

# Cross Connection Control Management Plan

## 2025



Remembering what connects us.

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This Cross Connection Control Management Plan has been prepared in compliance with the California State Water Board CCCPH.

A handwritten signature in black ink, appearing to read "L. Hatch", is written over a horizontal line.

Lauren Hatch  
Cross Connection Control Program Specialist,  
Certification No. 2413, Expiration Date: 3/31/2027



City of Tustin Cross Connection Control Management Plan (CCCMP)

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## City of Tustin Cross Connection Control Management Plan (CCCMP)

# 1 Cross Connection Control Policy Overview

## 1.1 Objective

The primary objective of the Cross-Connection Control Management Plan (CCCMP) is to bring the City of Tustin into compliance with the Cross Connection Control Policy Handbook (CCCPC) developed by the State Water Resources Control Board (State Water Board) for the protection of public health through the establishment of standards intended to ensure a public water system's (PWS) drinking water distribution system will not be subject to the backflow of liquids, gases, or other substances, see CCCMP **Appendix A**. In addition, by providing basic educational information on backflow prevention, the City intends to build a foundation of awareness within the City regarding the importance of backflow protection and cross-connection control, leading to the implementation of a robust cross-connection control program.

Per Section 3.1.4 (b)(1) description the City will implement the requirements of the State CCCPC by implementing ordinances, rules and regulations], and procedures as detailed in this CCCMP.

## 1.2 Applicability

The State CCCPC and its standards apply to all California PWSs, as defined in California's Health and Safety Code (CHSC, section 116275 (h)). Compliance with the State CCCPC is mandatory for all California PWSs. The City's CCCMP has been developed in conformance to the State CCCPC and is applicable to all customers within the City's service area.

## 1.3 Policy Development Background and Legal Authorities

Through the adoption of the State CCCPC, the State Water Board exercised its authority, under California's Safe Drinking Water Act (SDWA), to establish enforceable standards applicable to California's PWSs. Failure to comply with the CCCMP which is in conformance with the State CCCPC may result in the issuance of compliance, enforcement, or other corrective actions against the City.

## 1.4 California Safe Drinking Water Act

On October 6, 2017, Assembly Bill 1671 (AB 1671) was approved and filed with the Secretary of State (**see CCCMP Appendix B**). AB 1671 amended California's SDWA through the establishment of CHSC sections 116407 and 116555.5. AB 1671 also amended section 116810 of the CHSC, which is briefly discussed in CCCPC.

On October 2, 2019, Assembly Bill 1180 (AB 1180) was approved and filed with the Secretary of State. AB 1180 amended Section 116407 of the CHSC and added section 13521.2 to the City of Tustin CCCMP – June 2025



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Water Code. AB 1180 requires that the CCCPH include provisions for the use of a swivel or changeover device (swivel-ell) (**see CCCMP Appendix B**).

Pursuant to sections 116407 and 116555.5 of the CHSC, the State Water Board chose to adopt standards for backflow protection and cross-connection control through the adoption of this State CCCPH, which became effective July 1, 2024.

- The State Water Board is required to adopt regulations for the control of cross-connections that it determines to be necessary for ensuring PWSs “distribute a reliable and adequate supply of pure, wholesome, potable, and healthy water.” (CHSC section 116375, subd. (c).)
- Any person who owns a PWS is required to ensure that the distribution system will not be subject to backflow under normal operating conditions. (CHSC section 116555, subd. (a)(2).)

Prior to AB 1671 and the adoption of the State CCCPH, California’s regulations pertaining to cross-connection control were set forth in regulations in CCR Title 17, which were adopted in 1987 with minor revisions in 2000. Although still protective to public health, the CCR Title 17 cross-connection regulations required updating as both the drinking water and cross-connection control industries had evolved. This State CCCPH updates those regulations, which as previously noted are no longer operative following the adoption of the State CCCPH.

The State Water Board may update its standards for backflow protection and cross-connection control through revisions of the State CCCPH. Prior to adopting substantive revisions to the State CCCPH, the State Water Board will consult with state and local agencies and persons identified as having expertise on the subject by the State Water Board, and the State Water Board will hold at least one public hearing to consider public comments.



## 1.5 Acronyms and Abbreviations

As used in this policy, acronyms and abbreviations reference the following:

Acronym or Abbreviation	Meaning
AB	Assembly Bill
AG	Air Gap separation
BAT	Best Available Technology
BPA	Backflow Prevention Assembly
Bus. & Prof. Code	Business and Professional Code
CA	California
CBSC	California Building Standards Commission
CII	Commercial-Industrial-Institutional
CCCMP	Cross Connection Control Management Plan
CCCPH	Cross-Connection Control Policy Handbook
CCR	California Code of Regulations
C.F.R.	Code of Federal Regulations
CHSC	California Health and Safety Code
City	City of Tustin
Civ. Code	Civil Code
DC	Double Check valve backflow prevention assembly
DCDA	Double Check Detector backflow prevention Assembly
DCDA-II	Double Check Detector backflow prevention Assembly–type II
District	Irvine Ranch Water District
Division	Division of Drinking Water
EPA	Environmental Protection Agency
Gov. Code	Government Code
IRWD	Irvine Ranch Water District
MCL	Maximum Contaminant Level
Muni Code	Municipal Code
Pen. Code	Penal Code
PVB	Pressure Vacuum Breaker backsiphonage prevention assembly
PWS	Public Water System
RP	Reduced Pressure principle backflow prevention assembly
RPDA	Reduced Pressure principle Detector backflow prevention Assembly
RPDA-II	Reduced Pressure principle Detector backflow prevention Assembly – type II
RW	Recycled Water
SB	Senate Bill
SDWA	Safe Drinking Water Act
State Water Board	State Water Resources Control Board



SVB	Spill-resistant Pressure Vacuum Breaker backsiphonage prevention assembly
U.S.	United States

## 1.6 Definitions and General Requirements

The following definitions apply to the terms used in the CCCPH:

**“Air-gap separation”** or **“AG”** means a physical vertical separation of at least two (2) times the effective pipe diameter between the free-flowing discharge end of a potable water supply pipeline and the flood level of an open or non-pressurized receiving vessel, and in no case less than one (1) inch.

**“Approved water supply”** means a water source that has been approved by the State Water Board for domestic use in a public water system and designated as such in a domestic water supply permit issued pursuant to section 116525 of the CHSC.

**“Auxiliary water supply”** means a source of water, other than an approved water supply, which is either used or equipped, or can be equipped, to be used as a water supply and is located on the premises of, or available to, a water user.

**“Backflow”** means an undesired or unintended reversal of flow of water and/or other liquids, gases, or other substances into a public water system’s distribution system or approved water supply.

**“Backflow prevention assembly”** or **“BPA”** means a mechanical assembly designed and constructed to prevent backflow, such that while in-line it can be maintained and its ability to prevent backflow, as designed, can be field tested, inspected, and evaluated.

**“Backflow prevention assembly tester”** means a person who is certified as a backflow prevention assembly tester.

**“Community water system”** means a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system.

**“Contact hour”** means not less than 50 minutes of a continuing education course.

**“Continuing education course”** means a presentation or training that transmits information related to cross-connection control programs and backflow prevention and protection.

**“Cross-connection”** means any actual or potential connection or structural arrangement between a public water system, including a piping system connected to the public water system and located on the premises of a water user or available to the water user, and any source or distribution system containing liquid, gas, or other substances not from an



approved water supply.

**“Cross-connection control specialist”** means a person who is certified as a cross-connection control specialist.

**“Distribution system”** has the same meaning as defined in section 63750.50 of CCR, Title 22, Division 4, Chapter 2.

**“Double check detector backflow prevention assembly”** or **“DCDA”** means a double check valve backflow prevention assembly that includes a bypass with a water meter and double check backflow prevention assembly, with the bypass’s water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 1, CCCMP **Appendix F**.

**“Double check detector backflow prevention assembly – type II”** or **“DCDA-II”** means a double check valve backflow prevention assembly that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 2, CCCMP **Appendix F**.

**“Double check valve backflow prevention assembly”** or **“DC”** means an assembly consisting of two independently-acting internally-loaded check valves, with tightly closing shut-off valves located at each end of the assembly (upstream and downstream of the two check valves) and fitted with test cocks that enable accurate field testing of the assembly. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 3, CCCMP **Appendix F**.

**“Existing public water system”** or **“existing PWS”** means a public water system initially permitted on or before July 1, 2024 as a public water system by the State Water Board.

**“Hazard Assessment”** means an evaluation of a user premises designed to evaluate the types and degrees of hazard at a user’s premises.

**“High hazard cross-connection”** means a cross-connection that poses a threat to the potability or safety of the public water supply. Materials entering the public water supply through a high hazard cross-connection are contaminants or health hazards. See CCCMP **Appendix C** for some examples.

**“Low hazard cross-connection”** means a cross-connection that has been found to not pose a threat to the potability or safety of the public water supply but may adversely affect the aesthetic quality of the potable water supply. Materials entering the public water supply through a low hazard cross-connection are pollutants or non-health hazards.

**“New public water system”** or **“new PWS”** means a public water system permitted after



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July 1, 2024 as a public water system by the State Water Board. A new public water system includes a public water system receiving a new permit because of a change in ownership.

**“Premises containment”** means protection of a public water system’s distribution system from backflow from a user’s premises through the installation of one or more air gaps or BPAs, installed as close as practical to the user’s service connection, in a manner that isolates the water user’s water supply from the public water system’s distribution system.

**“Pressure vacuum breaker backsiphonage prevention assembly”** or **“PVB”** means an assembly with an independently-acting internally-loaded check valve and an independently-acting loaded air inlet valve located on the discharge side of the check valve; with test cocks and tightly closing shutoff valves located at each end of the assembly that enable accurate field testing of the assembly. This type of assembly may only be used for protection from backsiphonage and is not to be used to protect from backpressure. See Diagram 4, CCCMP **Appendix F**.

**“Public water system”** or **“PWS”** has the same meaning as defined in section 116275(h) of the CHSC.

**“Recycled Water”** is a wastewater which as a result of treatment is suitable for uses other than potable use.

**“Reduced pressure principle backflow prevention assembly”** or **“RP”** means an assembly with two independently acting internally-loaded check valves, with a hydraulically operating mechanically independent differential-pressure relief valve located between the check valves and below the upstream check valve. The assembly shall have shut-off valves located upstream and downstream of the two check-valves, and test cocks to enable accurate field testing of the assembly. See Diagram 5, CCCMP **Appendix F**.

**“Reduced pressure principle detector backflow prevention assembly”** or **“RPDA”** means a reduced pressure principle backflow prevention assembly that includes a bypass with a water meter and reduced pressure principle backflow prevention assembly, with the bypass’s water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. See Diagram 6, CCCMP **Appendix F**.

**“Reduced pressure principle detector backflow prevention assembly – type II”** or **“RPDA-II”** means a reduced pressure principle backflow prevention assembly that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. See Diagram 7, CCCMP **Appendix F**.

**“Spill-resistant pressure vacuum breaker backsiphonage prevention assembly”** or **“SVB”** means an assembly with an independently-acting internally-loaded check valve and an independently-acting loaded air inlet valve located on the discharge side of the



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check valve; with shutoff valves at each end and a test cock and bleed/vent port, to enable accurate field testing of the assembly. This type of assembly may only be used for protection from backsiphonage and is not to be used to protect from backpressure. See Diagram 8, CCCMP **Appendix F**.



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**“State Water Board,”** unless otherwise specified, means the State Water Resources Control Board or the local primacy agency having been delegated the authority to enforce the requirements of the CCCPH by the State Water Resources Control Board.

**“Swivel-Ell”** means a reduced pressure principle backflow prevention assembly combined with a changeover piping configuration (swivel-ell connection) designed and constructed pursuant to this Chapter. See design and construction criteria, as well as Diagrams 9a and 9b, CCCMP **Appendix F**.

**“User premises”** means the property under the ownership or control of a water user and is served, or is readily capable of being served, with water via a service connection with a public water system.

**“User’s service connection”** means either the point where a water user’s piping is connected to a water system or the point in a water system where the approved water supply can be protected from backflow using an air gap or backflow prevention assembly.

**“User Supervisor”** means a person designated by a water user to oversee a water use site and responsible for the avoidance of cross-connections.

**“Water supplier”** means a person who owns or operates a public water system.

**“Water user”** means a person or entity who is authorized by the PWS to receive water.



## 2 Hazard Assessments and Required Protection

In accordance with the State CCCPH, Section 3.1.3 (a)(3) – Hazard Assessments, Section 3.1.4 (b)(2), and Section 3.2.1 – The City must survey its service area and conduct hazard assessments per Article 2 of the State CCCPH that identifies actual or potential cross-connection hazards, degree of hazard, and any backflow protection needed.

