

YUIMA MUNICIPAL WATER DISTRICT BACKFLOW PREVENTION PROGRAM

Yuima Municipal Water District (YUIMA) has the responsibility of protecting the public water supply from contamination by implementation of a cross-connection control program. The program is implemented by Yuima for the purpose of addressing the requirements of California Public Health Code Title 17, Section 7585 through 7605 including, but not limited to, the following elements:

- (a) The adoption of operating rules or ordinances to implement the cross-connection program.
- (b) The conducting of surveys via “Backflow Questionnaire” and/or field inspection to identify water user premises where cross-connections are likely to occur,
- (c) The provisions 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, and
- (f) The maintenance of records of locations, tests, and repairs of backflow preventers.

DEFINITIONS (Title 17 § 7583)

- 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 Yuima Municipal Water District.
- c) “Air-gap Separation (AG)” is a physical break between the supply line and a receiving vessel.
- d) “AWWA Standard” is an official standard developed and approved by the 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) “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 watertightness of each check valve.
- g) “Health Agency” means the California Department of Health Services, or the local County Health Department.
- h) “Local Health Agency” means the San Diego County Department of Environmental Health (DEH).
- 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 water supplier’s facilities.
- l) “Water Supplier” is the person who owns or operates the public water system (YUIMA)
- m) “Water User” is any person obtaining water from a public water supply.

EVALUATION OF HAZARD (Title 17 § 7585)

YUIMA will 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. YUIMA, however, shall not be responsible for eliminating or reducing the degree of hazard associated with a potential cross-connection, which may exist within a user’s premises. As a minimum, the evaluation will consider: the existence of cross-connections, the nature of materials handled on the property, the probability of 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 YUIMA and is approved by the health department.
- (c) Premises that have internal cross-connections that are not abated to the satisfaction of YUIMA.
- (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 where a repeated history of cross-connections being established or re-established.

USER SUPERVISOR (Title 17 § 7586)

YUIMA may require, at their discretion, that an industrial or agricultural water user designate a user supervisor when the water user's premises has a multi-piping system that convey 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.

PROTECTION OF WATER SYSTEM (Title 17, Group 4, Article 2)

APPROVAL OF BACKFLOW PREVENTERS (Title 17 § 7601)

Approved backflow preventers shall be selected from the current List of Approved Backflow Prevention Assemblies as published by the University of Southern California's Foundation for Cross-Connection Control and Hydraulic Research.

CONSTRUCTION OF BACKFLOW PREVENTERS (Title 17 § 7602)

- 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 Reduced Pressure Principle Type Backflow Prevision 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.

LOCATION OF BACKFLOW PREVENTERS (Title 17 § 7603)

- 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 YUIMA and the health agency.
- 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 a minimum of twelve (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.
- 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 meter connection and shall be installed a minimum of twelve (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.
- d) Note: There shall be no unprotected connection between the meter and the backflow device.

TYPE OF PROTECTION REQUIRED (Title 17 § 7604)

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 customer'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 YUIMA. The minimum types of backflow protection required to protect the public water supply, at the water user's connection to premises with various degrees of hazard are given in the Backflow Questionnaire. Situations which are not covered in the Questionnaire shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by YUIMA.

TESTING AND MAINTENANCE OF BACKFLOW PREVENTERS (Title 17 § 7605)

- a) YUIMA shall assure that adequate maintenance and periodic testing are provided by the water user to ensure their proper operation.

- b) Backflow preventers shall be tested by persons who have demonstrated their competency in testing of these devices to the County of San Diego and ABPA Certified.
- c) Backflow preventers shall be tested at least annually or more frequently if determined to be necessary by the health agency or YUIMA. When devices are found to be defective, they shall be repaired or replaced as set forth herein.
- 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) YUIMA will notify the water user when testing of backflow preventers is needed. The notice shall contain the date when the test must be completed. All backflow device testing forms will be supplied by YUIMA and shall be returned to YUIMA after testing. Because YUIMA must assure the adequate maintenance and periodic testing are done on time, if the water user does not submit the testing and maintenance report to YUIMA within two (2) weeks following the required test date, YUIMA will do the required testing and repair, or contract with an outside certified tester to complete the testing and repairs if required. The charges incurred will be added to the water user's next water bill issued. These charges will become due and payable as a condition of water service and will be subject to the district's rules and regulations and specifically with respect to delinquency charges.
- f) Reports of testing and maintenance shall be maintained by YUIMA for a minimum of three (3) years.

