AGENDA

EAST ORANGE COUNTY WATER DISTRICT

ENGINEERING AND OPERATIONS COMMITTEE MEETING

Thursday, November 5, 2026 at 10:00 A.M.
185 N. McPherson Road, Orange, CA

1. Call meeting to order
2. Public communications to the Committee
3. Additional items arising after posting of agenda

Informational Items

4. Operations Report – Retail, Wholesale, and Sewer System Status
5. Engineering Report – Project Updates
6. Sewer Master Plan Presentation
7. Cross Connection Control Management Plan Update

Action Items

Adjournment

Members of the public shall be permitted to speak as to both agendized and non-agendized items, as reflected in the agenda. Those wishing to speak may submit a speaker request or by verbally indicating their desire to comment at the time the item is called. Additionally, members of the public may, but are not required to, e-mail comments to Sylvia Prado at sprado@eocwd.com up to 30 minutes before the Committee meeting, and such comments shall be provided to the Committee. Members of the public wishing to attend the meeting that require disability-related or other reasonable modifications or accommodation to facilitate such attendance should contact Ms. Prado at (714) 538-5815 or the e-mail address provided as soon as feasible before the meeting to make such request.

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the East Orange County Water District Engineering & Operations Committee in connection with a matter subject to discussion or consideration at an open meeting of the Engineering & Operations Committee are available for public inspection in the District's office, 185 McPherson Road, Orange, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available via phone or email request to Ms. Prado at (714) 538-5815 or sprado@eocwd.com.

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE
FROM: GENERAL MANAGER
SUBJECT: OPERATIONS REPORT – RETAIL, WHOLESALE, AND SEWER SYSTEMS
DATE: NOVEMBER 5, 2026

Background

This memo serves as cover for the Operations Report for the Retail, Wholesale, and Sewer systems' status. Handouts at the meeting may include Retail water use and well reports, Wholesale demands and imported water reports, and Sewer system status and permitting reports. Discussion will include Operational updates and recent activities.

Recommendation

Informational

Attachment(s):

September / October Work Reports
September / October Permit Activity Summary
September / October Water Usage Reports - Handouts

Monthly Sewer Asset Report

September 2026

Sewer Gravity Main Work

Worktype	Workflows Completed	Footage Completed
CCTV Inspection	56	14,132
Main Cleaning	363	91,819
Main Lining	0	0
Main Repair	0	0
Main Replace	0	0
Managers Form	0	0
Root Foaming	99	27,063
Grand Total	**518**	**133,014**

FOG Work

Worktype	Workflows Completed
BMP GRE Inspection	2
BMP GRE Violation Follow-up	3
BMP Inspection	6
BMP Violation Follow-up	0
GRE Inspection	3
GRE Violation Follow-up	3
Initial Inspection	1
Operational Status Investigation	5
Grand Total	**23**

Easement Work

Worktype	Workfolws Completed
Easement Inspection	0

Lateral Work

Worktype	Workflows Completed
Lateral Connection Ed	0

Manhole Work

Worktype	Workflows Completed
Manhole Inspection	288
Manhole Rehab	0
Manhole Repair	0
Roach Spray	154
Smartcover Alarm Response	0
SSO Report	0
Grand Total	**442**

Water Hydrants

Worktype	Workflows Completed	Water Used in Gallons	Water Used in CCF
Hydrant Meter Read	2	4,275	6

EAST ORANGE COUNTY WATER DISTRICT

Monthly Water Asset Report

September 2026

Meter Work

Workflow	Work Completed
Broken Meter Box	0
Meter Changeout	1
Meter Connect	4
Meter Disconnect	7
Meter Installation	0
Meter Investigation	0
Meter Leak	0
Meter Read	0
Meter Re-read	0
Meter Test	0
Miscellaneous Meter Work	4
Grand Total	**16**

Vault Work

Workflow	Work Completed
Cleaning	0
Construction Inspection	0
Maintenance	0
Repairs	0
Vault Maintenance	0
Wholesale Flushing	4
Grand Total	**4**

Air Vac Work

Workflow	Work Completed
Air Vac Maintenance	0
Grand Total	**0**

Hydrant Work

Workflow	Work Completed
Fire Flow Test	0
Hydrant Comment	1
Hydrant Flushing	75
Hydrant Installation	0
Hydrant Maintenance	2
Hydrant Meter Install	0
Hydrant Meter Read	0
Hydrant Meter Remova	0
Hydrant Replacement	0
Grand Total	**78**

Pressure Reducing

Workflow	Completed
Pressure Reducing Stati	0

Valve Work

Workflow	Work Completed
Main Line Restore	0
Main Line Shut Down	0
Valve Comment	5
Valve Exercise	85
Valve Repair/Replace	0
Valve Shut Down	0
Grand Total	**90**

Production Meter Work

Workflow	Work Completed
Production Meter Changeout	0
Production Meter Maintenance	0
Production Meter Repairs	0
Production Meter Test	0
Wholesale Flushing	4
Grand Total	**4**

Facilities Work

Workflow	Work Completed
Cleaning	0
Maintenance	0
Repairs	0
Reservoir Cleaning	0
Tank Inspection	0
Grand Total	**0**

Water Site Work

Workflow	Work Completed
Rounds	82
Site Inspection	0
Site Maintenance	1
Site Repairs	0
Grand Total	**83**

Water Distribution Line Work

Workflow	Work Completed
Water Main Repair	2
Grand Total	**2**

Sample Work

Workflow	Work Completed
In-House WQ Data	79
Sample Post Work	0
THM / HAA5	4
Wholesale Flushing	4
Grand Total	**87**

Lateral Work

Workflow	Work Completed
Lateral Inspection	0
Lateral Installation	0
Lateral Leak	0
Lateral Repair	1
Lateral Replacement	1
Grand Total	**2**

Control Valve Work

worktype	Work Completed
Air Vac Maintenance	0
Control Valve Maintenance	0
Open Control Valve	0
Valve Exercise	0
Valve Repair/Replace	0
Grand Total	**0**

Pump Work

Workflow	Work Completed
Motor Installation	0
Pump and Motor Inspec	0
Pump and Motor Maint	2
Pump Efficiency Testing	0
Grand Total	**2**

EAST ORANGE COUNTY WATER DISTRICT

Monthly Customer and Locate Work Report

September 2026

Customer Work

Workflow	Work Completed
Construction Inspection	0
Customer Door Tag	10
Customer High Water Bill Investigation	0
Customer Investigation	12
Customer Leak	1
Customer Water Quality Investigation	0
Preconstruction	0
Water Pressure Investigation	2
Grand Total	**25**

DigTicket Work

Workflow	Work Completed
Tickets completed by Sewer	227
Tickets completed by Water	91
Grand Total	**318**

Monthly Sewer Asset Report

October 2026

Sewer Gravity Main Work

Worktype	Workflows Completed	Footage Completed
CCTV Inspection	65	17,636
Main Cleaning	271	63,780
Main Lining	0	0
Main Repair	0	0
Main Replace	0	0
Managers Form	0	0
Root Foaming	0	0
Grand Total	**336**	**81,416**

FOG Work

Worktype	Workflows Completed
BMP GRE Inspection	1
BMP GRE Violation Follow-up	0
BMP Inspection	1
BMP Violation Follow-up	0
GRE Inspection	0
GRE Violation Follow-up	2
Initial Inspection	0
Operational Status Investigation	0
Grand Total	**4**

Easement Work

Worktype	Workfolws Completed
Easement Inspection	0

Lateral Work

Worktype	Workflows Completed
Lateral Connection Ed	0

Manhole Work

Worktype	Workflows Completed
Manhole Inspection	192
Manhole Rehab	0
Manhole Repair	0
Roach Spray	0
Smartcover Alarm Response	0
SSO Report	0
Grand Total	**192**

Water Hydrants

Worktype	Workflows Completed	Water Used in Gallons	Water Used in CCF
Hydrant Meter Read	0	0	0

EAST ORANGE COUNTY WATER DISTRICT

Monthly Water Asset Report

October 2026

Meter Work

Workflow	Work Completed
Broken Meter Box	0
Meter Changeout	0
Meter Connect	0
Meter Disconnect	1
Meter Installation	0
Meter Investigation	0
Meter Leak	0
Meter Read	17
Meter Re-read	0
Meter Test	0
Miscellaneous Meter Work	8
Grand Total	**26**

Valve Work

Workflow	Work Completed
Main Line Restore	0
Main Line Shut Down	0
Valve Comment	0
Valve Exercise	2
Valve Repair/Replace	0
Valve Shut Down	0
Grand Total	**2**

Water Site Work

Workflow	Work Completed
Rounds	93
Site Inspection	0
Site Maintenance	10
Site Repairs	1
Grand Total	**104**

Lateral Work

Workflow	Work Completed
Lateral Inspection	1
Lateral Installation	0
Lateral Leak	3
Lateral Repair	0
Lateral Replacement	0
Grand Total	**4**

Vault Work

Workflow	Work Completed
Cleaning	0
Construction Inspection	0
Maintenance	0
Repairs	0
Vault Maintenance	0
Wholesale Flushing	5
Grand Total	**5**

Air Vac Work

Workflow	Work Completed
Air Vacuum Maintenance	0
Air Vacuum Valve Inspection	0
Air Vacuum Valve Replacement	0
Air Vacuum Valve T Installation	0
Grand Total	**0**

Production Meter Work

Workflow	Work Completed
Production Meter Changeout	0
Production Meter Maintenance	0
Production Meter Repairs	1
Production Meter Test	0
Wholesale Flushing	5
Grand Total	**6**

Water Distribution Line Work

Workflow	Work Completed
Water Main Repair	4
Grand Total	**4**

Control Valve Work

worktype	Work Completed
Air Vac Maintenance	0
Control Valve Maintenance	0
Open Control Valve	0
Valve Exercise	0
Valve Repair/Replace	0
Grand Total	**0**

Hydrant Work

Workflow	Work Completed
Fire Flow Test	0
Hydrant Comment	0
Hydrant Flushing	2
Hydrant Installation	0
Hydrant Maintenance	1
Hydrant Meter Install	0
Hydrant Meter Read	0
Hydrant Meter Remova	0
Hydrant Replacement	0
Grand Total	**3**

Pressure Reducing

Workflow	Completed
Pressure Reducing Stati	0

Facilities Work

Workflow	Work Completed
Cleaning	0
Maintenance	7
Repairs	2
Reservoir Cleaning	0
Tank Inspection	0
Grand Total	**9**

Sample Work

Workflow	Work Completed
In-House WQ Data	63
Sample Post Work	0
THM / HAA5	0
Wholesale Flushing	5
Grand Total	**68**

Pump Work

Workflow	Work Completed
Motor Installation	0
Pump and Motor Inspec	0
Pump and Motor Maint	0
Pump Efficiency Testing	0
Grand Total	**0**

EAST ORANGE COUNTY WATER DISTRICT

Monthly Customer and Locate Work Report

October 2026

Customer Work

Workflow	Work Completed
Construction Inspection	1
Customer Door Tag	17
Customer High Water Bill Investigation	0
Customer Investigation	17
Customer Leak	5
Customer Water Quality Investigation	0
Preconstruction	0
Water Pressure Investigation	2
Grand Total	**42**

DigTicket Work

Workflow	Work Completed
Tickets completed by Sewer	221
Tickets completed by Water	88
Grand Total	**309**

PERMITS ISSUED FOR: **Sep-26**

Received	Address	Type of Development	APN	Date Issued	Regional CFCC (OCSan) Fees	EOCWD Sewer Capacity Fees	Sewer PC&I Fees	Total Sewer Fees	WZ Meter Fees
1/8/2026	13831 Orange St.	ADU	500-152-14	9/3/2026	$ -	$ -	$ -	$ -	$ 719.00
6/29/2026	16471 McFadden Ave.	Commerical (R)	402-031-04	9/29/2026	$ 2,961.72	$ 14,684.59	$ -	$ 17,646.31	$ -
7/9/2026	145 N. B St.	ADU	401-531-08	9/1/2026	$ -	$ -	$ -	$ -	$ 719.00
8/31/2026	115 Orangewood Ln.	ADU	401-532-23	9/16/2026	$ 692.55	$ 3,094.59	$ -	$ 3,787.14	$ 719.00
				Totals	**$ 3,654.27**	**$ 17,779.18**	**$ -**	**$ 21,433.45**	**$ 2,157.00**
				Due to OCSAN	*$ 3,471.56*				

APPLICATIONS RECEIVED

Received	Address	Type of Development	APN	Permit Status
9/17/2026	1921 Jan Marie Pl.	ADU	500-074-06	Pending payment and signature
9/30/2026	12651 Kingsview Dr.	ADU	393-331-03	Pending plans
9/22/2026	1961 Sierra Vista Dr.	ADU	500-073-05	Pending revised plan

PERMITS ISSUED FOR: **Oct-26**

Received	Address	Type of Development	APN	Date Issued	Regional CFCC (OCSan) Fees	EOCWD Sewer Capacity Fees	Sewer PC&I Fees	Total Sewer Fees	WZ Meter Fees
7/24/2025	1852 San Juan St.	MFR (N)	500-032-04	10/8/2026	$ 29,212.45	$ 44,749.63		$ 73,962.08	$ 7,553.00
				Totals	**$ 29,212.45**	**$ 44,749.63**	**$ -**	**$ 73,962.08**	**$ 7,553.00**
				Due to OCSAN	*$ 27,751.83*				

APPLICATIONS RECEIVED

Received	Address	Type of Development	APN	Permit Status
10/1/2026	11322 S. Colbow St.	ADU	093-342-17	Pending revised plan
10/23/2026	13881 Karen Way,	ADU	500-072-02	Pending plans
10/28/2026	18472 Hillhaven Dr.	ADU	395-064-11	Pending revised plan
10/26/2026	1941 Jan Marie Pl.	ADU	500-074-08	Pending revised plan
10/26/2026	10961 Limetree Dr.	ADU	503-063-01	Pending customer response
10/26/2026	11413 Arroyo Ave.	ADU	502-271-13	Pending customer response

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE
FROM: GENERAL MANAGER
SUBJECT: ENGINEERING REPORT – PROJECTS STATUS UPDATE
DATE: NOVEMBER 5, 2026

Background

The purpose of this report is to provide status updates for the various CIP projects and provide updates to other Engineering related activities. A handout may be provided at the meeting.

Recommendation

Informational

Attachment(s):

None

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE
FROM: GENERAL MANAGER
SUBJECT: SEWER MASTER PLAN UPDATE
DATE: NOVEMBER 5, 2026

Background

The District's first Sewer Master Plan was completed in 2018 to provide initial assessment of public sewer facilities existing condition, estimate remaining useful life, and to plan for repair or replacement of sewer assets. The District also completed a Sanitary Sewer Management Plan (SSMP) in 2019 to be in compliance with Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems. The document assisted staff with setting goals to prioritize various maintenance activities in order to prevent public sanitary sewer overflows. In 2022, the State updated its WDRs and required agencies to update their SSMPs. Since many of the projects and rehabilitation efforts recommended in the 2018 Sewer Master Plan were complete at that time, staff sent out an RFP for an update to the Sewer Master Plan and SSMP in 2023-24.

In December 2024, the Board of Directors approved a contract with Dopudja & Wells to update its Sewer Master Plan and SSMP. The work efforts to update both plans are now complete.

The SSMP update was completed in August 2025 and complies with updated WDRs. Staff receives continuous training on the updated document and continues to comply with all State requirements, including spill reporting.

The 2026 Sewer Master Plan is now complete. With an updated hydraulic model, the capacity of the District's facilities were assessed and recommendations were made regarding potential capacity upgrades.

Dopudja & Wells will provide a presentation on their efforts to describe the existing system and trends, apply land use and development impacts, study existing and future sewer flows, update and calibrate the hydraulic model, establish performance criteria for existing and future system capacity, evaluate collection system rehabilitations and replacements, and recommend a Capital Improvement Program.

Recommendation

Informational

Attachment(s):

None

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE

FROM: GENERAL MANAGER

SUBJECT: CROSS-CONNECTION CONTROL MANAGEMENT PLAN UPDATE

DATE: NOVEMBER 5, 2026

Background

The District's Rules and Regulations for Water Service were updated and approved in 2019 and covered a variety of subjects including conditions for water service, delineation of facility ownership, billing, enforcement and backflow prevention. *Section 6: Cross Connection and Backflow Prevention* detailed how the District complied with the California Code of Regulations, Title 17 "Regulations Relating to Cross Connections."

The State Water Resources Control Board adopted a Cross-Connection Control Policy Handbook that replaced many requirements of Title 17 and required all agencies to prepare a new Cross-Connection Control Plan to meet the requirements of the Policy Handbook. Staff worked with a consultant, West Yost, to prepare new plans for the Retail and Wholesale water service areas. The plans were submitted to the State by the July 1 deadline and Staff recently received approval of each plan.

Some of the most impactful updates include:

- Documentation and record keeping of initial and on-going hazard assessments at all service connections
- Requirements to replace all single-check backflow preventers on firelines within 10 years
- Guidelines for ensuring that non-testable backflow prevention devices are maintained accordingly or replaced with a device that is commensurate with the hazard
- Residential Fire Sprinklers will require a backflow prevention device unless five criteria are met
- Future addition of backflow prevention devices serving residences that are higher than two stories, as measured from the elevation of the service location

Staff is working on revisions to the District's Rules and Regulations for Water Service and will provide those revisions to the Board under separate cover.

Recommendation

Informational

Attachment(s):

EOCWD Retail Zone Water System ID No. CA3010068: Cross-Connection Control Plan
EOCWD Wholesale Zone Water System ID No. CA3010093: Cross-Connection Control Plan

PREPARED BY:

WEST YOST
Water. Engineered.



EOCWD
EAST ORANGE COUNTY WATER DISTRICT

EAST ORANGE COUNTY WATER DISTRICT

EOCWD RETAIL ZONE WATER SYSTEM ID NO. CA3010068

CROSS-CONNECTION CONTROL PLAN

IN ACCORDANCE WITH THE CROSS-CONNECTION CONTROL POLICY HANDBOOK ADOPTED IN 2023

JUNE 2025

Cross-Connection Control Plan

Prepared for

East Orange County Water District

RETAIL ZONE WATER SYSTEM ID NO. CA3010068

Project No. 959-A1-25-06

The information submitted in this Cross-Connection Control Plan is drafted to be in compliance with the Cross-Connection Control Policy Handbook and an accurate description of the Cross-Connection Control Program intended to protect the Public Water System.

July 1, 2025

Public Water System Representative:
David Youngblood, General Manager

Date

July 1, 2025

Prepared by: Courtney Rubin
AWWA Cross-Connection Control Specialist #01854

Date

REGISTERED PROFESSIONAL ENGINEER
ALEXANDRE L. BUCHER
No. C66711
Exp. 09/30/26
CIVIL
STATE OF CALIFORNIA

July 1, 2025

QA/QC Review: Alex Bucher
AWWA Cross-Connection Control Specialist #10708

Date

East Orange County Water District Contact Information			
Title	Name	Contact Information	Backflow Certifications
General Manager	David A Youngblood	dyoungblood@eocwd.com	NA
Engineering Manager	Bobby Young	byoung@eocwd.com	NA
Operations Manager/ Cross-Connection Control Program Coordinator	Jerry Mendzer	jmendzer@eocwd.com 714-538-5815	Cross-Connection Control Specialist # TBD[(a)]
Office Manager	Sylvia Prado	sprado@eocwd.com	NA
On-Call Operator Number:	After hours call-ins are instructed to call the duty cell phone for emergencies. Customers call the regular number, and the message directs people to call an on-call Water Operator.		

(a) Currently in the process for re-certifying due to a lapsed certification.

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Appendix B. EOCWD Rules and Regulations

Appendix C. Orange County Health Care Agency Backflow Tester Registration Application and Code of Conduct

Appendix D. EOCWD Standard Drawings for Water Systems W-11

Appendix E. Backflow Prevention Device Test and Maintenance Report

LIST OF ACRONYMS AND ABBREVIATIONS

AG	Air Gap Separation
ANSI	American National Standard Institute
BPA	Backflow Prevention Assembly
BPA Tester	Backflow Prevention Assembly Tester
CCCP	Cross-Connection Control Plan
CCCPH	Cross-Connection Control Policy Handbook
CCR	California Code of Regulation
DC	Double Check Valve Backflow Prevention Assembly
DCDA	Double Check Detector Backflow Prevention Assembly
DCDA-II	Double Check Detector Backflow Prevention Assembly – Type II
EOCWD	East Orange County Water District
EOCWD-Retail Zone	East Orange County Water District – Retail Zone (Water System ID No. CA3010068)
EOCWD-Wholesale Zone	East Orange County Water District – Wholesale Zone (Water System ID no. CA3010093)
Program	Cross-Connection Control Program
PVB	Pressure Vacuum Breaker 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
SVB	Spill-Resistant Pressure Vacuum Breaker
Swivel-ell	Swivel-Ell Backflow Prevention Assembly
SWRCB	State Water Resource Control Board
Title 17	Title 17, Chapter V, Sections 7583-7622 under the California Code of Regulation

Cross-Connection Control Plan

1.0 INTRODUCTION

The State Water Resources Control Board (SWRCB) adopted the Cross-Connection Control Policy Handbook (CCCPH) on December 19, 2023. The effective date for the CCCPH was July 1, 2024, replacing the previous regulations housed under Title 17, Chapter V, Sections 7583-7622 under the California Code of Regulation (CCR) (Title 17). Title 17 became inoperative and repealed 90 days after July 1, 2024, on October 1, 2024. The CCCPH expands on the previous Title 17 requirements for initial and follow-up hazard assessments, program training, backflow prevention testing and certification, maintenance of records, incident response, reporting and notification, public outreach and education, and local entity coordination. The CCCPH requires East Orange County Water District (EOCWD), the Public Water System (PWS), to develop a Cross-Connection Control Plan (CCCP) to describe how the PWS will manage and administer their Cross-Connection Control Program (Program).

Appendix A includes the most recent version to date of the CCCPH (Adopted 2023, Amended June 17, 2025).

1.1 Purpose

The intent of this document is to describe the Program implemented and administered by EOCWD. The purpose of this CCCP is:

1. To protect the PWS against actual or potential contamination that may occur within a water user's premises because of some undiscovered or unauthorized cross-connection on the premises;
2. To eliminate existing connections between potable water systems and other sources of water that are not approved as safe and potable for human consumption;
3. To eliminate cross-connections between potable water systems and sources of contamination; and
4. To prevent the making of cross-connections in the future.

1.2 EOCWD Service Area Description

The East Orange County Water District encompasses an area of approximately 10,000 acres and is a member of the Municipal Water District of Orange County. EOCWD is a public community water system that is governed by a Board of Directors. EOCWD has two systems, one serving potable water to retail water customers named EOCWD Retail Zone Water System ID No. CA3010068 (EOCWD-Retail Zone) and a system dedicated to supply wholesale water called EOCWD Wholesale Water System ID No. CA3010093 (EOCWD-Wholesale Zone). EOCWD-Retail Zone has approximately 1,200 retail water services that consists primarily of single-family residential water services along with one school, two parks, and several dedicated irrigation sites. The cross-connection control program for the EOCWD-Wholesale Zone is described in a separate CCCP. This CCCP describes the cross-connection control program for EOCWD-Retail Zone.

The EOCWD-Retail Zone water service area is approximate one square mile located in central Orange County, which includes a portion of north Tustin and the City of Orange. The retail potable water system includes one reservoir, two well sites with a common treatment plant, and three pump stations where one pump station is used as an emergency standby booster. EOCWD-Retail Zone has one turnout and one emergency connection with the EOCWD-Wholesale Zone system.

Since the number and type of connections will vary over time, the exact number and types of services can be provided to the SWRCB upon request.

2.0 DEFINITIONS

Air-Gap Separation (AG)

A physical break between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. The physical break shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the vessel, in no case less than 1-inch in diameter.

Approved Water Supply

A water source that has been approved by the SWRCB for domestic use in a PWS and designated as such in a domestic water supply permit.

Auxiliary Water Supply

A source of water, other than an approved water supply, that 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

The undesirable flow of water or other liquids, gases, mixtures or substances, into the distributing pipes of a PWS from any source other than an approved water supply. Backsiphonage or backpressure are causes of backflow.

Backflow Prevention Assembly (BPA)

A mechanical assembly designed and constructed to prevent backflow, such that while in-line it can be repaired and its ability to prevent backflow, as designed, can be tested. The assembly must have passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated its competency to the State Water Resources Control Board).

Backflow Prevention Assembly Tester (BPA Tester)

A person who is certified as a BPA tester pursuant to Section 4 of this CCCP.

Community Water System

A PWS that serves at least 15 service connections used by yearlong residents or regularly serves at least 25-year-long residents of the area served by the system.

Contamination

Degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health, or which may impair the usefulness or quality of the water.

Cross-Connection

Any actual or potential connection or structural arrangement between a PWS, including a piping system connected to the PWS 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.

By-pass arrangements, jumper connections, removable sections, or other devices through which backflow could occur shall be considered cross-connections.

Cross-Connection Control Program Coordinator

The designated individual involved in the development of and be responsible for reporting, tracking, and other administration duties for the Program.

Cross-Connection Control Specialist

A person who is certified as a Cross-Connection Control Specialist pursuant to Section 4 of this CCCP.

Customer's Water System

All facilities beyond the service meter. The system or systems may include both potable and non-potable water systems.

Distribution System

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

Double Check Valve Backflow Prevention Assembly (DC)

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 for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards.

Double Check Detector Backflow Prevention Assembly (DCDA)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may only be used for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this CCCP.

Double Check Detector Backflow Prevention Assembly – Type II (DCDA-II)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may only be used for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

East Orange County Water District Retail Zone Water System ID No. CA3010068 (EOCWD-Retail Zone)

The potable water system serving residential and commercial customers through the retail zoned system.

East Orange County Water District Wholesale Zone Water System ID No. CA3010093 (EOCWD-Wholesale Zone)

The potable water system serving wholesale water to the EOCWD-Retail Zone and four neighboring agencies through metered turnouts along with two service connections to one EOCWD facility and one commercial customer.

Hazard Assessment

An evaluation of a user premises designed to evaluate the types and degrees of hazard at a user's premises.

High Hazard Cross-Connection

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 Appendix D of the CCCPH.

Low Hazard Cross-Connection

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.

Pollutant

Material which causes a degradation in the quality of the potable water supply which does not create a hazard to the public health, but which does impair the aesthetic quality of water.

Premises

All areas on a customer's property which are served or have the potential to be served by the PWS.

Premises Containment

Protection of a PWS's distribution system from backflow from a user's premises through the installation of one (1) 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 PWS's distribution system.

Pressure Vacuum Breaker Backflow Prevention Assembly (PVB)

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 low or high hazard backsiphonage events and is not to be used to protect from any backpressure events.

A schematic of this assembly is provided in Appendix C of the CCCPH.

Public Water System (PWS)

A system for the provision of piped water to the public for human consumption which has five or more service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year. Additionally, consists of the source facilities and the distribution system and shall include all those facilities of the water system under the complete control of EOCWD up to the point where the Customer's Water System begins the service connection.

Recycled Water (RW)

Wastewater which as a result of treatment is suitable for uses other than potable use.

Reduced Pressure Principle Backflow Prevention Assembly (RP)

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. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Reduced Pressure Principle Detector Backflow Prevention Assembly (RPDA)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Reduced Pressure Principle Detector Backflow Prevention Assembly – Type II (RPDA-II)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Service Connection

The point where a water user's piping is connected to the PWS or the point in the customer's water system where the PWS can be protected from backflow using an AG or a BPA.

Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly (SVB)

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 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 low hazard cross-connection backsiphonage events and is not to be used to protect from any backpressure events.

A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

State Water Board (SWRCB)

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 Backflow Prevention Assembly

An assembly consisting of a reduced pressure principle backflow prevention assembly combined with a changeover piping configuration (swivel-ell connection) designed and constructed pursuant to Section 5 of this CCCP.

Used Water

Any water supplied by EOCWD from the PWS to a Customer's Water System after it has passed through the service connection and is no longer under the control of EOCWD.

User Supervisor

A person designated by a water user to oversee a water use site and responsible for the avoidance of backflow events.

Water Service Agreement

Shall mean an agreement entered into between the District and a person, persons, firm, corporation, association or agency, or their successors and assignees, who has already, or desires to, install, remove, alter or replace, or cause to be installed, removed, altered, or replaced, any water facility or appurtenance for the purpose of supplying water to a property.

Water System

The water system shall be considered as made up of two parts; the PWS and Customer's Water System

Water Supplier

EOCWD, who owns and operates the PWS.

Water User

Any person(s) or entity obtaining water from EOCWD.

3.0 PROGRAM ADMINISTRATION

3.1 Legal Authority (CCCPH 3.1.3)

The Water District administers the Program in accordance with the Rules and Regulations for Water Service, Cross-Connection and Backflow Prevention, Section 6. The adoption was December 19, 2019, in agreement with Title 17, Chapter V, Sections 7583-7622, California Code of Regulations. The Rules and Regulations for Water Service will be revised to include new elements presented in this CCCP and in compliance with CCCPH. The adoption is expected by August 2025.

The existing Rules and Regulations are included in Appendix B.

3.2 Program Administration (CCCPH 3.1.3)

The Program is administered by the EOCWD. EOCWD is responsible for reporting on several regulatory programs involving water and wastewater. Program administration includes cross-connection control reporting, backflow testing notification and tracking, and performing hazard assessments.

Figure 3-1 shows the current organizational chart for the EOCWD Program. Additional Program activities spanning across other departments are discussed in more detail in Section 9 of this CCCP.

The Operations Manager is the Cross Connection Control Program Coordinator and holds a Cross-Connection Control Specialist certification, but EOCWD also hires a consultant to assist with the performance of the program. The Operations Manager reports directly to the General Manager. The Cross-Connection Control Program Coordinator is responsible for overseeing the administrative responsibilities of the program. Additional staff include the Operations Supervisor as well as Wastewater Collections and Water Distribution Operators who are available to assist with the administrative duties of the Program.