### 2.1 Hazard Assessments

- a. To evaluate the potential for backflow into the City’s water distribution system the City must conduct an initial hazard assessment of the user premises within its service area. The hazard assessment must consider:
  1. The existence of cross-connections;
  2. the type and use of materials handled and present, or likely to be, on the user premises;
  3. the degree of piping system complexity and accessibility;
  4. access to auxiliary water supplies, pumping systems, or pressure systems;
  5. distribution system conditions that increase the likelihood of a backflow event (e.g., hydraulic gradient differences impacted by main breaks and high water- demand situations, multiple service connections that may result in flow-through conditions, etc.);
  6. user premises accessibility;
  7. any previous backflow incidents on the user premises; and
  8. the requirements and information provided in the State CCCPH, and the City’s CCCMP.
- b. Each hazard assessment must identify the degree of hazard to the City’s distribution system as either a high hazard cross-connection, a low hazard cross- connection, or having no hazard. Examples of some high hazard cross-connection activities may be found in CCCMP **Appendix C**.
- c. The hazard assessment must determine whether an existing BPA, if any, provides adequate protection based on the degree of hazard.
- d. Hazard assessments completed prior to the adoption of the State CCCPH may be considered as an initial hazard assessment provided that such hazard assessments and associated backflow protection provide protection consistent with the State CCCPH and the City describes their review of these assessments in the City’s CCCMP.
- e. Subsequent to the initial hazard assessment described in subsection (a), the City must perform a hazard assessment under the following criteria:
  1. if a user premises changes account holder, excluding single-family residences;
  2. if a user premises is connected to the City’s water distribution system;



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3. if evidence exists of changes in the activities or materials on a user's premises;
  4. if backflow from a user's premises occurs;
  5. periodically, as identified in the City's CCCMP required pursuant to State CCCPH section 3.1.4.;
  6. if the State Water Board requests a hazard assessment of a user's premises; or
  7. if the City concludes an existing hazard assessment may no longer accurately represent the degree of hazard.
- f. A cross-connection control specialist must review or conduct each initial and follow-up hazard assessment pursuant to this section and make a written finding that, in the specialist's judgment based on cross-connection control principles, the City's hazard assessment properly identified all hazards at the time of the assessment, the appropriate degree of hazards, and the corresponding backflow protection.

## 2.2 Hazard Assessment Process

In order to assess each connection in the City's water distribution system for potential cross connection the City has contracted with IRWD who will undertake assessments in the following phases. As part of the hazard assessment process IRWD is has created a tracking system for the assessments. See IRWD's CCCMP **Appendix D**.

Data will be gathered and logged into the assessment database in three phases. The assessment database will be retained per Section 9 – Recordkeeping.

- Phase 1 - All connections with BPA at the meter connection
- Phase 2 - All commercial/industrial connections without BPA at the meter connection
- Phase 3 – Residential connections without BPA at the meter connection

### 2.2.1 Phase 1 - Connections with Backflow Protection

The City currently has 97 connections with a backflow protection installed at the meter as of 5/24/2025. These include commercial, industrial, multi-family residential, and single family residential. For connections with backflow protection the City will enter each address into the assessment tracking system indicating what type of BPA has been installed. The City's Cross Connection Control Specialist will review the data when entered into the assessment database to verify that an appropriate BPA has been installed on the meter connection. The Cross Connection Control Specialist's review date will be noted in the assessment database.

It is assumed that a Cross Connection Control Specialist can process (5) connections with a BPA at the meter connection per available hour, and the total number of annual Cross Connection Control Specialist available hours is 93 hrs./yr (5% of total annual 1,867 hrs., based 2,080 hrs./yr less 80 hrs./yr for vacation, 45 hrs./yr for sick leave, and 88 hrs./yr for holidays) for a total of 6 connections with a BPA at the meter connection per year, per Cross Connection Control Specialist assigned by the City to cross connection control. It is also assumed that

Based on the availability of the Cross Connection Control Project Specialist the City has



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determined that this phase of the assessments can be completed within 16.5 years from the adoption of the City's CCCMP.

### 2.2.2 Phase 2 – Commercial, Industrial, institutional Connections without Backflow Protection

The City currently has 2304 commercial, industrial, and multi-family sites without backflow protection installed at the meter as of 5/25/2025. For those commercial/industrial/institutional connections without an approved BPA the City will provide a self-reporting letter to provide information regarding onsite conditions which would necessitate the installation of an approved BPA at the meter connection. The self-reporting letters will be distributed via direct mail.

The self-reporting letters would be reviewed based on the available Cross Connection Control Specialist hours to review and process commercial/industrial self-reporting letters and the expected percent of self-reporting letters returned per distribution.

It is assumed that a Cross Connection Control Specialist can process (5) self-reporting letters per available hour, and the total number of annual Cross Connection Control Specialist available hours is 93 hrs./yr (5% of total annual 1,867 hrs., based 2,080 hrs./yr less 80 hrs./yr for vacation, 45 hrs./yr for sick leave, and 88 hrs./yr for holidays) per Cross Connection Control Specialist assigned by the City to cross connection control. A total of 527 self-reporting letters per year can be processed by the Cross Connection Control Specialist assigned by the City to cross connection control.

- If the Cross Connection Control Specialist determines that based on the self-reporting letter that an approved BPA is not required, they will note that in the assessment database and the reason for not requiring an approved BPA.
- If the Cross Connection Control Specialist determines that based on the self-reporting letter that an approved BPA is required, they will note that in the assessment database and notify the commercial/industrial customer that an approved BPA must be installed at the meter connection and note that determination in the assessment database.

The City has determined that this phase of the assessments can be completed within 4.4 years from the completion of Phase 1.

### 2.2.3 Phase 3 – Residential Connections without Backflow Protection

The City currently has 11,991 single family residential and residential condominium sites without backflow protection installed at the meter as of 5/25/2025. For those single family and residential condominium connections the City will assess each site by means of office-based tools such as:

- Reviewing sites via Google Maps or other aerial photography software
- Reviewing tract maps to review blocks of residential customer in a common building area or zone.



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- Using meter route maps or other billing information databases.

The office-based assessment will review sites for:

- Private water wells
- Other auxiliary water supplies
- Sewer lift stations
- Graywater systems

The office-based assessments would be conducted based on the available Cross Connection Control Specialist hours to review the office-based databases and/or files.

- If the Cross Connection Control Specialist determines that based on the office-based assessment that an approved BPA is not required, they will note that in the assessment database.
- If the Cross Connection Control Specialist determines that based on the office-based that an approved BPA is required, they will note that in the assessment database and notify the residential customer that an approved BPA must be installed at the meter connection and note that the customer has been contacted in the assessment database.

It is assumed that a Cross Connection Control Specialist can perform (25) assessments by means of office-based tools per available hour. Assuming that the total number of annual Cross Connection Control Specialist available hours is 93 hrs./yr (5% of total annual 1,867 hrs., based 2,080 hrs./yr less 80 hrs./yr for vacation, 45 hrs./yr for sick leave, and 88 hrs./yr for holidays) per Cross Connection Control Specialist assigned by the City to cross connection control. Therefore 422 single family and condominium residential sites can be assessed per year.

Based on the single family and condominium residential sites the City has determined that this phase of the assessments can be completed within 28.4 years from the completion of Phase 2.



### 3 Operating Rules or Ordinances

In accordance with the State CCCPH, Section 3.1.3 (a)(1), and Section 3.1.4(b)(1) and Section 3.1.4 (b)(3), the City must have operating rules, ordinances, by-laws, or a resolution to implement the cross-connection program. The City must have legal authority to implement corrective actions in the event a water user fails to comply in a timely manner with the City's provisions regarding the installation, inspection, field testing, or maintenance of BPAs required pursuant to this Section. Such corrective actions must include the City's ability to perform at least one of the following:

- Deny or discontinue water service to a water user,
- Install, inspect, field test, and/or maintain a BPA at a water user's premises, or
- Otherwise address in a timely manner a failure to comply with the City's cross-connection control program.

The City's backflow and cross-connection prevention requirements follow IRWD Rules and Regulations. A copy can be found on the District's website located at:

<https://www.irwd.com/about-us/engineering>



## 4 Backflow Prevention

In accordance with the State CCCPH, Section 3.1.3 (a)(4) and Section 3.2.2 – the City must ensure that actual and potential cross-connections are eliminated when possible or controlled by the installation of approved BPAs or AG's consistent with the requirements of the Article 3 of the State CCCPH and the sections to follow.

### 4.1 Backflow Prevention Requirements

- (a) The City must ensure its distribution system is protected from backflow from identified hazards through the proper installation, continued operation, and field testing of an approved BPA (see Section 4.2.1 for installation and approved BPA criteria). When a DC is required or referenced in the State CCCPH, a DCDA or DCDA-II type of assembly may be substituted if appropriate. When an RP is required or referenced in the State CCCPH, an RPDA or RPDA-II type of assembly may be substituted if appropriate.
- (b) The BPA installed must be no less protective than that which is commensurate with the degree of hazard at a user premises, as specified in this section and as determined based on the results of the hazard assessment conducted pursuant to CCCMP Section 3.
- (c) Unless specified otherwise in this section, the City must, at all times, protect its distribution system from high hazard cross-connections (see CCCMP **Appendix C** for examples), through premises containment, through the use of AG(s) or RP(s).
  - (1) Following State Water Board review and approval, the City may implement an alternate method of premises containment in lieu of a required AG provided that the proposed alternative would provide at least the same level of protection to public health.
  - (2) Following State Water Board review and approval, the City may accept internal protection in lieu of containment when premises containment is not feasible.
- (d) Except as otherwise allowed or prohibited in statute or in CCR Title 22, Division 4, Chapter 3, a swivel-ell may be used instead of an AG for premises containment protection when temporarily substituting tertiary recycled water use areas with potable water from a PWS if all the following criteria are met:
  - (1) the swivel-ell is approved by the State Water Board;
  - (2) the City has a cross-connection control program, required pursuant to the State CCCPH Section 3.1.3, and the use and operation of the swivel-ell is described in the CCCMP required pursuant to the State CCCPH Section 3.1.4;
  - (3) the design and construction-related requirements of the swivel-ell adheres to the criteria in CCCMP **Appendix F**;
  - (4) at least every 12 months, inspections are performed and documented to confirm



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- ongoing compliance with the design and construction-related requirements in the City's followed Rules and Regulations;
- (5) the RP used in conjunction with the swivel-ell is field tested and found to be functioning properly:
- (A) immediately upon each switchover to potable water use, a visual inspection of the RP must be completed
  - (B) within 72 hours of each switchover to potable water use, a field test must be completed, and
  - (C) at least every 12 weeks the use site is supplied with potable water; and
- (6) there is a legally binding agreement between the City and the entity supplying the recycled water, signed by those with relevant legal authority, which includes the following requirements:
- (A) The State Water Board will be notified within 24 hours of all switchovers to or from potable water, will be given an estimate of the timeframe until the next switchover, and will be provided the results of the field testing required in paragraph (5);
  - (B) a trained representative of the City be present to supervise each switchover; and
  - (C) within seven days of each switchover, if requested by the State Water Board, the City will submit a written report describing compliance with this subsection, as well as potable and recycled water usage information.
- (e) Except as noted below, the City must ensure its distribution system is protected with no less than DC protection for a user premises with a fire protection system within ten years of adoption of the State CCCPH.
- (1) A high hazard cross-connection fire protection system, including but not limited to fire protection systems that may utilize chemical addition (e.g., wetting agents, foam, anti-freeze, corrosion inhibitor, etc.) or an auxiliary water supply, must have no less than RP protection.
  - (2) For existing fire protection systems that do not meet the State CCCPH, Section 3.2.2 (e)(3) or cannot install DC protection within ten years of adoption of the State CCCPH, the City may propose in the CCCMP submitted for compliance with the State CCCPH Section 3.1.4:
    - (A) an alternative date; or
    - (B) an alternative method of backflow protection that provides at least the same level of protection to public health.
  - (3) A BPA is not necessary for a low hazard fire protection system on a residential user premises if the following criteria are satisfied:



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- (A) the user premises has only one service connection to the City;
  - (B) a single service line onto the user premises exists that subsequently splits on the property for domestic flow and fire protection system flow, such that the fire protection system may be isolated from the rest of the user premises;
  - (C) a single, water industry standard, water meter is provided to measure combined domestic flow and fire protection system flow;
  - (D) the fire protection system is constructed of piping materials certified as meeting NSF/ANSI Standard 61; or
  - (E) the fire protection system's piping is looped within the structure and is connected to one or more routinely used fixtures (such as a water closet) to prevent stagnant water.
- (f) The State Water Board and the City may, at their discretion, require a water user to designate a user supervisor when the user premises has a multi-piping system that conveys various types of fluids and where changes in the piping system are frequently made. If a user supervisor is designated the following is required:
- (1) The user supervisor is responsible for the avoidance of cross-connections during the installation, operation and maintenance of the water user's pipelines and equipment. The user supervisor must be trained on the fluids used and backflow protection for the premise, and must inform the City of changes in piping, and maintain current contact information on file with the City; and;
  - (2) The City must include in the CCCMP required in the State CCCPH Section 3.1.4 the training and qualification requirements for user supervisors, identify the entity that will provide the user supervisor training, and frequency of any necessary recurring training. The training must adequately address the types of hazards and concerns typically found.
- (g) Facilities producing, treating, storing, or distributing drinking water that are an approved water supply or water recycling plants as defined by CCR Title 22, Section 60301.710 must have proper internal protection from cross-connections to ensure that all drinking water produced and delivered to customers and workers at those facilities is free from unprotected cross-connections.