BACKFLOW QUESTIONNAIRE

(Title 17 California Code of Regulations)

The "Backflow Questionnaire" is a tool used by YUIMA to determine backflow requirements and assess whether a field survey of the premises is necessary. The water user must certify that the information is true and correct. If circumstances change in the future which could cause potential cross-connections, it is the water user's responsibility to advise YUIMA immediately of the change and complete a new "Backflow Questionnaire" for YUIMA's evaluation of protection requirements. YUIMA must be advised of the change in circumstances even if the water service is protected by the appropriate device. Conversely, you may decrease the hazard or eliminate any potential cross-connection at a later date. In that case, we need to again be notified and a new "Backflow Questionnaire" completed reflecting the change in circumstances. If YUIMA determines that your backflow device is not required anymore, then you may remove it or leave it in place by plugging the test outlets. Once this has been done it will be removed from our records for testing.

Account Number _____ **App #** _____ **Address** _____

PLEASE ANSWER THE FOLLOWING QUESTIONS:

Do not guess. If you do not know circle "unknown".

		Circle One	Minimum Type of Backflow Prevention
HAZARDOUS SUBSTANCES: (§7604 & 7605)			
1)	Do you use or plan to use reclaimed water on your premises?	Yes No Unknown	AG
2)	Are you using or do you plan to use hazardous substances on your property for any industrial activity?	Yes No Unknown	AG
	If Yes, what substances are used? _____		

	Please explain how you use the substance(s) and if it is used with water from the potable system?		

	_____		AG/RP*
3)	If you are using hazardous materials on the property, but the use is not connected to the potable system anywhere on the premises, can this be easily determined by a visual inspection?	Yes No Unknown	
4)	Do you or will you be injecting fertilizers, herbicides, or pesticides into your irrigation system?	Yes No Unknown	RP

AUXILIARY WATER SUPPLIES:

5) Do you have a well on the property? Yes No Unknown RP

If Yes, is it in use? Yes No RP

Do you plan to use it in the future? Yes No Unknown RP

6) Do you have now, or plan any other sources of water to these premises from any other source other than from the meter above-referenced? Yes No Unknown RP

If Yes, please describe. _____

7) Do you have any by-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur if put in place? Yes No Unknown RP

Describe _____

8) Do you have any surface water available for use on your property? Yes No Unknown RP

If Yes, are you using it now or plan to use it in the future?

Explain how it is used (i.e. where captured, where diverted, where stored and how delivered for use) _____

9) Do you have a swimming pool, pond or reservoir? Yes No Unknown RP/DC

If so, how is it filled and how is the water used i.e for irrigation purposes? Please describe. _____

FIRE PROTECTION SYSTEMS:

9) Do you have a fire protection system which is directly supplied from the public water system? Yes No Unknown DC

- 10) Is your fire protection system supplied from the public water and also interconnected with another source of water? Yes No Unknown AG/RP*
- 11) Is your fire protection system supplied from the public water system and also supplied from elevated storage tanks or fire pumps which take suction from private reservoirs or tanks? Yes No Unknown DC

ACKNOWLEDGMENTS

- 12) Do you acknowledge that you have read and understand the questions presented? Yes No

If no, please make an appointment to come into the YUIMA office and one of our representatives will review the questionnaire with you and answer any of your questions.

- 13) Do you acknowledge that you understand that once your backflow prevention device requirements are determined in answer to this questionnaire, or any field survey done in response to this questionnaire, that you have the responsibility to advise YUIMA of any changes in the future? Yes No

- 14) Do you acknowledge that you understand that YUIMA must be notified of any changes to the information submitted, even though an appropriate backflow device has been installed that would address those changes? Yes No

(Example: If you state that you inject fertilizer but have no auxiliary supply and therefore a Reduced Pressure Principle Backflow Device is installed, but later you do develop or use an auxiliary supply, then you need to notify YUIMA even though no additional backflow prevention requirement may be needed)

(*) Also requires DEH approval.

CERTIFICATION

I declare, under penalty of perjury, that I have read and understand the foregoing backflow prevention program and answered the backflow questionnaire and that the information submitted is true and correct to the best of my knowledge and belief. Executed this _____ day of _____, 20____, at _____, California.

App # _____ Acct# _____

Applicant Signature/Title (Owner/Agent*)

*submit authorization to act on behalf of owner

Please return signed & completed pages 6 - 8