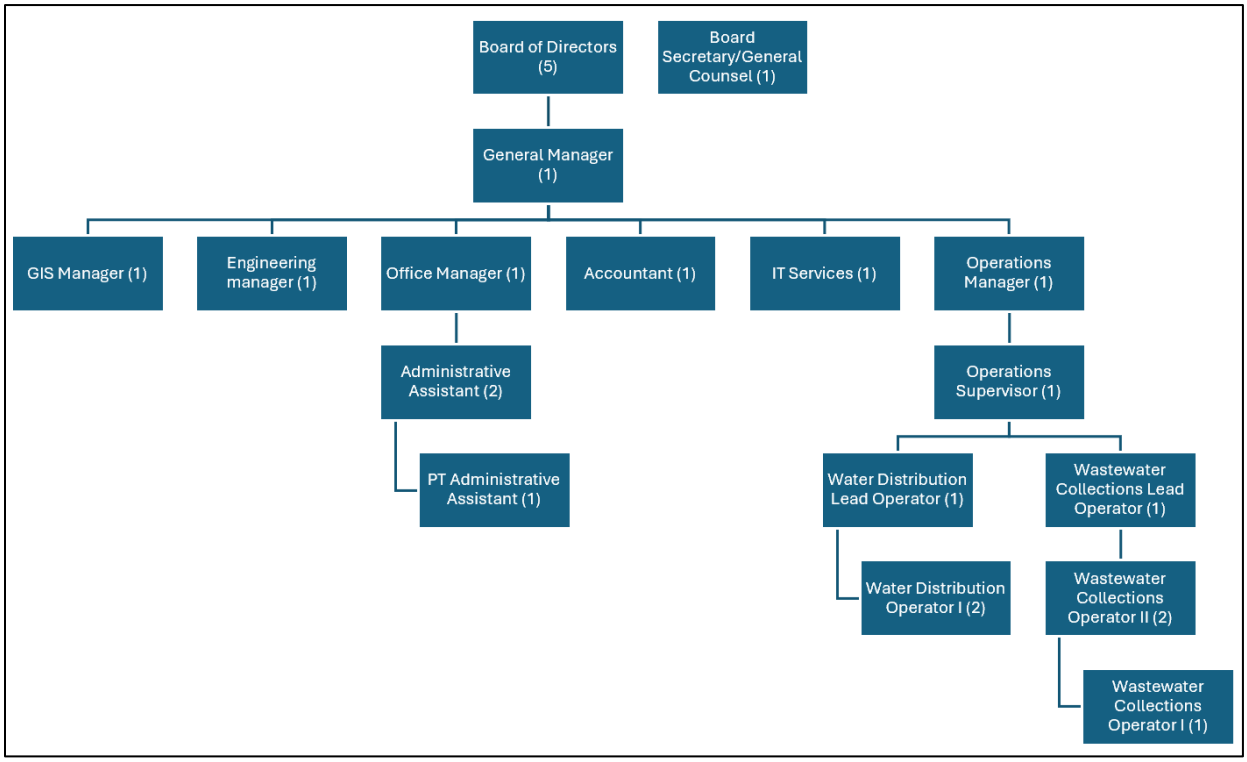


Figure 3-1. EOCWD Organization Chart

4.0 BACKFLOW PREVENTION ASSEMBLY TESTERS AND CROSS-CONNECTION CONTROL SPECIALISTS

This section specifies the certification requirements for Backflow Prevention Assembly Tester (BPA Testers) and Cross-Connection Control Specialists.

4.1 CCCPH Backflow Prevention Assembly Tester Requirements (CCCPH 3.4.1)

Chapter 3, Article 4 of the CCCPH provides the requirements of a SWRCB recognized and American National Standards Institute accredited organization certifying BPA Testers. Within an accredited organization, the program must include provisions for revocation of a BPA, testers certification and a publicly available list of certified backflow prevention assembly testers. Certification from an accredited organization requires completion of a program that includes the following:

- Timed and proctored written exams with prescribed number of test questions and covering specified material.
- Performance of a hands-on exam demonstrating proficiency in accurately determining the operating condition of an RP, DC, PVB, and SVB.
- Recertification no less frequently than every three years including both a written and performance exam.
- Prerequisite of either two years prior experience or completion of an instructional training course.

4.1.1 Approved Backflow Prevention Assembly Tester List

EOCWD hires a backflow tester from a list of certified testers generated from the Orange County Health Care Agency to test backflows within the service area including both EOCWD owned and privately owned BPAs. A handful of customers have certified BPA testers that are registered with the Orange County Health Care Agency on staff, such as the school district and cities. Those select customers are not tested by the EOCWD hired tester if they maintain a valid, registered tester certification. Test reports are reviewed for accuracy and completeness by the Cross-Connection Control Specialists.

Additionally, EOCWD offers a list of certified BPA Testers to assembly owners with failed initial test results who must hire someone to repair or replace the BPA and retest the assembly. EOCWD uses the Orange County Health Care Agency Environmental Health's certified backflow tester list.

Below are the Orange County Health Care Agency's requirements to be included on EOCWD's list.

- A copy of American National Standard Institute (ANSI) accredited organization certificate.
- Completed and signed backflow tester application.
- Completed and signed backflow tester code of conduct.
- Proof of backflow test kit calibration.
- A current head shot photo.
- Valid registration with the Orange County Health Care Agency.

Testers may be removed from the approved list if any of the following conditions apply:

- Certification expires
- Gauge calibration expires
- Improper testing or repairs
- Falsifying results or documents
- Failure to enter completed tests reports online

Orange County Health Care Agency will communicate BPA Testers who falsify records to the certification board. Appendix C includes the BPA Tester Application to be included in the Orange County Health Care Agency list.

4.1.2 Cross-Connection Control Specialist Requirement (CCCPH 3.4.2)

Cross-Connection Control Specialist(s) shall maintain valid certification from a certifying organization recognized by the SWRCB pursuant to CCCPH Chapter 3 Article 4. Certification requires completion of a program that includes the following:

- Timed and proctored written exams with prescribed number of test questions and covering specified material
- Completion of an instructional training course
- Recertification no less frequently than every three years
- Recertification through an exam, 12 contact hours of continuing education, or a combination of both

Similar to program requirements for BPA testers, the program for Cross-Connection Control Specialists from the accredited organization must contain:

- Provisions for revocation of a Cross-Connection Control Specialist's certification
- A publicly available list of certified Cross-Connection Control Specialists
- A valid Backflow Prevention Assembly Tester certification as well as completion of an instructional training course for initial certification or when an examiner has not held a valid certification for three or more years

Cross-Connection Control Specialists working for EOCWD will be required to be certified from an approved accredited organization.

5.0 CROSS-CONNECTION CONTROL PROGRAM REQUIREMENTS

5.1 Program General Requirements (CCCPH 2.2)

Unprotected cross-connections with the EOCWD-Retail Zone PWS are prohibited. Whenever backflow protection has been found necessary, EOCWD will require the water user to install an approved backflow protection, by and at the expense of the user, for continued service or before a new service is granted.

The installation and type of backflow protection shall be in accordance with the requirements of this CCCP, EOCWD's Rules and Regulations for Water Service, and Appendix D of the CCCPH. If backflow protection is found to be removed or bypassed, water service will be discontinued until the issue is corrected, and fines may be imposed.

Topics addressed in this section include:

- Backflow Protection Requirements
- Protection Requirements Based on Degree of Hazard
- Hazard Assessments

5.1.1 Backflow Protection Requirements (CCCPH 3.3.2 & Rules and Regulations for Water Service)

5.1.1.1 General Requirements

Backflow protection is required when the following conditions are present or expected to occur:

- When a premises contains an auxiliary water supply the water supply to the premises shall be protected against backflow of water from the premises into the public water system unless the auxiliary water supply is accepted as an additional source by EOCWD and is approved by the public health agency having jurisdiction.
- When a premises on which any substance is handled in such a fashion as may allow its entry into the water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of process waters and waters originating from the EOCWD water system which have been subjected to deterioration in sanitary quality.
- When a premises has internal cross-connections that cannot be permanently corrected or controlled to the satisfaction of EOCWD or local health department.
- When a premises has intricate piping arrangements or where entry to all or portions of the site are restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that no cross-connection exist.
- When a premises has a history of repeated cross-connections being established or reestablished.

EOCWD must ensure its retail distribution system is protected from backflow from identified hazards through the proper installation, continued operation, and field testing of an approved BPA according to Section 6 and 7 of this CCCP. When a DC is required or referenced in this CCCP, a DCDA or DCDA-II type of assembly may be substituted if appropriate. When an RP is required or referenced in this CCCP, an RPDA or RPDA-II type of assembly may be substituted if appropriate.

The BPA installed must be no less protective than that which is commensurate with the degree of hazard at a user premises and as determined based on the results of the hazard assessment as specified in this section.

Unless specified otherwise in this section and in Section 3.2.2 of the CCCPH, EOCWD must, at all times, protect its retail distribution system from high hazard cross-connections (see Appendix D of the CCCPH for examples), through premises containment, through the use of AG(s) or RP(s).

Following SWRCB review and approval, EOCWD may use internal protection in lieu of premises containment when premises containment is infeasible.

5.1.2 Protection Requirements Based on Degree of Hazard

The type of backflow protection that is required is determined based on the degree of hazard that is present at a premises. EOCWD will determine the minimum level of protection required, but a water user may opt for a higher level of protection.

See CCCPH Appendix D for additional information on high hazard cross-connection control premises containment.

5.1.2.1 Toxic, Sewage, or Hazardous Substances

1. Premises where toxic or hazardous substances are handled in any manner which may allow for contamination of the PWS shall be protected by an AG or an RP at the service connection.
2. Premises where the PWS is used to supplement the RW supply shall be protected by an AG.
3. Premises where RW is used and there is no interconnection with the potable water system shall have a minimum protection type of an RP.
4. Premises where there are wastewater pumping and/or treatment plants and there is no interconnection with the potable water system shall have a minimum protection type of AG. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by EOCWD.

5.1.2.2 Auxiliary Water Supplies

Protection from auxiliary water supplies shall comply with the following:

1. Premises where there is an unapproved auxiliary water supply which is interconnected with the PWS will use an AG. An RP may be provided in lieu of an AG if approved by EOCWD and the SWRCB.
2. Premises where there is an unapproved auxiliary water supply and there are no interconnections with the PWS will use an RP. A DC may be provided in lieu of an RP if approved by EOCWD.

5.1.2.3 Commercial Fire systems

Protection from commercial fire systems shall be no less than a DCDA and comply with the following:

1. A high hazard cross-connection fire system, including but not limited to fire systems that may utilize chemical addition (e.g., anti-freeze) or an auxiliary water supply, must have no less than RPDA protection.
2. Premises where the fire system is directly supplied from the PWS and there is an unapproved auxiliary water supply on or to the premises (not interconnected) will use an RPDA.
3. Premises where the fire system is supplied from the PWS and where either elevated storage tanks or fire pumps which take suction from the private reservoirs or tanks are used will use a DCDA.
4. All fire service connections must receive at least the same level of protection on a premises.

5.1.2.4 Single-Family Residence Fire systems

Low hazard fire systems on single-family residential user premises will require a BPA unless the following five criteria are met:

1. The user premises has only one service connection to the PWS;
2. 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;
3. A single, water industry standard, water meter is provided to measure combined domestic flow and fire protection system flow;
4. The fire protection system is constructed of piping materials certified as meeting NSF/ANSI Standard 61; and,
5. 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.

5.1.2.5 Multi-Level Building

1. At the service connection to any premises, where there are more than two stories in height above the service connection, an approved Backflow prevention device shall protect the water supply. Devices may be required for residential buildings on a case-by-case basis.

5.1.2.6 Swivel-Ell Assemblies (CCCPH 3.2.2(d))

EOCWD does not currently and will not be utilizing swivel-ell assemblies.

5.1.3 Hazard Assessments (CCCPH 3.2.1 & Rules and Regulations for Water Service)

An evaluation of hazards on the EOCWD-Retail Zone system will be performed or reviewed by a certified Cross-Connection Control Specialist to determine whether a high, low, or no hazard is present. The required BPA at a user premises will be determined by the degree of hazard through observed or understood water use. The observations and final determination of the required BPA will be included in a final report that will be maintained by EOCWD for reference.

5.1.3.1 Access for Inspection

EOCWD's Rules and Regulations for Water Service provides for reasonable access to any water user's premises for purposes of conducting cross-connection control surveys, inspections of BPAs, and as otherwise necessary to protect the PWS against cross-connections. If access is refused, EOCWD has the option to discontinue water service to the premises until entry is allowed.

5.1.3.2 New Construction

EOCWD evaluates all new water service requests through review of plans and specifications submitted to EOCWD to assess backflow protection requirements.

If a BPA is required, EOCWD requires it to be installed and tested prior to initiating water service, as is described in Section 3.3.3(a) of the CCCPH.

5.1.3.3 Existing Customers

5.1.3.3.1 Initial Hazard Assessment (CCCPH 3.2.1)

As required by the CCCPH, EOCWD will conduct initial site hazard assessments at existing premises to evaluate the potential for backflow into the PWS. The hazard assessment will consider the following items:

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 or a backflow event;
6. User premises accessibility;
7. Any previous backflow incidents on the user premises; and,
8. The requirements and information provided in the CCCPH.

EOCWD will perform the initial assessment using a combination of the following actions:

- Review of Building Permits
- Review of as-built or record drawings
- Date of construction
- Cross reference of billing records with known backflow assemblies
- Field Inspections
- Google Maps and Aerial photos
- Reporting from BPA Testers

Timelines for conducting initial hazard assessments are provided in Table 5-1.

Table 5-1. EOCWD Hazard Assessment

Customer Types	Tasks	Timeframes
Existing Commercial and Irrigation Services		
Commercial/Irrigation Services With Known Backflow Protection Assemblies	• Determine the degree of hazard for services with existing backflow preventors using SIC codes or other classification methods, or understood water use • Survey high hazard sites, if deemed necessary because of possible inadequate current backflow • Site without adequate protection will be sent a letter to install appropriate backflow protection	• Begin evaluation in July 2025 and complete Dec 2025 • Perform site surveys by July 2026 • Complete compliance Jan 2026
Commercial/Irrigation Services with No Known Backflow Protection Assemblies	• Audit billing system records versus backflow database system records to determine services without backflows • Categorize groups based on classification codes to assign a potential high or low hazard for services without backflows • Survey high hazard sites first and require appropriate backflow protection within 60 days of notice • Survey remainder of commercial sites to determine if backflow protection is required	• Complete July 2025 • Begin Jan 2026 • Complete July 2030 • Complete July 2030
Commercial Fire	• Determine fire services without a backflow • Survey sites without a backflow to determine low or high hazard systems • Work with the customer to install appropriate backflow protection for high hazard sites • For low-hazard fire system sites, require a backflow to be installed when the account changes hands or a tenant improvement permit is pulled	• Complete July 2025 • Begin Jan 2026 • Installation expected by 2030 • Installation by 2034
Hydrant Meters	• Inspection of sites and water truck air gaps	• On-going
Residential Services		
Residential With Possible or Known Auxiliary Water Supplies	• Using county well records, the EOCWD will evaluate areas of the EOCWD that may have auxiliary water supplies • Perform a review of permits to determine any graywater systems or sewer pumps • Perform site inspection for any possible homes with wells or other system supplies • Require installation of appropriate backflow protection	• Complete July 2026
Single Family Residential Services with Possible or Known Fire Systems	• Through county assessor info find homes built since 1/2011 that may have sprinkler systems • Use building permit data to review and identify sites with possible fire sprinkler systems • Prepare notification and educational letter to be sent to homes with fire sprinkler systems that require backflow protection	• Send survey by July 2025 • Full compliance met by July 2035
Single Family Residential Properties with other potential Hazards	• Send a web-based survey to understand possible hazards • Randomly select homes to inspect to confirm hazards • Perform outreach at events to encourage safe water handling	• Completion by 2027 • Education will be on-going
Non-Testable Devices		
PWS Owned Non-Testable Devices	• Evaluate water facilities to make sure plumbing fixtures comply with the plumbing code.	• July 1, 2026

5.1.3.4 Follow-Up Hazard Assessments (CCCPH 3.2.1(e))

The program administrator or the Cross-Connection Control Specialist will conduct or review hazard assessments during site inspections or when:

1. A user premises changes ownership, excluding single-family residences;
2. A user premises is newly connected to the PWS;
3. Evidence exists of potential changes in the activities or materials on a user's premises;
4. A backflow event from a user's premises occurs;
5. Periodically according to EOCWD's Program;
6. The SWRCB requests a hazard assessment of a user's premises; and
7. EOCWD concludes an existing hazard assessment may no longer be correct.

EOCWD will notify water users through a written notice requesting an inspection appointment. Any water user who cannot or will not allow an on-premises inspection of piping system will be required to install a RP or AG.

5.1.3.5 Hazard Assessment Outcomes

Outcomes following the completion of hazard assessments are described below.

5.1.3.5.1 Meets Requirements

If the presently installed BPA is found to meet the requirements of the CCCPH and is found to be in good working order, then it will remain in place and be considered adequate protection.

5.1.3.5.2 Non-Complying Assembly

All presently installed BPAs which do not meet the requirements set forth in the CCCPH and this CCCP will be required to be upgraded to the appropriate BPA as determined by EOCWD. EOCWD will provide written notice to the customer to install, at their cost and expenses, an approved BPA within 30 calendar days. If corrective actions are not taken, EOCWD will send a second notice that will give the customer an additional two-week period to take required corrective actions. If no action is taken within the two-week period, EOCWD may terminate water service to the affected customer until the required corrective actions are taken.

5.1.3.5.3 New Assembly Required

If it is determined that an existing premises requires backflow protection, EOCWD will provide written notice to the customer to install, at their cost and expenses, an approved BPA within 30 calendar days. If corrective actions are not taken, EOCWD will send a second notice that will give the customer an additional two-week period to take required corrective actions. If no action is taken after the two-week period, EOCWD may terminate water service to the affected customer until the required corrective actions are taken.

5.2 Discontinuation of Water Service (Rules and Regulations for Water Service)

Conditions for discontinuation of water services may include the following items:

- Refusal to install a required BPA
- Refusal to test a BPA
- Refusal to repair a faulty BPA
- Refusal to replace a faulty BPA
- Direct or indirect connection between the PWS and a sewer line
- Unprotected direct or indirect connection between the PWS and a system or equipment containing contaminants
- Unprotected direct or indirect connection between the PWS and an auxiliary water system
- A situation which presents an immediate health hazard to the PWS

EOCWD will make reasonable effort to advise water users, through direct contact or written notices, of the necessary corrective actions. If no action is taken within a reasonable time period, water service will be terminated. The water service will remain inactive until correction of violations has been approved by EOCWD.

6.0 BACKFLOW PREVENTION ASSEMBLIES

6.1 Approved Backflow Prevention Assemblies (CCCPH 3.3.1)

Only BPAs approved and deemed acceptable by EOCWD shall be allowed for installation by a water user to protect the PWS. Approved BPAs which may be subjected to back-pressure or back-siphonage must have been fully tested and granted a Certificate of Approval by a certified laboratory. EOCWD will provide, upon request, to any water user required to install a backflow preventer a list of approved BPAs.

Approved BPAs must have passed both laboratory and field evaluation tests in accordance with standards found in any of the following:

- The latest edition of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California Manual of Cross-Connection Control;
- The certification requirements for BPAs in the latest edition of Standards of American Society of Safety Engineers International; or
- An equivalent testing organization approved by the SWRCB.

BPAs must not be modified from the approved configuration. The type of device required shall depend on the degree of hazard. Different types of approved BPAs are specified for various scenarios to protect the potable water supply. BPA testers are required to notify EOCWD if a water user or EOCWD owned backflow preventer has been modified.

6.1.1 Installation Requirements (CCCPH 3.3.2)

BPAs shall be installed by the customer and at their expense when found necessary or prior to installation of a new service per EOCWD standards and specifications. The BPAs shall be installed in a manner prescribed in the CCCPH and as close as practical to the user's service connection on the user premises. The final authority in determining the required location shall be EOCWD. If internal protection is proposed for the purpose of containment, EOCWD must be able to access the user's premises and ensure that the on-site protections meet the requirements of the CCCPH. All BPAs shall be readily accessible for field testing and maintenance.

As soon as the installation of the BPA has been completed, the Customer is to have the assembly tested by a certified tester and submit the test results to the EOCWD within ten days of the test date. Requirements for the specific elements of backflow prevention assemblies are described in the following subsections.

Standard Drawings for a RP BPA is included in Appendix D.

6.1.1.1 Air Gap

An AG is to be installed on the user's premises at the water user's service connection and in accordance with CCCPH requirements. The receiving water container must be located on the water user's premises at the water users service connection. Alternate locations must be approved by EOCWD. All piping between the water users service connection and the discharge location of the receiving water container must be above grade and accessible for visual inspection. No water user shall be provided from any point between the service connection and the AG. If installed at the user service connection after the adoption of the CCCPH, the AG must be approved by the SWRCB prior to installation. The water inlet piping shall

terminate a distance of twice the diameter of the effective opening, but in no case less than 1 inch above the overflow rim of the receiving tank.

6.1.1.2 Reduced Pressure Principle Backflow Prevention Assembly

The approved RP shall be installed on the user's side of and as close to the service connection as is practical. The RP shall be installed such that the lowest point of the assembly is a minimum of 12 inches above the finished grade and not more than 36 inches above grade measured from the bottom of the assembly and with a minimum of 12 inches side clearance, unless an alternative is approved by EOCWD. However, a minimum side clearance of 24 inches must be provided on the side of the assembly that contains the test cocks. The assembly should be installed so that it is readily accessible for maintenance and testing.

The same space requirements may be applied to RPDA assemblies.

6.1.1.3 Double Check Valve Backflow Prevention Assembly

DCs installed or replaced after the adoption of the CCCPH must be installed on the user's side of and as close to the service connection as is practical. The DC shall be installed such that the lowest point of the assembly is a minimum of 12 inches above the finished grade and not more than 36 inches above grade measured from the bottom of the assembly and with a minimum of 12 inches side clearance, unless an alternative is approved by EOCWD. However, a minimum side clearance of 24 inches must be provided on the side of the assembly that contains the test cocks. The assembly should be installed so that it is readily accessible for maintenance and testing.

The same space requirements may be applied to DCDA assemblies.

Below ground installation can be considered if approved by EOCWD where no alternative option is available.

6.1.1.4 Pressure Vacuum Breaker Backflow Prevention Assembly

A PVB must be installed a minimum of 12 inches above all downstream piping and outlets. A PVB may only be used for containment when no potential for backpressure is present, such as roadway right-of-way irrigation systems.

The same requirements may be applied to SVB assemblies.

7.0 NOTIFICATION AND TESTING OF BACKFLOW PREVENTION ASSEMBLIES

7.1 BPA Testing and Notification Procedures (CCCPH 3.3.3 & Rules and Regulations for Water Service Sections 6.7 & 6.8)

This section outlines EOCWD's overall BPA testing and notification procedures.

7.1.1 Testing

7.1.1.1 Frequency

EOCWD requires all BPAs with active water services be field tested upon installation, repair, or when relocated. More frequent testing may be deemed necessary based on site condition, hazards present, or as determined by EOCWD such as where successive annual reports indicate defective operation of a Backflow prevention device. Prior to initiating or resuming water service, EOCWD must receive from a BPA Tester a backflow test report form indicating a passing test.

7.1.1.2 Procedures

BPA Testers shall follow the testing procedures according to the latest edition of the University of Southern California's Manual of Cross-Connection Control. All costs associated with testing, repairing, replacing, or overhauling a BPA shall be borne by the water user. Testing results shall be submitted to EOCWD on an approved testing form in electronic format or signed paper form.

A copy of the testing form is included in Appendix E.

7.1.1.3 New Installations

EOCWD must receive a passing field test for all newly installed BPAs providing containment protection before water service can be provided. In addition, visual inspections of all newly installed assemblies will be made to assess proper installation and to validate the information from the initial testing of the assembly.

7.1.1.4 Failed Field Test

BPAs that fail the field test should be repaired or replaced and retested within 30 days. Failed assemblies may be removed for repair or replacement provided the water use is either discontinued until repair is completed and the device is returned to service, or the service connection is equipped with other backflow protection approved by EOCWD. A retest will be required following the repair or replacement of the assembly.

7.1.2 Notifications

7.1.2.1 Notification Process

It is the responsibility of EOCWD to verify that BPAs receive a passing field test at least once a year. EOCWD will send notifications to customers regarding the need for backflow testing. The notice requires that backflows be tested within 30 days by an approved BPA.

If a test report is not completed and EOCWD will not be testing the assembly, a second notice is sent providing a two-week period to have the BPA tested. If no action is taken within the two-week period,

EOCWD may terminate water service to the premises until the subject device is tested and the necessary certification provided to EOCWD.

EOCWD currently hires BPA Testers who proactively test BPA devices on behalf of the customer without requiring any action from the customer.

Notifications include information regarding Cross-Connection Control State Regulations, EOCWD's Rules and Regulations for Water Service and contact information, instructions for accessing the list of backflow tester companies, processes for submitting a backflow test report, and the due date for testing.

7.1.2.2 Notification of Imminent Hazard

BPA testers are required to notify EOCWD within 24 hours if a backflow incident or an unprotected cross-connection is observed at a user premise during field testing. EOCWD will immediately investigate the incident as described in Section 9 of this CCCP.

8.0 RECORD MAINTENANCE

EOCWD will retain the following records, described in the sections below, in either electronic or hardcopy form and make them available to the SWRCB upon request. EOCWD utilizes Continental Utility Services, a utility billing and asset management software program, to track cross-connection control related activities.

8.1 Cross-Connection Control Plan

This CCCP will be retained and reviewed every five years to evaluate for necessary updates.

8.2 Hazard Assessments

EOCWD will retain the two most recent hazard assessments conducted according to Section 5.1.3 of this CCCP.

8.3 Assembly Records

For each BPA type, the associated hazard, location, owner, manufacturer and model, size, installation date, serial number, account number, consumer of record, and repair history shall be kept electronically.

EOCWD uses Continental Utility Services for recordkeeping . Hardcopy and/or electronic copies are kept within EOCWD files.

For each AG installation: the associated hazard and the location, owner, and as-built plans of the AG.

8.4 Testing Results

Test results on all BPAs and AGs will be kept electronically for three calendar years and will include the name, test date, repair date, and certification number of the BPA tester.

8.5 Repairs

All repairs made to BPAs for the previous three calendar years.

8.6 User Supervisors

Current contact information for the user supervisor and water user, and any applicable training and qualifications as described by Section 10.3 of this program.

8.7 Incident Reports

Descriptions and follow-up actions related to all backflow incidents for the most recent 10 years will be retained.

8.8 Cross-Connection Control Shutdown Tests

The most recent shutdown tests or dye tests will be retained.

8.9 Contracts or Agreements

All contracts or agreements that pertain to the Cross-Connection Control Program will be retained.

8.10 Public Outreach and Educational Materials

Elements required per the CCCPH will be saved for the previous three calendar years.

9.0 INCIDENT RESPONSE AND NOTIFICATION

EOCWD will investigate potential backflow incidents when any of the following events are reported:

- Water quality complaints that cannot be explained as a "normal" aesthetic problem
- Backflow incident has been suspected or has known to have occurred
- Unknown increase or decrease of system pressure reported

Additionally, EOCWD will initiate notification and water quality sampling procedures when a water main break or power outage causes a complete loss of water pressure within a significant area of the retail transmission system.

9.1 Incident Response Procedure (CCCPH 3.5.2)

In the event of a potential backflow or cross-connection related incident, EOCWD will take the following steps.

9.1.1 Incident Investigation

The EOCWD operations team will investigate a potential incident by dispatching either the Operations Manager, Operations Supervisor, or Water Operator lll to the location of the reported incident. Through a field investigation, it will be determined if contamination is present in the PWS and the extent of the impacted area. The operations personnel will perform the following tasks to investigate for the potential cross-connections:

- Survey the location and surrounding area for possible main breaks
- Investigate the location to observe for potential source(s) of contamination
- Observe the domestic meter(s) for negative consumption
- Interview affected customers
- Survey hydrants, blow offs, and air inlet valves for possible sources of contamination

If a backflow incident is discovered, EOCWD will discontinue water service to that location until a corrective action is taken.

If a backflow incident is suspected during off-hours the initial investigation will begin with on-call personnel familiar with cross-connection control. The response will be within an hour. The on-call personnel will relay findings to the Cross-Connection Control Specialist when the shift begins and the specialist will continue with the investigation and notification process.

9.1.2 Source of Contamination Isolation

EOCWD will isolate the portion of the system suspected of being contaminated by closing isolation valves or the water service and will notify impacted customers.

9.1.3 Notification and Coordination with Outside Agencies

EOCWD will be responsible for notifying, within 24 hours, the SWRCB and the Orange County Health Care Agency of a potential incident.

9.1.4 Sampling Plan

A sampling plan will be implemented to confirm that the potable system meets Safe Drinking Water Standards. The Sampling Plan will be submitted to the SWRCB and Orange County Health Care Agency and will describe the steps required to identify the contaminants, assess the extent of the contamination, and define the necessary remediation efforts.

9.1.5 Notification of Affected Customers

When required, EOCWD will issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1. If the contamination is of biological nature, EOCWD will issue a Boil Water Order Notice. If the contamination is of chemical nature, EOCWD will issue Unsafe Water Alerts as "Do-Not-Use" or "Do-not-Drink" Notices. Notices include instructions on what consumers should do, where potable water is available, and if applicable, dates of notice issuance and expected resolution and location where additional information can be obtained.