## 4.2 Backflow Prevention Assemblies

### 4.2.1 Standards for Types of Backflow Protection

- (a) Each AG used for the CCCMP must meet the requirements in Table 1, Minimum Air Gaps for Generally used Plumbing Fixtures, page 4 of the American Society of Mechanical Engineers (ASME) A112.1.2- 2012(R2017).
- (b) Each replaced or newly installed PVB, SVB, DC, and RP for protection of the PWS must be approved through both laboratory and field evaluation tests performed in accordance with at least one of the following:



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- (1) Standards found in Chapter 10 of the *Manual of Cross-Connection Control, Tenth Edition*, published by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research;
  - (2) certification requirements for BPAs in the Standards of ASSE International current as of 2022 that include ASSE 1015-2021 for the DC, ASSE 1048-2021 for the DCDA & DCDA-11, ASSE 1013-2021 for the RP, and ASSE 1047-2021 for the RPDA & RPDA-II and must have the 1YT mark.
- (c) BPAs must not be modified following approval granted under Section 4.2.1(b). The City requires that BPA testers notify the City if a water user or City-owned BPA has been modified from the CCCMP Section 4.2.1(b) approval.

### 4.2.2 Installation Criteria for Backflow Protection

- (a) For AGs, the following is required:

- (1) The receiving water container must be located on the water user's premises at the water user's service connection unless an alternate location has been approved by the City;
  - (2) all piping between the water user's service connection and the discharge location of the receiving water container must be above finished grade and be accessible for visual inspection unless an alternative piping configuration is approved by the City;
  - (3) the City must ensure that the AG specified in the State CCCPH Section 3.3.1 (a) has been installed; and
  - (4) any new air gap installation at a user's service connection must be reviewed and approved by the State Water Board prior to installation.
- (b) RPs must be installed such that the lowest point of an assembly is a minimum of twelve inches above grade, and a maximum of thirty-six inches above the finished grade, unless an alternative is approved by the PWS.
- (c) DCs installed or replaced after the adoption of the State CCCPH must be installed according to the State CCCPH Section 3.3.2 (b). Below ground installation can be considered if approved by the City where it determines no alternative options are available.
- (d) A PVB or SVB must be installed at a minimum of twelve inches above all downstream piping and outlets.
- (e) SVBs may not be used for premises containment. PVBs may only be used for roadway right of way irrigation systems as premises containment where there is no potential for backpressure.
- (f) A RP or DC installed after the adoption of the State CCCPH must have a minimum side clearance of twelve inches, except that a minimum side clearance of twenty-four inches



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must be provided on the side of the assembly that contains the test cocks. The City may approve alternate clearances providing that there is adequate clearance for field testing and maintenance.

(g) Backflow protection must be located as close as practical to the water user's service connection unless one or more alternative locations have been approved by the City. If internal protection is provided in lieu of premises containment, the City must obtain access to the user premises and must ensure that the on-site protection meets the requirements of this Chapter for installation, field testing, and inspections.

(h) Each BPA and air gap separation must be accessible for field testing, inspection, and maintenance.

Standard Specifications and Standard Drawings for each type of BPA, that the City uses can be found in IRWD's Construction Guidelines which can be found on the District's website located at:

<https://www.irwd.com/about-us/engineering>



## 5 Non-Testable Devices

### 5.1 Non-testable backflow preventer testing procedures

There are no non-testable backflow preventer devices at water facilities under City ownership or administration. Hose-bibb vacuum breakers are an example of the most common type of non-testable backflow prevention devices for the City. The location and type of non-testable backflow preventer is shown in **Table 5-1**.

Table 5 -1 Location of Non-Testable Backflow Prevention Devices

Location	Hose Bibb Vacuum Breaker	Identification Potential Onsite Hazard
Main Street Reservoir	Yes	None
Rawlings Reservoir	Yes	None
Simon Reservoir	Yes	None
17 <sup>th</sup> Street Desalter Plant	Yes	None
Main Street PFAS / NIX Plant	Yes	None
Beneta Well	Yes	None
Columbus Tustin Well	Yes	None
Edinger Well	Yes	None
Main Street Well 3	Yes	None
Main Street Well 4	Yes	None
Newport Well	Yes	None
Pasadena Well	Yes	None
Vandenberg Well	Yes	None

The City inspects all City owned and operation facilities annually. All of the water sites are inspected by Operations Staff daily, Monday through Friday.



## 6 Certified Backflow Prevention Assembly Testers and Certified Cross-Connection Control Specialists

In accordance with the State CCCPH, Section 3.1.3 (a)(5), Section 3.1.4 (b)(6), and Section 3.4.1 – the City must ensure that each BPA required by the CCCMP to protect the City’s domestic water system is field tested by a person with valid certification from a certifying organization recognized by the State Water Board pursuant to the State’s CCCPH.

### 6.1 Backflow Tester Certification

All backflow testers operating within the City’s service area must provide evidence of current certification from a State Water Board-recognized organization that certifies backflow prevention assembly testers. Certifying organizations must be recognized by the State Water Board in accordance with the requirements of the State CCCPH and ISO/IEC 17024. Beginning on July 1, 2025, only those testers with a valid certification from a State Water Board recognized certifying organization shall be allowed to test BPA’s in the City’s service area; certifications from any other entity will be considered invalid.

#### 6.1.1 Backflow Tester List

The City is in contract with IRWD for all cross-connection needs and requirements.

The City uses the District’s approved Backflow Testers list located on the District’s website.

Backflow Testers must provide evidence of certification from a State Water Board recognized certifying organization, which currently is ANSI, to Lauren Hatch at [backflowtest@irwd.com](mailto:backflowtest@irwd.com).

Backflow Testers must submit their test gauge equipment calibration certifications to Lauren Hatch at [backflowtest@irwd.com](mailto:backflowtest@irwd.com).

The City utilizes one staff member who is certified by a State Water Board recognized certifying organization as a Backflow Tester. The staffer is listed in **Table 6-1** below.



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Table 6 -1 Certified Backflow Tester

Name	Agency	Address	Phone No.	Email Address	Certification No.	Certification Expiration Date
Jimmy Morales	City of Tustin	1472 Service Rd, Tustin, CA, 92780	(714) 913-3476	<a href="mailto:jimorales@tustinca.org">jimorales@tustinca.org</a>	19762	7/31/2027

## 6.2 Cross-Connection Control Specialist Certification

All Cross-Connection Control Specialists, used by the City pursuant to the requirements of the State CCCPH, shall have valid certification from a State Water Board recognized certifying organization, which complies with the State CCCPH, will be considered to be a State Water Board-recognized certifying organization.

Beginning three years after the effective date of the State CCCPH, only those Cross-Connection Control Specialists with a valid certification from a State Water Board recognized certifying organization shall satisfy the requirements of the State CCCPH.

Certifications obtained by organizations that do not meet the requirements of the State CCCPH will be invalid.

The City is in contract with IRWD, who has three (3) staff members who are certified by a State Water Board recognized certifying organization as Cross Connection Control Specialists. The staff is listed in **Table 6-2** below.

Table 6 -2 Certified Cross Connection Control Specialists

<u>Name</u>	<u>Agency</u>	<u>Address</u>	<u>Phone No.</u>	<u>Email Address</u>	<u>Certification No.</u>	<u>Certification Expiration Date</u>
Lauren Hatch	Irvine Ranch Water District	3512 Michelson Dr. Irvine, CA 92612	(949) 453-5761	<a href="mailto:hatch@irwd.com">hatch@irwd.com</a>	2413	3/31/2027
Bill Hall	Irvine Ranch Water District	3512 Michelson Dr. Irvine, CA 92612	(949) 453-5774	<a href="mailto:hall@irwd.com">hall@irwd.com</a>	3020	11/30/2026
Evan Melendez	Irvine Ranch Water District	3512 Michelson Dr. Irvine, CA 92612	(949) 453-5647	<a href="mailto:melendez@irwd.com">melendez@irwd.com</a>	3364	1/31/2026



## 7 Backflow Incident Response, Reporting and Notification

In accordance with the State CCCPH, Section 3.1.3(a)(8), Section 3.1.4 (b)(7), and Section 3.5.2 the City has developed and implemented procedures for investigating and responding to suspected or actual backflow incidents. The procedure for responding to backflow incidents, reporting any incidents, and reporting those incidents, will be:

### 7.1 Backflow Incident Response Procedure

In the event that a suspected backflow incident occurs in the City, the City's response will include, but not limited to, the following:

- (a) Consideration of complaints or reports of changes in water quality as possible incidents of backflow;
- (b) Water quality sampling and pressure recording; and
- (c) Documentation of the investigation, and any response and follow-up activities.

### 7.2 Backflow Incident Notification

In the event that a backflow incident occurs the Cross-Connection Control Coordinator will provide the following notification:

- (a) The Cross-Connection Control Coordinator will notify the State Water Board and Orange County Health Care Agency of any known or suspected incident of backflow within 24 hours of the determination. If required by the State Water Board, the City will issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1.
- (b) If required by the State Water Board, the City will submit, by a date specified by the State Water Board, a written incident report describing the details and affected area of the backflow incident, the actions taken by the City in response to the backflow incident, and the follow up actions to prevent future backflow incidents.

The written report form is in CCCMP **Appendix G**.



## 8 Cross-Connection Control Program Coordinator

In accordance with the State CCCPH, Section 3.1.3 (a)(2) and Section 3.1.4 (b)(8), the City must designate at least one individual involved in the development of and be responsible for the reporting, tracking, and other administration duties of its cross-connection control program. Further for public water systems with more than 3,000 service connections the Cross-Connection Control Program Coordinator must be a Cross-Connection Control Specialist.

The City's water system includes 14,392 domestic water connections as of 5/25/2025. Therefore, the City must have a Cross-Connection Control Program Coordinator. The Coordinator does not have to be a certified Cross-Connection Control Specialist.

The City's Cross-Connection Control Program Coordinator is:

Lauren Hatch  
Recycled Water & Cross Connection Control Manager  
Irvine Ranch Water District  
3512 Michelson Dr. Irvine, CA 92612  
(949) 453-5761  
[hatch@irwd.com](mailto:hatch@irwd.com)  
AWWA Certification No: 2413  
Expiration Date: 3/31/2027

The City's Cross-Connection Control Program Specialist(s) is(are):

Lauren Hatch  
Recycled Water & Cross Connection Control Manager  
Irvine Ranch Water District  
3512 Michelson Dr. Irvine, CA 92612  
(949) 453-5761  
[hatch@irwd.com](mailto:hatch@irwd.com)  
AWWA Certification No: 2413  
Expiration Date: 3/31/2027

The City's CCCMP was developed in consultation with their Cross-Connection Control Specialist(s) because the City's domestic water system has more than 1,000 service connections.

The City's designated Cross-Connection Control Specialist can be contacted within one hour, per the requirement of the State CCCPH for a PWS with 3,000 or more service connections.



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### 8.1 Cross Connection Control Specialist Designee

In the event the City's Cross Connection Control Specialist is not available due to vacation, sickness, or other reason, the duties of the Cross Connection Control Specialist will be carried out by:

1. Backup Cross Connection Control Coordinator

Bill Hall

Senior Recycled Water & Cross Connection Control Specialist

Irvine Ranch Water District

3512 Michelson Dr. Irvine, CA 92612

Phone: (949) 453-5774

Email: [hall@irwd.com](mailto:hall@irwd.com)

AWWA Certification No.: 3020

Expiration Date: 11/30/2026

2. Backup Cross Connection Control Specialist

Evan Melendez

Senior Recycled Water & Cross Connection Control Specialist

Irvine Ranch Water District

3512 Michelson Dr. Irvine, CA 92612

Phone: (949) 453-5647

Email: [melendez@irwd.com](mailto:melendez@irwd.com)

AWWA Certification No.: 3364

Expiration Date: 1/31/2026



## 9 Recordkeeping

In accordance with the State CCCPH, Section 3.1.3(a)(7) and Section 3.1.4 (b)(9), the City is contracting with IRWD, which has developed and implemented a recordkeeping system for:

1. Backflow prevention assemblies (BPA)
2. Cross-connection information.
3. Commercial/Industrial and Residential site assessments.

