

**MESA DEL TORO**  
**MUNICIPAL WATER COMPANY**

**CA2701503**

**CROSS-CONNECTION**  
**CONTROL PROGRAM**

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## 1- Purpose of Cross-Connection Control Program

Water provided by a Mesa Del Toro MWC may be contaminated via cross-connections within its distribution system. Section 7584 of Title 17, California Code of Regulations, requires that Mesa Del Toro Municipal Water Company (MWC) protects the water supply from contamination by eliminating actual cross-connections and reducing the hazard of potential cross-connections. Cross-connections can be eliminated either by installing appropriate backflow prevention assemblies or ensuring that water-using equipment are installed in accordance with plumbing code requirements.

The purpose of this cross-connection control program is to:

- a) Protect the public water supply against actual or potential contamination through cross-connections by isolating sources of contamination that may occur within a water user's premises because of some undiscovered or unauthorized cross-connection on the premises;
- b) Eliminate existing connections between drinking water systems and other sources of water that are not approved as safe and potable for human consumption;
- c) Eliminate cross-connections between drinking water systems and sources of contamination;
- d) Prevent the making of cross-connections in the future.

## 2- Types of Cross-Connections

Cross-connections are actual and potential unprotected connections between a potable water system and any source or system containing unapproved water or a substance that is not safe. Examples of cross-connections include:

- a) Improperly installed irrigation systems which may allow backsiphonage of stagnant, bacteriologically unsafe water into the domestic piping system.
- b) Improperly plumbed water-using devices such as hot tubs, boilers, or commercial dishwashers, which may allow unsafe water back into the domestic piping system.
- c) Irrigation systems served by an auxiliary source, such as a private well or creek. Such systems create a potential for major contamination of the public water system via inter-ties with the domestic piping system.
- d) Interconnections between the potable system and a non-potable system.

## 3- Regulation Requirements

Section 7584 of Title 17, California Code of Regulations, requires that each public water system have a cross-connection control program that includes these elements:

- a) The adoption of operating rules or ordinances to implement the cross-connection program.
- b) The conducting of surveys to identify water user premises where cross-connections exist or are likely to occur.

- c) The provisions of backflow protection by the water user at all connections where a cross-connection hazard has been identified.
- d) The provision of at least one person trained in cross-connection control to carry out the program.
- e) The establishment of a procedure or system for testing backflow prevention assemblies.
- f) The maintenance of records of locations, tests, and repairs of backflow prevention assemblies within each water supplier's distribution system.

## 4- Cross-Connection Protection Requirements

### 1- General Provisions

Unprotected cross-connections with the Mesa Del Toro MWC are prohibited.

- a) Whenever backflow protection has been found necessary, Mesa Del Toro MWC will require the water user to install an approved backflow prevention assembly at his expense for continued services or before a new service will be granted.
- b) Wherever backflow protection has been found necessary on a water supply line entering a water user's premises, any and all water supply lines from the Mesa Del Toro MWC mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention assembly. The type of assembly to be installed will be in accordance with the requirements of this cross-connection control program.

### 2- Where protection is required?

- a) Each service connection from the Mesa Del Toro water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the water system unless the auxiliary water supply is accepted as an additional source by Mesa Del Toro MWC.
- b) Each service connection from the Mesa Del Toro water system for supplying water to any premises on which any substance is handled in such fashion as may allow its entry into the water system shall be protected against backflow of the water from the premises into the water system. This shall include the handling of process waters and waters originating from the Mesa Del Toro water system which have been subjected to deterioration in sanitary quality.
- c) Backflow prevention assemblies shall be installed on the service connection to any premises having an
  - i. internal cross-connections that cannot be permanently corrected and controlled to the satisfaction of the state or local health agency and Mesa Del Toro MWC.
  - ii. 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 cross-connections exist.

## 5- Type of Protection Required

The type of protection that shall be provided to prevent backflow into the Mesa Del Toro water system shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of protective assembly that may be required (in an increasing level of protection) includes:

- a) **Double Check Valve Assembly (DC)**  
If a Double Check Valve Assembly is deemed necessary, it 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.
- b) **Reduced Pressure Principle Backflow Prevention Assembly (RP)**  
If a Reduced Pressure Principle Backflow Assembly is deemed necessary, it 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. Water supplied from any point between the service connection and the RP assembly shall be protected in a manner approved by Mesa Del Toro MWC.
- c) **Air Gap Separation (AG)**  
The air-gap separation shall be located on the user's side 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 a least two pipe diameters of the supply inlet but in no case less than one inch above the overflow rim of the receiving tank.

The water user may choose a higher level of protection than required by Mesa Del Toro MWC. The minimum types of backflow protection required to protect the water supply, at the water user connection to premises with varying degrees of hazard, shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by Mesa Del Toro MWC.

## 6- Administrative Procedures

### 1- Water System Survey & Inspection

The system survey consists of an Initial Survey as shown in Figure (01) and an actual inspection at a frequency decided by Mesa Del Toro MWC. The initial survey consists of a questionnaire sent to each water user asking whether the user has specific potential hazards.

## Mesa Del Toro MWC

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### Cross Connection Initial Survey

Name: \_\_\_\_\_

Property Address: \_\_\_\_\_

Please complete the following survey and return it to the Water System.

Please select Yes or No for all questions.