9.1.6 Incident Reporting (CCCPH 3.5.3)

If required by the SWRCB, EOCWD will submit to the SWRCB a written incident report describing the nature and severity of the backflow, the actions taken by EOCWD in response to the incident, and any follow up actions required to prevent future incidents. The written report will contain, at a minimum, the information provided in Appendix F of the CCCPH.

10.0 PUBLIC OUTREACH, EDUCATION, AND COORDINATION

10.1 Public Outreach and Education

EOCWD uses public outreach as an opportunity to educate the general public, staff, and BPA owners on EOCWD's Program and the importance of testing and maintaining BPAs. Public outreach may include:

- Fliers or pamphlets
- New construction packets for developers
- Water bill inserts
- Consumer confidence report
- Emails
- District's website

EOCWD will be creating public outreach material to compliment the hazard assessments to be performed to help water customers understand the process, need for backflows and hazard assessments, and provide resources when necessary.

10.2 Training

EOCWD encourages its employees and other staff to obtain and maintain water related certifications such as BPA tester and Cross-Connection Control Specialist certifications.

10.3 User Supervisors (CCCPH 3.2.2)

EOCWD may require, when necessary and at its discretion, a water user to designate a user supervisor. The water user shall inform EOCWD of the user supervisor's identity on, at a minimum, an annual basis and whenever a change occurs.

The user supervisor will be responsible for monitoring BPAs and avoiding cross-connections. In the event of contamination or pollution of the PWS due to a cross-connection on the premises, EOCWD shall be promptly notified by the user supervisor.

The user supervisor will be required to attend, at the owner's expense, a yearly training provided by EOCWD that covers the Program, types of hazards, and concerns typically found on the user's premises.

At the time of this CCCP, no sites require a User Supervisor.

10.4 Inter-Agency Coordination

EOCWD coordinates, when required, with the Orange County Health Care Agency for environmental and public health concerns. EOCWD coordinates with Water Emergency Response Organization of Orange County with strategies to integrate communication and information sharing.

EOCWD reviews drawings, permits, and performs inspections on new projects requiring water services and remodeling projects involving existing water users. EOCWD coordinates with the following entities in regard to requests for new services:

- City of Tustin Water Department
- City of Orange Water Department
- Orange County Fire Authority
- City of Orange Fire Department
- Orange County Sheriff's Department
- California Office of Emergency Services
- SWRCB, Division of Drinking Water

Appendix A

Cross-Connection Control Policy Handbook
(Amended June 17, 2025)

State Water Resources Control Board

Cross-Connection Control Policy Handbook

Standards and Principles for California's Public Water Systems

Adopted: December 19, 2023
Effective: July 1, 2024
Amended: June 17, 2025

California Environmental Protection Agency

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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
CCCPH	Cross-Connection Control Policy Handbook
CCR	California Code of Regulations
C.F.R.	Code of Federal Regulations
CHSC	California Health and Safety Code
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
Division	Division of Drinking Water
EPA	Environmental Protection Agency
Gov. Code	Government Code
MCL	Maximum Contaminant Level
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

Chapter 1 – Policy Overview

1.1 Objective

The primary objective of the Cross-Connection Control Policy Handbook (CCCPH) is 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. In addition, by providing basic educational information on backflow prevention, the State Water Resources Control Board (State Water Board) intends to build a foundation of awareness within the regulated community regarding the importance of backflow protection and cross-connection control, leading to the implementation of a robust cross-connection control program for PWSs.

1.2 Applicability

The CCCPH and its standards apply to all California PWSs, as defined in California's Health and Safety Code (CHSC, section 116275 (h)). Compliance with this CCCPH is mandatory for all California PWSs.

1.3 Policy Development Background and Legal Authorities

Through the adoption of the CCCPH, the State Water Board is exercising its authority, under California's Safe Drinking Water Act[1] (SDWA), to establish enforceable standards applicable to California's PWSs. Failure to comply with the CCCPH may result in the issuance of compliance, enforcement, or other corrective actions against a PWS.

1.3.1 California Safe Drinking Water Act

On October 6, 2017, Assembly Bill 1671 (AB 1671) was approved and filed with the Secretary of State (see Appendix A). 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 Appendix G.

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

[1] CHSC, div. 104, pt. 12, ch. 4, section 116270 et seq.

AB 1671 and 1180 established the following:

- The State Water Board must adopt standards for backflow protection and cross-connection control by January 1, 2020.
- The State Water Board may establish standards for backflow protection and cross-connection control through the adoption of the CCCPH, with the CCCPH not being subject to the requirements of the CA Administrative Procedure Act.[2]
- If standards for backflow protection and cross-connection control are established via the CCCPH, the State Water Board must:
    - Consult with state and local agencies and persons, identified by the State Water Board, as having expertise on the subject of backflow protection and cross-connection control.
    - Hold at least two public hearings before adoption of the CCCPH.
    - Post the CCCPH on the State Water Board website.
- Upon the effective date of the CCCPH, the previous cross-connection control standards[3] become inoperative, and are repealed 90 days later, unless the State Water Board determines not to repeal a specific existing regulation.
- A PWS must implement a cross-connection control program that complies with the standards adopted by the State Water Board.
- Use of a swivel-ell must be consistent with any notification and backflow protection provisions contained in the CCCPH.

The development of the CCCPH included consultation with stakeholders, including state and local agencies, on an array of subjects related to cross-connection control, consistent with the statutory mandate, as well as consideration of input from other stakeholders and the general public in a February 20, 2020 workshop.

Prior to adoption of the CCCPH, in accordance with the statutory mandate, the State Water Board held two public hearings - one on April 27, 2021, and the other on December 5, 2022. A Board Workshop was held on October 18, 2023.

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 CCCPH, which became effective July 1, 2024.

Aside from the mandates of AB 1671 related to the State Water Board's need and authority to develop and adopt an enforceable CCCPH, there are long-standing statutory mandates in California's SDWA concerning backflow protection and cross-connection control, some of which are summarized below.

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[2] Gov. Code, tit. 2, div. 3, pt. 1, ch. 3.5, section 11340 et seq.
[3] Cal. Code Regs., tit. 17, div. 1, ch. 5, subch. 1, grp. 4, arts. 1 & 2, section 7583 et seq.

- 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 this CCCPH, California's regulations pertaining to cross-connection control were set forth in regulations in CCR Title 17,[4] 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 CCCPH updates those regulations, which as previously noted are no longer operative following the adoption of the CCCPH.

The State Water Board may update its standards for backflow protection and cross-connection control through revisions of the CCCPH. Prior to adopting substantive revisions to the 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.

[4] Cal. Code Regs., tit. 17, div. 1, ch. 5, subch. 1, grp. 4, arts. 1 & 2, section 7583 et seq.

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Chapter 2 – Background on Backflow Protection and Cross-Connection Control

2.1 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, improperly installed 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.[5] The 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.

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[5] 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.

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, 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.

2.2 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 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 CCCPH.

2.3 Notes on Applicability of the Cross-Connection Control Policy Handbook

The 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 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 CCCPH, although a PWS that uses recycled water is regulated by the 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.

Transient noncommunity and nontransient noncommunity systems are PWSs and must comply with both the California Plumbing Code and CCCPH. The California Plumbing Code and the CCCPH will overlap in protection of these user premises. To ensure compliance, these noncommunity water systems may need to have internal cross-connection control programs within the user premises.

Noncommunity water systems must have the ability to enforce backflow protection within the premises. Compliance with the California Plumbing Code can be verified by the PWS and used for compliance with the CCCPH. Compliance with the CCCPH is documented through the hazard assessment and maintenance of an inventory of field-testable BPAs and methods. Annual field testing of BPAs is required. Where the minimum backflow protection differs between the California Plumbing Code and the CCCPH, the more protective minimum protection will be required.

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Chapter 3 – Standards for Backflow Protection and Cross-Connection Control

Article 1 – Definitions and General Requirements

3.1.1 Definitions

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 opening, as defined in section 207.0 of the California Plumbing Code, 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, that 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, Appendix C.

"**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, Appendix C.

"**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, Appendix C.

"**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 Appendix D 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 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.

“**Noncommunity water system”** means a public water system that is not a community water system.

“**Nontransient noncommunity water system”** means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.

“**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, Appendix C.

“**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, Appendix C.

"**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, Appendix C.

"**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, Appendix C.

"**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 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, Appendix C.

"**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, Appendix C.

"**Transient noncommunity water system"** means a noncommunity water system that does not regularly serve at least 25 of the same persons over six months per year.

"**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.

3.1.2 Applicability

A public water system (PWS) must comply with the requirements of the CCCPH.

3.1.3 Program for Public Water System Cross-Connection Control

(a) A PWS must protect the public water supply through implementation and enforcement of a cross-connection control program. Unless otherwise specified by this Chapter or directed by the State Water Board, a PWS may implement its cross-connection control program, in whole or in part, either directly or by way of contract or agreement with another party. The PWS, however, shall not be responsible for abatement of cross-connections which may exist within a user's premises. The cross-connection control program must include at a minimum the following elements:

(1) **Operating rules or ordinances** – Each PWS must have operating rules, ordinances, by-laws or a resolution to implement the cross-connection program. The PWS must have legal authority to implement corrective actions in the event a water user fails to comply in a timely manner with the PWS's provisions regarding the installation, inspection, field testing, or maintenance of BPAs required pursuant to this Chapter. Such corrective actions must include the PWS's ability to perform at least one of the following:

(A) deny or discontinue water service to a water user,
(B) install, inspect, field test, and/or maintain a BPA at a water user's premises, or
(C) otherwise address in a timely manner a failure to comply with the cross-connection control program.

(2) **Cross-Connection Control Program Coordinator** – The PWS 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. For PWS with 3,000 service connections or more the Cross-Connection Control Program Coordinator must be a cross-connection control specialist.
(3) **Hazard Assessments** – The PWS must survey its service area and conduct hazard assessments per Article 2 of this Chapter that identifies actual or potential cross-connection hazards, degree of hazard, and any backflow protection needed.
(4) **Backflow Prevention** – The PWS 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 this Chapter.

(5) **Certified Backflow Prevention Assembly Testers and Certified Cross-Connection Control Specialists** – The PWS must ensure all BPA testers and cross-connection control specialists used are certified per Article 4 of this Chapter.
(6) **Backflow Prevention Assembly Testing** – The PWS 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 CCCPH section 3.3.3.
(7) **Recordkeeping** – The PWS must develop and implement a recordkeeping system in accordance with CCCPH section 3.5.1.
(8) **Backflow Incident Response, Reporting and Notification** – The PWS must develop and implement procedures for investigating and responding to suspected or actual backflow incidents in accordance with Article 5 of this chapter.
(9) **Public Outreach and Education –** The PWS must implement a cross-connection control public outreach and education program element that includes educating staff, customers, and the community about backflow protection and cross-connection control. The PWS may implement this requirement through a variety of methods which may include providing information on cross-connection control and backflow protection in periodic water bill inserts, pamphlet distribution, new customer documentation, email, and consumer confidence reports.
(10) **Local Entity Coordination** – The PWS 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.

(b) The cross-connection control program must be developed in consultation with a cross-connection control specialist if:

(1) The PWS has 1,000 or more service connections, or
(2) required by the State Water Board.

(c) A PWS must have at least one cross-connection control specialist as a permanent or contracted employee of the PWS, and that specialist, or their designee, must be able to be contacted within one hour, if:

(1) The PWS has 3,000 or more service connections, or
(2) the PWS has less than 3,000 service connections and is directed by the State Water Board based on hazard assessments conducted pursuant to CCCPH section 3.2.1. or the PWS's history of backflow incidents.

3.1.4 Plan for Public Water System Cross-Connection Control

(a) After adoption of the CCCPH, each PWS must submit a written Cross-Connection Control Plan for State Water Board review in accordance with the following schedule:

(1) An Existing PWS must submit the Cross-Connection Control Plan no later than 12 months after the effective date of the CCCPH.
(2) A new PWS must submit the Cross-Connection Control Plan for review and approval prior to issuance of a domestic water supply permit.
(3) A PWS may submit a written request to the State Water Board for an extension of the deadline for submittal of its initial Cross-Connection Control Plan. The PWS's application must include a written description of the need for an extension. Approval of an extension will be at the sole discretion of the State Water Board.

(b) The Cross-Connection Control Plan for a community water system must include, at a minimum, the following cross-connection control program procedures and documentation:

(1) a description of how the community water system will achieve and maintain compliance with each requirement in this Chapter;
(2) a description of the process, personnel, and timeframes for completing initial and ongoing hazard assessments pursuant to CCCPH section 3.2.1;
(3) a description of the legal authority pursuant to CCCPH section 3.1.3 to implement corrective actions in the event a water user fails to comply in a timely manner with the provisions of the PWS's cross-connection control program;
(4) a description of the process and timeframes for ensuring each BPA is inspected and field tested, and AG is inspected, at a frequency no less than required by this Chapter;
(5) a description of the process and timeframe for ensuring each non-testable backflow preventer that is under the PWS ownership or administration is installed and maintained according to the California Plumbing Code;
(6) a description of the process for ensuring individuals field testing and inspecting BPAs are no less qualified than required by this Chapter, including but not limited to confirmation of the individual's:

(A) certification as a backflow prevention assembly tester,
(B) field test kit or gage equipment accuracy verification, and
(C) BPA field test result reports;

(7) a description of the procedures and timeframes of activities for responding to backflow incidents, including notification of customers, and reporting of backflow incidents pursuant to CCCPH section 3.5.2;
(8) contact information for cross-connection control personnel including any cross-connection control program coordinator and specialist;
(9) a description of the tracking system that maintains current and relevant information, including:

(A) recordkeeping information required pursuant to CCCPH section 3.5.1,
(B) location and type of each BPA, and
(C) highest threat potential hazard from which a given BPA is protecting the public water system distribution system;

(10) for user supervisors, if used, the required information pursuant to CCCPH section 3.2.2 (f);
(11) the corrective actions, including timeframes for the corrective actions, that a community water system will implement when:

(A) a cross-connection exists and the BPA installed is not commensurate with the user premises' hazard or no BPA has been installed, or
(B) a BPA needs to be replaced or maintained;

(12) a description of the public outreach and education program to comply with CCCPH section 3.1.3(a)(9); and
(13) the procedures for coordination with local entities

(c) The Cross-Connection Control Plan for a noncommunity water system must include, at a minimum, the following cross-connection control program procedures and documentation:

(1) a description of how the noncommunity water system will achieve and maintain compliance with each requirement in this Chapter that is applicable to the noncommunity water system;
(2) a description of the process, personnel, and timeframes for completing initial and ongoing hazard assessments pursuant to CCCPH section 3.2.1;
(3) a description of the legal authority pursuant to CCCPH section 3.1.3 to implement corrective actions in the event a water user fails to comply in a timely manner with the provisions of the PWS's cross-connection control program;
(4) a description of the process and timeframes for ensuring each BPA is inspected and field tested and AG is inspected, at a frequency no less than required by this Chapter;
(5) a description of the process and timeframe for ensuring each non-testable backflow preventer for internal protection that is under the PWS ownership or administration is installed and maintained according to the California Plumbing Code;
(6) a description of the process for ensuring individuals field testing and inspecting BPAs are no less qualified than required by this Chapter, including but not limited to confirmation of the individual's:

(A) certification as a backflow prevention assembly tester,
(B) field test kit or gage equipment accuracy verification, and
(C) BPA field test result reports;

(7) a description of the procedures and timeframes of activities for responding to backflow incidents, including notification of customers, and reporting of backflow incidents pursuant to CCCPH section 3.5.2;
(8) contact information for cross-connection control personnel including the cross-connection control program coordinator;
(9) maintaining a tracking system with current and relevant information, including:

(A) recordkeeping information required pursuant to CCCPH section 3.5.1,
(B) location and type of each BPA,
(C) location and type of each non-testable backflow preventer used for internal protection in accordance with the California Plumbing Code, if applicable, and
(D) potential hazard from which a BPA is protecting the public water system distribution system;

(10) for user supervisors, if used, the required information pursuant to CCCPH section 3.2.2(f);
(11) the corrective actions, including timeframes for the corrective actions, that a noncommunity water system will implement when:

(A) a cross-connection exists and the BPA installed is not commensurate with the user premises' hazard or no BPA has been installed, or
(B) a BPA or non-testable backflow preventer needs to be replaced or maintained;

(12) a description of the public outreach and education program to comply with CCCPH section 3.1.3(a)(9); and,
(13) the procedures for coordination with local entities (e.g., local health departments with internal cross-connection control programs, building officials, plumbing officials, etc.).

(d) A PWS must ensure its Cross-Connection Control Plan is, at all times, representative of the current operation of its Cross-Connection Control program. The PWS must make its Cross-Connection Control Plan available to the State Water Board for review upon request. If a PWS makes a substantive revision to its Cross-Connection Control Plan, the PWS must submit the revised Cross-Connection Control Plan to the State Water Board for review.

Article 2 – Hazard Assessments and Required Protection

3.2.1 Hazard Assessments

(a) To evaluate the potential for backflow into the PWS, each community water system must conduct an initial hazard assessment of the user premises within its service area and each noncommunity water system must conduct an initial hazard assessment of its water distribution system. 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 CCCPH.

(b) Each hazard assessment must identify the degree of hazard to the PWS'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 Appendix D.

(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 CCCPH may be considered as an initial hazard assessment provided that such hazard assessments and associated backflow protection provide protection consistent with the CCCPH and the PWS describes their review of these assessments in the Cross-Connection Control Plan required in CCCPH section 3.1.4.

(e) Subsequent to the initial hazard assessment described in subsection (a), a community water system 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 newly or re-connected to the PWS;
(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 PWS's Cross-Connection Control Plan required pursuant to CCCPH section 3.1.4.;

(6) if the State Water Board requests a hazard assessment of a user's premises; or
(7) if the PWS concludes an existing hazard assessment may no longer accurately represent the degree of hazard.

(f) Noncommunity water systems must conduct an initial or follow-up hazard assessment within three years of the effective date of the CCCPH.

(g) Noncommunity water system must conduct a follow-up hazard assessment of its water distribution system if any changes are made that could result in a cross-connection or any backflow incidents occur.

(h) 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 PWS's hazard assessment properly identified all hazards at the time of the assessment, the appropriate degree of hazards, and the corresponding backflow protection.

3.2.2 Backflow Protection Required

(a) A PWS 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 Article 3 for installation and approved BPA criteria). When a DC is required or referenced in the CCCPH, a DCDA or DCDA-II type of assembly may be substituted if appropriate. When an RP is required or referenced in the 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 Chapter and as determined based on the results of the hazard assessment conducted pursuant to CCCPH section 3.2.1.

(c) Unless specified otherwise in this Chapter, a PWS must, at all times, protect its distribution system from high hazard cross-connections (see Appendix D for examples), through premises containment, through the use of AG(s) or RP(s).

(1) Following State Water Board review and approval, a PWS may implement an alternate method of premises containment in lieu of a required AG provided that the proposed alternative would not increase the level of risk to protection of public health.
(2) Following State Water Board review and approval, a PWS 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 PWS has a cross-connection control program, required pursuant to CCCPH section 3.1.3, and the use and operation of the swivel-ell is described in the Cross-Connection Control Plan required pursuant to CCCPH section 3.1.4;
(3) the design and construction-related requirements of the swivel-ell adheres to the criteria in Appendix C;
(4) at least every 12 months, inspections are performed and documented to confirm ongoing compliance with the design and construction-related requirements in Appendix C;
(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 PWS and the entity supplying the recycled water, signed by those with relevant legal authority, that 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 PWS be present to supervise each switchover; and
(C) within seven days of each switchover, if requested by the State Water Board, the PWS will submit a written report describing compliance with this subsection, as well as potable and recycled water usage information.

(e) Except as noted below, a PWS 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 the effective date of the 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 Section 3.2.2 (e)(3) or cannot install DC protection within ten years of the effective date of the CCCPH, a PWS may propose in the cross-connection control plan submitted for 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:

(A) the user premises has only one service connection to the PWS;
(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; and
(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 PWS 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 PWS of changes in piping, and maintain current contact information on file with the PWS; and
(2) The PWS must include in the Cross-Connection Control Plan required in 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.

Article 3 – Backflow Prevention Assemblies

3.3.1 Standards for Types of Backflow Protection

(a) The PWS must ensure that each AG used for its Cross-Connection Control Program meets 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) (See Appendix B).

(b) The PWS must ensure that each replaced or newly installed PVB, SVB, DC, and RP for protection of the PWS is approved through both laboratory and field evaluation tests performed in accordance with at least one of the following:

> (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; or
> (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-II, 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 3.3.1 (b). PWS must require BPA testers to notify the PWS if a water user or PWS-owned BPA has been modified from the CCCPH section 3.3.1 (b) approval.

3.3.2 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 PWS;
> (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 PWS;
> (3) the PWS must ensure that the AG specified in 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, unless an alternative is approved by the PWS, a maximum of thirty-six inches above the finished grade.

(c) DCs installed or replaced after the adoption of the CCCPH must be installed according to CCCPH section 3.3.2 (b). Below ground installation can be considered if approved by the PWS where it determines no alternative options are available.

(d) A PVB or SVB must be installed 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 CCCPH must have a minimum side clearance of twelve inches, except that a minimum side clearance of twenty-four inches must be provided on the side of the assembly that contains the test cocks. The PWS 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 PWS. If internal protection is provided in lieu of premises containment, the PWS 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.

3.3.3 Field Testing and Repair of Backflow Prevention Assemblies and Air Gap Inspection

(a) PWS must ensure that all BPAs installed for its Cross-Connection Control Program are field tested following installation, repair, depressurization for winterizing, or permanent relocation. All required field testing must be performed by certified backflow prevention assembly testers.

(b) BPAs must be field tested at least annually. The CCCPH does not preclude a PWS, 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.

(c) Air-gap separations must be visually inspected at least annually to determine compliance with this Chapter by persons certified as backflow prevention assembly testers or certified as a cross-connection control specialist pursuant to this Chapter.

(d) PWS must receive passing field tests before providing continuous service to a water user with a newly installed BPA.

(e) PWS must ensure that BPAs that fail the field test are repaired or replaced within 30 days of notification of the failure. Extensions may be allowed by the PWS if included as part of the Cross-Connection Control Plan.

(f) PWS must require backflow prevention assembly testers to notify the PWS as soon as possible within 24 hours if a backflow incident or an unprotected cross-connection is observed at the BPA or prior to the user premises during field testing. PWS must immediately conduct an investigation and discontinue service to the user premises if a backflow incident is confirmed, and water service must not be restored to that user premises until the PWS receives a confirmation of a passing BPA field test from a backflow prevention assembly tester and the assembly is protecting the PWS.

Article 4 – Backflow Prevention Assembly Testers and Cross-Connection Control Specialists

3.4.1 Backflow Prevention Assembly Tester Certification

(a) A PWS must ensure that each BPA required by this Chapter to protect the public water system is field tested by a person with valid certification from a certifying organization recognized by the State Water Board pursuant to this Article.

(b) A State Water Board-recognized organization certifying backflow prevention assembly testers is one that has a certification process that, at a minimum, includes the following:

(1) A timed and proctored written[6] exam, using a closed-book, objective grading format, consisting of no less than 100 questions for initial certification and no less than 50 questions for recertification. A passing score must be achieved by an examinee as a requirement for certification.

(A) Written exam proctors must:

1. not provide an examinee any assistance in answering exam questions, verbal or otherwise; and
2. be impartial.

(B) Passing scores for the written exams are to be determined prior to exam sessions, such that passing a written exam demonstrates sufficient knowledge of subjects associated with the proper field testing of BPAs, including but not limited to:

1. the hydraulics and theory of backflow;
2. California's laws, regulations, and requirements related to cross-connection control;
3. types of BPA field test equipment and the need to verify accuracy, at least annually and when otherwise necessary, to ensure accuracy of field test results;
4. field test procedures for an RP, RPDA, RPDA-II, DC, DCDA, DCDA-II, PVB, and SVB using the procedures provided in the *Manual of Cross-Connection Control, Tenth Edition,* published by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or equivalent;
5. identification of improperly functioning BPAs (i.e., diagnostics or troubleshooting); and
6. recordkeeping and safety.

[6] The requirement for a written exam does not preclude using computerized exams.

(2) A performance (i.e., hands-on) exam, using a closed-book, objective grading process and the field test procedures in paragraph (1)(B)(4), designed such that passing the performance exam demonstrates proficiency in accurately determining the operating condition of an RP, DC, PVB, and SVB, when properly or improperly functioning, including but not limited to BPAs with leaks in shutoff valves, and failures in check valves, air inlet valves, or relief valves. A passing score must be achieved by an examinee as a requisite for certification. The performance exam process must include the following:

(A) Performance exam proctors must:

1. be certified as a backflow prevention assembly tester pursuant to this Article;
2. evaluate no more than one examinee at a time;
3. not provide an examinee any assistance in answering exam questions, verbal or otherwise;
4. provide no indication an examinee has erred until completion of a BPA field test, at which time only the fact the examinee has erred may be indicated (i.e., not the nature of the error);
5. be impartial and not affiliated with the certifying organization's preparation of, or preparatory course for (if applicable), the performance exam; and
6. not evaluate an examinee who was trained by the proctor during the six-month period prior to the exam or other conflict of interest.

(B) An examinee is considered to have failed a performance exam if the examinee:

1. makes a field test procedure or recording error that could impact an accurate determination of the operating condition of a BPA,
2. completes the BPA performance exam form with an error,
3. is informed of making an error (see subparagraph (A)(4)) and begins the procedure a second time, and
4. errs a second time and completes the BPA performance exam form accordingly.

(3) recertification requirements of no less frequently than every three years which includes both a written and performance exam;
(4) provisions for revocation of a backflow prevention assembly tester's certification, including but not limited to, revocation for falsifying field test results or field test reports;

(5) a website providing public access to the most recent list of backflow prevention assembly testers:

(A) who hold a valid certification from the certifying organization. At a minimum, the list is to include each backflow prevention assembly tester's last name, first name, certification number, and the date on which each backflow prevention assembly tester's certification expires; and
(B) whose certification was revoked, pursuant to paragraph (4), in the three years preceding the date of the list. At a minimum, the list is to include each backflow prevention assembly tester's last name, first name, revoked certification number, the date on which each backflow prevention assembly tester's certification was revoked, and the reason for revocation.

(6) as a prerequisite to sections 3.4.1(b)(1) and (b)(2), completion of an instructional training course accepted by the certifying organization[7] that covers the subjects in subsection (1)(B) and is no less than 30 hours in length over no fewer than four days for:

(A) a backflow prevention assembly tester's initial certification;
(B) a backflow prevention assembly tester's recertification as a result of revocation; or

(7) In lieu of compliance with section 3.4.1(b)(6) a certifying organization may accept two years prior experience in backflow prevention assembly testing.

(c) To be recognized by the State Water Board as a certifying organization for backflow prevention assembly testers, a certifying organization shall:

(1) submit an application with the following information to the State Water Board for review:

(A) written documentation of a certification program that includes a process that is no less stringent than the criteria in subsection (b);
(B) evidence that the organization's certification program and exam process has been reviewed, with concerns adequately addressed, by a credentialed psychometrician proficient in the design of objective exams, experienced in the assessment of certification or licensing organizations, and familiar with the application of the requirements of *ISO[8]/IEC[9] 17024: Conformity Assessment- General Requirements for Bodies Operating Certification of Persons*; and

[7] But not limited only to training provided by the certifying organization or its affiliates.
[8] International Organization for Standardization
[9] International Electrotechnical Commission

(C) a written statement, signed by the certifying organization's representative(s) having the authority and legal responsibility for operation of the certifying organization, attesting that the certifying organization will implement its certification program in a manner meeting or exceeding the criteria in subsection (b) and consistent with the application submitted to the State Water Board.

(2) adequately address each State Water Board comment and/or question concerning the application, and
(3) receive written acknowledgment from the State Water Board that the application is complete.

(d) A certifying organization, accredited by the American National Standards Institute (ANSI) in accordance with ISO/IEC 17024, which complies with subsection (b), will be considered to be a State Water Board-recognized certifying organization. Beginning three years after the effective date of the CCCPH, only those testers with a valid certification from an ANSI-accredited certifying organization shall satisfy subsection (a) and certifications obtained by organizations in accordance with subsection (c) will be invalid.

(e) This Article does not preclude a local health agency from maintaining a backflow prevention assembly tester certification program for the field testing of BPAs within the local health agency's jurisdiction. Accepting a tester certified by a local health agency does not relieve a PWS from meeting the requirements of this Article.

(f) This Article does not preclude a PWS from disallowing the use of an individual tester certified pursuant to this Article if the PWS has reason to believe a certified tester may not be proficient in accurately determining the operating condition of BPA, or for any other reason (e.g., fraud, deceit, negligence, misconduct, etc.). A PWS must report any evidence of a tester falsifying reports to that tester's certifying organization.

(g) This Article is effective July 1, 2026.

3.4.2 Cross-Connection Control Specialist Certification

(a) A PWS must ensure that cross-connection control specialists, used pursuant to the CCCPH, have valid certification from a certifying organization recognized by the State Water Board pursuant to this Article.

(b) A State Water Board-recognized organization certifying cross-connection control specialists is one that has a certification process that, at a minimum, includes the following:

(1) A timed and proctored, written[10] exam, using a closed-book, objective grading format, consisting of no less than 100 questions for certification. A passing score must be achieved by an examinee as a requirement for certification.

(A) Written exam proctors must:

1. not provide an examinee any assistance in answering exam questions, verbal or otherwise; and
2. be impartial.

(B) Passing scores for the exams are to be determined prior to exam sessions, such that passing an exam demonstrates sufficient and comprehensive range of knowledge of the subjects provided in Appendix E, as they may relate to cross-connection control and the causes, effects, and prevention of backflow.