This recordkeeping system, outlined in Section 9, complies with the State CCCPH section 3.5.1.

### 9.1 Records Retained

The City's Contractor, IRWD, maintains the following records:

- (a) The hazard assessments for each user premise, conducted pursuant to CCCPH section 3.2.1 (Hazard Assessment).
- (b) For each BPA, the associated hazard or application, location, owner, type, manufacturer, model, size, installation date, and serial number.
- (c) For each AG installation, the associated hazard or application and the location, owner, and as-built plans of the AG.
- (d) Results of all BPA field testing, AG inspections, swivel-ell inspections, and field tests for the previous three calendar years, including the name, test date, repair date, and certification number of the backflow prevention assembly tester for each BPA field test and AG and swivel-ell.
- (e) Repairs made to, or replacement or relocation of, BPAs for the previous three calendar years.
- (f) The most current cross-connection tests (e.g., shutdown test, dye test), if recycled water use on the premise.
- (g) If a User Supervisor is designated for a user premise, the current contact information for the User Supervisor and Water User, and any applicable training and qualifications as described by State CCCPH section 3.2.2(f).
- (h) Descriptions and follow-up actions related to all backflow incidents.
- (i) If any portion of the cross-connection control program is carried out under contract or agreement, a copy of the current contract or agreement.



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- (j) The current Cross-Connection Control Management Plan as required in the State CCCPH Section 3.1.4.
- (k) Any public outreach or education materials issued as required in the State CCCPH section 3.1.3.(a)(7) for the previous three calendar years.
- (l) All records retained by the IRWD will be made available to the State Water Board upon request.
- (m) Records of Commercial/Industrial site assessments.
- (n) Records of Residential site assessments.

## 9.2 Recordkeeping Policy and Procedures

The City's written records retention policy for information generated in **Section 9.2** is reflected in the section below:

### 9.2.1 Backflow Prevention Assembly Test Results

- BPA test notices generated monthly by due date assigned at installation based on geographical area. use Oracle (but that may change) to generate and send to Infosend for mailing by postal mail.
- The City's contractor, IRWD, utilizes Oracle to generate and send to Infosend who sends the BPA test notices to the customers via direct mail.
- Test results are returned to the District via email.
- Test forms are scanned as PDFs, and the data is input into the City's backflow test result database.
- The copies of the test results are scanned weekly and saved by due month in Webdocs. Electronic test data is maintained in the District's server in perpetuity but the emails with the test results are saved only for 3 years.
- District staff can access the test results via the backflow tracking software computer program customer interface.

### 9.2.2 Phase 1 - Connections with Backflow Protection Assessments

Electronic assessment document created as an Excel spreadsheet is reviewed and signed by the Cross Connection Control Specialist. Data is stored electronically in Webdocs.

- If no action is required -
  - Electronic copy is filed: IRWD Network within Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information



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- Electronic storage location where the data from the assessment is stored: IRWD Network
- If action is required
  - Electronic copy is filed: IRWD: Network, Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information
  - Electronic storage location where the data from the assessment is stored: IRWD Network

### 9.2.3 Phase 2 – Commercial/Industrial/Institutional Connections Without Backflow Protection Assessments

Electronic self-reporting letter is submitted as a pdf which is printed and reviewed by the Cross Connection Control Specialist then signed and scanned as a final pdf for filing. Data from the pdf is transferred to the assessment database in the form of an Excel spreadsheet.

After scanning the pdf self-reporting letters are saved on the IRW Networks and stored by address with all the water service (s) information:

- If no action is required -
  - Electronic copy is filed: IRWD: Network, Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information
  - Electronic storage location where the data from the assessment is stored: City of Santa Ana Network
- If action is required
  - Electronic copy is filed: IRWD: Network, Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information
  - Electronic storage location where the data from the assessment is stored: IRWD Network



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### 9.2.4 Phase 3 – Residential Connections Without Backflow Protection Assessments

Electronic assessment document created as an Excel spreadsheet is reviewed and signed by the Cross Connection Control Specialist. Data is stored electronically in Webdocs.

- If no action is required -
  - Electronic copy is filed: IRWD Network within Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information
  - Electronic storage location where the data from the assessment is stored: IRWD Network
- If action is required
  - Electronic copy is filed: IRWD: Network, Webdocs
  - Responsible for the filing: A District Cross-Connection Control Specialist
  - How long is it filed: Permanently – a living document
  - How is assessment data stored: Stored by address with all water service(s) information
  - Electronic storage location where the data from the assessment is stored: IRWD Network



## 10 User Supervisors

In accordance with the State CCCPH, Section 3.2.2 (3)(f), The State Water Board and City may, at their discretion, require a water user to designate a user supervisor when the user premises has a multi-piping system that conveys various types of fluids and where changes in the piping system are frequently made. If a user supervisor is designated the following is required:

- (1) The user supervisor is responsible for the avoidance of cross-connections during the installation, operation and maintenance of the water user's pipelines and equipment. The user supervisor must be trained on the fluids used and backflow protection for the premise, and must inform the City of changes in piping, and maintain current contact information on file with the City; and,
- (2) The City must include in the CCCMP required in CCCPH Section 3.1.4 the training and qualification requirements for user supervisors if required by the State Water Board or City, identify the entity that will provide the user supervisor training, and frequency of any necessary recurring training. The training must adequately address the types of hazards and concerns typically found.

The City has not required any user supervisors for use sites within the City.



## 11 Backflow Prevention Assembly Testing and Reporting

In accordance with the State CCCPH, Section 3.1.3 (a)(6) – the City must ensure that each BPA required by the CCCMP to protect the City’s domestic water system is field tested. The City must develop and implement a procedure for ensuring all BPAs are field tested, inspected, and maintained and AG’s are inspected and maintained in accordance with the State CCCPH, Section 3.3.3.

1. All BPAs installed in the City in compliance with CCCMP must be field tested following installation, repair, depressurization for winterizing, or permanent relocation. All required field testing must be performed by certified backflow prevention assembly tester.
2. BPAs must be field tested at least annually. The State CCCPH does not preclude the City, the State Water Board, or a local health agency from requiring more frequent field testing for premises with high hazard cross-connection or BPA at increased risk of testing failure.
3. Air-gap separations must be visually inspected at least annually by a certified as backflow prevention assembly tester or certified as a cross-connection control specialist.
4. The City must receive passing field tests before providing continuous service to a water user with a newly installed BPA.
5. BPAs that fail the field test must be repaired or replaced within 30 days of notification of the failure by the City. Extensions may be allowed by the City at the discretion of the Cross Connection Control Specialist.

Backflow prevention assembly testers must notify the City within one day if a backflow incident or an unprotected cross-connection is observed at the BPA or prior to the user premises during field testing. The City will immediately investigate and discontinue service to the user premises if a backflow incident is confirmed, and water service will not be restored to that user premises until the City receives a confirmation of a passing BPA field test from a backflow prevention assembly tester and the assembly is protecting the City.

### 11.1 Backflow Testing Notification Process

Each water user with a BPA on the service connection must comply with the following schedule in order to be in compliance with the CCCMP and continue to receive water service from the City.



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- First notice – the first annual notice of BPA testing required is sent by direct mail to the user providing them with 30 days to complete the test and submit the results by email. Notices are sent by postal mail in April.
- Second notice – if no test results are emailed to the City after 30 days, a second notice will be sent to the user by mail providing them with an additional 15 days to complete the test and submit the results by email.
- Third notice– if no test results are emailed to the City after 15 days, a third notice will be sent to the user by mail providing them with an additional 10 days to submit the results through the backflow tracking computer program portal.
- Final notice – if no test results are emailed to the City after 7 days, a final notice will be provided to the customer, via email, an in-person visit, phone call, or door hangar with 7 days' Notice of Code enforcement involvement.
- Code enforcement – Code enforcement will levy fees daily, granted to them by the city code, to get customer to comply with the required BPA testing. Customer will be made aware via email, an in-person visit, phone call, or door hangar with 7 days' Notice of termination of water service.
- Termination of water service – the test results are not provided to the City within the 7 days shutdown notice period, water service is terminated.

### 11.2 Damaged, missing, or improperly installed backflow prevention assemblies.

In the event that a backflow prevention assembly is missing (or stolen), installed incorrectly, illegally modified, or tampered with, the City shall notify the customer that the device has to be replaced or repaired within 30 days of notification of the failure by the City.

Extensions may be allowed by the City at the discretion of the Cross Connection Control Specialist.



## 12 Public Outreach and Education

In accordance with State CCCPH, Section 3.1.3 (a)(9) and Section 3.1.4 (b)(12) – the City has partnered with the IRWD who has developed a cross-connection control public outreach and education program that is intended to educate staff, customers, and the community about backflow protection and cross-connection control.

The City has a designated Public Information Officer (PIO) that provides a point of contact for the City regarding the City's cross-connection control and backflow protection program and other water related issues.

Contact Information:  
Public Information Officer  
714-573-3000

Public Outreach to educate the City's customers on backflow and cross-connection control include information on backflow and cross-connections on the IRWD website which is:

<https://www.irwd.com/services/backflow-prevention>

In addition, backflow and cross-connection prevention may be distributed by other means, including but not limited to, periodic water bill inserts, information pamphlet distribution, new customer documentation, emails, and additions to the City's Consumer Confidence Reports (CCR).

Refer to the City's website for the City's Consumer Confidence Reports

<https://www.tustinca.org/documentcenter/view/17920/2025-water-quality-report>

Refer to the District's website for a trifold handout outlining the District's backflow prevention program.

[cross\\_connection\\_trifold.pdf](#)



## 13 Local Entity Coordination

In accordance with the State CCCPH, Section 3.1.3 (a)(10) and Section 3.1.4 (b)(13) The City must coordinate with applicable local entities that are involved in either cross-connection control or public health protection to ensure hazard assessments can be performed, appropriate backflow protection is provided and provide assistance in the investigation of backflow incidents. Local entities may include but are not limited to plumbing, permitting, or health officials, law enforcement, fire departments, maintenance, and public and private entities.

For the District, the local entities which are involved in cross-connection control include, but are not limited to:

Orange County Environmental Health  
Hisham Elmishad  
714-433-6280

**Coordination includes:** coordinating backflow protection and cross connection control on a project-by-project basis.

Orange County Fire Authority  
Steve Klein  
(714) 573-6475

**Coordination includes:** coordinating backflow protection and cross connection control on a project-by-project basis.

Orange County Sheriff's Department  
Glenn Blounts  
(714) 935-6278

**Coordination includes:** coordinating backflow protection and cross connection control on a project-by-project basis.

The City intends to include coordination with other local PWS through events which may include, but not be limited to, semi-annual gatherings with other PWS' Cross Connection Control Coordinators, public outreach events, and vendor workshops.



# **Appendix A**

## **What is a Cross Connection ?**



## Appendix A

### Background on Backflow Protection and Cross-Connection Control

#### A.1 What is a Cross-Connection?

A cross-connection is an interconnection between a potable water supply and a non-potable source via any actual or potential connection or structural arrangement between a PWS and any source or distribution system containing liquid, gas, or other substances not from an approved water supply. Bypass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices through which, or because of which backflow can occur are considered to be cross-connections.<sup>1</sup> The State CCCPH includes acceptable installation criteria for swivel-ell and other types of backflow prevention assemblies (BPAs) to prevent backflow.

Backflow is the undesired or unintended reversal of flow of water and/or other liquids, gases, or other substances into a PWS's distribution system or approved water supply.

The presence of a cross-connection represents a location in a distribution system through which backflow of contaminants or pollutants can occur. Backflow occurs when a non-potable source is at a greater pressure than the potable water distribution system. Backflow can occur from either backsiphonage or backpressure. Backsiphonage occurs when a non-potable source enters the drinking water supply due to negative (i.e., sub-atmospheric) distribution system pressure. Backpressure occurs when the pressure from a non-potable source exceeds the pressure in the potable water distribution system.

Backsiphonage may be caused by a variety of circumstances, such as main breaks, flushing, pump failure, or emergency firefighting water demand. Backpressure may occur when heating, cooling, waste disposal, or industrial manufacturing systems are connected to potable supplies and the pressure in the external system exceeds the pressure in the distribution system. Both situations act to change the direction of water, which normally flows from the distribution system to the customer, so that non-potable substances from industrial, commercial, or residential premises flows back into the distribution system through a cross-connection.

