the device with the test cocks and the side of the vault, and so there is a minimum of three inches (3") clearance between the other side of the device and the side of the vault. Special consideration must be given to double check valve assemblies of the "Y" type. These devices must be installed on their "side" with the tests cocks in a vertical position so that either check valve may be removed for service without removing the device. Vaults which do not have an integrated bottom must be placed on a three inch (3") layer of gravel.

dd. Detector check valve assembly. (DCA) The approved detector check valve assembly shall be installed above grade and housed within an approved enclosure. The assembly shall be located where it is readily accessible for testing and maintenance. The enclosure shall allow easy access. The assembly and its installation shall conform to the District's detail drawing.

i. Initial Testing

For new backflow preventer installations that have been in service for less than 60 days, the initial test shall be performed by District personnel at no expense to the customer-user. In cases where the device(s) has been in service for longer than a 60 day period prior to initial testing, the customer-user will assume responsibility for having the device tested. The initial test for commercial, industrial, or institutional fire system detector check valve assemblies shall be performed by a certified tester at the applicant's expense prior to receiving service.

j. Annual Testing

It shall be the duty of the customer-user at any premises where backflow prevention assemblies are installed to have certified inspections and operational tests made at least once per year. In those instances where the Operations Manager deems the hazard to be great enough he may require certified inspections at more frequent survey intervals. These inspections and tests shall be performed, at customer-user expense, by individuals approved and certified by District. It shall be the duty of the Operations Manager to see that these tests are performed as outlined under the Districts' Cross-Connection Program. The customer-user shall notify District in advance when the tests are to be undertaken so that an official representative may witness the tests if so desired. These assemblies shall be repaired, overhauled, or replaced within 7 days at the expense of the customer-user whenever said assemblies are found to be defective. All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for the inspection and maintenance requirements under subsection "h" be excluded from the requirements of these

rules so long as the Operations Manager is assured that they will satisfactorily protect the utility system. Bypass lines, including meters and backflow preventers, shall be retrofitted at the customer's expense where they do not already exist. Whenever the existing device is moved from the present location, requires more than minimum maintenance, or when the Operations Manager finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention assembly meeting the requirements of this section.

k. Approved Certified Testers

No person shall test or shall make reports on backflow prevention assemblies as required in Title 17 of the California Administrative Code, unless such person has been approved by the District. In order to ensure that the testing of backflow prevention assemblies is performed by technically competent individuals who are personally responsible and, if other than self-employed, are employed by person and/or organizations which are also responsible, the District authorized to require backflow prevention testers to show evidence that such person possess a current valid Backflow Prevention Testers Certificate issued by the American Water Works Association (AWWA) or the Northern California Backflow Prevention Association (NCBPA) for any persons who will perform such tests; and provide current valid calibration certifications dated within the previous 24 months for any differential pressure gauges to be used for the purpose of testing backflow prevention assemblies.

1. The District may conduct written examinations to determine the competency of any person desiring to test, repair and make reports on backflow prevention assemblies hereinbefore described. Those persons who have successfully completed such examination, and who have been determined by the District to be competent to test, repair and make reports on backflow prevention assemblies shall be placed on the approved Tester List.
2. District shall compile and annually update a list of the names, business addresses and telephone numbers of all approved testers and shall make the current version of the list available to customers.
3. District may require an approved tester to (1) demonstrate backflow prevention assembly testing procedures in the field and (2) provide advanced notice to District of scheduled backflow prevention assembly testing, installation or repair work so that it may be observed by District.
4. District may revoke approval of an individual tester and remove them from the list of approved testers if the individual tester, or their employee(s), fail or refuse to comply with District's policies and procedures for testing backflow prevention assemblies.

l. Test Reporting

The District shall be furnished a record of each test within 10 working days of test completion. All test records shall be submitted on District issued forms.

m. Discontinuance of Water Service

The District may discontinue water service to any customer-user if a required backflow prevention assembly is not properly installed and is not tested annually in accordance with the provisions herein, or is removed or altered by customer-user. **In the event of a discontinuance in service, the customer will still be responsible for all applicable monthly service charges.** The District has the right to perform testing on a backflow prevention assembly that was not tested annually or is suspected to not be functioning correctly and charge the customer-user the TUD hourly labor rate as shown in Exhibit _D.3.

n. Abandonment of Wells

In order for the District to consider a well abandoned, the well must be properly abandoned in accordance with Tuolumne County specifications as outlined in the Tuolumne County Well Ordinance, as that ordinance may be amended from time to time. .

In all other cases, if the customer/user chooses not to abandon the well in accordance with this section (n), the District will consider the well as a functioning well with the potential to cross-contaminate the public water supply and the required backflow prevention assembly must be properly installed and tested in accordance with the provisions herein.

TABLE 1
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
1. Sewage and Hazardous Substances	
a. Premises where the public water system is used to supplement the reclaimed water supply.	AG
b. 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. An RP may be provided in lieu of an AG if approved by the health agency and the District.	AG
c. Premises where reclaimed water is used and there is no interconnection with the potable water system. An RP may be provided in lieu of an AG if approved by the health agency and the District.	AG
d. Premises where hazardous substances are handled in any manner in which the substances may enter a potable water system. This does not include a single family residence that has a sewage lift pump. An RP may be provided in lieu of an AG if approved by the health agency and the District.	AG
e. Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.	RP
f. Water meters that are solely used for irrigation service.	RP
g. Premises where a booster pump is used to increase pressure. An AG may be provided in lieu of an RP if approved by the District.	RP
2. Auxiliary Water Supplies	
a. Premises where there is an unapproved auxiliary water supply which is interconnected with the public water system. An RP may be provided in lieu of an AG if approved by the District.	AG
b. Premises where there is an unapproved auxiliary water supply and there are no interconnections with the public water system.	RP

TABLE 1 (continued)

TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
3. Fire Protection Systems (Commercial)	
a. Premises where the fire sprinkler system or privately-owned fire hydrants are directly supplied from the public water system.	DCA
b. 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 District.	AG
c. Premises where an anti-freeze material is used in the fire sprinkler system.	
4. Residential Fire will be determined per system	RPA
5. Dockside Watering Points and Marine Facilities	
a. Pier hydrants for supplying water to vessels for any purpose.	DC
b. Premises where there are marine facilities.	RP
6. 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 cross connections do not exist	RP
7. Premises where there is a repeated history of cross connections being established or re-established	RP