(2) recertification requirements of no less frequently than every three years. Recertification may be done through at least one of the following:

(A) an exam as required by section 3.4.2 (b)(1),
(B) through 12 contact hours from continuing education courses covering material in Appendix E or,
(C) a combination of exam and continuing education contact hours equivalent to (A) or (B);

(3) provisions for revocation of a specialist's certification, including but not limited to, falsifying information or providing negligent recommendations inconsistent with industry-standard cross-connection control guidelines;
(4) a website providing public access to the most recent list of cross-connection control specialists:

(A) who hold a valid certification from the certifying organization. At a minimum, the list is to include each specialist's last name, first name, certification number, and the date on which each specialist's certification expires; or

[10] The requirement for a written exam does not preclude using computerized exams.

(B) whose certification was revoked, pursuant paragraph (3), in the three years preceding the date of the list. At a minimum, the list is to include each specialist's last name, first name, revoked certification number, the date on which each specialist's certification was revoked, and the reason for revocation.

(5) initial certification requirements:

(A) a valid backflow prevention assembly tester certification from a certification organization recognized by the State Water Board pursuant to section 3.4.1; and
(B) completion of an instructional training course (acceptable to the certifying organization[11]) that covers the subjects in Appendix E and is no less than 30 hours in length over no fewer than five days (inclusive of an exam, if provided). This paragraph does not preclude a certification organization from providing the instructional training course to the public, including certified specialists.
(C) As an alternative to (A) the certifying organization may accept additional instruction in the subject areas of testing, maintaining and repairing BPAs equivalent in length and scope to the requirements in 3.4.1(b)(6).
(D) As an alternative to (A) the certifying organization may accept a minimum of five (5) years documented experience performing cross-connection control specialist duties, as outlined in Appendix E.

(c) To be recognized by the State Water Board as a certifying organization for cross-connection control specialists, a certifying organization shall:

(1)submit an application with the following information to the State Water Board for review:

(A) Written documentation of a certification program that includes a process that is no less stringent than the criteria in subsection (b);
(B) evidence that the organization's certification program and exam process has been reviewed, with concerns adequately addressed, by a credentialed psychometrician proficient in the design of objective exams, experienced in the assessment of certification or licensing organizations, and familiar with the application of the requirements of *ISO[12]/IEC[13] 17024: Conformity Assessment- General Requirements for Bodies Operating Certification of Persons*; and

[11] But not limited only to training provided by the certifying organization or its affiliates.
[12] International Organization for Standardization
[13] International Electrotechnical Commission

(C) a written statement, signed by the certifying organization's representative(s) having the authority and legal responsibility for operation of the certifying organization, attesting that the certifying organization will implement its certification program in a manner meeting or exceeding the criteria in subsection (b) and consistent with the application submitted to the State Water Board.

(2) adequately address each State Water Board comment and question concerning the application, and
(3) receive a written acknowledgment from the State Water Board that the application is complete:

(d) A certifying organization, accredited by the American National Standards Institute (ANSI) in accordance with ISO/IEC 17024, which complies with subsection (b), will be considered to be a State Water Board-recognized certifying organization. Beginning three years after the effective date of the CCCPH, only those specialists with a valid certification from an ANSI-accredited certifying organization shall satisfy subsection (a) and certifications obtained by organizations in accordance with subsection (c) will be invalid.

(e) This Article does not preclude a local health agency from maintaining a cross-connection control specialist certification program for specialists within the local health agency's jurisdiction. Using a specialist certified by a local health agency does not relieve a PWS from meeting the requirements of this Article.

(f) This Article does not preclude a PWS from disallowing the use of an individual cross-connection control specialist certified pursuant to this Article if the PWS has reason to believe a certified specialist may not be proficient in their knowledge of cross-connection control and the causes, effects, and prevention of backflow, or for any other reason (e.g., fraud, deceit, negligence, misconduct, etc.). A PWS must report any evidence of a specialist falsifying reports to that specialist's certifying organization.

(g) This Article is effective July 1, 2026.

Article 5 – Recordkeeping, Backflow Incident Response, and Notification

3.5.1 Recordkeeping

(a) Each PWS must maintain the following records:

(1) The two most recent hazard assessments for each user premise, conducted pursuant to CCCPH section 3.2.1 (Hazard Assessment);
(2) for each BPA, the associated hazard or application, location, owner, type, manufacturer and model, size, installation date, and serial number;
(3) for each AG installation, the associated hazard or application and the location, owner, and as-built plans of the AG;
(4) results of all BPA field testing, AG inspection, and 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;
(5) repairs made to, or replacement or relocation of, BPAs for the previous three calendar years;
(6) the most current cross-connection tests (e.g. shutdown test, dye test);
(7) 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 CCCPH section 3.2.2(f);
(8) descriptions and follow-up actions related to all backflow incidents;
(9) if any portion of the cross-connection control program is carried out under contract or agreement, a copy of the current contract or agreement;
(10) the current Cross-Connection Control Plan as required in CCCPH section 3.1.4.; and
(11) any public outreach or education materials issued as required in CCCPH section 3.1.3.(a)(9) for the previous three calendar years.

(b) All information in subsection (a) must be available to the State Water Board upon request.

3.5.2 Backflow Incident Response Procedure

Each PWS must include backflow incident response procedures in the Cross-Connection Control Plan required in CCCPH section 3.1.4. The PWS must describe its procedures for investigating and responding to suspected backflow incidents including, 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.

3.5.3 Backflow Incident Notification

(a) Each PWS must notify the State Water Board and local health agencies of any known or suspected incident of backflow within 24 hours of the determination. If required by the State Water Board, a PWS must issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1.

(b) If required by the State Water Board, the PWS must 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 PWS in response to the backflow incident, and the follow up actions to prevent future backflow incidents. The written report must contain, at a minimum, the information requested in Appendix F.

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Appendix

Appendix A: Assembly Bill 1671 (2017, Chapter 533) and Assembly Bill 1180 (2019, Chapter 455).
Appendix B: ASME A112.1.2-2012(R2017) Table 1, Minimum Air Gaps for Generally used Plumbing Fixtures, page 4
Appendix C: Backflow Prevention Assembly Diagrams
Appendix D: High Hazard Premises
Appendix E: General Range of Knowledge for Cross-Connection Control Specialists
Appendix F: Example Backflow Incident Reporting Form
Appendix G: Related Statutes and Regulations

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Appendix A

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

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STATE OF CALIFORNIA
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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.

(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,

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.

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STATE OF CALIFORNIA
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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.

(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

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.

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Appendix B

ASME A112.1.2-2012(R2017) Table 1, Minimum Air Gaps for Generally used Plumbing Fixtures, page 4

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Appendix B
ASME A112.1.2-2012(R2017) Table 1, Minimum Air Gaps for Generally used Plumbing Fixtures,[1] page 4

TABLE 1
Minimum Air Gaps for Generally used Plumbing Fixtures[4]

FIXTURES	WHERE NOT AFFECTED BY SIDEWALLS[1] (inches)	WHERE AFFECTED BY SIDEWALLS[2] (inches)
Effective opening[3] not greater than ½ of an inch in diameter	1	1 1/2
Effective openings[3] not greater than ¾ of an inch in diameter	1 1/2	2 1/4
Effective openings[3] not greater than 1 inch in diameter	2	3
Effective openings[3] greater than 1 inch in diameter	Two times the diameter of effective opening	Three times the diameter of effective opening

For SI units: 1 inch = 25.4 mm

Notes:

[1] Sidewalls, ribs, or similar obstructions do not affect air gaps where spaced from the inside edge of the spout opening at a distance exceeding three times the diameter of the effective opening for a single wall, or at a distance exceeding four times the effective opening for two intersecting walls.

[2] Vertical walls, ribs, or similar obstructions extending from the water surface to or above the horizontal plane of the spout opening other than specified in Footnote 1 above. The effect of three or more such vertical walls or ribs has not been determined. In such cases, the air gap shall be measured from the top of the wall.

[3] The effective opening shall be the minimum cross-sectional area at the seat of the control valve or the supply pipe or tubing that feeds the device or outlet. Where two or more lines supply one outlet, the effective opening shall be the sum of the cross-sectional areas of the individual supply lines or the area of the single outlet, whichever is smaller.

[4] Air gaps less than 1 inch (25.4 mm) shall be approved as a permanent part of a listed assembly that has been tested under actual backflow conditions with vacuums of 0 to 25 inches of mercury (85 kPa).

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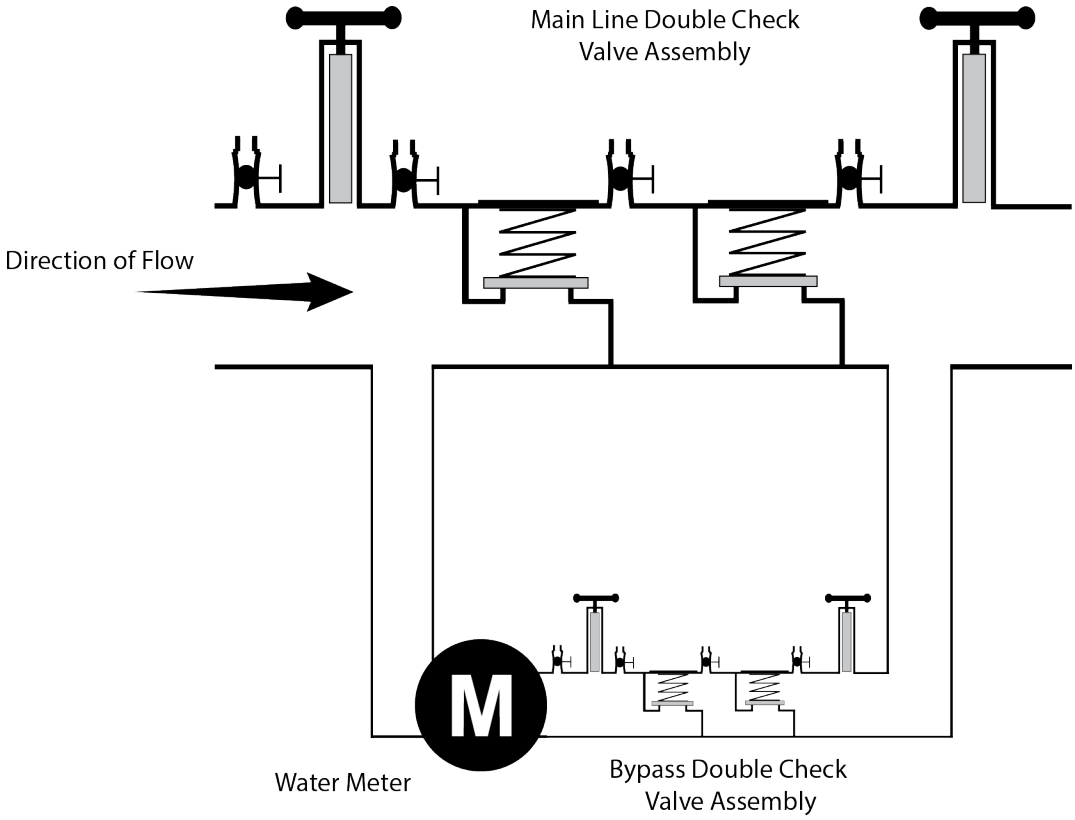
Appendix C

Backflow Prevention Assembly Diagrams

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Appendix C

Diagram 1
Double check detector backflow prevention assembly[1]

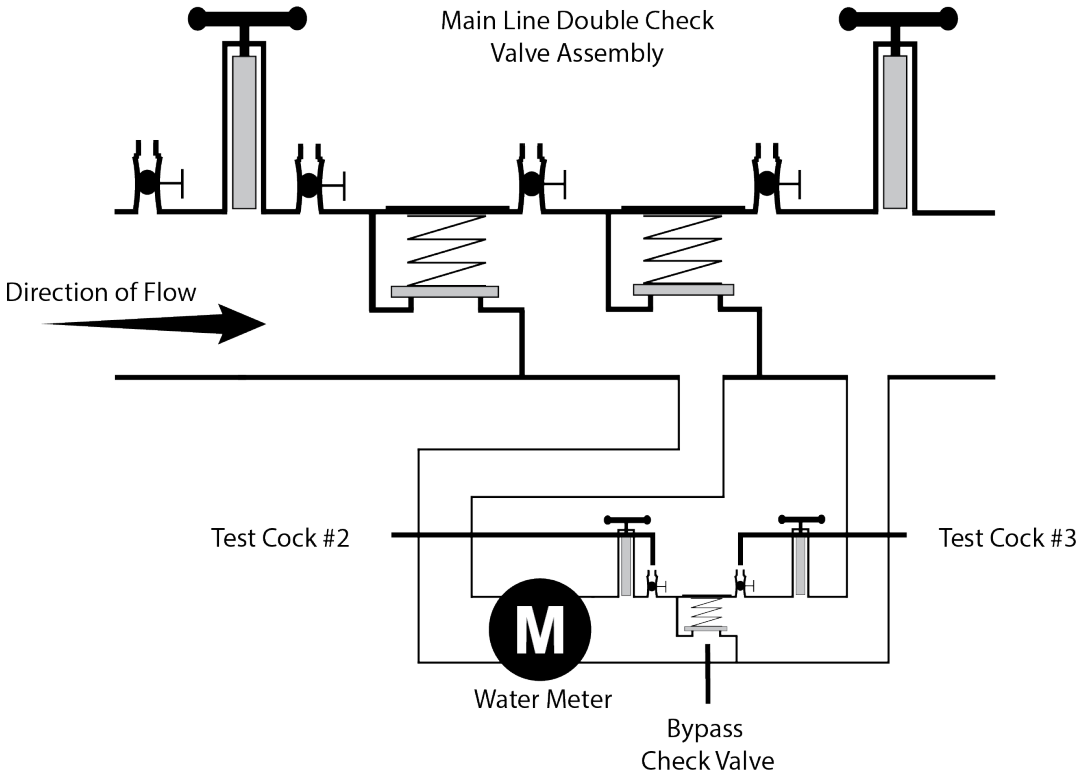


[1] © 2023 University of Southern California. Used with permission.

Appendix C

Diagram 2

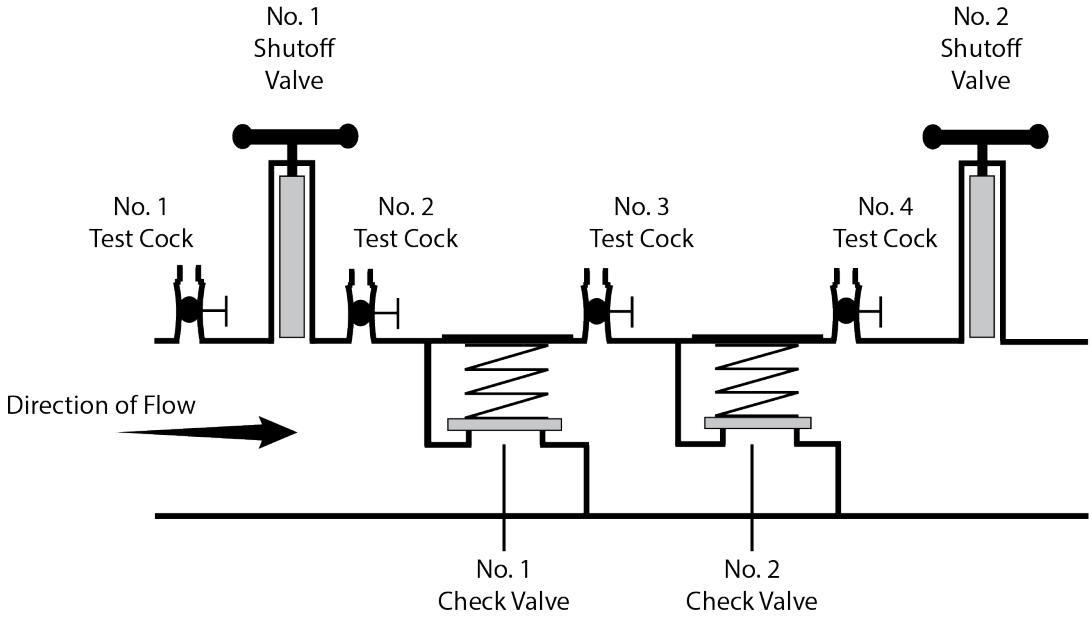
Double check detector backflow prevention assembly – type II [2]



[2] © 2023 University of Southern California. Used with permission.

Appendix C

Diagram 3
Double check valve backflow prevention assembly[3]

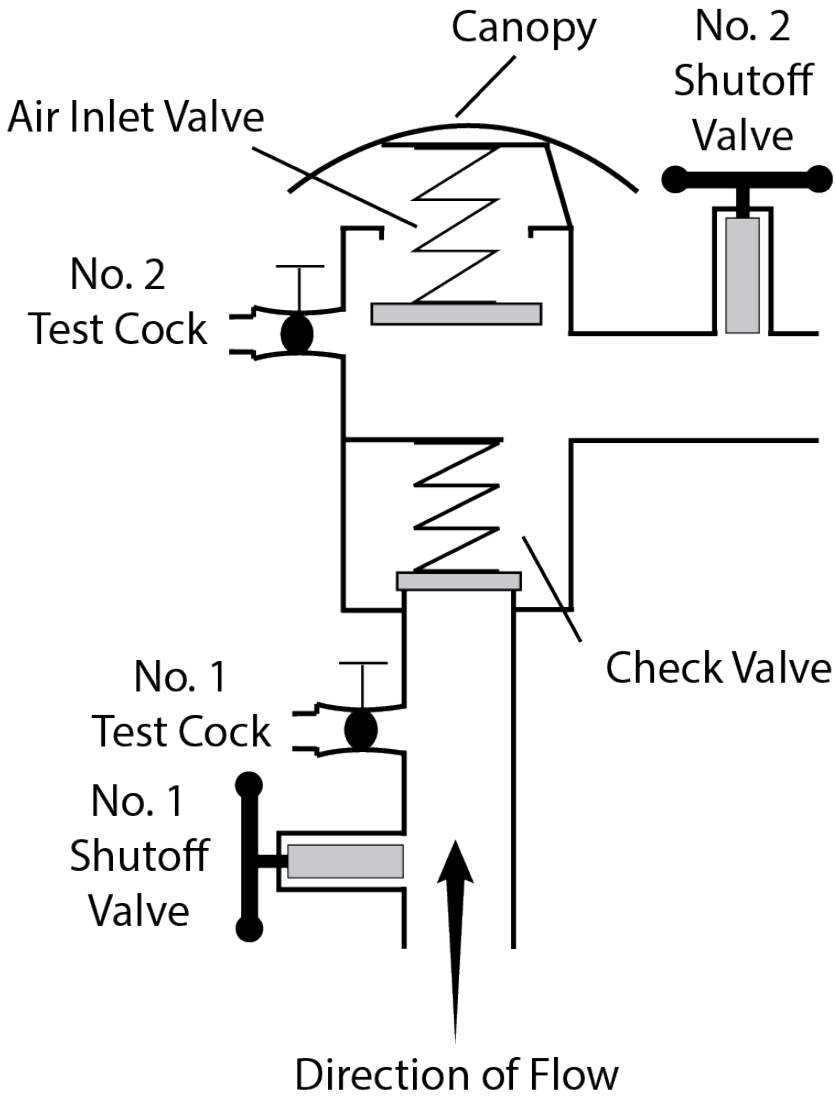


[3] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 4

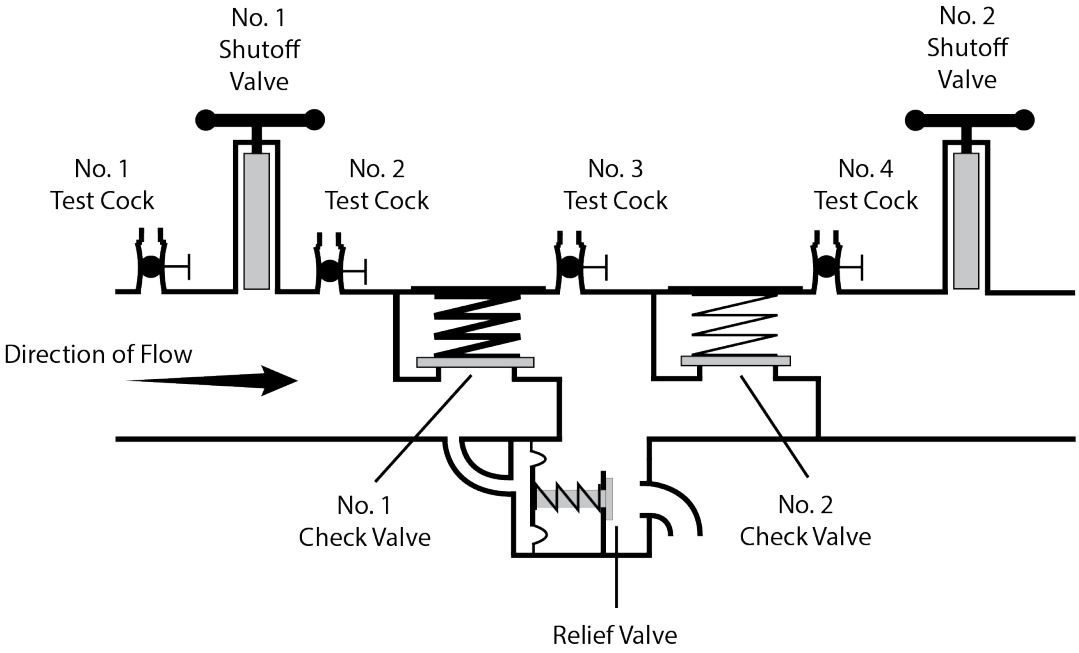
Pressure vacuum breaker backsiphonage prevention assembly [4]



[4] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 5
Reduced pressure principle backflow prevention assembly [5]

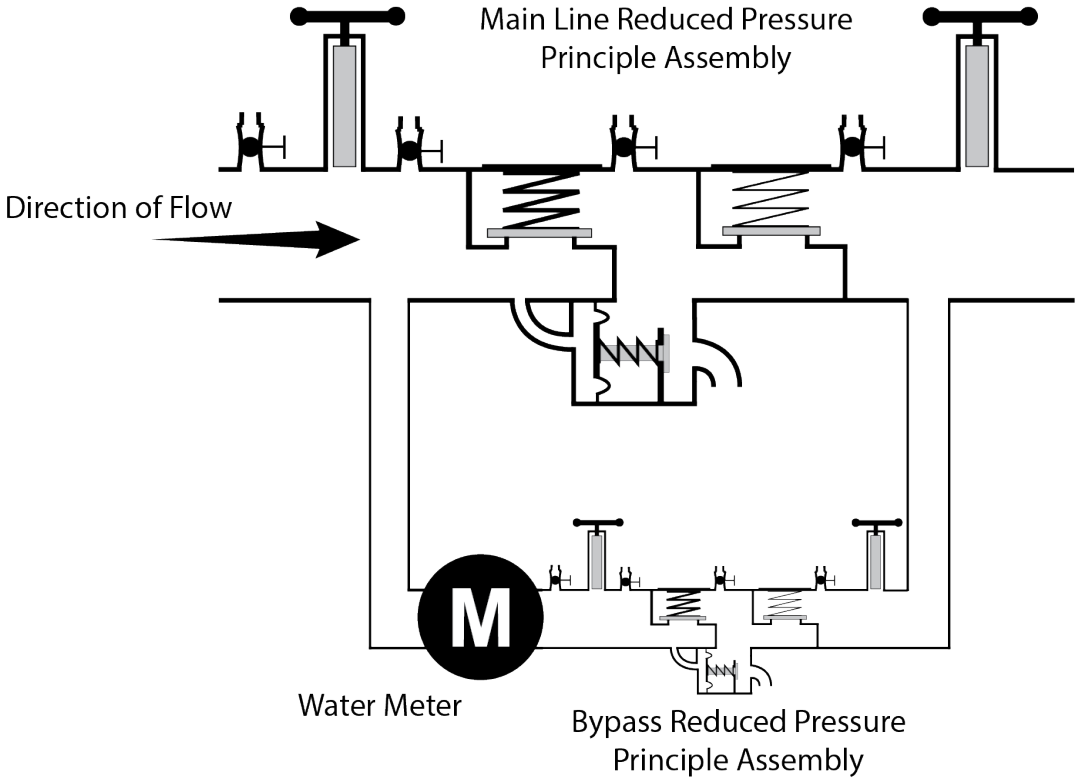


[5] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 6

Reduced pressure principle detector backflow prevention assembly [6]

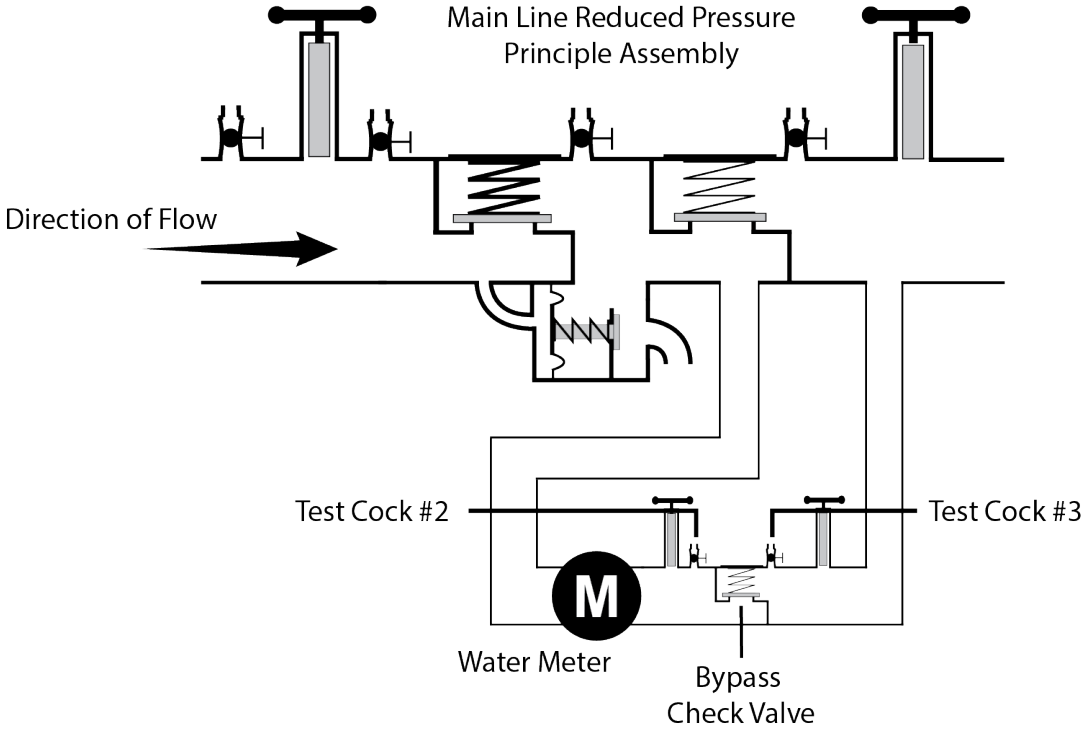


[6] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 7

Reduced pressure principle detector backflow prevention assembly – type II [7]

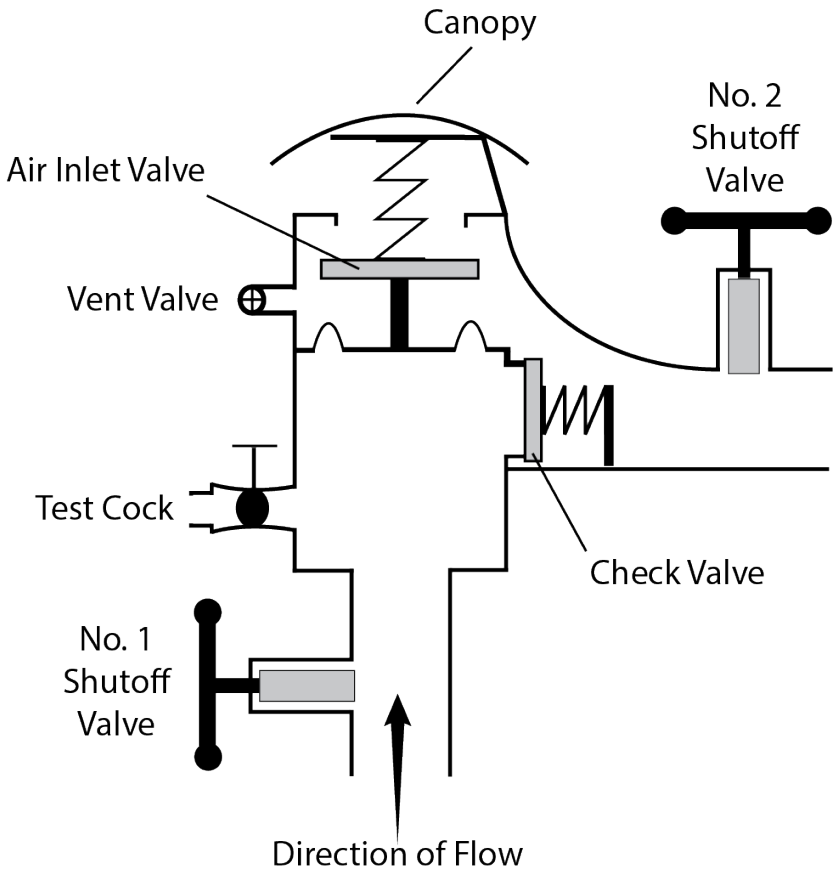


[7] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 8

Spill-resistant pressure vacuum breaker backsiphonage prevention assembly [8]



[8] © 2023 University of Southern California. Used with permission

Appendix C

Swivel-Ell Design and Construction Criteria

The criteria below, in conjunction with the swivel-ell diagrams that follow (Diagrams 9a and 9b), 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.