	Yes	No
1. Private well on your own property	_____	_____
2. Private water storage tank	_____	_____
3. Domestic water served by a separate source (Creek, pond, spring, private well)	_____	_____
4. Irrigation served by a separate source (Creek, pond, spring, private well)	_____	_____
5. Irrigation system not installed to plumbing codes	_____	_____
6. Swimming pool or Spa not installed to plumbing codes	_____	_____
7. Animal watering troughs	_____	_____
8. Solar hot water heating panels not installed to plumbing codes	_____	_____
9. Grey water system	_____	_____
10. Cistern/Rainwater harvesting system	_____	_____
11. Ornamental Pond	_____	_____
12. Any commercial activities that use the water System	_____	_____

Mesa Del Toro MWC Cross-Connection Control Program - Initial Survey

## Figure (01): Cross-Connection Initial Survey

The goal of the initial survey is to identify actual and potential cross-connection hazards. If any potential hazards are determined to be located on-site, Mesa Del Toro MWC shall determine whether the equipment has been installed in accordance with the Uniform Plumbing Code and good practice to minimize the risk of backflow occurring.

At a frequency approved by the water board, Mesa Del Toro MWC will require an on-premise inspection to evaluate cross-connection hazards. Mesa Del Toro MWC will transmit a written notice requesting an inspection appointment to each water user. Any water user who cannot or will not allow an on-premise inspection of his piping system shall be required to install the backflow prevention assembly that Mesa Del Toro MWC considers necessary. The cross-connection system inspection shall be conducted by a qualified individual approved by Mesa Del Toro MWC.

### 2- Special Conditions

- a) Mesa Del Toro MWC shall review all requests for new services to determine if backflow protection is needed. Plans and specifications must be submitted to Mesa Del Toro MWC upon request for review of possible cross-connection hazards as a condition of service for new service connections. If it is determined that a backflow prevention assembly is necessary to protect the water system, the required assembly must be installed before service will be granted.
- b) Mesa Del Toro MWC may, at its discretion, require a reinspection for cross-connection hazards of any premise to which it serves water. Mesa Del Toro MWC will transmit a written notice requesting an inspection appointment to each affected water user. Any water user who cannot or will not allow an on-premise inspection of his piping system shall be required to install the backflow prevention assembly that Mesa Del Toro MWC considers necessary.

### 3- Customer Notification – Assembly Installation

- a) Mesa Del Toro MWC will notify the water user of the survey findings, listing the corrective actions to be taken if any are required. A period of 60 days will be given to complete all corrective actions required, including the installation of backflow prevention assemblies.
- b) A second notice will be sent to each water user who does not take the required corrective actions prescribed in the first notice within the 60 days period allowed. The second notice will give the water user a two-week period to take the required corrective action. If no action is taken within the two-week period, Mesa Del Toro MWC may terminate water service to the affected water user until the required corrective actions are taken.

#### 4- Customer Notification – Testing and Maintenance

- a) Mesa Del Toro MWC will notify each affected water user when it is time for the backflow prevention assembly installed on their service connection to be tested. This written notice shall give the water user 30 days to have the assembly tested and supply the water user with the necessary form to be completed and resubmitted to Mesa Del Toro MWC.
- b) A second notice shall be sent to each water user which does not have his/her backflow prevention assembly tested as prescribed in the first notice within the 30- day period allowed. The second notice will give the water user a two-week period to have his/her backflow prevention assembly tested. If no action is taken within the 2- week period Mesa Del Toro MWC may terminate water service to the affected water user until the subject assembly is tested.



## 7- Maintenance of Records

Mesa Del Toro MWC will keep an up-to-date copy of the system's records to be able to respond to emergencies. The records should include the following information for each backflow prevention assembly in the water system:

1. Identification
  - information Name
  - Address
  - Account number (or other identification number)
  - Responsible person
  - Type of business
2. The date of most recent cross connection survey performed at this location.
3. Type of hazard(s)
4. Location of assembly.
5. Type of assembly including, model, size, serial number,
6. Record of testing and repairs.
7. Comments, notes on any problems

Mesa Del Toro MWC will keep an up-to-date version of the Cross-Connection Survey Summary Form as outlined below:

### Cross-Connection Survey Summary Form

**Name of System** \_\_\_\_\_ **System Number** \_\_\_\_\_

*Date of Survey* \_\_\_\_\_

Description of Survey Procedures - How survey was conducted (include copy of survey form).

Person conducting survey (List name and qualifications): \_\_\_\_\_

\_\_\_\_\_

Procedures for Residential Connections: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Total number of service connections \_\_\_\_\_ Number of service connections surveyed \_\_\_\_\_

Number of connections with auxiliary sources (i.e. wells, springs, or creek pumps) \_\_\_\_\_

Number of connections with other hazards \_\_\_\_\_

Total number of backflow prevention devices \_\_\_\_\_

<b>Type of Hazard Identified (i.e. private well, hot tub, irrigation system, swimming pool, etc)</b>	<b>Number of connections with hazard</b>	<b>Number of devices installed</b>	<b>Number where device not necessary</b>

Describe follow-up for service connections which did not respond to the survey: \_\_\_\_\_

\_\_\_\_\_

Long-term (Describe ongoing cross-connection protection & testing of backflow prevention assemblies):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Submitted by (signature) \_\_\_\_\_ Date \_\_\_\_\_