Cross-connections are not limited to industrial or commercial facilities. Submerged inlets are found on many common plumbing fixtures and are sometimes necessary features of the fixtures if they are to function properly. Examples of this type of design are siphon-jet urinals or water closets, flushing rim slop sinks, and dental cuspidors.

Older bathtubs and lavatories may have supply inlets below the flood level rims, but modern sanitary design has minimized or eliminated this cross-connection in new fixtures. Chemical and industrial process vats sometimes have submerged inlets where the water pressure is used as an aid in diffusion, dispersion, and agitation of the vat contents. Even though a supply pipe may be installed above a vat, backsiphonage can still occur. Siphon action has been shown to raise a liquid in a pipe such as water almost 34 feet. Some submerged inlets are difficult to control,



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including those which are not apparent until a significant change in water level occurs or where a supply may be conveniently extended below the liquid surface by means of a hose or auxiliary piping. A submerged inlet may be created in numerous ways, and its detection may be difficult.

Chemical and biological contaminants have caused illness and deaths during known incidents of backflow, with contamination affecting several service connections, and the number of incidents reported is believed to be a small percentage of the total number of backflow incidents that actually occur. The public health risk from cross-connections and backflow is a function of a variety of factors including cross-connection and backflow occurrence and type and amount of contaminants.

### **A.2 Purpose of a Cross-Connection Control Program**

The purpose of a cross-connection control program is to prevent the occurrence of backflow into a PWS's distribution system in order to protect customers from contamination or pollution from any on-site hazards. Properly installed and maintained BPAs, devices or methods provide protection against the threat posed by many conditions typically found on a user's premise.

The use of approved BPAs ensures that the appropriate performance evaluation of the assembly was conducted. It is important and required by the State CCCPH to select and properly install an approved BPA that is capable of protecting the distribution system from the hazard identified. The success of a program depends on individuals that are knowledgeable about cross-connection control to identify actual and potential hazards, apply principles of backflow protection and prevention, and implement cross-connection control policies and procedures. A successful program will have ongoing surveillance of a PWS to ensure BPAs, devices or methods are working and identify new hazards or changes in the distribution system. Certified specialists are needed to properly evaluate the degree of hazard that exists in the distribution system. Hazards typically identified in distribution systems along with the required level of protection are specified in Chapter 3 of the State CCCPH.

### **A.3 Notes on Applicability of the Cross-Connection Control Policy Handbook**

The State CCCPH provides the basis for regulating the use and management of cross-connection control programs and BPAs in PWSs, and related requirements for supporting programs and policies. Activities or uses outside of the scope of the authority of the State Water Board to regulate PWSs are not regulated by the State CCCPH, including California Plumbing Code requirements and definitions not related to PWSs.

Recycled water cross-connection control installations and programs for the purposes of protecting the recycled water supply are not regulated by the State CCCPH, although a PWS that uses recycled water is regulated by the State CCCPH to ensure that a PWS's drinking water system has adequate backflow protection from a recycled water system.

Water systems that do not meet the definition of a PWS (e.g., "State Small Water Systems" under CCR Title 22, Article 3) are not regulated by the CCCPH, although they may need to comply with the California Plumbing Code, local health agencies, and other laws or entities.



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<sup>1</sup> California Department of Health Services (DHS), Public Water Supply Branch. (1988). *Guidance Manual for cross connection Control Program (Green Manual)*. California Department of Health Services.



## **Appendix B**

Assembly Bill 1671 (2017, Chapter 533)  
Assembly Bill 1180 (2019, Chapter 455)



## City of Tustin Cross Connection Control Management Plan (CCCMP)



### Assembly Bill No. 1671

#### CHAPTER 533

An act to amend Section 116810 of, and to add Sections 116407 and 116555.5 to, the Health and Safety Code, relating to drinking water.

[Approved by Governor October 6, 2017. Filed with Secretary of State October 6, 2017.]

#### legislative counsel's digest

AB 1671, Caballero. Backflow protection and cross-connection controls: standards.

(1) Existing law, the California Safe Drinking Water Act, requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health, including, but not limited to, conducting research, studies, and demonstration projects relating to the provision of a dependable, safe supply of drinking water, enforcing the federal Safe Drinking Water Act, adopting regulations, and conducting studies and investigations to assess the quality of private domestic water wells. Existing law makes certain violations of the act a misdemeanor.

Existing law requires any person who owns a public water system to ensure that the system does certain things, including, but not limited to, that it will not be subject to backflow under normal operating conditions. Existing law, to ensure that testing and maintenance of backflow prevention devices are performed by persons qualified to do testing and maintenance, authorizes local health officers to maintain programs for certification of backflow prevention device testers and requires the certification program to be consistent with backflow protection regulations adopted by the state board. A violation of these provisions, or an order by a local health officer pursuant to these provisions, is a misdemeanor.

This bill would require a public water system to implement a cross-connection control program that complies with, and would require the certification program to be consistent with, applicable regulations and the standards described in (2).

(2) Existing regulations establish standards for a backflow prevention device and cross-connection control.

This bill, on or before January 1, 2020, would require the state board to adopt standards for backflow protection and cross-connection control and would authorize the state board to do so through the adoption of a policy handbook, as specified. By authorizing the state board to adopt standards, the violation of which would be a crime, the bill would create a new crime and impose a state-mandated local program.



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(3) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

*The people of the State of California do enact as follows:*

SECTION 1. Section 116407 is added to the Health and Safety Code, to read:  
116407. (a) On or before January 1, 2020, the state board shall adopt standards for backflow protection and cross-connection control.

(b) The state board may implement subdivision (a) through the adoption of a policy handbook that is not subject to the requirements of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The policy handbook shall include standards for backflow protection and cross-connection control. In developing the standards and any amendments to those standards, the state board shall consult with state and local agencies and other persons whom the state board has identified as having expertise in the subject of backflow protection and cross-connection control. The state board shall hold at least two public hearings before adopting the policy handbook. The policy handbook shall be posted on the board's Internet Web site.

(c) (1) Upon the effective date of a policy handbook adopted by the state board pursuant to subdivision (b), the regulations set forth in Article 1 (commencing with Section 7583) and Article 2 (commencing with Section 7601) of Group 4 of Subchapter 1 of Chapter 5 of Division 1 of Title 17 of the California Code of Regulations shall become inoperative, and, 90 days thereafter, are repealed, unless the state board makes a determination not to repeal a specific regulation.

(2) If the state board determines not to repeal a specific regulation pursuant to paragraph (1), the state board shall provide to the Office of Administrative Law and the Secretary of State written notice of its determination, including identification of the specific regulation that is not repealed. That regulation, upon the provision of that written notice to the Office of Administrative Law and the Secretary of State, shall become operative.

SEC. 2. Section 116555.5 is added to the Health and Safety Code, to read:

116555.5. A public water system shall implement a cross-connection control program that complies with applicable regulations and with standards adopted by the board pursuant to Section 116407.

SEC. 3. Section 116810 of the Health and Safety Code is amended to read:

116810. To ensure that testing and maintenance of backflow prevention devices are performed by persons qualified to do testing and maintenance,



## City of Tustin Cross Connection Control Management Plan (CCCMP)

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local health officers may maintain programs for certification of backflow prevention device testers. The local health officer may suspend, revoke, or refuse to renew the certificate of a tester, if, after a hearing before the local health officer or his or her designee, the local health officer or his or her designee finds that the tester has practiced fraud or deception or has displayed gross negligence or misconduct in the performance of his or her duties as a certified backflow prevention device tester. The local health officer may collect fees from certified testers to offset the cost of the certification program provided pursuant to this section. The certification standards shall be consistent with standards adopted by the state board pursuant to Section 116407 and any other applicable backflow protection regulations.

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.



## City of Tustin Cross Connection Control Management Plan (CCCMP)



### Assembly Bill No. 1180

#### CHAPTER 455

An act to amend Section 116407 of the Health and Safety Code, and to add Section 13521.2 to the Water Code, relating to water.

[Approved by Governor October 2, 2019. Filed with Secretary of State  
October 2, 2019.]

#### legislative counsel's digest

AB 1180, Friedman. Water: recycled water.

(1) Existing law, the California Safe Drinking Water Act, requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health. Existing law requires, on or before January 1, 2020, the state board to adopt standards for backflow protection and cross-connection control through the adoption of a policy handbook, as specified.

This bill would require that handbook to include provisions for the use of a swivel or changeover device to supply potable water to a dual-plumbed system during an interruption in recycled water service.

(2) Existing law requires the state board to establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health.

This bill would require the state board, on or before January 1, 2023, as specified, to update the uniform statewide criteria for nonpotable recycled water uses.

*The people of the State of California do enact as follows:*

SECTION 1. The Legislature finds and declares all of the following:

(a) On December 11, 2018, the State Water Resources Control Board unanimously adopted an amendment to the policy for water quality control for recycled water, which included a goal to increase the use of recycled water in the state from 714,000 acre-feet per year in 2015 to 1,500,000 acre-feet per year by 2020 and 2,500,000 acre-feet per year by 2030.

(b) Section 13521 of the Water Code requires the state board to establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health.

(c) The regulations establishing the uniform statewide criteria for recycled water uses are set forth in Chapter 3 (commencing with Section 60301.050) of Division 4 of Title 22 of the California Code of Regulations. The regulations that pertain to nonpotable recycled water uses have not been updated since 2000.



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(d) The regulations relating to backflow protection and cross-connection control for recycled water are set forth in Article 1 (commencing with Section 7583) and Article 2 (commencing with Section 7601) of Group 4 of Subchapter 1 of Chapter 5 of Division 1 of Title 17 of the California Code of Regulations. These regulations have not been updated since 1987.

(e) Section 1 of Chapter 533 of the Statutes of 2017 (Assembly Bill 1671 of the 2017–18 Regular Session) requires, on or before January 1, 2020, the state board to adopt backflow protection and cross-connection control standards and authorizes their implementation through a policy handbook.

(f) In order to maximize the amount of recycled water California can safely use for beneficial purposes, it is necessary to update the uniform statewide criteria for nonpotable recycled water uses and specify certain associated backflow protection and cross-connection control provisions.

SEC. 2. Section 116407 of the Health and Safety Code is amended to read:

116407. (a) On or before January 1, 2020, the state board shall adopt standards for backflow protection and cross-connection control.

(b) (1) The state board may implement subdivision (a) through the adoption of a policy handbook that is not subject to the requirements of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The policy handbook shall include standards for backflow protection and cross-connection control. In developing the standards and any amendments to those standards, the state board shall consult with state and local agencies and other persons whom the state board has identified as having expertise in the subject of backflow protection and cross-connection control. The state board shall hold at least two public hearings before adopting the policy handbook. The policy handbook shall be posted on the board's internet website.

(2) (A) The policy handbook described in this subdivision shall include provisions for the use of a swivel or changeover device to supply potable water to a dual-plumbed system during an interruption in recycled water service.

(B) The use of a swivel or changeover device shall be consistent with any notification and backflow protection provisions contained in the policy handbook.

(c) (1) Upon the effective date of a policy handbook adopted by the state board pursuant to subdivision (b), the regulations set forth in Article 1 (commencing with Section 7583) and Article 2 (commencing with Section 7601) of Group 4 of Subchapter 1 of Chapter 5 of Division 1 of Title 17 of the California Code of Regulations shall become inoperative, and, 90 days thereafter, are repealed, unless the state board makes a determination not to repeal a specific regulation.

(2) If the state board determines not to repeal a specific regulation pursuant to paragraph (1), the state board shall provide to the Office of Administrative Law and the Secretary of State written notice of its determination, including identification of the specific regulation that is not repealed. That regulation, upon the provision of that written notice to the



## City of Tustin Cross Connection Control Management Plan (CCCMP)

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Office of Administrative Law and the Secretary of State, shall become operative.

SEC. 3. Section 13521.2 is added to the Water Code, to read:

13521.2. (a) On or before January 1, 2023, the state board shall update the uniform statewide criteria for nonpotable recycled water uses established in Chapter 3 (commencing with Section 60301.050) of Division 4 of Title 22 of the California Code of Regulations. The deadline imposed by this section is mandatory only if the Legislature has appropriated sufficient funds, as determined by the executive director of the state board, in the annual Budget Act or otherwise to cover the state board's costs associated with the performance of the duties imposed by this section.

(b) For purposes of the update to the uniform statewide criteria for nonpotable recycled water uses described in subdivision (a), the state board shall adopt a regulation that incorporates by reference the criteria and applicable backflow protection provisions, including the provisions for the use of a swivel or changeover device for dual-plumbed systems, that are contained in the most recently adopted version of the policy handbook adopted pursuant to Section 116407 of the Health and Safety Code and any future versions of the policy handbook.