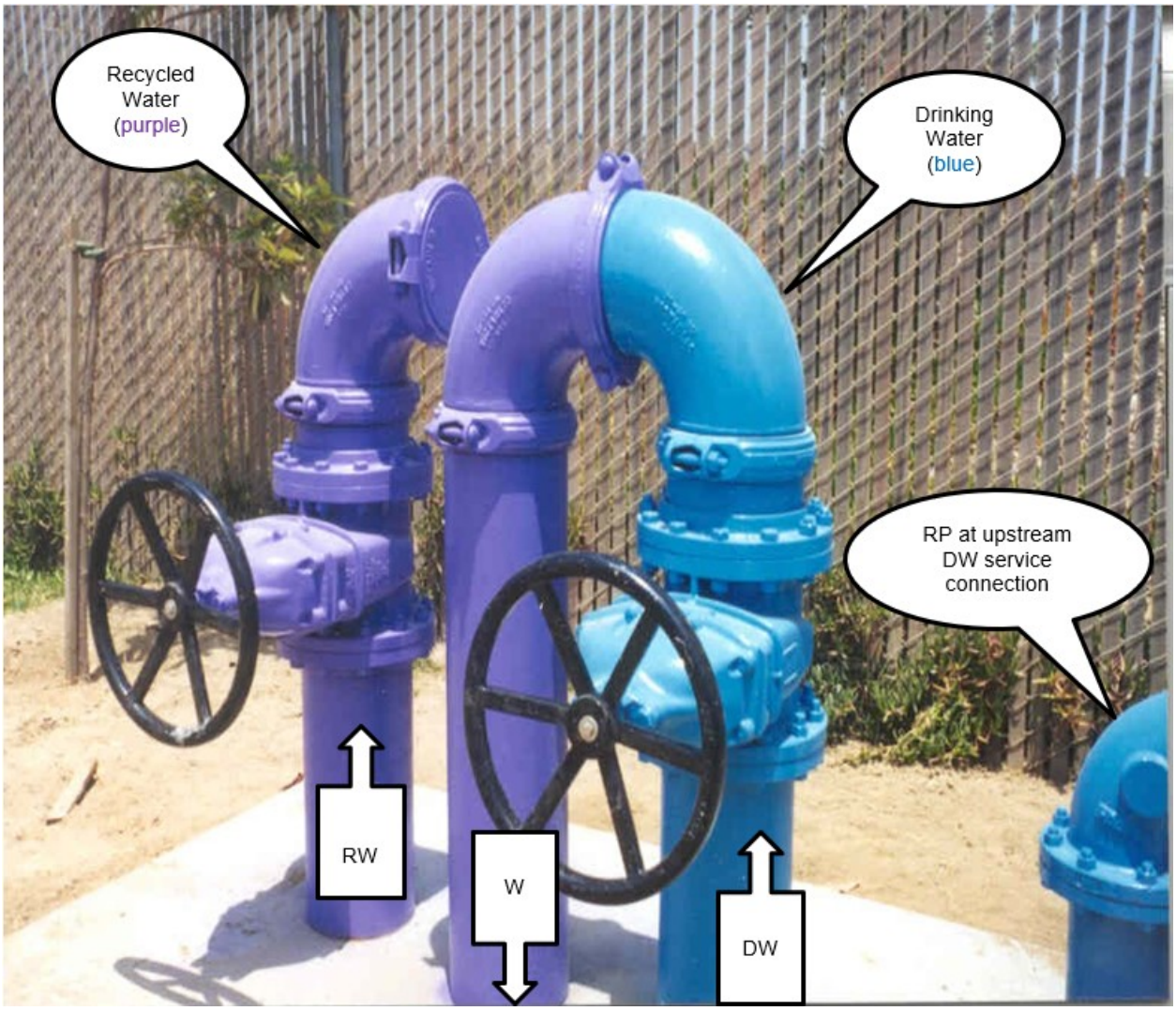
F. The swivel-ell must:

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.

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

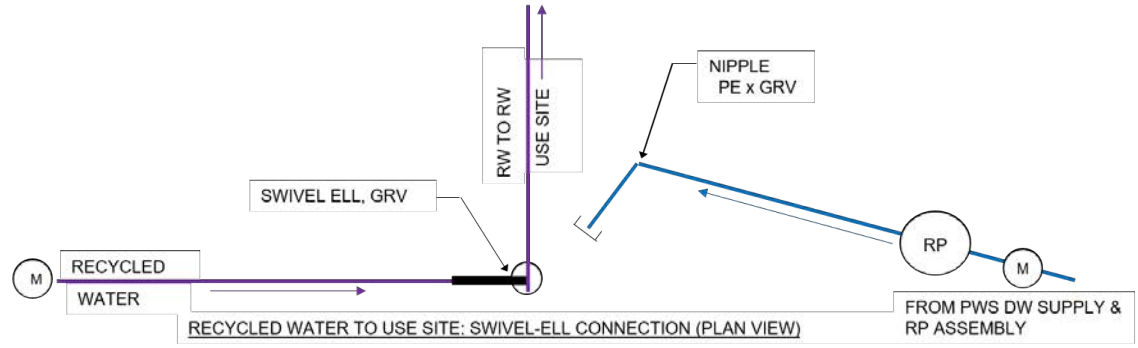
RP = Reduced pressure principle backflow prevention assembly
RW = Tertiary-treated recycled water originating from wastewater treatment facility
DW = Drinking water originating from a public water system
W = Water (tertiary recycled water **or** drinking water) to use site. As pictured, configured for 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 9a: Example Swivel-Ell Pictorial (also see Plan View Schematics)

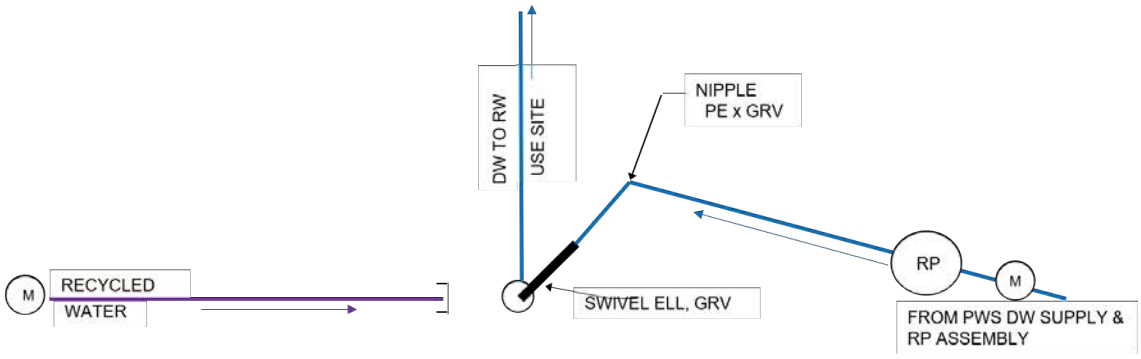


Note: The RP, a required component of an acceptable swivel-ell, is not shown in the picture.

Diagram 9b: Swivel-Ell Typical Plan View Schematics
(not intended to be an exact portrayal of the pictorial)



RECYCLED WATER TO USE SITE: SWIVEL-ELL CONNECTION (PLAN VIEW)



POTABLE WATER TO USE SITE: SWIVEL-ELL CONNECTION (PLAN VIEW)

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Appendix D

High Hazard Premises

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APPENDIX D

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
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.

(+++) 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).

Appendix E

General Range of Knowledge for Cross-Connection Control Specialists

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APPENDIX E

General Range of Knowledge for Cross-Connection Control Specialists

To effectively prevent unintended backflow into a PWS's distribution system, it is necessary for a cross-connection control specialist to have an understanding of a range of subjects related to cross-connection control. This appendix provides a list of such subjects.

This appendix is not meant to preclude instruction of additional subjects that may be necessary or beneficial to the goal of a prospective or existing cross-connection control specialist in being proficient in protecting public health from backflow through cross-connection control measures. Emphasis on particular subjects should be in a manner that best achieves that goal.

(a) GENERAL

(1) Cross-connection control terminology.
(2) The history leading to the need for cross-connection control, including causes, impacts, including but not limited to:

(A) potable water distribution systems;
(B) examples of backflow incidents and actual or potential public health impacts; and
(C) evolution of methods of cross-connection control and backflow prevention assemblies.

(3) Hydraulics (general) – An understanding of hydraulic gradients, pressure variations, flow rates, temperature, the properties of water, backsiphonage, backpressure, and other elements necessary to understand the causes for backflow.
(4) Public outreach – How to appropriately convey the value of cross-connection control to PWS personnel and the public.

(b) LAWS, REGULATIONS, AND GUIDANCE

(1) Federal – Applicable federal laws, regulations, and guidance.
(2) State – California laws and regulations, including, but not limited to, the State Water Resources Control Board's most recent edition of its *Cross-Connection Control Policy Handbook* and other requirements related to cross-connection control.
(3) Local – An understanding of the need to ensure local requirements are considered and how best to find such requirements.

(c) HAZARD ASSESSMENTS AND METHODS TO PREVENT BACKFLOW

A comprehensive understanding of how to conduct cross-connection surveys of water systems for the purpose of identifying cross-connections, assessing hazards, and identifying the most effective and legally appropriate methods for protection from backflow. At a minimum, the following topics should be considered to achieve such an understanding:

(1) Surveys:

(A) Preparation (e.g., authority, notification, prioritizing customers/premises, coordinating with public water systems, etc.);
(B) Design and as-built drawings related to water supply and cross-connection control;
(C) Public water system schematics;
(D) How to identify existing and new construction, with an understanding of how construction may impact backflow protection;
(E) How to identify cross-connections (actual and potential);
(F) How to identify and differentiate between high hazard and low hazard cross-connections; and
(G) Problems associated with multi-story buildings, multiple service connections at a premises, typical water-use equipment, etc., and varying types of water service, including irrigation, recycled water, gray water, fire prevention systems, and dual plumbed premises.

(2) Assessing Hazards:

(A) Identifying and differentiating between premises activities leading to high hazard cross-connections and low hazard cross-connections (for examples of high hazard activities, see Appendix D); and
(B) Understanding potential public health impacts from backflow associated with the problems in section (c)(1)(G) of this appendix.

(3) Assemblies and Methods for Backflow Prevention:

(A) A comprehensive understanding of approved methods for cross-connection control and preventing backflow with respect to an assessed hazard;
(B) Identifying unapproved methods for cross-connection control and preventing backflow;
(C) An understanding of components, design and operation, proper installation and location of backflow prevention assemblies, including air gaps, and backflow prevention assembly field test methods, field test results, and the assessment of air gaps; and
(D) Identifying unapproved assemblies, as well as those assemblies whose operation and/or state of repair necessitates replacement with an approved assembly.

(d) CROSS-CONNECTION CONTROL PROGRAMS

A comprehensive understanding of the development, elements, and administration of cross-connection control programs, including, but not limited to:

(1) An ability to assess the federal, state, and local requirements applicable to a public water system's cross-connection control program, such that adherence to the cross-connection control program would result in compliance with the requirements;
(2) The roles, responsibilities, and authority of individuals and entities involved in the critical elements of a successful plan for cross-connection control (see CCCPH section 3.1.4); and
(3) The ability to assess the components of a public water system's Cross-Connection Control Plan (see CCCPH section 3.1.4) that best assures the prevention of undesired backflow into the public water system's distribution system, and to communicate deficiencies to public water system personnel.

(e) CROSS-CONNECTION TESTS

A comprehensive understanding of:

(1) The purpose of a cross-connection test and when a cross-connection test should be performed;
(2) The ability to develop protocols and make arrangements for cross-connection tests, and subsequently oversee and/or perform such cross-connection tests, in a manner that determines whether interconnections exist between unapproved sources and approved water supplies; and
(3) Follow-up actions and notifications if a cross-connection test indicates an interconnection.

(f) RECORDKEEPING AND INCIDENT RESPONSE

A comprehensive understanding of:

(1) The agencies and authorities to be notified in the event of a backflow incident;
(2) How to determine the cause of a backflow incident and the actions necessary to prevent similar incidents in the future;
(3) How to properly document a backflow incident, including but not limited to the information in the example backflow incident response form in Appendix F; and
(4) How to properly document the elements associated with surveys and hazard assessments, including those identified in section (c) of this appendix.

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Appendix F

Example Backflow Incident Reporting Form

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BACKFLOW INCIDENT REPORT FORM

Water System: _____

Water System Number: _____

Incident Date: _____

Incident Time (if known):_____

Incident Location: _____

How was the incident discovered?

_____

<u>Backflow Originated from:</u>

Premise Location: _____

Address: _____

Premise Contact Person: _____ Title:_____

Phone:_____ Email: _____

Connection Type: (please check one)

□ Industrial □ Commercial □ Single-Family Residential □ Multi-Family Residential

□ Irrigation □ Recycled Water □ Water System Facility

□ Other: _____

Description and source of backflow substance (please be as descriptive as possible):

_____

_____

If available, please attach an MSDS or other chemical description form

Was the backflow fluid contained within the user side? YES □ NO □

Estimated Number of Affected Persons: _____

Number and description of consumer complaints received:

_____

_____

Did any consumers report illness? Please describe.

_____

_____

If applicable, please describe the consumer notification:

_____

_____

INVESTIGATION

Please describe the water system investigation including time frames:

_____
_____
_____
_____
_____
_____

What was the area system pressure? _____

Is this within typical range: YES ☐ NO ☐ - typical pressure: _____

Was a sample of the water contaminated by the backflow incident collected and stored before flushing? YES ☐ NO ☐

Please describe all sampling:

_____

_____

_____

DDW recommends laboratory or field sampling for the following parameters: total coliform, E. coli, free and total chlorine residual, pH, odor, turbidity, temperature, and color. Additional sampling should be collected at the PWS and regulatory agency's discretion.

CORRECTIVE ACTIONS

Please describe the corrective actions taken by the water system:

_____
_____
_____
_____
_____
_____

Was the chlorine residual increased after discovery of backflow incident? YES ☐ NO ☐

Date of the last cross-connection control hazard assessment of the premise with the backflow incident conducted: _____

Did the premise have backflow prevention assemblies? YES ☐ NO ☐

Date of most recent backflow prevention assembly test(s): _____

When was the Division of Drinking Water or Local County Health office notified?

Date: _____Time: _____ Contact Person: _____

Was the Division or Local County Health notified within 24 hours? YES ☐ NO ☐

Other agencies or organizations contacted?

CERTIFICATION

Name: _____ Job Title: _____

Certification(s): _____

_____

Please list all cross-connection control related certifications including number and expiration date

I certify that the forgoing information is true and correct to the best of my ability.

Signature: _____ Date: _____

Attach the following applicable documentation

1. Laboratory Test Results
2. Sketch of the cross-connection and modifications
3. MSDS or chemical information forms if chemical hazard is known
4. Applicable backflow assembly test reports including the most recent test before the incident
5. Other relevant supporting documentation

Appendix G

Related Statutes and Regulations

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The following laws and regulations are considered related or tangential to the CCCPH, and are included in a descriptive format to provide additional, relevant background information

California Laws and Regulations

In addition to the California SDWA statutory requirements cited in CCCPH Chapter 1, section 1.3.1, California has statutes addressing certain authorities and requirements that may have influenced the CCCPH or may otherwise be of interest.

- Urban and community water systems must have a written policy on discontinuation of residential service for nonpayment and must not discontinue residential service for nonpayment if certain conditions are met. (CHSC sections 116900 – 116926)

- Senate Bill 1263 (2017) requires that before a person submits an application for a permit for a proposed new public water system, the person shall first submit a preliminary technical report which must include a cost comparison of a new public water system and consolidations with an existing system. (CHSC section 116527)

- Effective June 24, 2015, Senate Bill 88 (SB 88) (Statutes 2015, Chapter 27) added sections 116680-116684 to the CHSC, allowing the State Water Board to require certain water systems that consistently fail to provide safe drinking water to consolidate with, or receive an extension of service from, another public water system. The consolidation can be physical or managerial.

- Local health officers may maintain programs for the control of cross-connections by water users, within water users' premises, where public exposure to backflow may occur. Such programs may include water user premises inspections, collection of fees, certification of backflow prevention assembly[1] (BPA) testers, and other discretionary elements. Local health officer BPA tester certification standards must be consistent with the standards prescribed in the CCCPH. Water users are required to comply with all orders, instructions, regulations, and notices from the local health officer regarding installation, testing, and maintenance of a BPA. (CHSC sections 116800 - 116820).

- Pursuant to the California Building Standards Law (CHSC sections 18901 - 18949.31), the California Building Standards Commission (CBSC) must administer the processes related to the adoption, approval, and publication of regulations referred to as the California Building Standards Code (Title 24, California Code of Regulation). Title 24 serves as the basis for the minimum design and construction

[1] California statutes use a variety of terms when referencing a 'backflow prevention assembly' (e.g., backflow protective device, backflow protection equipment, backflow prevention device, backflow or back siphonage protection device, backflow preventer, or backflow device). For consistency with industry terminology, 'backflow prevention assembly' is used in the CCCPH, unless directly quoted otherwise.

of buildings in California and includes the California Plumbing Code (Part 5 of Title 24), which contains requirements pertaining to cross-connection control and backflow prevention.

- A BPA intended to convey or dispense water for human consumption via drinking or cooking must meet California's "lead free" requirements. (CHSC section 116875)

- Limits are established for the installation of backflow protection equipment where automatic fire sprinkler systems are utilized. (CHSC section 13114.7)[2]

- Cross-connection control must be addressed in engineering reports that are required (CCR Title 22, section 60323) for recycled water projects. (Wat. Code section 13552.8)

- If a public agency requires the use of recycled water for toilet and urinal flushing in a structure (except certain mental health facilities), the public health agency must prepare an engineering report that addresses cross-connection control. (Wat. Code section 13554)

- Prior to indoor use of recycled water in a condominium project, the entity delivering the recycled water must submit a report, for State Water Board[3] approval, and include the following related to cross-connection control (Wat. Code section 13553(d)(1)):

    - The condominium project must be provided with a backflow prevention assembly approved by the State Water Board.

    - The backflow prevention assembly must be inspected and tested annually by a certified tester.

    - The condominium project must be tested by the recycled water agency or local agency at least once every four years for indications of possible cross-connections between the condominium's potable and non-potable systems.

- California's Department of Water Resources was required to convene a task force, known as the 2002 Recycled Water Task Force, to identify constraints, impediments, and opportunities for the increased use of recycled water and report

---

[2] CHSC section 13114.7 historically provided potential limits for backflow prevention assemblies on fire sprinklers. Even though current standards differ from the language stated in CHSC section 13114.7, it is still being provided as a historical reference as there may still be installations with the now outdated limits established in section 13114.7

[3] The California Department of Public Health's authority and responsibility pertaining to this reference was transferred to the State Water Board via Senate Bill 861 (2014, Chapter 35). As such, applicable statutory mandates that may refer to "California Department of Public Health" or "Department" may be referred to as "State Water Board" in this document.

to the Legislature by July 1, 2003. The task force was also asked to advise and make recommendations concerning cross-connection control, including the applicability of visual inspections instead of pressure tests for cross-connections between potable and non-potable water systems. (Wat. Code section 13578(b)(1). The final report[4] provided the following recommendations to the State Water Board – Division of Drinking Water (Division):

- ▫ Prepare guidance on dual plumbed regulations (22 CCR sections 60313-60316) consistent with Appendix J of plumbing code (Chapter 15 of 2019 California Plumbing Code, formerly Chapter 16A).
- ▫ Support thorough assessment of risk associated with cross-connections between disinfection tertiary recycled water and potable water.
- ▫ Ensure uniform interpretation of cross-connection control requirement of Title 22 regulations (recycled water) and Title 17 (cross-connection control regulations)
- ▫ Recommend stakeholders to review draft Title 17 regulations.

▪ A person engaged in the salvage, purchase, or sale of scrap metal who knowingly possesses a backflow prevention assembly (or connections to the assembly or any part of the assembly), or who failed to report the possession of such items, which was previously owned by a utility or public agency, is guilty of a crime. (Pen. Code section 496e)

▪ Junk dealers or recyclers who possess a backflow prevention assembly (or connections to that assembly or any part of the assembly) without a written certification from the agency or utility owning or previously owning the assembly will be liable to the agency or utility for the wrongful possession. (Civ. Code section 3336.5 and, similarly, Bus. & Prof. Code section 21609.1)

Please note that a number of the codes, regulations, and statutes cited above are implemented under the authority of regulatory entities other than the State Water Board and would therefore be beyond the scope of this CCCPH. The intent of providing such citations is to increase general awareness with respect to other potential statutory requirements associated with cross-connection control. The list is not exhaustive and does not include other requirements that may exist, including those via regulations that may have been adopted by an appropriate regulatory entity.

Federal Laws and Regulations

[4] California Department of Water Resources. (2003). *Water Recycling 2030: Recommendations of California's Recycled Water Task Force*

All suppliers of domestic water to the public are subject to regulations adopted by the U.S. Environmental Protection Agency (EPA) under the U.S. Safe Drinking Water Act (SDWA) of 1974, as amended (42 U.S.C. section 300f et seq.), as well as by the State Board under the California SDWA (Health & Saf. Code, div. 104, pt. 12, ch. 4, section 116270 et seq.). Additionally, the State Water Board has been delegated primacy - the responsibility and authority to administer U.S. EPA's drinking water regulations within California – on the condition that California adopt enforceable requirements no less stringent than U.S. EPA's.

The U.S. EPA currently has no distinct cross-connection control requirements that apply broadly to public water systems (PWS); however, the importance of cross-connection control is evident by the issue papers and guidance documents developed by U.S. EPA and their recognition that cross-connections and backflow represent a significant public health risk (see discussion in Chapter 2). Although U.S. EPA currently has no distinct cross-connection control requirements, the subject of cross-connection or backflow prevention assemblies is included in the U.S. SDWA and the Code of Federal Regulations (C.F.R.) in relation to PWS, including the following:[5]

- If used exclusively for non-potable services, a backflow prevention assembly (BPA) is exempt from the federal lead prohibitions. (42, U.S.C. section 300g)
- Allows increasing disinfectant concentrations in a PWS distribution system in the event of a cross-connection (backflow) event. (40 C.F.R. section 141.130(d))
- Proper maintenance of the distribution system, including cross-connection control, is identified as a best available technology (BAT) for microbial contaminant control. (40 C.F.R. section 141.63(e))
- Under the federal Revised Total Coliform Rule, a PWS having a cross-connection control program is one of the enhancements necessary to reduce monitoring for a PWS that had been under an increased monitoring frequency. (40 C.F.R. section 141.854(h)(2))
- Under the federal Revised Total Coliform Rule, a PWS having a cross-connection control program is a criterion for a state to allow a reduced monitoring frequency (40 C.F.R. section 141.855(d)(1))
- If a state allows the monitoring frequency reductions previously mentioned under the federal Revised Total Coliform Rule, a state is required to include in its primacy package to U.S. EPA how a PWS will be required to demonstrate cross-connection control. (40 C.F.R. section 142.16(q))

[5] For requirements unrelated to cross-connection control, please consult California's laws and regulations specific to the topic of interest. California may have more stringent requirements (e.g., reduced monitoring allowed via federal regulations may be prohibited in California).

Appendix B

EOCWD Rules and Regulations



RULES AND REGULATIONS FOR WATER SERVICE

APPROVED: DECEMBER 19, 2019

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SECTION 1 GENERAL

1.1 INTRODUCTION

The East Orange County Water District (District) is a County Water District operating pursuant to the County Water District Law (Section 30000 and following of the California Water Code). The Board, as authorized by Section 31024 of the Water Code, has established these Rules and Regulations for the retail sale, distribution and use of water.[1]

The District provides water service to all Applicants, subject to the availability of water and/or the facilities necessary to provide the service, conditional upon receipt of all required fees and charges, and in accordance with these Rules and Regulations.

All terms, conditions, rates and requirements contained herein are subject to change by actions of the Board.

1.2 DEFINITIONS

Whenever the following terms, or pronouns used in their place, occur in these Rules and Regulations, or in any documents that these Rules and Regulations govern, the intent and meaning shall be interpreted as follows:

Abandoned Service - shall mean any service where the meter, the meter angle stop, curb stop or gate valve, and all tubing, have been removed. The service saddle and the corporation stop may or may not have been removed.

Air-Gap Separation - shall mean a physical separation between the free flowing discharge end of a water supply pipeline and an open or non-pressure receiving vessel. The separation shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel, and in no case less than one-inch. The design shall be to the satisfaction of the General Manager or authorized agent and the Appropriate Regulatory Agencies.

Applicant - shall mean any person, persons, firm, corporation, association or agency that desires and applies to obtain water service from the District, and has the legal capacity to enter into and contract with the District.

Application for Water Service - shall mean a contractual agreement applied for by a person, persons, firm, corporation, association or agency who desires to obtain water service through an established meter.

Application for Temporary Water Service - shall mean a contractual agreement applied for by a person, persons, firm, corporation, association or agency who desires to obtain temporary water service for use during construction.

Appropriate Regulatory Agencies - shall mean those public agencies legally constituted to protect the public health and water quality such as, but not limited to, the California Department of Health Services, the Santa Ana Regional Water Quality Control Board, the Orange County Health Care Agency and the Orange County Building and Safety Department.

Backflow - shall mean the flow of water or other liquids, mixtures, gases or any other substances into the distributing pipes of a Potable Water supply from any source or sources other than the District's sources.

Backflow Prevention Device - shall mean a specially designed and certified device, such as, but not limited to, the Reduced Pressure Principle Backflow Prevention Device and the Double Check Valve Assembly, that is used in protecting the Potable Water system from contamination that originated downstream of the device. The device shall be recognized and approved as such by the General Manager or authorized agent and the Appropriate Regulatory Agencies.

[1] The District's sale of water at wholesale, to entities that provide retail water service in the portions of the District's service area outside the District's Retail Zone, is governed by separate contracts and other requirements, and not by these Rules and Regulations.

Billing Date – shall refer to the date invoices are printed by the District, and shall be the date from which all other dates are calculated.

Board - shall mean the elected Board of Directors of the East Orange County Water District.

Business Day - shall mean Monday - Friday 7:30 am to 4:00 pm excluding holidays.

Connection Charge - shall mean a fee charged to a Retail Zone Applicant in connection with a Water Service Agreement or charged to an existing customer for an increase in demand for Potable Water service (increasing the size of the service meter), as set forth in the Schedule of Rates, Fees and Charges, together with the District's applicable wholesale connection charge. A Connection Charge shall be charged for property not previously served by the District or property with an existing water service requiring an increase in demand for water service. The Connection Charge includes a retail water system capacity charge but does not include the cost of meter setting, service lateral, any main extension or reimbursement for main extension.[2]

Capital Projects Fee – shall mean the monthly fee, referred to in the schedule of rates as the "Monthly Fee for Existing Water System Capital Projects" or similar term, levied for the cost of repairing, rehabilitating, replacing and/or improving capital facilities in the water system.

Connected Capacity Demand (CCD) - shall mean the total estimated demand for water service, expressed in terms of gallons per minute, as calculated using the procedures specified in the California Plumbing Code.

Construction Use - shall mean an approved use of water to support construction activities such as soil compaction and dust control.

Contractor - shall mean the party entering into contract with the Applicant for performance of the work for which the District issues a permit. The Applicant and the Contractor may or may not be one and the same.

Cross Connection - shall mean any unprotected, actual or potential connection between any part of a Potable Water system used to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved by the District as safe, wholesome and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which Backflow could occur, shall be considered to be Cross Connections.

Customer - shall mean any person, persons, firm, corporation, association or agency receiving retail water or services from the District.

Customer Control Valve - shall mean a valve with a lever-type turn handle, manufactured of bronze, installed on the outlet side of a water meter.

Customer of Record - shall mean the person, persons, firm, corporation, association or agency that owns the property and has entered into a Water Service Agreement or other contractual agreement with the District for water service or is the successor and/or assignee to a Water Service Agreement or such other contractual agreement; and/or the property tenant who is the Applicant in an Application for Water Service or Application for Temporary Water Service. The contractual agreement may include, but is not limited to, the Water Service Agreement, the Application for Water Service permit, the Application for Temporary Water Service permit, and a request for any of these received at the District by phone, mail or in person. The Customer and Customer of Record may or may not be one and the same. The Customer of Record is responsible for payment of all moneys owed on accounts for which the Customer of Record has entered into a contractual agreement.

Day(s) - shall refer to calendar days unless otherwise specified.

[2] The "Connection Charge" as defined herein does not include the District's separate Wholesale Zone Connection Charge established and charged within the entire service area of the District, including the Retail Zone.

Deposit - shall mean any money held by the District for the purpose of guaranteeing payment of money owed to the District. Deposits are applicable only to the account(s) for which the money was collected. Deposits are refunded only to the Customer of Record, unless the depositor has made a written request and has received permission from the District to do otherwise.

District - shall mean the East Orange County Water District or an authorized agent.

District's Engineer - shall mean the engineer designated by the District or an authorized agent.

District Inspector - shall mean any person authorized by the District to perform inspections of either onsite or offsite facilities prior to construction, during construction, after construction or during operation.

District Office - shall mean the District business office currently located at 185 N. McPherson Road, Orange, California 92869.

Drawings - shall mean the plans, working drawings, detail drawings, profiles, typical cross sections and supplemental drawings or reproductions thereof, approved by the District, which show locations, character, dimensions or details of the work or modifications to be performed.

General Manager - shall mean the General Manager of the District or an authorized agent.

Main or Mainline - shall mean water distribution pipelines located in streets, highways, public ways or private right-of-ways used to deliver or transmit water.

Meter - shall mean the District approved primary measuring device, owned by the District, which is used for the purpose of accurately recording the consumption of water at a property, properties or on a portion of a property. The meter is typically the ending Point of Ownership.

Owner - shall mean any holder of legal title to a property to which the District provides water service or has entered into a Water Service Agreement.

Property – shall mean any real property owned, leased, rented, or otherwise controlled, utilized, or inhabited by any person, including any corporation or partnership of any form holding a water account with the District.

Point of Ownership – The point where the District's ownership and control of water system facilities ends, which shall be the outlet (downstream) side of the water meter or the control valve upstream of the backflow device. By written agreement only, the District may designate another location as the ending Point of Ownership.

Potable Water - shall mean water that is approved for human consumption by the federal, State and local Appropriate Regulatory Agencies.