O



# **Appendix C**

## **High Hazard Premises**



## APPENDIX C

### HIGH HAZARD CROSS-CONNECTION CONTROL PREMISES

The list below identifies premises that require backflow protection provided by an air gap or a reduced pressure principle backflow prevention assembly, unless noted otherwise. The list below is not intended to be all-inclusive. A PWS, State Water Board, or local health agency may require an AG, RP, or both to protect a PWS from other hazards not listed below and identified in premises through the hazard assessment completed in CCCPH Chapter 3, section 3.2.1. A PWS may reduce or increase the minimum protection required for a previously hazard-assessed user premise following a hazard reassessment as described in CCCPH Chapter 3, section 3.2.1.

1. Sewage handling facilities
2. Wastewater lift stations and pumping stations
3. Wastewater treatment processes, handling, or pumping equipment that is interconnected to a piping system connected to a PWS (+)
4. Petroleum processing or storage plants
5. Radioactive material storage, processing plants or nuclear reactors
6. Mortuaries
7. Cemeteries
8. Sites with an auxiliary water supply interconnected with PWS (+)
9. Sites with an auxiliary water supply not interconnected with PWS
10. Premises with more than one connection to the PWS (++++)
11. Recycled water (++)(+++)
12. Recycled water interconnected to piping system that contains water received from a PWS (+)
13. Graywater systems, as defined in California Water Code Section 14876, that are interconnected to a piping system that is connected to a PWS
14. Medical facilities
15. Kidney dialysis facilities
16. Dental office with water-connected equipment
17. Veterinarian facilities
18. Chemical plants
19. Laboratories
20. Biotech facilities
21. Electronics manufacture
22. Dry cleaner facilities
23. Industrial or commercial laundry facilities
24. Metal-plating facilities
25. Business park with a single meter serving multiple businesses
26. Marine-port facilities
27. Car wash facilities



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28. Mobile home park, RV park, or campgrounds with RV hookups
29. Hotels/motels
30. Gas stations
31. Fire stations
32. Solid waste disposal facilities
33. Pet groomers
34. Agricultural premises
35. Hazard assessment access denied or restricted
36. Railroad maintenance facilities
37. Incarceration facilities (e.g., prisons)
38. Temporary connections to fire hydrants for miscellaneous uses, including construction
39. Private water distribution mains
40. Drinking water storage tank overflow connected to a sump or storm drain (+)
41. Airports

(+) Premise isolated by air gap only except as allowed through CCCPH Section 3.2.2(c)

(++) Dual-plumbed use areas established per CCR Title 22, Section 60313 through 60316 where recycled water is used for individually owned residential unit.

(+++ Residences using recycled water for landscape irrigation as part of an approved dual plumbed use area established pursuant to CCR Title 22, sections 60313 through 60316 shall use, at a minimum, a DC. If the water supplier is also the supplier of the recycled water, then the recycled water supplier may obtain approval of the local public water supplier or the State Water Board, to utilize an alternative backflow protection plan that includes an annual inspection of both the recycled water and potable water systems and an annual cross-connection test of the recycled water and potable water systems pursuant to subsection 60316(a) in lieu of any BPA.

(++++ All connections must receive at least the same level of protection excluding fire protection when connected to the PWS distribution system (e.g., if one connection requires an RP then all connections must have RPs installed).



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# **Appendix E**

## **Self-Report Letter (Commercial/Industrial Assessments)**



## City of Tustin Cross Connection Control Management Plan (CCCMP)



## | CCCPH Questionnaire

The State Water Resources Control Board adopted the Cross-Connection Policy Handbook which is effective July 1, 2024. This new legislation mandates that all public water systems conduct initial and ongoing inspections of facilities with potential high hazards.

**Your Prompt Action is Required:** To determine the level of hazard within your facility, we need you to complete the attached survey and return it to Lauren Hatch at [TustinBackflow@IRWD.com](mailto:TustinBackflow@IRWD.com) or you can return it with your signed 2025 Business License Renewal by December 31, 2024.

Please review the questions below to assess the potential cross-connection risks on your property. If any of these hazards apply, or if you're unsure, please provide the necessary details or indicate your need for an inspection.

Do any of the following exist on your property? (Please check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> dental and/or medical equipment using water.  | <input type="checkbox"/> Laundry facilities     |
| <input type="checkbox"/> Graywater system(s)   | <input type="checkbox"/> Multiple tenant suites |
| <input type="checkbox"/> Pumps or motors connected to water or sewage piping.  |   |
| <input type="checkbox"/> Chemicals in quantities greater than 5 gallons/1 lbs. If yes, what chemicals are present:<br>_____                              |   |
| <input type="checkbox"/> Water storage tanks, ponds, water treatment systems, sewage treatment or storage and/or wells.<br>If yes, please explain: _____ |   |
| <input type="checkbox"/> Petroleum, chemical or radioactive material processing or storage   |   |
| <input type="checkbox"/> Not sure of hazards on-site? Check here to request an inspection.   |   |



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**Type of business:**

- Veterinary/Pet Grooming       Manufacturing       Retail
- Medical/Dental       Food Processing/Restaurant       Hotel/Motel
- Office/Warehouse       Aerospace       Retail
- Other (explain below)

**Certification:**

By signing below, you confirm that the information provided is accurate to the best of your knowledge.

Please don't delay! Respond by 12/31/2024 to comply with this important regulation.

Site Contact (Name/Phone Number/Email):

\_\_\_\_\_

Signature \_\_\_\_\_

Print Name \_\_\_\_\_ Date \_\_\_\_\_

**For Water Purveyor Use Only**

Degree of Hazard:  High     Low     No Hazard

Meter Protection appropriate for Degree of Hazard:  Yes     No

Internal Protection and Referral to OC Health:  Yes     No

Cross Connection Control Specialist Reviewer: \_\_\_\_\_

Review Date: \_\_\_\_\_    Cross Connection Certification Number: \_\_\_\_\_



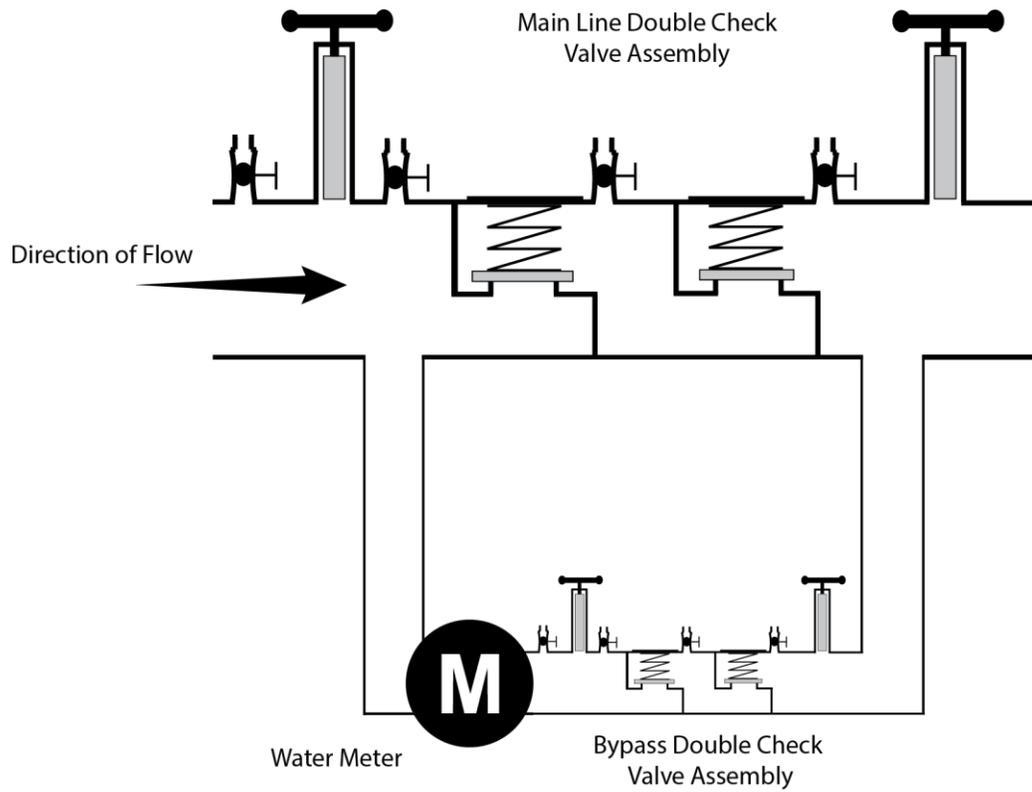
# Appendix F

## Backflow Prevention Assembly Diagrams

City of Tustin Cross Connection Control Management Plan (CCCMP)

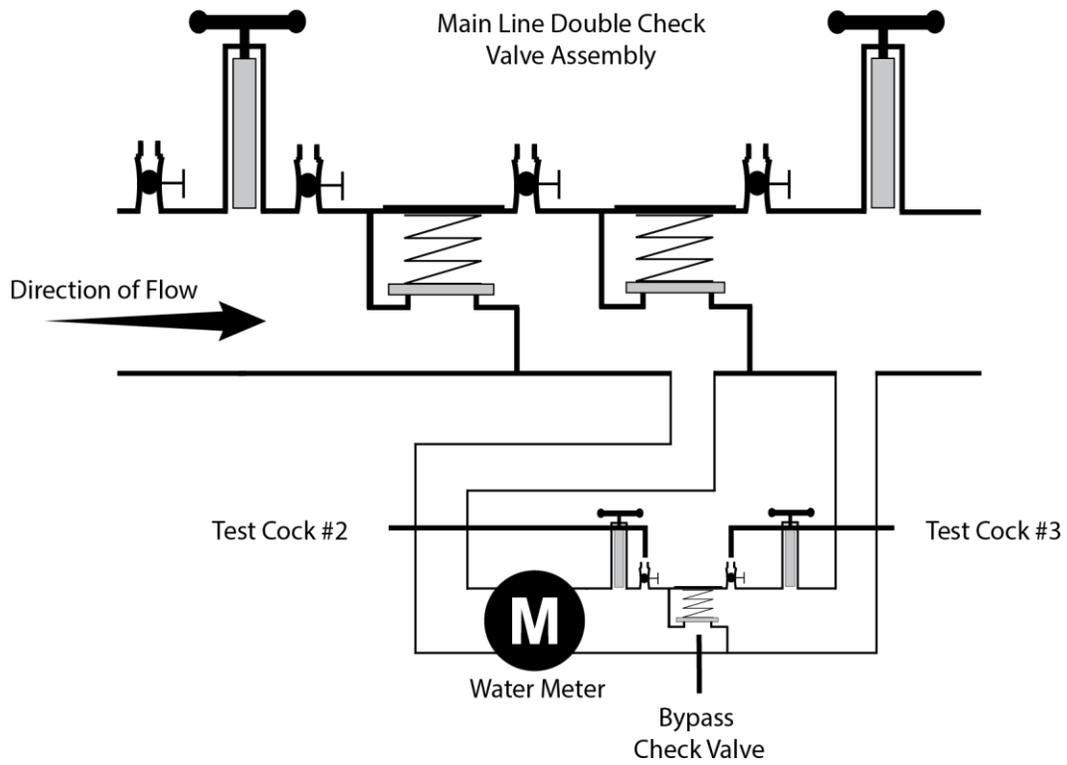
**Diagram 1**

***Double check detector backflow prevention assembly***



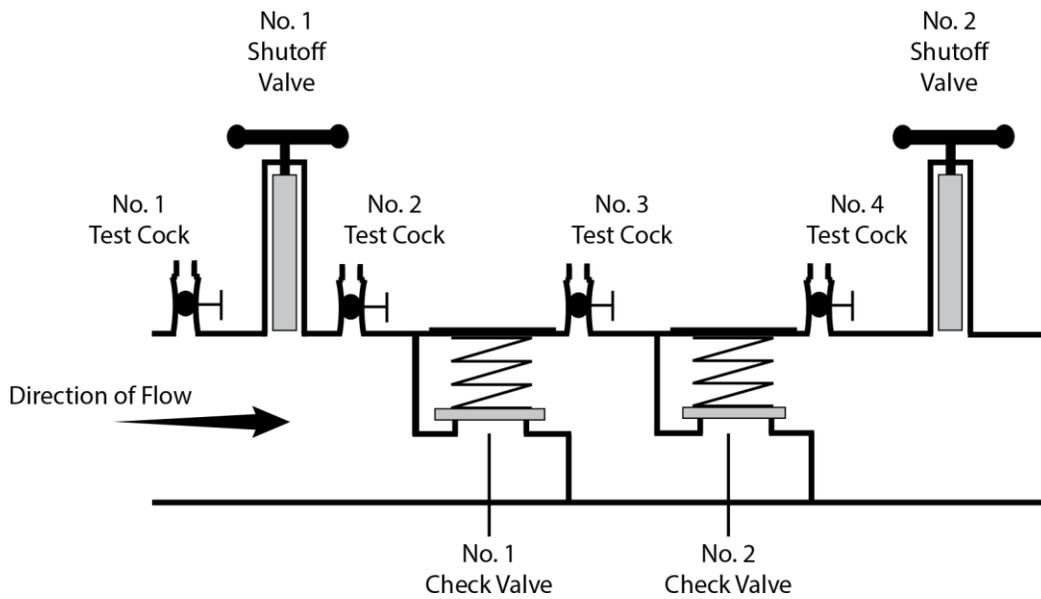
**Diagram 2**

***Double check detector backflow prevention assembly – type II***



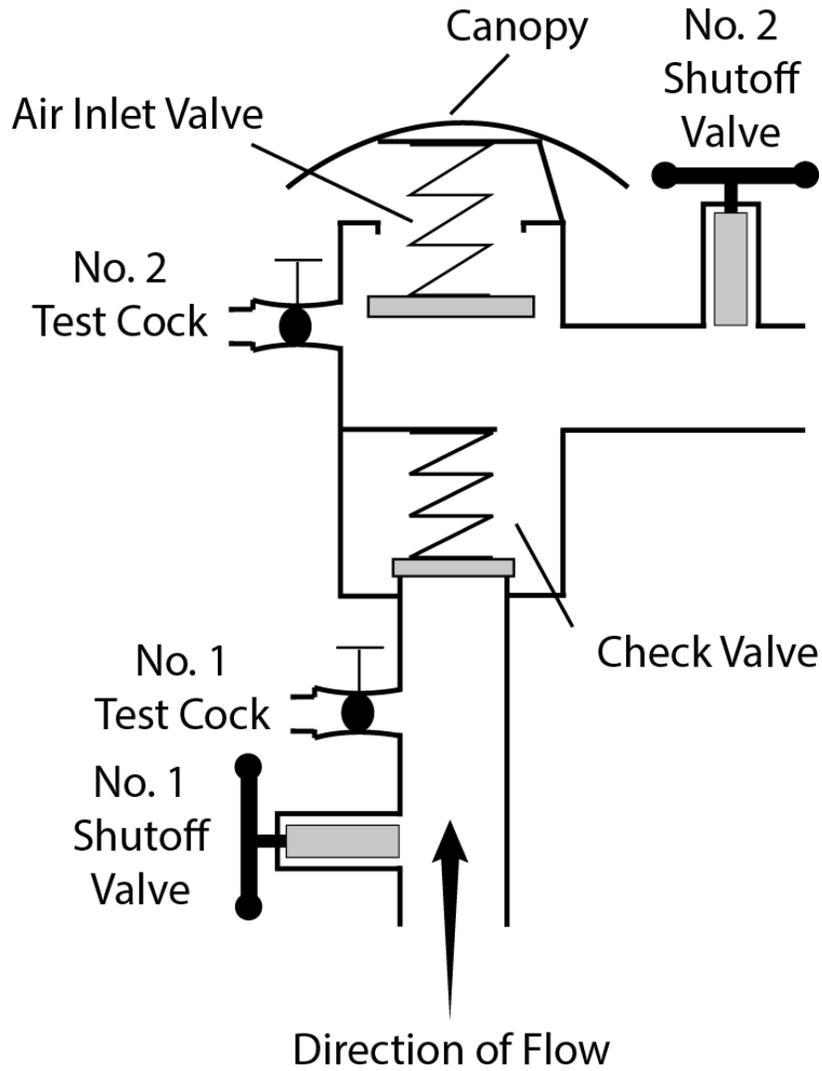
**Diagram 3**

***Double check valve backflow prevention assembly***



**Diagram 4**

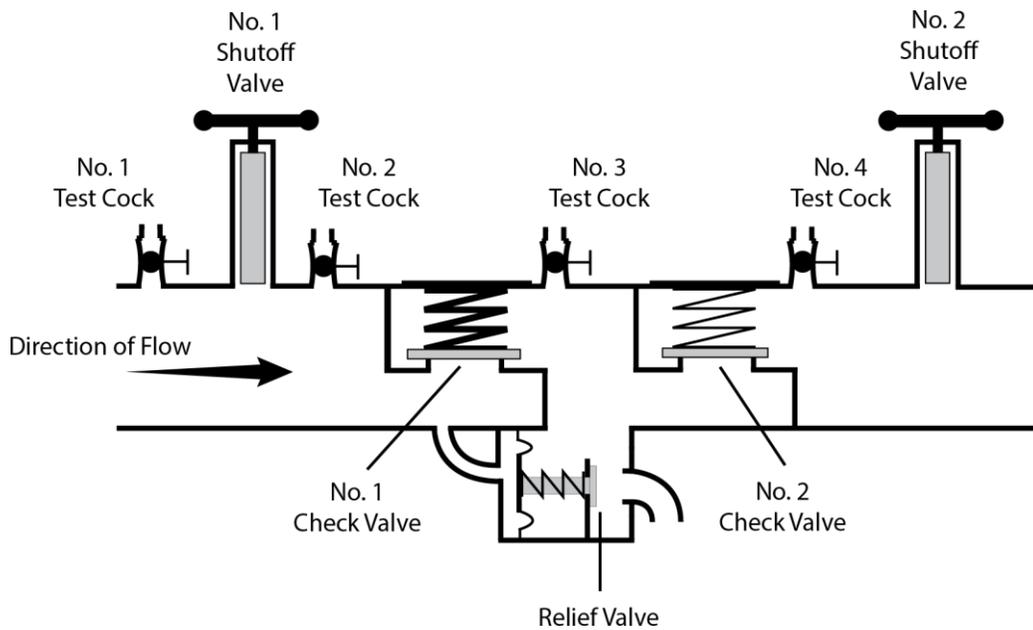
***Pressure vacuum breaker backsiphonage prevention assembly***





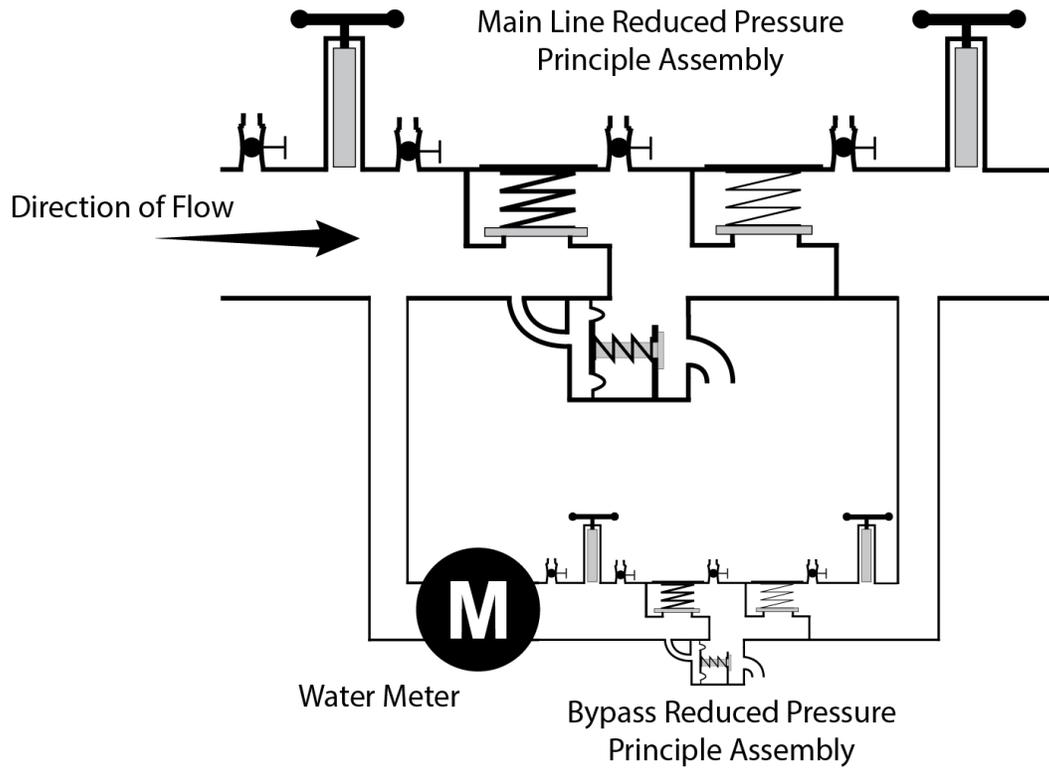
**Diagram 5**

***Reduced pressure principle backflow prevention assembly***



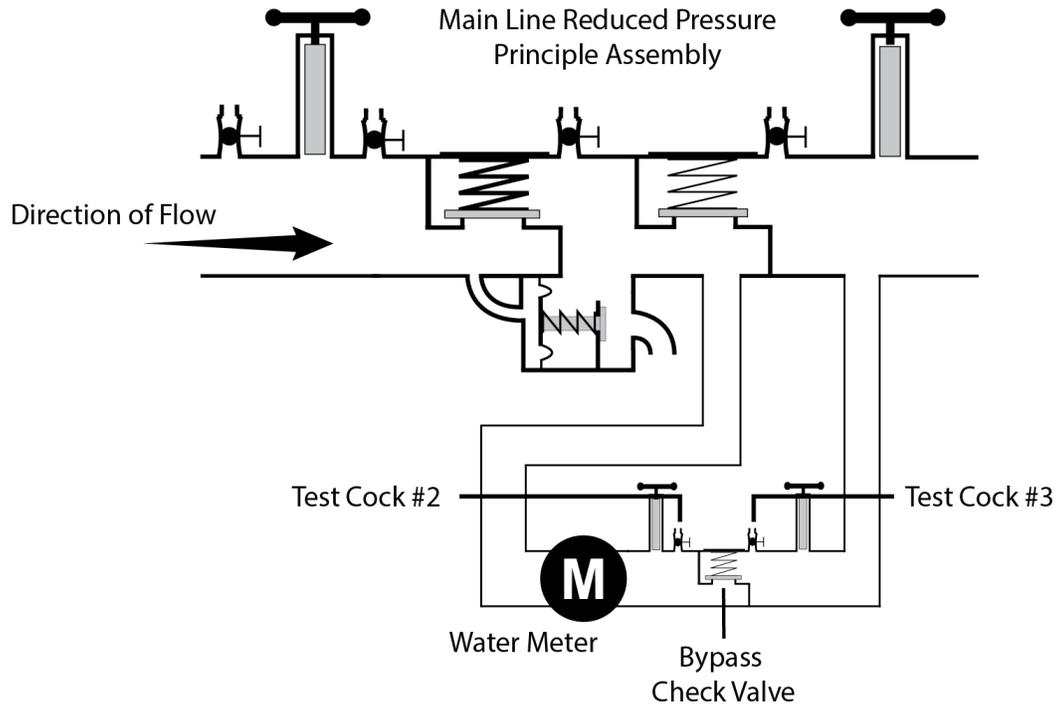
**Diagram 6**

***Reduced pressure principle detector backflow prevention assembly***



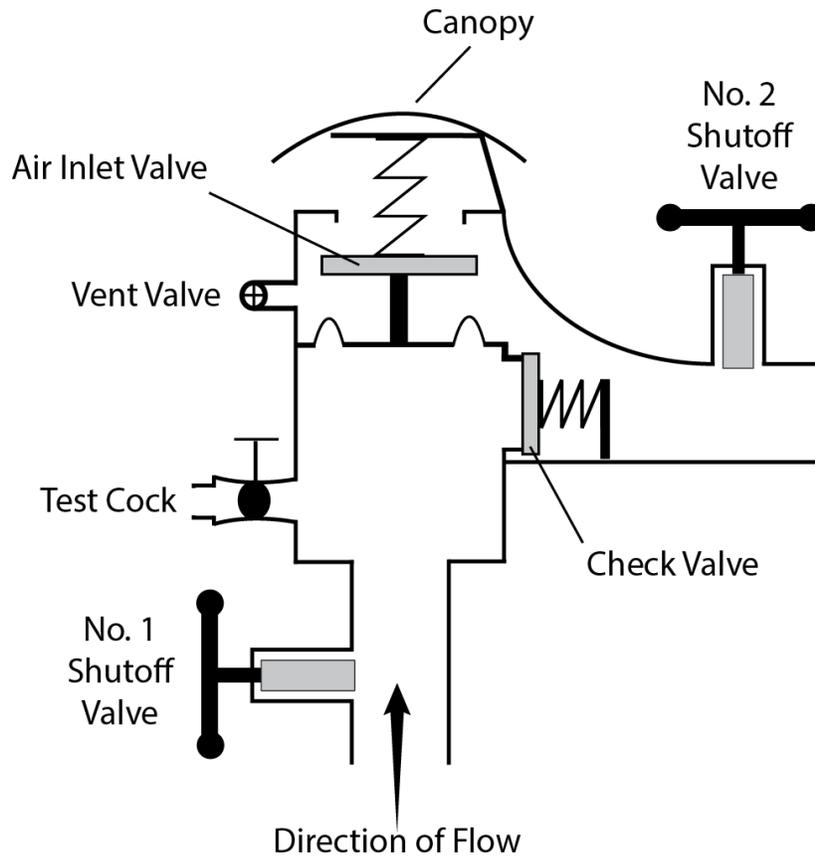
**Diagram 7**

**Reduced pressure principle detector backflow prevention assembly – Type II**



**Diagram 8**

***Spill-resistant pressure vacuum breaker backsiphonage prevention assembly***





## Swivel-Ell Design and Construction Criteria

The criteria below, in conjunction with the swivel-ell diagrams that follow (Diagrams A and B), are **minimum** acceptable design and construction-related requirements for utilizing a swivel-ell. For restrictions and allowances for utilizing a swivel-ell, see CCCPH section 3.2.2.