Potable Water System - shall mean the facilities that produce, convey and store Potable Water.

Pulled Meter - shall a meter that has been removed, where the service line is still in place.

Record Drawings - shall mean the design drawings that have been marked to show all construction changes for a given project to the best of available knowledge.

Retail Zone - shall mean the portion of the District's service area where the District provides both wholesale and retail water services to the Customers. See Section 1.3.

Rules and Regulations - shall mean the Rules and Regulations for Water Service as adopted, and amended, by the District.

Schedule of Rates, Fees and Charges – shall mean the District's "Retail Zone Monthly Service Charges and Delivered Water Service Charges," as adopted and in effect at the relevant time and available on the District's website at www.eocwd.com.

Service Charge - shall mean a fixed monthly charge based on meter size levied to fund the ongoing day-to-day fixed costs of the water system.

Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities - shall mean the latest edition of the District's publication.

Tenant - shall mean the person, persons, firm, corporation, association or agency that is renting or leasing property, to which the District provides water service, from an Owner.

Violation - shall mean noncompliance with any condition or conditions of these Rules and Regulations by any person, action or occurrence, whether willfully or by accident.

Water Charge – shall mean the any of the commodity rates, service charges, and other fees and charges levied for water service.

Water Service -- shall mean retail water service provided by the District.

Water Service Agreement - shall mean an agreement entered into between the District and a person, persons, firm, corporation, association or agency, or their successors and assignees, who has already, or desires to, install, remove, alter or replace, or cause to be installed, removed, altered, or replaced, any water facility or appurtenance for the purpose of supplying water to a property.

Water Service Permit – shall mean a permit issued by the District upon approval by the District of a map or plans for the installation, removal, alteration or replacement, of any water facility or appurtenance, and upon receipt of required fees and charges, including Connection Charges.

1.3 SERVICE AREA

The District was formed on December 1, 1961 to provide imported water service to the then- unincorporated areas of the East Orange area. The District provides imported water (wholesale) service to parts of the Cities of Tustin and Orange, the Irvine Ranch Water District and the Golden State Water Company. The District provides local groundwater and imported water service (retail) to the unincorporated county area of East Orange.

1.4 SERVICE CONDITIONS

Water service shall be available only in accordance with the District Rules and Regulations, as well as applicable Federal, State, and local statutes, ordinances, regulations, and contracts, and other requirements including, but not by way of limitation, the California Water Code, the California Administrative Code and regulations imposed by State and local health departments, as well as the terms of any service agreement and/or permit issued by the District. Any such permit may be revoked by the District, and thereupon, all such water service shall cease in the manner provided in these Rules and Regulations.

As a condition of service, the District reserves the right to require any Applicant to construct any water facility that the District deems essential, including the over-sizing or extension of water facilities.

1.5 CUSTOMER RECORDS

The District will provide information on customers in accordance with Government Code *Section 6250 - the* California Public Records *Act.*

The request for records shall be submitted at the District Office. It is preferred that the request be made in writing to streamline the process and to ensure that the correct records are transmitted

1.6 ESTABLISHMENT OF RATES

In accordance with the California Water Code, the District's Board fixes the water rates and other related fees and charges. Periodically, the Board reviews and adjusts the rates, fees and charges.

1.7 GUIDELINES AND INTERPRETATIONS

The General Manager shall have the authority to adopt additional guidelines or generate written interpretations of these Rules and Regulations where necessary for day-to-day operations and/or may submit a question to the Board for clarification.

1.8 SEVERABILITY

If any section, subsection, sentence, clause or phrase of these Rules and Regulations is for any reason held to be invalid or unconstitutional, such decision shall not affect the remaining portions of these Rules and Regulations. The Board hereby declares that it would have passed these Rules and Regulations by section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

SECTION 2 CONDITIONS FOR SERVICE

2.1 ACCESS TO PREMISES

Authorized employees of the District, upon presentation of credentials and during reasonable or necessary hours, shall have free access including gate codes and keys or key cards, to any premises supplied with water by the District, for the purpose of reading meters and/or making repairs, inspections, examinations or tests of the water system upon said premises and to ensure compliance with these Rules and Regulations.

If any authorized employee is refused admittance to any premises, or is hindered or prevented from reading meters, making repairs or inspections, examinations or tests, the District may cause the water service to said premises to be turned off after giving twenty-four hours' notice to the owner or occupant of said premises of the intention to do so. In the case of major violations, operational emergencies on the property, or health hazards the District may cause the water to be turned off without notice.

2.2 OPERATION BY THE DISTRICT EMPLOYEES

All of The District's water system, including but not limited to, water pipelines, reservoirs, fire hydrants, manholes, pumping stations, valves, connections, treatment facilities and other appurtenances and property, shall be under the management and control of the General Manager. No other persons, except authorized employees of the District, shall have any right to enter upon, inspect, operate, adjust, change, alter, move or relocate any portion of the foregoing or any of the District's property without the written consent of the General Manager or an authorized representative of the manager. In the event that an unauthorized person(s) enters upon, inspects, operates, adjusts, changes, alters, moves or relocates any facilities without written consent from the General Manager or an authorized representative of the General Manager, the District reserves the right to prosecute such an unauthorized person to the fullest extent of the law. In addition, the District shall be entitled to recover damages as provided in Section 3.6.2 and penalties as provided in Section 7.4.

2.3 DAMAGE TO SYSTEM

Except to shut off water to prevent damage, no person other than an authorized District employee shall at any time or in any manner, operate or cause to be operated, any valve in or connected with a water Main, service connection or fire hydrant or tamper or otherwise interfere with any water meter, check valve or other part of the District's water system, except the Customer Control Valve. In the event a person, for any reason, digs out or uncovers a corporation stop, angle meter stop or valve controlling a water supply, lifts or removes a meter box cover or its center piece or causes or suffers any such act to be done, such person will be subject to penalties as provided in Section 2.2 and will be held liable to the District for any injury or damage occasioned thereby or resulting there from. In addition, the Customer of Record will be held liable to the District for any costs incurred for repairing, replacing or adjusting any meter or other appurtenances which have been damaged due to negligence or carelessness, including but not limited to, damages caused by hot water or steam from a boiler. See Section 3.6.2.

2.4 THE DISTRICT'S RIGHT TO INTERRUPT SERVICE

The District reserves the right at any and all times to shut off water service to any property(s) for emergency, operational or maintenance purposes.

The District will make reasonable efforts to minimize negative impacts and provide appropriate notice to the affected Customer(s) when shutdowns occur. However, the District assumes no liability for damages to property or for personal injury or any other liability as a result of shutdowns.

2.5 DISTRICT LIMITS OF RESPONSIBILITY AND LIABILITY

The District assumes no responsibility for the maintenance and/or operation of the Customer's water system downstream of the Point of Ownership.

The District assumes no responsibility or liability for damage or injury resulting from any violation of these Rules and Regulations by the Customer, Customer of Record, owner or other person.

As provided in Section 2.4, the District assumes no liability for damages to property or for personal injury or any other liability as a result of interruptions in water service.

2.6 VIOLATIONS AND ENFORCEMENT

The District shall have the right to discontinue service to any Customer or property who fails to comply with the District's Rules and Regulations. Such discontinuance of service shall occur after the Customer of Record has been given notice to remedy such noncompliance and/or to cease and desist from such violation or infraction, and a reasonable opportunity thereafter within which to comply with said notices. Such time may be specified in the notice to comply/desist. No such notice need be given where the noncompliance, violation or infraction of any rule or regulation by the Customer results, or is likely to result, in a dangerous or unsanitary condition or a health, pollution or system hazard on the Customer's premises and/or in the District's water system or elsewhere, or where discontinuance of service is necessary to protect The District from fraud, loss or abuse.

The General Manager may assess a fine to the Customer of Record for each violation of the District's Rules and Regulations and for each incidence involving the intentional and improper taking of water (see Section 7.4.). Each day that a violation of these Rules and Regulations continues, or each day such intentional and improper taking of water continues, shall be treated as a separate violation of this provision. No further water service shall be provided to such Customer or property until such charge has been paid or otherwise satisfied. If the charge is paid under protest, the Customer of Record can file a written appeal to the Board.

2.7 RIGHT OF APPEAL

Notwithstanding any of the provisions of the Rules and Regulations concerning water service, any aggrieved Customer or Customer of Record, who is dissatisfied with the final decision of the General Manager in administering the Rules and Regulations, can appeal, in writing, such final decision to the Board. The Board shall hear such appeal and render its decision. The decision of the Board shall be final.

SECTION 3 WATER BILLING AND CUSTOMER SERVICE

3.1 RESPONSIBILITY FOR ACCOUNT

The Customer of Record is responsible for all bills or invoices. See Section 3.5 regarding procedure for closing account.

3.2 RESPONSIBILITY FOR UNPAID CHARGES

If, after the application of the deposit to the final billing, any charges remain unpaid, the Customer of Record shall not be relieved of his or her responsibility for unpaid water charges for the subject property, and the District may secure and collect the unpaid charges as permitted by law.

3.3 TENANT RESPONSIBILITY

Tenants may submit an Application for Water Service and arrange to become the Customer of Record with the permission of the property owner. Tenants must provide a copy of the lease or rental agreement that indicates the Owner's name, contact information and permission for tenant billing; the District will verify it before the account name is changed. In the event the Owner is deceased or otherwise not legally available, Tenant may establish a right to occupy the property by way of other legal documentation or court order. Upon closing of a water service account established in a Tenant's name, from that point on, billing will revert to the Owner as Customer of Record.

3.4 NEW ACCOUNTS

Water service will be provided upon request where there is a service line and meter, once the following has been completed:

1) Submission of and District acceptance of the Application for Water Service (which is also the agreement for water service).

2) Submission of verifiable proof of ownership of the property (Recorded Property Title showing the name of the Applicant) must be received to ensure that a right to serve the property exists; if a Tenant, proof of this right is contained in the lease/rental agreement/other legal documentation furnished pursuant to Section 3.3. 3) A deposit, calculated pursuant to the requirements of Section 3.10, must also be paid prior to service commencement. Requests must be made at least one business day in advance of the business day service is to commence.

If the District determines that water may run uncontrolled at a property and no one is at the property, the water will not be turned on.

3.5 CLOSING OF ACCOUNTS

The Customer of Record is responsible for all bills or invoices. Should a Customer of Record wish to discontinue water service, the District customer service staff must be informed at least one business day before the date service is to be discontinued.

The Customer of Record will be responsible for payment for all water registering on the meter up to and including the day the final meter reading is obtained. The water service shall be turned off and the meter will be locked until a new Customer of Record has applied for service. A closing bill will be prepared, which reflects the charges for all water registering on the meter at the time of final reading, Service Charges and Capital Projects Fees, and any previous balances owed (including prior bills, fees and charges). Any deposit retained by the District on the account shall then be credited to the account. The

Customer of Record will be billed for any amounts over the deposit, in accordance with the Schedule of Rates, Fees and Charges.

The closing bill will include a due date. If payment in full is not received by this date, a closing delinquent bill will be sent. If payment in full is not received, the District may send the outstanding balance to a collection agency for collection or pursue other lawful collection measures.

3.6 BILLING

Bills cover a specified period of service, which is stated on the water bill.

Bills for water service will be based on meter readings or in some cases estimated usage. Additionally, a Monthly Service Charge will be assessed based upon the size of the water meter to the property as well as a monthly Capital Charge based on a flat fee. The Service Charge and the Capital Charge will be assessed, and must be paid, regardless of the amount of water used at the property, or regardless if there is no water use during the billing period.

Invoices for construction water or other services provided by the District shall be billed according to the fees, charges and conditions outlined in the Schedule of Rates, Fees and Charges.

All bills and invoices are due and payable upon receipt. Unpaid bills and invoices are considered delinquent if payment is not received by the due date shown on the bill or invoice. For all Customers, the due date shall be not less than twenty-five days from the Billing Date.

3.6.1 BILLING DISPUTES

Any dispute by the Customer of the amount owed on a bill or invoice must be raised within fifteen days of the date of the Billing Date printed on the bill or invoice, or the bill or invoice will be considered correct and payable.

Only the disputed portion of the bill may be set aside by the District pending resolution of the dispute. The Service Charge and the Capital Projects Fee, plus any outstanding balance, charges or deposits must be paid. The undisputed portion of the bill must be paid in accordance with the provisions of the Rules and Regulations governing undisputed bills or invoices.

3.6.2 BILLING FOR DAMAGES

Recoverable costs of damages to any District facility will be billed to the party that causes the damage.

Damages can occur from many causes, for example, traffic accidents, construction projects, or hydrant meter use. Any damage to District property resulting from any authorized or unauthorized work on, in or around District facilities also will result in billing for damages, including District staff time for inspection of damages plus the District's standard labor overhead rate.

In the event that District staff repairs the property damage, the causing party will be billed to recover the costs of the repair. These costs will include, but are not limited to, the actual cost of replacement parts and the cost of District staff labor required to complete the repair, plus the District's standard labor overhead rate.

In the event that the District hires a contractor for the repair work, the causing party will be billed for the costs of the repairs plus administrative fees.

Payment is due 30 days from the invoice date. A bill will be delinquent if the District does not receive payment by the due date shown on the bill. A late fee on the unpaid balance will be charged. If payment is not received in full, the District may termination water service due to the unauthorized actions of the Customer.

The District expects payment to recover all of the costs for damages at one time. However, the causing party may petition the District for payment arrangements, which will be reviewed and may be approved by the General Manager. If the

General Manager approves payment arrangements, the requesting party must complete and return a signed and notarized promissory note that will detail the payment agreement.

3.7 PAYMENTS

Cash payments for all services provided by the District must be made at the District Office on a Business Day. No payment by any method will be accepted by District personnel away from District Office.

Payments received without sufficient information to properly credit the Customer's account may be returned without being processed and may be subject to late charges as provided for in the Schedule of Rates, Fees and Charges.

3.7.1 PAYMENTS MADE AT DISTRICT OFFICE

Payments made at the District Office may be in the form of cash, check, cashier's check, or money order. The District may request additional information or identification of any persons presenting payment in person at the District Office to ensure payment is being made on behalf of the Customer of Record. For a fee, credit or debit card payments may be made at the District Office or via the District website.

Payments made by 4:00 p.m. on a Business Day will be credited to the account that same day. Payments received in the night drop box by the opening of business on the next regular business day will be credited to the account that business day. CASH PAYMENT SHALL NOT BE MADE VIA THE NIGHT DROP BOX –THE DISTRICT WILL NOT BE RESPONSIBLE

FOR LOST OR STOLEN PAYMENTS. Customers are advised that payments via check that are left in the night drop box are also subject to theft and loss; the District does not warrant the security of the night drop box.

Processing charges will apply if service has been discontinued for non-payment (see Section 3.8.4).

3.7.2 PAYMENTS MADE BY MAIL OR "BILL PAY"

Payments made by mail or "Bill Pay" (or any similar bank-initiated bill pay service) will be credited to the Customer's account on the same day received at the District Office. If you make payment via your Bank's "Bill Pay" option, please note that your bank does not transfer these funds electronically. They prepare a "bank check" for the amount and mail it to us. This process can take from 3-5 days or more. Because of this, payment is credited to the account on the same day we receive the check, NOT the day the Customer paid the bill through their checking account. If insufficient time is allowed through the Bill Pay process, the Customer payment may be delinquent and subject to late charges.

3.7.3 RECURRING ELECTRONIC FUNDS TRANSFER PAYMENTS

Customers may initiate recurring, pre-authorized payment of their water bills by electronic funds transfer (EFT) from an account at their financial institution by completing an authorization agreement on a form provided by the District, subject to applicable transaction fees if any. No fee is charged for this service.

A Customer can submit the completed, signed authorization agreement for each water account that is to be paid by this method, in person at the District Office via the EOCWD website at www.eocwd.com. Due to requirements of SB 998, the Customer of Record will receive a printed copy of the bill via U.S. Mail, marked "DO NOT PAY."

All transfers made in accordance with the authorization agreement will be subject to the Rules, Regulations, and Guidelines of the Automated Clearing House and the agreements between the District and its Originating Depository Financial Institution (ODFI).

The first EFT will occur with the next billing after the District has received and processed the properly completed authorization agreement from the Customer. If desired, the District will email or mail, via the U.S. Postal Service, a copy of the paid water bill to the Customer.

Should a Customer have an EFT returned by the ODFI twice within a two-year period the Customer will no longer be eligible for the EFT option.

In the event of a dispute regarding the amount owed on a bill, the rules and regulations specified in Section 3.6.1, Billing Disputes, shall apply. In the event the Customer is entitled to a credit, the District will issue a check on its next normal check printing date or, if the Customer prefers, a credit may remain on the water account.

3.7.4 PAYMENTS MADE BY CREDIT/DEBIT CARDS THROUGH THE DISTRICT WEBSITE

The District accepts payments by credit/debit card through a third-party company that charges a transaction fee paid by the Customer for this service. Payment can be made using a credit card through the District's website at www.eocwd.com.

Payments made by credit/debit card will be credited to the Customer's account on the date of transaction, if made before 9:00 a.m., and on the next business day if made after 9:00 a.m.

3.7.5 PAYMENTS RETURNED BY BANK

Should a check or an electronic fund transfer (EFT) or credit card charge rendered for payment be returned by the bank for any reason, the Customer will be notified and a fee will be charged against the account(s) to which the check/EFT had been credited. The fee will be in accordance with the Schedule of Rates, Fees and Charges. Should a Customer have two returned checks or EFTs in a one-year period, the District may require all payments be made by cash, cashier's check, money order or credit/debit card.

3.8 NON-RESIDENTIAL DELINQUENCIES

For non-residential customers, a bill is delinquent if the District has not received payment by the due date shown on the bill. A fee will be charged in accordance with the Schedule of Rates, Fees and Charges. For residential customers, delinquencies will be governed by Section 3.9, unless otherwise specified.

3.8.1 DELINQUENT BILLS

A delinquent bill will be mailed to the Customer if payment is not made by the due date indicated on the water bill and a fee will be imposed in accordance with the Schedule of Rates, Fees and Charges.

The delinquent bill will have a due date. If payment in full is not received by this date, water service to the property concerned will be subject to disconnection. Once disconnected, water restoration will be subject to Section 3.8.4 Restoration of Water Service.

3.8.2 NOTICE OF PLANNED SHUTOFF OF WATER SERVICE

If payment is not received by the due date of the delinquent bill, a notice of planned shutoff of water service (Notice) will be mailed at least 15 days prior to the planned shutoff date and not earlier than 19 days from the mailing of the bill.

The Notice will show a service shutoff date. Additionally, if payment of all water bills, fees, charges and deposits is not received by this date, the District will mail or post a Notice at least 48 hours prior to shutoff. The District will also make a reasonable effort, using the contact information supplied by the Customer of Record to the District - to contact an adult person located at the premises by telephone, at least 24 hours prior to shutoff. If payment of all water bills, fees, charges and deposits is not received by the end of this time (24 or 48 hours, as applicable) water service may be discontinued without further notice.

3.8.3 SHUTOFF OF WATER SERVICE FOR NONPAYMENT

When water service is terminated for nonpayment, the meter shall be locked, where possible, and a shut off fee assessed. Fees and charges associated service shutoff are shown in the Schedule of Rates, Fees and Charges.

Tampering with the lock or turning the water back on, or in any other manner interfering or tampering with the District's property, is prohibited (See Section 2.3). Penalties for such interference will be charged and the matter may be referred to the appropriate law enforcement agency at the discretion of the District in accordance with Sections 2.2 and 7.4.

3.8.4 RESTORATION OF WATER SERVICE

All amounts owed, including all bills, fees, charges, and deposits, must be paid or otherwise satisfied before service will be restored. If the meter has been removed, all fees must be paid before the meter is re-installed. Fees for the restoration of service during normal working hours and limited after-hours processing are shown in the Schedule of Rates, Fees and Charges.

If payment is not received within ten days of service shutoff, the account may be closed and the balance owed may be turned over to a collection agency for collection.

3.9 RESIDENTIAL DELINQUENCIES – DISCONTINUATION OF RESIDENTIAL WATER SERVICE

3.9.1 APPLICATION OF POLICY

This Section 3.9 on Discontinuation of Residential Water Service (this "Section 3.9") shall apply to all District accounts for Residential Water Service, but shall not apply to any accounts for Non-Residential Water Service. To the extent this Section 3.9 conflicts with any other rules, regulations, or policies of the District, this Section 3.9 shall control.

3.9.2 DEFINITIONS

The following definitions shall apply specially to this Section 3.9 of the Rules of Regulations ("Section 3.9") relative to Residential Water Service only:

Bill - shall refer to the invoice for Residential Water Service received by the Customer from the District for the provision of water.

Customer Service - shall refer to the employees of EOCWD performing customer related services.

Delinquent Date - shall refer to the date immediately following the Due Date, as defined herein, and shall constitute the first day on which a Customer's Payment is late and past due.

Due Date - shall refer to the last day to pay an existing Bill for Residential Water Service, which shall be the date printed on such Customer Invoice, 30 days from the Billing Date.

Flow Restrictor - shall mean a device to restrict the flow of water.

Non-Residential Water Service - shall refer to all water service connections other than the Residential Water Service connections defined herein.

Occupant - shall mean the adult individual or individuals currently legally residing at a residence, whether it be the owner, tenant, or otherwise.

Past Due Notice - shall refer to those notices provided for herein to Customers relative to their non-payment of outstanding invoices for Residential Water Service.

Payment - shall refer to, during business hours, check, cash, credit card or debit card, and after-hours by credit card or debit card only via the District's on-line payment portal.

Payment Plan - shall refer to an agreement between the District and Customer entered into pursuant to the terms of this Section 3.9 provided for payment of unpaid balances, and may include the amortization of the unpaid balance, an alternative payment schedule, or temporary deferral of payment.

Policy and/or Section 3.9 - shall refer to this Section 3.9 relative to Residential Water Service, established pursuant to the requirements of Health and Safety Code Section 116900 et seq. Section 3.9 is added to be consistent with the Policy on Discontinuation of Residential Water Service adopted by the Board of Directors on November 21, 2019 ("Policy"). In the event this Section 3.9 conflicts with the Policy, the Policy shall control.

Primary Care Provider - shall refer to either (i) any internist, general practitioner, obstetrician-gynecologist, pediatrician, family practice physician, non-physician medical practitioner, or any primary care clinic, rural health clinic, community clinic or hospital outpatient clinic currently enrolled in the Medi-Cal program, which agrees to provide case management to Medi-Cal beneficiaries; or (ii) a county or other political subdivision that employs, operates, or contracts with, any of the primary care providers listed in 2.18(i), and that agrees to use that primary care provider for the purposes of contracting under this Section 3.9.

Reliable Contact Information - shall refer to the information provided by Customer to the District for use in the District's compliance with this Section 3.9, and shall be the accepted method of communication and/or point of contact for Customer for all notices provided herein. The District shall be entitled to rely upon the Reliable Contact Information provided by the Customer for the provision of notices, and Customer shall not be entitled to dispute receipt if information and/or notices are sent to such Reliable Contact Information.

Resident - shall refer to a legal Occupant residing at a residence receiving and qualifying for Residential Water Service

Residential Water Service - shall mean water service to a residential connection that includes single-family residences; multifamily residences; mobile homes, including, but not limited to, mobile homes and mobile home parks; and farmworker housing.

Service Address - shall refer to the residential address at which water service is in fact delivered by the District to the Customer.

U.S. Mail - shall refer to delivery by way of the United States Postal Service, and shall be deemed received by the Customer and/or recipient five calendar days after being placed in the mail by the District.

3.9.3 DISTRICT CONTACT INFORMATION

For questions or assistance regarding your Bill, the District's Customer Service staff can be reached both during regular hours and after-hours at (714) 538-5815 or at admin@eocwd.com. Customers may also visit the District Office in person Monday through Friday, from 8 a.m. to 5 p.m., except on District holidays.

3.9.4 BILLING PROCEDURES

Water service charges are currently billed by the District once every two months, which may be modified by the Board of Directors from time to time. All Bills for water service are due and payable thirty (30) days after the Billing Date (Due Date). Any Bills not paid within such period are considered delinquent.

3.9.5 DISCONTINUATION OF WATER SERVICE FOR NONPAYMENT

Subject to the provisions of this Section 3.9, if a Bill is not fully paid within sixty (60) days from the Delinquent Date and if a Payment Plan has not been initiated, the District may discontinue water service to the service address if the following procedures have been adhered to:

3.9.5.1 NOTICES OF DELINQUENCY AND WATER RESTRICTIONS

The District, in implementing these provisions, shall utilize the following minimum time frame:

(a) The District shall, five (5) or more days after non-payment of the Bill, issue via U.S. Mail the Past Due Notice, assessing the late fee, in accordance the Schedule of Rates, Fees, and Charges, and calling for payment within 15 days;

(b) Delinquent Notice - 20 Days After Non-Payment: The District shall, twenty (20) or more days after non-payment of the Bill, issue via personal delivery the Delinquent Notice, which shall include notice that non-payment after 15 days will make them subject to installation of a Flow Restrictor with a goal of reducing residential water usage to indoor usage (approximately no more than 55 gallons per day per person);

(c) Impending Shutoff Notice - 35 Days After Non-Payment: The District shall thirty-five (35) or more days after non-payment of the Bill issue via personal delivery an Impending Shut-Off Notice, indicating that water service may be disconnected on the sixtieth (60) day following non-payment of the Bill if not paid before . The District will install a Flow Restrictor to restrict residential water use to indoor use, with the goal of limiting use to no more than 55 gallons per day per person during the period the Bill is unpaid;

(d) Occupant Notice - 45 Days After Non-Payment: At any time on or after the forty-fifth (45) day following non-payment of the Bill, the District may provide such notice to Occupants as required by Sections 3.9.5.3 and 3.9.5.4 relative to discontinuation of service, subject to the provisions set forth within this Section 3.9; and

(e) Final Shutoff Notice - 50 Days After Non-Payment: Final Shutoff Notice mailed and posted at Service Address.

(f) Discontinuation of Service - 60 Days After Non-Payment. Subject to the provisions of this Section 3.9, the District may implement procedures for discontinuing service. To the extent not in conflict with this Section 3.9, Sections 3.8 of the District's Rules and Regulations shall thereafter apply.

(g) Nothing in this Section 3.9 shall prohibit the District from providing additional notices, in its sole and absolute discretion.

3.9.5.2 WRITTEN NOTICE TO CUSTOMER OF DISCONTINUATION OF SERVICE

The notice will contain:

(a) the name and address of the Customer;

(b) the amount of the delinquency;

(c) the date by which payment or payment arrangements must be made to avoid discontinuation of service;

(d) the procedure by which the Customer may initiate a complaint or request an investigation or appeal concerning service or charges;

(e) a description of the procedure by which the Customer may request an alternative payment arrangement, which may include an extension, amortization, or alternative payment schedule;

(f) the telephone number where the Customer may request a payment arrangement or receive additional information from the District.

3.9.5.3 WRITTEN NOTICE TO OCCUPANTS OR TENANTS

The District will also send via U.S. mail a notice to the Occupants living at the service address at least fifteen (15) days before discontinuation of water service under the following circumstances: (i) the District furnishes individually metered service to a single-family dwelling, multi-unit residential structure, mobile home park, or farm labor camp and the owner, manager, or operator is the Customer of Record; or (ii) the Customer of Record's mailing address is not the same as the service address. The notice will be addressed to "Occupant," will contain the information required in Section 3.9.5.2 above, and will inform the residential Occupants that they have the right to become Customers of the District without being required to pay the amount due on the delinquent account. Terms and conditions for Occupants to become Customers of the District are provided in Section 3.9.9 below.

3.9.5.4 POSTING OF FINAL SHUTOFF NOTICE AT SERVICE ADDRESS

If the District is unable to make contact with the Customer or Occupant living at the service address in person or by telephone, the District will make a good faith effort to leave a notice of imminent discontinuation of residential service and a copy of the Policy in a conspicuous place at the service address. The notice and copy of the Policy will be left at the residence at least five days before discontinuation of service. The notice shall include:

(a) the name and address of the Customer;

(b) the amount of the delinquency;

(c) the date by which payment or payment arrangements must be made to avoid discontinuation of service;

(d) the telephone number where the Customer may request a payment arrangement or receive additional information from the District.

3.9.5.5 CIRCUMSTANCES UNDER WHICH SERVICE WILL NOT BE IMMEDIATELY DISCONTINUED

The District will not discontinue residential water service for nonpayment under the following circumstances:

(a) During the pendency of an appeal to the Board of Directors under Section 3.9.6.4 below; or

(b) During the period of time in which a Customer's payment is subject to a District-approved extension, amortization, or alternative payment schedule, and the Customer remains in compliance with the approved payment arrangement.

3.9.5.6 SPECIAL MEDICAL AND FINANCIAL CIRCUMSTANCES UNDER WHICH SERVICES WILL NOT BE DISCONTINUED

(a) The District will not discontinue water service if ALL of the following conditions are met:

(i) The Customer, or an Occupant, submits to the District the certification of a licensed Primary Care Provider, on their letterhead, prescription, or other official stationary, that discontinuation of water service will be life threatening to, or pose a serious threat to the health and safety of, a resident of the premises where residential service is provided. Customer and their Primary Care Provider shall take all necessary steps to ensure that such certification does not contain confidential information otherwise protected the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), and the submission of such information shall be deemed a waiver and consent to the District's use of such information for District-related purposes. Notwithstanding such provision, the District shall endeavor to utilize its best

efforts to limit such information to essential personnel, and shall not sell or otherwise provide such information to third-parties except as required by law; and

(ii) The Customer demonstrates that he or she is financially unable to pay for residential service within the District's normal billing cycle. The Customer is deemed financially unable to pay during the normal billing cycle if: (a) any member of the Customer's household is a current recipient of CalWORKs, CalFresh, general assistance, Medi-Cal, Supplemental Security Income/State Supplementary Payment Program, or California Special Supplemental Nutrition Program for Women, Infants, and Children, or is a participate in the Southern California Edison (SCE) or Southern California Gas Company California Alternate Rates for Energy (CARE) program; or (b) the Customer declares under penalty of perjury that the household's annual income is less than 200 percent of the federal poverty level; and

(iii) The Customer is willing to enter into an alternative payment arrangement, including an extension, or amortization, or alternative payment schedule with respect to the delinquent charges.