- A. Prior to operation of a swivel-ell, the PWS will receive approval for the design and construction plans of that swivel-ell from the State Water Board.
- B. The drinking water supply must not, under any circumstances, be directly connected to the recycled water supply, nor be designed such that the recycled water use site could be supplied concurrently by a recycled water supply and a drinking water supply.
- C. The drinking water supply line and the recycled water supply line must be offset (see Diagram 9b) in a manner that ensures a tee-connection, spool, or other prefabricated mechanical appurtenance(s) could not be readily utilized in lieu of the swivel-ell connection, nor result in the recycled water use site being supplied concurrently by recycled water and drinking water.
- D. The recycled water supply line used in conjunction with the swivel-ell must be the only recycled water supply to the recycled water use area.
- E. The swivel-ell must be located as close as practical to the public water system service connection, with the swivel-ell connection being located as close as practical to the RP upstream of the swivel-ell.
- F. The swivel-ell must:
  - 1. be located above ground;
  - 2. be color-coded pursuant to section 116815 of the CHSC and its implementing regulations;
  - 3. include appropriate signage, as required by regulation and the State Water Board;
  - 4. be provided the security necessary to prevent interconnections, vandalism, unauthorized entry, etc.; and
  - 5. be provided with meters on both the recycled water service and drinking water service connections.

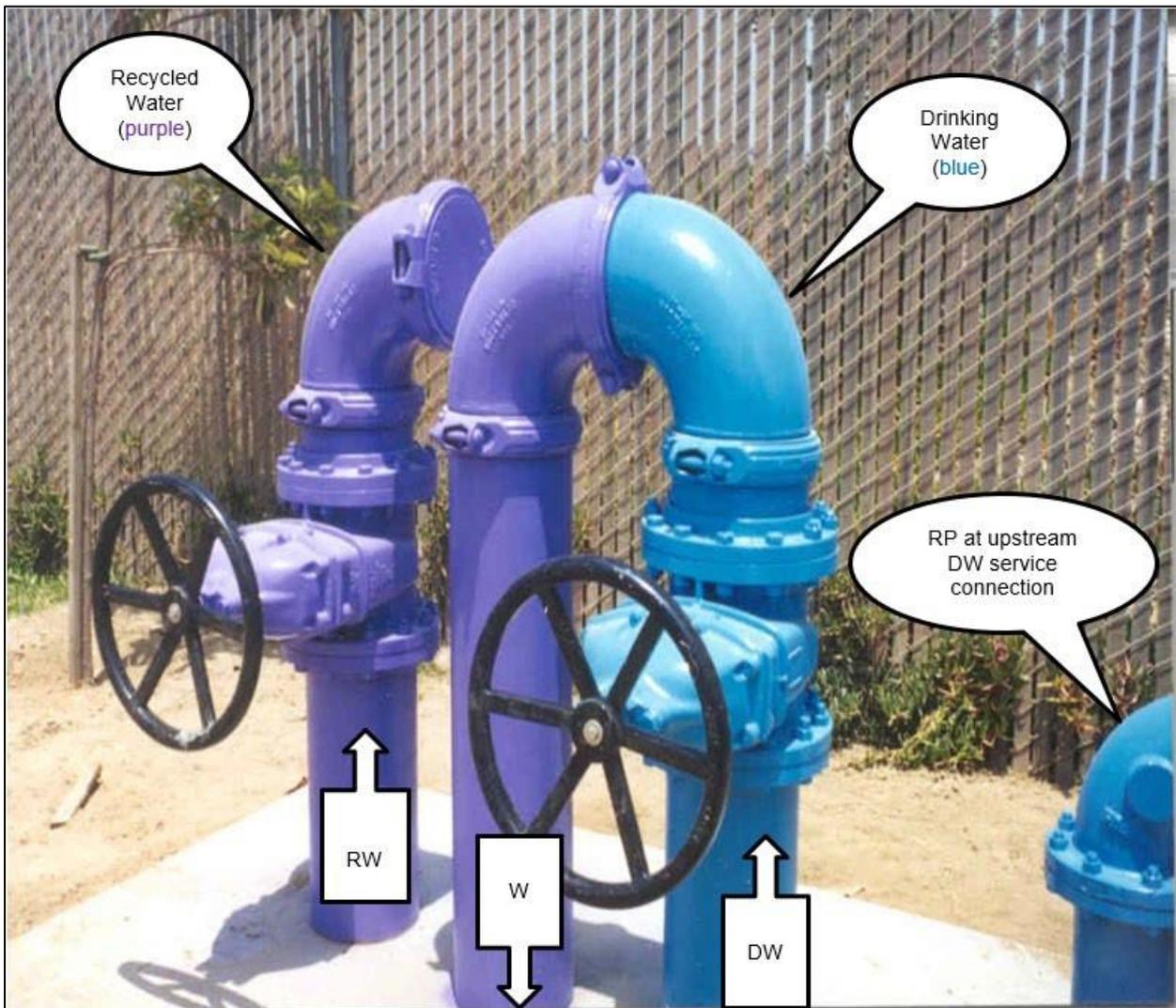


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**Legend for Diagram 9a and 9b (also see next page)**

- RP = Reduced pressure principle backflow prevention assembly
- RW = Tertiary-treated recycled water originating from wastewater treatment facility
- DW = Drinking water originating from a public water system
- W = Water (tertiary recycled water or drinking water) to use site. As pictured, configured for supplemental drinking water to the use site.
- M = Meter (next page)
- PE = Plain End (next page)
- GRV = Groove (next page)
- PWS= Public Water System (next page)

**Diagram A: Example Swivel-Ell Pictorial (also see Plan View Schematics)**



*Note: The RP, a required component of an acceptable swivel-ell, is not shown in the picture.*



City of Tustin Cross Connection Control Management Plan (CCCMP)

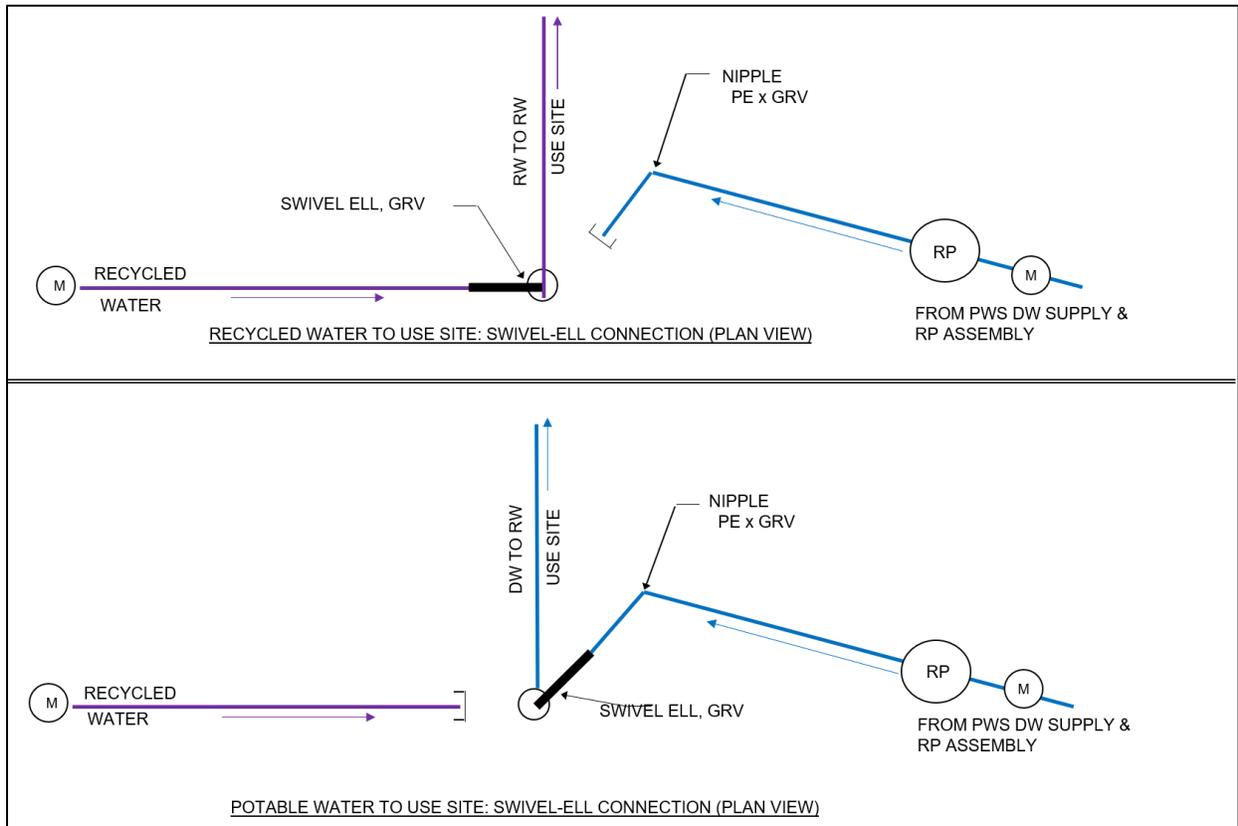


City of Tustin Cross Connection Control Management Plan (CCCMP)

Diagram B

Swivel-Ell Typical Plan View Schematics

(not intended to be an exact portrayal of the pictorial)





# Appendix G

## Cross-Connection Incident Response Form



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	<h2 style="margin: 0;">Cross-Connection Incident Report Form</h2>		
CALL DETAILS			
1. Caller Name:	<input style="width: 95%;" type="text"/>	Phone number:	<input style="width: 95%;" type="text"/>
2. Call Date:		Time:	<input style="width: 95%;" type="text"/>
3. Location address:	<input style="width: 80%;" type="text"/>	<input style="width: 95%;" type="text"/>	<input style="width: 95%;" type="text"/>
	Street Number	Street Name	City
4. Name of ownership/business:	<input style="width: 95%;" type="text"/>		
ISSUE DESCRIBED BY CALLER			
5. Estimated start date & time:	<input style="width: 95%;" type="text"/>		
6. Description of issue:	<div style="border: 1px solid black; min-height: 100%;"></div>		
7. Name of City/District Inspector:	<input style="width: 95%;" type="text"/>		
ON SITE DETAILS			
8. Site conditions: (Check all that apply)			
<input type="checkbox"/> Meter Protection	<input type="checkbox"/> Dual Plumbed Bldg.	<input type="checkbox"/> Cooling Tower	<input type="checkbox"/> Laboratory
Last Test Date:	<input type="checkbox"/> Kitchen/Cafeteria	<input type="checkbox"/> Chemical Pumps/	<input type="checkbox"/> Multi-Tenant
<input style="width: 80%;" type="text"/>	<input type="checkbox"/> Recycled Water Onsite	<input type="checkbox"/> Motors	
<input type="checkbox"/> Pass	<input type="checkbox"/> Designated Industrial Line		
<input type="checkbox"/> Fail			
Notes: <input style="width: 95%;" type="text"/>			
9. Number of persons in the building:	<input style="width: 95%;" type="text"/>		
10. OCHCA Notified?:			
<input type="checkbox"/> Yes	If Yes <input style="width: 95%;" type="text"/>		
<input type="checkbox"/> No	<input style="width: 95%;" type="text"/>		
(714) 955-3963 or	<input style="width: 95%;" type="text"/>		Time of Notice: <input style="width: 95%;" type="text"/>
WQOnCall@ochca.com			