(b) For any Customers who meet ALL of the above conditions, the District shall offer the Customer one or more of the following options, to be selected by the District in its discretion: (1) an extension of the payment period; (2) amortization of the unpaid balance; or (3) an alternative payment schedule. The District's General Manager will select the most appropriate payment arrangement, taking into consideration the information and documentation provided by the Customer, as well as the District's payment needs. The District will offer such options to a Customer at most once every twelve months.

(c) The Customer is responsible for demonstrating that the conditions in subsection (a) have been met, and providing Reliable Contact Information to the District for all points of contact hereunder. Upon receipt of documentation from the Customer, the District will review the documentation within ten (10) days and: (1) notify the Customer via the Reliable Contact Information of the alternative payment arrangement selected by the District and request the Customer's signed assent to participate in that alternative arrangement; (2) request additional informational from the Customer; or (3) notify via the provided Reliable Contact Information the Customer that he or she does not meet the conditions in subsection (a). In the event additional information is requested, the Customer shall have five (5) days to provide such information, and the District shall have five (5) additional days to complete its review after such information has been received by the District. Failure of the Customer to provide the requested information after the first request may result in the District's denial of the Customer's request.

(d) The District may discontinue water service if a Customer who has been granted an alternative payment arrangement under this section fails to do any of the following for sixty (60) days or more: (a) to pay his or her unpaid charges by the extended payment date; (b) to pay any amortized amount due under the amortization schedule; (c) to pay any amount due under an alternative payment schedule; or (d) to pay their current charges for water service. The District will post a final notice of intent to disconnect service in a prominent and conspicuous location at the service address at least five (5) business days before discontinuation of service). The final notice will not entitle the Customer to any investigation or review by the District. In such event, all amounts due, past and current, shall become immediately due in full, and water shall be disconnected until all amounts due are paid or, if the deposit is used to pay, the deposit is

replenished. Customers defaulting on an alternative payment arrangement will not be offered further alternative payment arrangements.

3.9.5.7 RESTORATION OF SERVICE

Customers whose water service has been discontinued may contact the District by telephone or in person regarding restoration of service. Restoration shall be subject to payment of: (a) any past-due amounts, including applicable interest or penalties; (b) any reconnection fees, subject to the limitations in Section 3.9.8.1, if applicable; (c) and a security deposit, if required by the District.

3.9.6 PROCEDURES TO CONTEST OR APPEAL A BILL

3.9.6.1 TIME TO INITIATE COMPLAINT OR REQUEST AN INVESTIGATION.

A Customer may initiate a complaint or request an investigation regarding the amount of a Bill within fifteen (15) days of the Billing Date.

3.9.6.2 REVIEW BY DISTRICT

A timely complaint or request for investigation shall be reviewed by Customer Service, who shall provide a verbal determination to the Customer using the Customer's Reliable Contact Information. Customer Service shall have 5 business days to respond to such timely requests.

3.9.6.3 APPEAL TO GENERAL MANAGER

Any Customer whose timely request for an investigation pursuant to this Section 3.9.6 has resulted in an adverse determination by Customer Service may appeal the determination to the General Manager by submitting a written or verbal request to Customer Service within 5 business days of receipt of a decision from Customer Service. The General Manager may, in his or her discretion, review untimely complaints or requests for investigation. The General Manager shall generally issue decisions on all reviews covered by this Section within 5 business days, unless the General Manager provides written notice of an extension of up to 10 additional business days.

3.9.6.4 APPEAL TO BOARD OF DIRECTORS

Any Customer whose timely complaint or request for an investigation pursuant to this Section 3.9.6 has resulted in an adverse determination by the General Manager, may appeal the determination to the Board of Directors by filing a written notice of appeal with the District Secretary within ten (10) business days of the General Manager's determination, which shall be deemed received by delivery to the District Office. Upon receiving the notice of appeal, the District will set the matter to be heard at a future Board meeting and will notify the Customer via their Reliable Contact Information. The decision of the Board shall be final.

3.9.6.5 WATER SERVICE DISCONTINUATION DURING APPEAL PENDENCY

No water service shall be discontinued for a Customer with an appeal pending, provided the original complaint was timely pursuant to Section 3.9.6.1. Any late fees assessed, or due to be assessed, during the period in which an investigation or complaint is pending pursuant to this Section 3.9.6, shall be waived if the Customer's complaint is correct and/or the District erred in the billing process.

3.9.7 EXTENSIONS AND OTHER ALTERNATIVE PAYMENT ARRANGEMENTS

3.9.7.1 TIME TO REQUEST AN EXTENSION OR OTHER ALTERNATIVE PAYMENT ARRANGEMENT

If a Customer eligible under Section 3.9.5.6 is unable to pay a Bill during the normal payment period, the Customer may request an extension or other alternative payment arrangement described in this Section 3.9.7. Any such request shall be

accompanied with Reliable Contact Information that shall be utilized by the District in all correspondence with Customer relative to such request.

3.9.7.2 EXTENSION.

If approved by the District, a Customer's payment of their unpaid balance may be temporarily extended for a period of two (2) months, with discretion of the General Manager to extend up to four (4) months, after the balance was originally due. The District's General Manager shall determine, in his or her discretion, how long an extension shall be provided to the Customer. The Customer shall pay the full unpaid balance by the date set by the District and must remain current on all water service charges accruing during any subsequent billing periods. The extended payment date will be set forth in writing and provided to the Customer utilizing the Reliable Contact Information provided.

3.9.7.3 AMORTIZATION

If approved by the District, a Customer's payment of their unpaid balance may be amortized over a period of two (2) months, with discretion to the General Manager to extend up to four (4) months, as determined by the District's General Manager in his or her discretion. If amortization is approved, the unpaid balance will be divided by the number of months in the amortization period, and that amount will be added to the Customer's bi-monthly bills for water service until fully paid. During the amortization period, the Customer must remain current on all water service charges accruing during any subsequent billing periods. The amortization schedule and amounts due will be set forth in writing and provided to the Customer utilizing the Reliable Contact Information.

3.9.7.4 ALTERNATIVE PAYMENT SCHEDULE

If approved by the District, a Customer may pay his or her unpaid balance pursuant to an alternative payment schedule that will not exceed two (2) months, with discretion to the General Manager to extend up to two (2) additional months. If approved, the alternative payment schedule may allow periodic lump-sum payments that do not coincide with the District's established payment date or may provide for payments made more or less frequently than the District's regular payment date. During the period of the alternative payment schedule, the Customer must remain current on all water service charges accruing during any subsequent billing periods. The alternative payment schedule and amounts due will be set forth in writing and provided to the Customer utilizing the Reliable Contact Information.

3.9.7.5 FAILURE TO COMPLY

If a Customer has been granted a payment arrangement under Section 3.9.5.6 and this Section 3.9.7 and fails to: (1) pay the unpaid charges by the extension date; (2) pay an amount due under an amortization schedule; or (3) pay an amount due under an alternative payment schedule for more than 60 days, then the District may terminate water service. The District will post a final notice of intent to disconnect service in a prominent and conspicuous location at the service address at least five (5) business days before discontinuation of service. The final notice will not entitle the Customer to any investigation or review by the District. In such event, all amounts due, past and current, shall become immediately due in full, and water shall be disconnected until all amounts due are paid or, if the deposit is used to pay, the deposit is replenished. Customers defaulting on an alternative payment arrangement will not be offered further alternative payment arrangements.

3.9.8 SPECIFIC PROGRAMS FOR LOW-INCOME CUSTOMERS

3.9.8.1 RECONNECTION FEE LIMITS AND WAIVER OF INTEREST

For residential Customers who demonstrate to the District a household income below 200 percent of the federal poverty line, the District will:

(a) Limit any reconnection fees during normal operating hours to fifty dollars ($50), and during non-operational hours to one hundred fifty dollars ($150). The limits will only apply if the District's reconnection fees actually exceed these amounts. These limits are subject to an annual adjustment for changes in the Bureau of Labor Statistics' Consumer Price Index for All Urban Consumers (CPI-U) - Los Angeles-Long Beach-Anaheim

(CUURS49ASA0), beginning March 1, 2021, based proportionate differential between the published annual indices for the immediately preceding calendar year and the year prior.

(b) To the extent charged, waive interest charges on a delinquent Bill once every 12 months.

3.9.8.2 QUALIFICATIONS

The District will deem a residential Customer to have a household income below 200 percent of the federal poverty line if: (a) any member of the household is a current recipient of CalWORKs, CalFresh, general assistance, Medi-Cal, Supplemental Security Income/State Supplementary Payment Program, or California Special Supplemental Nutrition Program for Women, Infants, and Children, or is enrolled in the Southern California Edison (SCE) or Southern California Gas Company California Alternate Rates for Energy (CARE) program; or (b) the Customer declares under penalty of perjury that the household's annual income is less than 200 percent of the federal poverty level.

3.9.9 PROCEDURES FOR OCCUPANTS OR TENANTS TO BECOME CUSTOMERS OF THE DISTRICT

3.9.9.1 APPLICABILITY

This Section 3.9.9 shall apply only when the property owner, landlord, manager, or operator of a residential service address is listed as the Customer of Record and has been issued a Delinquent Notice with intent to discontinue water service due to nonpayment.

3.9.9.2 AGREEMENT TO DISTRICT TERMS AND CONDITIONS OF SERVICE

The District will make service available to an Occupant if the Occupant agrees to the terms and conditions of service and otherwise meets the requirements of the District's Rules and Regulations. For circumstances where multiple residences are served by a single meter, if one or more of the Occupants are willing and able to assume responsibility for the subsequent charges to the entire account to the satisfaction of the District, or if there is a physical means, legally available to the District, of selectively discontinuing service to those Occupants who have not met the requirements of the District's Rules and Regulations, the District shall make service available to the Occupants who have met those requirements. If more than one Occupant desires to become a Customer of Record to the District, each Occupant must qualify and meet the terms and conditions of the District individually.

3.9.9.3 VERIFICATION OF TENANCY

To be eligible to become a Customer of Record without paying the amount due on the delinquent account, the Occupant shall verify that the delinquent account Customer of Record is or was the landlord, manager, or agent of the dwelling. Verification may include, but is not limited to, a lease or rental agreement, or information disclosed pursuant to Section 1962 of the Civil Code, at the discretion of the District.

3.9.9.4 DEDUCTIONS FROM RENTAL PAYMENT

Pursuant to Government Code Section 60371(d), any Occupant who becomes a customer of the District pursuant to this Section 3.8 and whose periodic payments (e.g., rental payments), include charges for residential water service, where those charges are not separately stated, may deduct from such periodic payment (e.g., rental payment due to a landlord) each payment period all reasonable charges paid to the District for those services during the preceding payment period. Such deduction is the responsibility of the Occupant, and nothing by way of this provision, which is included for informational purposes only, shall create an obligation of the District.

3.9.10 LANGUAGE FOR CERTAIN WRITTEN NOTICES

All written notices under Sections 3.9.5.1(d) & (e), 5.3, and 5.4 of this Section 3.9 shall be provided in English, Spanish, Chinese, Tagalog, Vietnamese, Korean, and any other language spoken by ten percent (10%) or more people within the District's service area.

3.9.11 OTHER REMEDIES

In addition to discontinuation of water service, the District may pursue any other remedies available in law or equity for nonpayment of water service charges, including, but not limited to: securing delinquent amounts by filing liens on real property, filing a claim or legal action, or referring the unpaid amount to collections. In the event a legal action is decided in favor of the District, the District shall be entitled to the payment of all costs and expenses, including attorneys' fees and accumulated interest.

3.9.12 DISCONTINUATION OF WATER SERVICE FOR OTHER CUSTOMER VIOLATIONS

The District reserves the right to discontinue water service for any violations of District ordinances, rules, or regulations other than nonpayment.

3.9.13 FEES AND CHARGES INCURRED

Except as otherwise expressly stated in this Section 3.9, any fees and charges incurred by a Customer under any other rules, regulations, or policies of the District, including, but not limited to, delinquent charges, shall be due and payable as set forth therein.

3.9.14 DECISIONS BY DISTRICT STAFF

Any decision which may be taken by the District's General Manager under this Section 3.9 may be taken by his or her designee.

3.10 DEPOSITS

Deposits will be required as a condition of becoming a Customer of Record. The amount of the initial deposit to commence water service will be equal to 2 times the average amount billed per billing cycle (excluding any amount attributable to a verified water leak) for the property during the previous 24 months. However, the amount of the deposit may be set differently at the discretion of the District's General Manager in an amount sufficient in his/her judgment to ensure that future bills will be paid when presented, not to exceed 2 times the amount estimated to be billed for the average billing period.

Additional deposits may be required when:

1) A Notice of planned shutoff of water service is delivered to the service address for a second time;

2) A service is shutoff for nonpayment;

3) Service is requested to be reinstated after nonpayment and shutoff of water service and the original deposit was used to satisfy payment for the water bill;

4) Water has been used, but the Customer has not notified the District that he/she is assuming responsibility for the water service;

5) Any other instance where the Customer's creditworthiness comes into question.

The additional deposit will be set at the discretion of the General Manager in an amount sufficient in his/her judgment to ensure that future bills will be paid when presented, as permitted by law.

3.11 CUSTOMER INQUIRIES AND COMPLAINTS

All Customer inquiries and complaints will be handled as expeditiously as possible. In some instances, extensive research will be required, thus extending the time required for resolution, and the Customer will be so informed. Please refer to Sections 3.6.1 and 3.9 for billing disputes.

3.11.1 METER INQUIRIES AND TESTING

If a Customer is concerned that their meter wasn't read correctly, the Customer can request the meter to be read a second time. If the new reading indicates the original reading was in error, an adjustment will be made to the original usage charges. If the new reading indicates the original reading was correct the Customer will be responsible for the original usage charges.

If a Customer is concerned that the meter is not operating correctly or is not accurate, upon written or e-mail request from the Customer, the District will test the meter for accuracy. Prior to the removal of the meter for testing, the District shall require a meter test deposit in accordance with the Schedule of Rates, Fees and Charges. Meter test deposits will be refunded if the meter is determined to be outside the prescribed limits for meter accuracy.

If the meter is found to be registering 3% or more in excess of the actual quantity flowing through the meter, the District will replace the defective meter, refund the meter test deposit and refund to the Customer the full amount of the overcharge based on the corrected meter readings for the previous period, not exceeding six months, that the meter was in use.

If the meter is not defective and does not register 3% or more excess, the meter test deposit shall be forfeited to the District and the water bill shall be paid as rendered.

If the District discovers an inaccurate or inoperable meter, the meter will be replaced and the Customer will be billed based on the average consumption for at least twelve preceding months during which the meter was in use and registering correctly.

3.11.2 HIGH WATER USE AND INVESTIGATIONS

Customers may experience high water use due to a leak or other planned or unplanned event (construction, pool filling, new plantings). No billing adjustment is allowed for leaks or planned or unplanned water consumption; the District must pay for the water regardless of the intended or unintended use of the water and that cost must be passed along to the Customer of Record.

Customers may request that the District assist them in the detection of leaks or other conditions, which may result in higher than normal water usage. Walk-through inspections may be arranged to survey the home or business to assist Customers in determining leaks and/or isolate probable areas of concern. Such requests will be handled by appointment only. Appointments may be arranged by contacting the District's customer service staff.

3.11.3 WATER QUALITY INQUIRIES

The District strives to provide Customers with high quality water at all times. If a Customer suspects any problem with the quality of water provided the Customer may contact the District and a representative will arrange to meet with the Customer at home or business to investigate the concern. Information regarding analyses of the District's water is available to the public via a published report that is posted at the District's website (www.eocwd.com) annually, and which may be provided upon request.

The District shall not be liable for any damage by water or resulting from defective plumbing, broken or faulty services or water mains; or resulting from any condition of the water itself, or any substance that may be mixed with or be in the water

as delivered to any Customer. All Applicants and Customers shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the proposed service connection and to hold the District harmless from all damage arising from low pressure or high pressure conditions.

3.12 BANKRUPTCIES

When the District receives notice that a Customer of Record has filed for bankruptcy, the Customer of Record's account(s) will be closed, whenever possible, as of the date of the bankruptcy filing and the deposit applied to the balance due. Any outstanding balances as of that time will be considered covered in the bankruptcy proceedings and the District may file a claim accordingly with any remaining owners, including mortgage holders. Service will not be terminated and a new account will be created for the Customer of Record to reinstate service. A deposit will be charged in accordance with Section 3.10.

SECTION 4 WATER FACILITIES AND APPURTENANCES

4.1 APPLICATION PROCESS

Any person, firm, or corporation who wishes to install, remove, alter or replace, or cause to be installed, removed, altered, or replaced, any water facility or appurtenance must obtain a permit from the District to do such work.

Any person legally entitled to apply for and receive the permit shall complete the District supplied Water Service Agreement form. The Applicant shall submit an Application for Water Service Permit/Change form, a complete subdivision map when applicable and a water facility construction plan showing the proposed service connection thereon, signed by a civil engineer registered in the State of California. All maps and plans shall be of the size and drawn on material specified in the District's current Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities. A processing fee shall be charged pursuant to the Schedule of Rates, Fees and Charges.

Whenever reference is made herein to a requirement to be carried out or performed by an Applicant's or Customer's "Contractor," then to the extent the Contractor and Applicant or Customer are not one and the same, such reference shall be deemed to state a requirement that the Applicant or Customer shall cause its Contractor to carry out or perform such requirement. The Applicant or Customer shall be solely responsible for the fulfillment of and compliance with any requirements of these Rules and Regulations by any Contractor or any other party acting on the Applicant's or Customer's behalf.

4.1.1 PLAN CHECK PROCESS

Plan checking and inspection fees shall be computed by the District according to the Schedule of Rates, Fees and Charges and shall be deposited with the District prior to plan approval. After payment of a plan check fee, the District's Engineer, or an authorized representative, and/or other appropriate staff, will review said map and plans and either approve it or return said plans to the Applicant with notations showing required changes. All plans must conform to the District's current Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities and other requirements specified by the District, the Orange County Fire Authority and Appropriate Regulatory Agencies before they will be approved.

If the plans are returned to the Applicant with notations showing required changes to be made, the Applicant shall complete all of the required changes and then resubmit a corrected set of plans. The corrected set of plans will not be accepted unless the Applicant shall return the previous set of plans containing the notations showing required changes along with the corrected set of plans.

4.1.2 ISSUING THE PERMIT

Upon approval of said map or plans, and upon receipt of required fees and charges, including Connection Charges, the District shall validate and issue a Water Service Permit.

The Permit shall be valid for a period of one year from the date of issuance. If construction has not commenced within said year, the Permit shall automatically become invalid and the Applicant shall *forfeit* all moneys, except Connection Charges, paid to the District in connection with the Application for a Water Service Permit. The Applicant will be required to reapply for a new permit and comply with all requirements as if it was the first time an application had been submitted.

4.1.3 WATER SERVICE AGREEMENT

Before water service is provided, the Applicant shall enter into a Water Service Agreement with the District regarding the terms under which the District shall provide water service to the Applicant. The Applicant shall complete, sign and submit a Water Service Agreement. The District shall enter into the Water Service Agreement only upon approval of the development project and payment by the Applicant of required fees and charges set forth in the Water Service Agreement. No water

service shall be provided by temporary water service or by any other means until the Water Service Agreement has been signed by the District and the Applicant.

4.1.4 FEES AND CHARGES

The District staff will determine the fees and charges for new development in accordance with the Schedule of Rates, Fees and Charges.

4.1.5 CONNECTION CHARGES

The District has adopted Connection Charges in the amounts specified in the Schedule of Rates, Fees and Charges. The fees will be used to assist the District in paying for the facilities and improvements to the District's water system required by this development. Provisions in this Section 4.1.5 based upon a difference in Connection Charges corresponding to a difference in meter size shall apply only to the extent District adopted Connection Charges that vary by meter size at the time of an Applicant's or property's initial connection.

4.1.5.1 CALCULATING THE CONNECTION CHARGE

As herein provided, the amount of any Capacity Charge shall be determined by the District's engineer, or an authorized representative, subject to appeal to the General Manager or Board of Directors.

The Connection Charge shall be assessed in accordance with the Schedule of Rates, Fees and Charges.

At the time the Applicant requests meters to be installed, the District will review the assessed Connection Charge. If there have been changes in the project, which affect the Connection Charges, additional Connection Charges will be assessed or a refund will be credited to the meter costs. The meters will not be installed until both the meter costs and any additional Connection Charges have been paid.

No Connection Charges will be assessed if an Applicant is removing a meter and is replacing it with a meter of the same size, providing that one of the following conditions is also satisfied:

1) The new meter is installed on the same service line from which the old meter is removed; or

2) The new meter is installed on a new service line and the existing service line is abandoned when the old meter is removed.

The District does not assess Connection Charges for automatic fire sprinkler service connections or temporary service connected to fire hydrants.

4.1.5.2 CALCULATING CONNECTION CHARGE CREDITS ON METERS PULLED AT THE TIME OF REDEVELOPMENT

The District will apply a Connection Charge credit on an account for meters that will be pulled at the time the property is redeveloped, providing one of the following conditions is satisfied:

1) The old meter is pulled and the existing service line is permanently abandoned. Any new meters of a larger size will be installed on new service lines and will be subject to Connection Charges based upon their size. Any new meters of a smaller size will be installed on new service lines and will be subject to Connection charges based upon their size.

The District's engineer or an authorized representative will determine the Connection Charge credit on the meter that is pulled.

The credit will be based on the Connection Charge in effect for the meter size being pulled according to the building classification and water use type the meter presently serves.

If the Connection Charge credit exceeds the Connection Charge calculated on the new meters, the excess credit may be carried forward with the property for additional development. The excess credit will be discounted five percent each year that it is carried and at the fifteenth year, the credit can no longer be used. Any excess credit may only be used once. Subsequent excess credit cannot be carried forward.

The number of years used for Connection Charge credit will be determined by calculating the number of years between the date the Application For Water Service Permit was issued for the redevelopment project for which the credit originated and the date of completion for the redevelopment project for which the Applicant wishes to use the credit.

4.1.5.3 CALCULATING CONNECTION CHARGE CREDITS ON METERS PULLED PRIOR TO REDEVELOPMENT

The District will apply a Connection Charge credit on meters pulled prior to the redevelopment of the property providing that all of the following conditions are satisfied:

1) The service line to which the meter was once connected is still connected to the District's water system and is in very good to excellent condition; and

2) The Pulled Meter was recorded and the record is on file at the District; and

3) The new meters that will be installed is a downgrade from the meters that were pulled prior to the redevelopment of the property; and

4) A new meter can be installed on the service line to which the meter was once connected because the condition of the service line is very good to excellent.

The District will not apply a Connection Charge credit for meters where both the meter and the service line were abandoned prior to the redevelopment of the property.

The District's engineer or an authorized representative will determine the appropriate credit amount.

The credit on the Pulled Meter will be based on the fee in effect for the meter size being replaced according to the building classification and water use type the meter previously served.

The credit is subject to a five percent reduction for each year that the meter was pulled prior to the Application for Water Service Permit. No credit will be given for meters that were pulled 15 years or more prior to the date the Application for Water Service Permit is issued.

The number of years that will be used for the reduction in Connection Charge credit will be determined by calculating the difference between the date on file at the District that the meter was pulled and the date the Application for Water Service Permit is issued.

In the case where the new meters being installed are the same size as the meters that were pulled, the District will apply a discount on the amount of the Connection Charge calculated on the new meters, providing all of the following conditions are satisfied:

1) The service line to which the meter was once connected is still connected to the District's water system and is in very good to excellent condition; and

2) The Pulled Meter was recorded and the record is on file at the District; and

3) A new meter can be installed on the service line to which the meter was once connected due to its very good to excellent condition.

The amount of the discount will be based on the length of time since the meter was pulled. The length of time will be determined by calculating the difference between the date on file at the District that the meter was pulled and the date the Application for Water Service Permit is issued.

4.1.5.4 APPLICATION OF CONNECTION CHARGES TO PUBLIC AGENCIES

For purposes of this section "Public Agency" shall have the same meaning as set forth in Government Code Section 54999.1(c) or any successor section thereto.

Any development or application to the District for new or increased water service by any Public Agency shall be subject to a Connection Charge. The amount of such Connection Charge shall be determined on a case by case basis. The determination of the Connection Charge with regard to an individual Public Agency development project shall be made based on the same criteria and methodology applicable to the Connection Fee for non-public Applicants.

The assessment of the Connection Charge on any school district, county office of education, community college district, the California State University, the University of California or state agency, as defined in Government Code Section 54999.1(g), (collectively referred to as "School/State Agency" for the purposes of this Section) shall be subject to the following:

The Connection Charge shall be paid by such School/State Agency in an amount equal to the actual construction costs of that portion of the District's water system actually providing, or needed to provide, service to such School/State Agency.

To the extent that the appropriate Connection Charge to such School/State Agency is in excess of the amount equal to the actual construction costs, the assessment and collection of said Connection Charges may be adjusted on a case-by-case basis by the District's General Manager.

4.1.6 BONDS AND CONDITIONS FOR RELEASE OF BONDS

As security for guarantee against defective material or work quality and as security for guarantee of the completion of the proposed project, the Applicant shall deliver to the District a construction performance bond in accordance with the rate specified in the *Standard Specification and Standard Drawings for the Construction of EOCWD Water Facilities*. The bond must be received and approved by the District prior to the District's final approval of plans or issuance of the permit.

The District will accept only a cash bond as payment for the bond if the construction estimate for the water facilities is less than $15,000. If the construction estimate for the water facilities is $15,000 or greater, the District will accept a surety bond provided the following conditions are met:

(a) The developer is charged a 1% bond administration fee.

(b) All bonds are processed on a bond form that will be approved by the District.

The bond, whether a cash or a surety bond, will be eligible for release one year after all of the following conditions have been satisfied:

1) All fees and charges are paid current;

2) The project has been completed to the satisfaction of the District; and

3) The District has received and has recorded with the County Recorder's office all necessary documents of conveyance and guarantees.

Approximately one year after all of the above conditions have been satisfied, the District will conduct a follow-up inspection of the water facilities. If the facilities are free from defective material and work quality, and all fees and charges are current, the bond will be released. The bond will stay in effect until all conditions are met.

4.1.7 DOCUMENT OF CONVEYANCE AND GUARANTEE

Within 30 days after the completion of construction and testing of water facilities, the Applicant shall deliver to the District an appropriate document of conveyance. The document will transfer to the District all interest and title to said system and appurtenances, guaranteed free of all liens, together with necessary rights-of-way for future maintenance and upkeep.

For a period of one year after acceptance of the work by the District, repair and/or replacement of any and all dedicated facilities that may prove to be defective in work quality and/or materials, together with any other works that may be displaced in so doing, shall be at the sole cost and expense of the Applicant. Such repair and/or replacement shall be without expense whatsoever to the District unless the repair and/or replacement were the result of ordinary wear and tear or unusual abuse or neglect by the District.

In the event of an emergency, as determined by the District, the District shall notify the Applicant of any defect and shall immediately proceed to have the defects repaired and/or replaced at the expense of the Applicant, who shall pay the costs and charges upon demand.

In the event that the District becomes aware of a defect in material or work quality, which does not involve an emergency, the District shall notify the Applicant and the Applicant shall undertake to accomplish the necessary repair or replacement. If within one week from the date of notification the Applicant has not accomplished the necessary corrective procedures or

made satisfactory arrangements thereof, the District shall proceed to have the defects repaired and/or replaced at the expense of the Applicant, who shall pay the costs and charges upon demand by the District.

In the event that the Applicant fails to pay for the costs and charges resulting from repairs and/or replacements of the facilities as provided in this section, the District reserves the right to reduce the amount of, or draw upon, the Applicant's security bond by the amount necessary to cover any such costs and charges.

4.2 CONSTRUCTION OF WATER FACILITIES

The Applicant is encouraged to perform construction with the assistance of a Contractor; however, the Applicant may request the District to perform the work.

It will be the responsibility of the Contractor to furnish all materials that meet the specifications contained in the then current edition of the District's Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities. It also will be the responsibility of the Contractor to provide all labor and equipment necessary to install the water facilities in conformance with the approved plans and the specifications contained in the latest edition of the Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities.

The District may construct facilities at the District's cost upon approval of the General Manager. The District shall prepare a cost estimate of the construction. The Applicant must pay a deposit in the amount of the cost estimate before the District will begin construction. After the work has been completed, the actual cost of the construction will be determined and excess funds from the deposit will be refunded or the Applicant shall be required to pay the costs in excess of the deposit.

4.2.1 UNDERGROUND SERVICE ALERT

The Contractor shall be responsible for researching utility records and indicating the location of all known utilities on the plans. At least two business days (48 hours) before beginning the work, the Contractor shall call U.S.A. (Underground Service Alert) for utility owners to mark the location of substructures, except for public sewers and storm drains. It shall be the Contractor's responsibility to determine the true location and depth of all utilities and service connections. The Contractor shall become familiar with the type, material, age and condition of any utility that may be affected by the work.

The Contractor shall not interrupt the service function or disturb the supporting base of any utility without authority from the utility owner or on order from the District.

Where protection is required to ensure support of utilities, the Contractor shall furnish and place the necessary protection at the Contractor's expense.

The Contractor shall immediately notify the District's engineer and the utility owner if the Contractor disturbs, disconnects or damages any utility.

4.2.2 SAFETY REQUIREMENTS

The Contractor must adhere to all appropriate CAL/OSHA safety requirements while on the job site. The Contractor shall have, at the job site, copies or suitable extracts of Construction Safety Orders, Tunnel Safety Orders and General Industrial Safety Orders issued by the California State Division of Industrial Safety. The Contractor shall comply with provisions of these and all other applicable laws, ordinances and regulations.

4.2.3 CHARGES FOR DAMAGES

It will be the Contractor's responsibility to "protect in place" all the District facilities. In the event it becomes necessary for the District to provide assistance to the Applicant, the Contractor or any third party, or to make repairs to the District's facilities damaged by any of the above, the District will charge the Applicant, Contractor or third party for the actual cost of assistance and/or repairs plus the District's standard overhead rate.

4.2.4 VALVES AND WATER MAIN SHUTDOWNS

It shall be the Contractor's responsibility to keep all valves exposed and accessible at all times. If a water Main shutdown is required, only the District personnel are authorized to perform shutdown operations. The Contractor shall notify the District staff and affected users at least 48 hours in advance in areas where shutdown is requested.

4.2.5 THE DISTRICT INSPECTION

All new water facilities shall be subject to inspection by the District or its authorized agent(s). Such facilities shall be installed in accordance with the latest version of the District's Standard Specifications and Standard Drawings for the Construction of EOCWD Water Facilities.

The Contractor shall notify District staff at least two business days (48 hours) prior to the commencement of construction of any water facilities.

Contractors requiring inspection outside the District's normal working hours shall pay the costs of such inspections prior to installation of water meters. These costs shall include the District's standard overhead rate and overtime rate.

4.2.6 SIZE, LOCATION AND INSTALLATION OF WATER SERVICES

The District reserves the right to determine the size of the meter and service connection and determine location of the meter and service connection in relation to boundaries of the premises to be served.

The District reserves the right to limit the number of houses or buildings, or the area of the land that is under one ownership, to be supplied by one service connection. When property provided with a service connection is subdivided, the service connection shall be considered as belonging to the lot or parcel of land that it directly enters.

A service connection shall not be used to supply an adjoining property.

If a service connection relocation is more than five feet laterally from the existing service connection, it will be considered a new service connection.

4.2.7 SERVICE LATERAL, METER INSTALLATION, FEES

All meters shall be provided and installed by the District, either separately or in conjunction with the installation of a service lateral, and shall remain the property of the District at all times, though committed to a particular service connection, and shall be maintained, repaired, replaced and read by District personnel. The Applicant shall pay the cost of installing meters before any meters will be installed. The fees for meter installation will be in accordance with the rates in the Schedule of Rates, Fees and Charges.

Service laterals, from the point beginning on the customer side of the meter, are the responsibility of the Applicant.

4.2.8 SINGLE METER POLICY

The District's standard metering policy is that individually owned units should be individually metered. Furthermore, all developments that have five or more units whether individually metered or not, shall install a separate irrigation meter.

However, the District recognizes that there may be local and individual conditions that make individual metering not feasible. Therefore, the Board delegates to the General Manager the authority to waive the single meter per unit policy on a case by case basis according to the following standards:

1) The District's policy of appropriate distribution of costs to all consumers still applies. For example, regardless of whether a party occupies the traditional single-family residence or occupies a condominium unit, the same Service Charges and Connection Charges, plus the cost of the water would apply.

2) A development shall be billed on the greater of the following: The cost of water used, plus the Service Charge plus the Connection Charge based upon actual meter size, or number of individual units multiplied by the Service and Connection Charge for the size of meter that would have been installed at each unit, if the variance had not been granted.

3) In addition, the District shall require a letter signed by the appropriate officer or agent stating that the appropriate entity accepts full responsibility for payment of all water bills, and that in the event of transfer of ownership, the new owner(s), or owners association, accepts full responsibility for payment.

The District’s engineer shall review each case and make recommendations to the General Manager. The General Manager shall report to the Board about each variance granted, the location, owner and conditions.

4.2.9 SUBMETERING AND PROHIBITED PRACTICES

4.2.9.1 APPLICATION

This rule pertains to multi-family residential units or mobile home parks located within the District's service boundaries to which the District provides water service. For purposes of this rule, multi-family residential units shall mean two or more residential units served from one water meter.

4.2.9.2 PROHIBITED PRACTICES

In the case of multi-family residential units or mobile home parks that install or utilize submeters or a submetering system in order to allocate the costs of water to tenants, subtenants, lessees or similar persons or parties, the following practices shall be prohibited (unless authorized in advance in writing by the Board, or by the General Manager at the direction of the Board):

1) No Customer, or contractor to a Customer, shall represent to any submetered tenant, subtenant, lessee or similar person or party that such Customer (or such contractor) is a provider of water service or water services; and

2) No Customer, or contractor to a Customer, shall terminate, or threaten to terminate, water service to any submetered tenant, subtenant, lessee or similar person or party by reason of non- payment of any allocated costs for water.

A violation of this rule occurs whenever the District becomes aware of a violation of Rule 4.2.9.2 (1) or 4.2.9.2 (2), as set forth above. Upon the District becoming aware that such a violation has occurred, the District shall provide written notice to the Customer of Record to cure such violation, and the notice shall include; (1) a statement of the nature of the violation, (2) the date upon which the District became aware of the violation, and (3) a date by which the Customer of Record shall cure such violation. If such violation is not cured by the date stated in the notice, the provisions of Rule 2.3 of the District's Rules and Regulations shall apply. Any such violation shall be reported by the General Manager to the Board of Directors, in writing, together with a description of the action(s) taken to compel enforcement of these Rules and Regulations as soon thereafter as shall be practical.

Customers of Record that have submeter systems attached to the District's water system shall comply with all applicable laws, statutes and regulations of the State of California and the city in which they are located, or the County of Orange, as applicable.

The District encourages conservation efforts, including submetering, to support and promote conservation of water use within its service boundaries; however, the District does not encourage, favor or support any submetering system or process that is used to generate revenue(s) over and above the fair and reasonable cost of installation of such system, fairly allocated costs of water and reasonable administrative costs.

4.2.10 AUTOMATIC FIRE SPRINKLER SERVICE CONNECTIONS

When an automatic fire sprinkler service connection (AFSSC) is installed, the control valve will be left closed and sealed until a written order to turn on the water is received by the District from the Customer of Record.

After an AFSSC is activated, the District shall not be liable for damages of any kind whatsoever that may occur on or to the premises served, due to the installation, maintenance, or use of such AFSSC, or due to pressure fluctuations or interruption of water supply.

The District will not approve any request for an AFSSC be shut off, unless approval is received from the Chief of the appropriate Fire Authority

Water is not to be used through an AFSSC for any purpose other than the extinguishing of fires, or a purpose related thereto. The District shall have the right to shut off the entire supply of water to the premises through the AFSSC when improper use occurs or for nonpayment of bills. The District will notify the appropriate fire department or authority prior to any such shutoff.

Should water be used through an AFSSC for an unauthorized purpose, the Customer of Record shall be charged for the unauthorized taking of water in accordance with the Schedule of Rates, Fees and Charges.

4.2.10.1 DOWN-STREAM RESIDENTIAL FIRE SPRINKLER SYSTEMS

Certain residential dwelling units located within the District's service area may have installed, or may in the future install, fire sprinkler systems that are connected down-stream of the District's service meter (Point of Ownership) (for purposes of this Section, a "System"). The District hereby provides notice that it is not responsible, and assumes no liability of any kind, for the installation, ownership, operation or use of any such System. The provisions of Sections 2.4 and 2.5 of these Rules and Regulations shall apply to any such System. The District expressly declines to provide, or guarantee, any particular water service, or pressure, to a District Customer, or customer account, that has such a System, and no contractual obligation therefore shall arise, whether through a Water Service Agreement or otherwise, without the express prior written agreement of the Board. The District assumes no liability whatsoever for any injuries or damages, of whatever nature, that arise or occur

based on the installation, ownership or use of any such System. The provisions of this Section shall be in addition to, and not in derogation of, The District's statutory protections applicable to such matters.

4.2.11 FIRE HYDRANT INSTALLATION

The appropriate fire department or authority having jurisdiction shall designate the size and location of all fire hydrants to be installed. Fire hydrants shall be installed in the parking and/or sidewalk area adjacent to the curb. Upon request and approval by the appropriate fire agency the District will change the location of fire hydrants when necessary.

4.2.12 WATER MAIN EXTENSIONS, ENLARGEMENTS AND OTHER SYSTEM IMPROVEMENTS

The District will extend its water distribution Mains to individual developers at the expense of the property owner. If the District deems it necessary to install larger Mains for future use, the District may enter into a development agreement and may share a portion of the cost of the extension or may enter into a benefited property agreement (Section 4.2.13)

4.2.13 BENEFITED PROPERTY AGREEMENT

In the event that a mainline extension or a new mainline will benefit adjacent properties and/or future use, at its discretion, the District may enter into a benefited property agreement with developer(s) of the adjacent properties. All terms and conditions of such a benefited property agreement will be subject to approval by the District's Board of Directors.

4.2.14 REGULATION OF BOOSTER PUMPS

When it becomes necessary, due to low water pressure or special operating conditions, to install a booster pump on the service to any premise, such pump shall be equipped with a low pressure cut-off switch designed to shutoff the pump when a water pressure gauge on the inlet side indicates 25 pounds per square inch or lower. It shall be the duty of the Customer of Record to maintain the cut-off device in proper working order and certify to the District, at least once a year that the device is operable. A person deemed competent by the District shall execute low-pressure cut-off device certification.

4.2.15 METER DOWNSIZING REQUESTS

No refund of connection charges for changes under this section.

The District will entertain a request for downsizing of a residential meter under the following conditions:

A Customer of Record who wishes to change the meter size of an installed meter and does not have an Automatic Fire Suppression Sprinkler System (AFSSC) served by their meter shall submit a Meter Downsizing Request form, along with a processing fee pursuant to the Schedule of Rates, Fees and Charges. Within 30 days of submittal of the application, the District General Manager shall review such application and make a determination whether to allow the requested meter size for the property. Such decision may be appealed to the District Board of Directors, provided requesting party submits a request for hearing within 45 days of General Manager's initial determination.

SECTION 5 TEMPORARY WATER SERVICES

5.1 TEMPORARY CONNECTIONS

On a case-by-case basis, the District will allow the use of temporary connections to the District's water system when water service is needed only for construction purposes. The District reserves the right to require the Applicant to use an existing service connection whenever feasible.

The District reserves the right at any time to set a meter on any temporary service connection and collect the required deposits, and thereafter charge the regular metered rate for the kind of service to be rendered.

All meters set on temporary service connections will be read by the District on a monthly basis, and all temporary service accounts will be billed monthly.

5.2 HYDRANT METERS

Water may be procured from fire hydrants for construction or other purposes only in the manner prescribed in these Rules and Regulations. When water is to be procured from a fire hydrant, the Applicant shall sign a Rules For Hydrant Meters For Construction Water Service form and also a Hydrant Meter Activity Report and Permit, wherein the Applicant shall specify the location of the fire hydrant to be used, the anticipated length of use and shall agree to make the required deposit to the District. Copies of both forms shall be issued to the Applicant and shall constitute authority to procure and make such limited use from the fire hydrant therein designated, through the District supplied hydrant meter.

The hydrant permit shall be valid for one (1) month and must be renewed for each additional month. Illegal use of a hydrant meter, including without limitation the failure to renew the permit, is subject to the penalties in Section 7.

Only District personnel are allowed to install or remove fire hydrant meters unless the fire hydrant meter is being installed on a private hydrant, with prior approval of the District's engineer and the General Manager. If the fire hydrant meter is being placed on a private hydrant, The District staff will monitor the placement of the fire hydrant meter upon the private hydrant. The District shall not assume any liability for damage to private hydrants. Prior to installation of the meter, the permit holder must pay a construction meter charge in accordance with the Schedule of Rates, Fees and Charges. The permit holder is required to give the District at least one business day (24 hours) notice when requesting the installation of a fire hydrant meter.

Unless the Applicant has applied for, and has been granted, a permit for a roving fire hydrant meter, only the District staff may relocate a fire hydrant meter. The permit holder must give the District at least one business day (24 hours) notice when requesting meter relocation or a relocation fee will be assessed. The construction meter charge will be in accordance with the rates listed in the Schedule of Rates, Fees and Charges.

The permit holder of a roving fire hydrant meter account shall inform the District as to the location of the meter at all times. Failure to do so may result in additional charges.

The permit holder is responsible for paying the costs of repairing any damages to the meters or hydrants. These costs will be the actual cost of repairs plus the District's standard labor overhead rate.

5.3 PAYMENT

5.3.1 REGULAR MONTHLY BILLS

Payment is due 25 days from the billing date. Closing bills are due upon receipt.

5.3.2 DELINQUENT BILLS

A bill will be delinquent if the District does not receive payment by the due date shown on the bill. A late fee on the unpaid balance will be charged. If payment is not received in full, the District may refer the account to a collection agency. If the outstanding balance is referred to a collection agency, the customer is responsible for payment of the outstanding balance plus collection agency fees and administrative fees.

SECTION 6 CROSS CONNECTION AND BACKFLOW PREVENTION

6.1 INTRODUCTION

The District recognizes that it has a responsibility to take all reasonable precautions to protect the public water supply. Thus, in the exercise of this responsibility, the District must take all reasonable precautions to protect the District's water system from the hazards originating on the premises of its Customers that may degrade the water in the District's water system.

To affect such precautions, the District, has adopted these Rules and Regulations pursuant to the State of California Administrative Code, Title 17 - Public Health entitled "Regulations Relating to Cross Connections."

In addition to the District's Rules and Regulations for Water Service, the Customer must comply with Public Law 99-339 - the Safe Drinking Water Act and its amendments, all state and local regulations including but not limited to Title 17 - Regulations Relating to Cross Connections, and the latest edition of the Manual of Cross Connection Control from the Foundation for Cross Connection Control and Hydraulic Research, University of Southern California.

These Rules and Regulations were written to assist the District in safeguarding the District's Potable Water supply. The District cannot, and will not, be held liable for actions by others that are beyond the District's control, including, but not limited to, willful sabotage, deceptive or fraudulent activities and acts of nature. These Rules and Regulations do not provide regulatory measures for protection of water users from the hazards of Cross Connection within the water users own premises.

6.2 GENERAL PROVISIONS

6.2.1 PROTECTION

Protection shall be accomplished by isolating within the premises, any and all used, degraded, contaminated or polluted water or other liquids, mixtures or substances. The District recognizes that there are varying degrees of potential and actual hazards; consequently, the degree of protection shall be commensurate with the degree of hazard.

6.2.2 BACKFLOW PREVENTION DEVICES

Backflow prevention devices shall be provided and maintained by the Applicant, owner or Customer of Record at his/her expense. Such devices shall be located on the premises of the property served and shall not be installed on the District's portion of the water system.

6.2.3 UNPROTECTED CROSS CONNECTIONS

Unprotected Cross Connections to the public water supply are prohibited.

6.2.4 NEW SERVICE REQUESTS

The District shall review all requests for new service to determine if Backflow protection is needed. Plans and specifications must be submitted to the District for review of possible Cross Connection hazards as a condition of service for new service connections.

6.2.5 PROTECTION REQUIRED BEFORE GRANTING SERVICE

Whenever Backflow protection is found necessary, the District will require the Customer of Record or Applicant to install an approved Backflow prevention device at the Customer's expense for continued services or before a new service is approved.

6.2.6 PROTECT ALL WATER LINES

Wherever Backflow protection is necessary on a water supply line entering a Customer's premises, any and all water service lines from the District's Mains entering such premises, buildings or structures shall be protected by an approved Backflow prevention device. The type of device to be installed will be in accordance with the requirements of these Rules and Regulations.

6.3 WHERE PROTECTION IS REQUIRED

6.3.1 PREMISES HAVING AN AUXILIARY WATER SUPPLY

Premises that have an auxiliary water supply shall be protected against Backflow of water from the premises into the public water system, unless the auxiliary water supply is accepted as an additional source by the District and is approved by the public health agency having jurisdiction.

6.3.2 PREMISES HANDLING PROCESSED WATER

Premises on which any substance is handled in such fashion that it may allow its entry into the water system, shall be protected against backflow of the water from the premises into the public water system. Such substances include, but are not limited to, the handling of processed waters and waters originating from the District's water system subjected to deterioration in sanitary quality.

6.4 PREMISES HAVING OR POSSIBLY HAVING CROSS CONNECTIONS

Premises that have any one of the following shall be protected against Backflow of the water from the premises into the public water system:

1) Internal Cross Connections;

2) Intricate plumbing and piping arrangements susceptible to Cross Connection; or

3) Where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not Cross Connections exist.

6.5 TYPE OF PROTECTION

6.5.1 TYPE OF BACKFLOW DEVICE

The type of approved Backflow prevention device shall depend upon the degree of hazard. The decision as to when, where and which device to be used shall be made at the discretion of the District and shall depend upon the facts of each particular situation. In determining the degree of hazard and the type of approved Backflow device required, the following principles shall apply:

6.5.1.1 HEALTH OR SYSTEM HAZARD

An approved air-gap separation or an approved reduced pressure principle Backflow prevention device shall be used where there is an existing or potential health or system hazard.

6.5.1.2 POLLUTION HAZARD

A double check valve assembly is to be used where there is an existing or potential pollution hazard only.

6.6 APPLICATION

6.6.1 STRUCTURES OF MORE THAN TWO STORIES IN HEIGHT

At the service connection to any premises, where there are more than two stories in height above the service connection, an approved Backflow prevention device shall protect the District water supply. Devices may be required for residential buildings on a case-by-case basis.

6.6.2 RECIRCULATING WATER

At the service connection to any premises containing recirculating water systems (hot or cold), the District water supply shall be protected by an approved Backflow prevention device.

6.6.3 FIVE OR MORE UNITS

At the service connection to any premises where there are multiple units or dwellings that have five or more individual units being serviced through one metering system, the District water supply shall be protected by an approved Backflow prevention device.

6.6.4 HEALTH OR SYSTEM HAZARD FROM AUXILIARY WATER SUPPLY

At the service connection to any premises, where there is an auxiliary water supply that may constitute a health or system hazard, an approved air-gap separation or an approved reduced pressure principle Backflow assembly, or both, shall be installed.

6.6.5 SEWAGE AND STORM DRAIN FACILITIES

At the service connection to any wastewater treatment plant, wastewater pumping station or storm water pumping station, the District water supply shall be protected by an approved air-gap separation. All piping between the meter and the receiving vessel shall be entirely visible. If, in the opinion of The District, an air-gap separation provides insufficient protection, The District may require installation of an additional approved Backflow prevention device(s).

6.6.6 HOSPITALS, MORTUARIES, ETC.

At the service connection to hospitals, medical and dental buildings, mortuaries and other premises where special hazards exist, the District water supply shall be protected by an approved reduced pressure principle Backflow prevention assembly.

6.6.7 COMMERCIAL OR INDUSTRIAL BUILDINGS

At the service connection to any premises containing commercial or industrial buildings subject to varying and unknown use, the District water supply shall be protected by an approved Backflow prevention device.

6.6.8 FIRELINE SERVICES

Approved Double Check Detector Assembly (DCDA) shall be installed on all fireline services, except where, in the opinion of The District, the DCDA does not provide sufficient Backflow protection. In this case, The District will require the installation of an approved Reduced Pressure Principle Detector Assembly (RPDA).

6.6.9 IRRIGATION SERVICES

Meters serving only irrigation systems shall be protected by an approved reduced pressure principle Backflow prevention device.

6.7 INSTALLATION

6.7.1 ONLY THE DISTRICT APPROVED DEVICES

Only Backflow prevention devices that have been approved by the District and the California Department of Public Health Office of Drinking Water shall be acceptable for installation on a service connection. Upon request, the District will provide a list of approved Backflow prevention assemblies.

6.7.2 INSTALLATION SPECIFICATIONS

Backflow prevention devices shall be installed in a manner prescribed in Section 7603, Title 17 of the California Administrative Code and they shall be installed on the Customer's side of, and as close to the service connection as is practical. The device shall be installed a minimum of twelve inches (12") and a maximum of thirty-six inches (36") above final grade measured from the concrete pad to the bottom of the device and with a minimum of twelve inches (12") clearance on either side. The device shall be installed so that it is readily accessible for maintenance and testing. The District shall have the final authority in determining the required location of a Backflow prevention device.

6.7.3 REPLACEMENT OF OBSOLETE DEVICES

The Customer of Record must replace obsolete Backflow prevention devices when notified by the District that the device is no longer appropriate or acceptable. An obsolete device may be upgraded provided that a factory manufactured upgrading kit is available. The upgraded Backflow prevention device must be approved by the District and the California Department of Public Health Office of Drinking Water.

6.7.4 TESTING NEW DEVICES

As soon as the installation of the Backflow prevention device has been completed, the Customer of Record shall have the device tested by a certified tester, and submit the test results to the District within ten days of the test date. An Orange County Health Department approved list of local certified testers may be obtained at the District's offices.

6.7.5 RIGHT TO REJECT

The District reserves the right to reject any installation or device.

6.8 INSPECTION AND TESTING

6.8.1 ORIGINAL TEST

All Backflow prevention devices shall be inspected, tested and certified as operational when the device is originally installed or relocated. All tests shall be conducted by a certified tester who shall prepare a report certifying that the device has been tested and is operating satisfactorily.

6.8.2 ANNUAL TEST BY CERTIFIED TESTER

At the expense of the Customer of Record, all Backflow prevention devices shall be inspected, tested and certified as operational at least once a year. All tests shall be conducted by a certified tester who shall prepare a report certifying that the device has been tested and is operating satisfactorily.

6.8.2.1 FIRST NOTIFICATION

The District will notify each Customer of Record and supply the necessary forms for Backflow prevention device testing when it is time for the annual Backflow prevention test. The Customer of Record shall have 30 days to comply with the Backflow

prevention device testing requirements. The District will not accept test results on unapproved forms or from unapproved Backflow prevention device testers.

6.8.2.2 SECOND NOTIFICATION

A second notice shall be sent to each Customer of Record who does not have the Backflow prevention device tested within the 30-day period as prescribed in the first notice. The second notice will give the Customer of Record a two-week period to have the Backflow prevention device tested. If no action is taken within the two-week period, the District may terminate water service to the Customer's premises until the subject device is tested and the necessary certification provided to the District.

6.8.2.3 CUSTOMER OF RECORD'S RESPONSIBILITY

The Customer of Record shall cause annual tests to be made of the device at the expense of the Customer of Record. Defective devices shall be repaired, overhauled or replaced immediately at the expense of the Customer of Record. As a courtesy the District provides a notice of annual testing, but failure to receive such notice shall not relieve the Customer of Record of requirements under this section.

6.8.2.4 REPORTS

Reports of inspections, tests, repairs, overhauling of the device and corrections made shall be submitted to the District within ten days of the test date by the certified tester. Such reports shall be submitted to the District on forms supplied by the District. No other forms will be accepted.

6.8.3 RANDOM TESTS AND INSPECTIONS OF DEVICES

The District will maintain a program of random or spot testing of various Backflow prevention devices at no cost to the Customer of Record. This testing may be done at the time of installation and periodically thereafter. This testing will in no way relieve the Customer of Record from responsibility for maintaining functional devices, but will serve to help assure that the program is serving its intended purpose.

6.8.4 ON-PREMISE INSPECTION BY THE DISTRICT

The District may, at its discretion, require an on-premises inspection for Cross Connection hazards on any property to which it serves water. The District will transmit a written notice requesting an inspection appointment to each Customer of Record. Any Customer or Customer of Record who cannot or will not allow an on-premise inspection of the piping system shall be required to install any Backflow prevention device that the District considers necessary.

6.8.5 MORE FREQUENT INSPECTION

Where successive annual reports indicate defective operation of a Backflow prevention device, the District may require more frequent inspections and/or require replacement of the device.

6.8.6 DUTY OF TESTER

The certified tester shall be responsible for the competency of inspections, corrective actions and the accuracy of reports required under this Section and the District's code of conduct for Backflow assembly testers.

6.8.7 TESTING METHODS

Test results of Backflow prevention devices will only be accepted if performed in accordance with the methods used by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California and County of Orange/Health Care Agency/Environmental Health.

6.9 TERMINATION

6.9.1 BASIS FOR TERMINATION

The District may immediately discontinue service to any premises where an actual or potential Cross Connection or other hazard to the District's water supply is found to exist. Any Customer who violates any of the provisions of these Rules and Regulations or alters, bypasses or renders inoperative, or removes any installed Backflow prevention device, or fails to test the device as required, shall be subject to immediate termination of water service. Conditions that create a basis for water service termination shall include, but are not limited to, the following items:

1) Refusal to install a required Backflow prevention device.

2) Refusal to test a Backflow prevention device.

3) Refusal to repair a faulty Backflow prevention device.

4) Refusal to replace a faulty Backflow prevention device.

5) Direct or indirect connection between the District's water system and a sewer line.

6) Unprotected direct or indirect connection between the District's water system and a system or equipment containing contaminants.

7) Unprotected direct or indirect connection between the District's water system and an auxiliary water system.

8) A situation that presents an immediate health hazard to the District's water system.

9) Failure to comply with other provisions of the District's Rules and Regulations for Water Service.

6.9.2 TERMINATION PROCEDURES

For conditions 1 through 4 stated in Section 6.9.1, the District will terminate service to a Customer's premises after two written notices have been sent specifying the corrective action needed and the time period in which it must be taken. If no action is taken within the allowed time period, water service may be terminated without further notice.

For conditions 5 through 9 stated in Sections 6.9.1 the District will make a reasonable effort to advise the Customer of the intent to terminate water service before termination.

SECTION 7 ENFORCEMENT

7.1 NEW SERVICE CONNECTIONS

No new service connections shall be completed, nor meters installed, until all provisions of the Rules and Regulations have been satisfied.

7.2 EXISTING SERVICE CONNECTIONS

Existing service connections shall comply with all provisions of the Rules and Regulations. If it is found that the service is out of compliance, the service will be brought into compliance with all provisions of the Rules and Regulations when the Customer of Record is notified by the District. Failure to comply shall result in termination of water service.

7.3 TERMINATION OF WATER SERVICE

The District may terminate service for violation of these Rules and Regulations, including termination as provided under Section 2.6 and Section 6.9. Water service shall not be restored until hazards are eliminated and/or violations have been corrected to the satisfaction of the District. Nor shall water service be restored until the District has received reimbursement for any costs incurred in terminating the water service and advance payment for the cost of service restoration. The District will pursue recovery of actual costs including legal fees and any penalties.

7.4 CIVIL AND CRIMINAL ACTIONS

Violation of these Rules and Regulations may constitute a public nuisance within the meaning of Health and Safety Code Section 4036 and Penal Code Section 372. Violators may be subject to civil actions for abatement and/or damages (Civil Code Section 3479, et seq.) and Criminal Penalties of up to $500 or both (Penal Code Section 29). Customers may also be assessed a fine of $500 per day by the District for violation of the Rules and Regulations.

Appendix C

Orange County Health Care Agency Backflow Tester Registration Application and Code of Conduct

Environmental Health Backflow Tester Registration Application

1241 E. Dyer Rd. Santa Ana, CA. 92705
www.ochealthinfo.com/services-programs/environment-food-safety/water

TESTER INFORMATION		
Tester Name:		Personal Phone:
Tester Street Address:	City:	Zip Code:
Email Address:		Date of Birth:

EMPLOYER INFORMATION (if applicable)		
Employer Name:		Phone:
Employer Address:	City:	Zip Code:
Employer Email:		Employer: Choose One

Select One: ☐ Initial ☐ Renewal

Registered backflow testers may opt for inclusion in a published listing exclusively on HCA's website. The listing is organized by tester seniority to assist businesses in locating OC HCA registered backflow testers.

ANSI ACCREDITED CERTIFYING ORGANIZATION	TESTER LIST INFORMATION (fee applies)
Organization Name: Choose One	Your Name:
Certification Number:	Company/Employer Name:
Expiration Date:	Phone:

Please be aware that it is the registered applicant's responsibility to ensure the ongoing validity of all required licensures and certificates. Failure to keep these up-to-date could result in the nullification of the OC Health Care Agency backflow assembly tester registration.

I have received a copy of the Code of Conduct for Backflow Prevention Device Testers adopted by OC Health Care Agency and the Orange County Cross Connection Control Group. I understand that failure to comply with this code can result in the loss of testing privileges in Orange County and/or within a member agency's jurisdiction. Also, knowingly filing a false test report may be a misdemeanor violation. I am aware that information on my application is public record based on the California Public Records Act and State Government Code Section 6250 and is subjected to inspection or copying upon request.

Print Name of Applicant: _____ Title: _____ Date: _____

Signature of Applicant: _____

Upload Your ANSI Accredited Certificate

Current Test Kit Calibration Report

Upload Your Current Photo

The Code of Conduct for HCA Backflow Prevention Assembly Testers

The OC Health Care Agency (HCA) requires that the following Code of Conduct is followed by all backflow prevention assembly testers registered to conduct tests in Orange County:

1. Testers must possess a current tester registration number issued by HCA- Environmental Health to perform tests on backflow prevention assemblies within Orange County.
2. Testers are strictly prohibited from knowingly falsifying field results of backflow prevention assemblies. Examples of such misconduct include:
    - Signing off on backflow test reports for tests they did not conduct.
    - Undertaking unnecessary repairs.
    - Lacking proper backflow registration required for testing in Orange County.
    - Failing to adhere to the established test procedures outlined by Orange County Environmental Health.
    - Using unauthorized equipment for backflow testing.
3. Testers must not remove, replace, or relocate a backflow assembly without obtaining explicit approval from the respective water purveyor or HCA.
4. Within 10 working days of the initial test, irrespective of the test outcome, all backflow assembly test reports must be promptly submitted to both the water purveyor and HCA. In case of any specific issues related to the test or the test report form, the tester is required to contact either the water agency or HCA.
5. All backflow reports must be submitted using the designated forms. These reports should be clear, legible, and contain all relevant information pertaining to the conducted test(s).
6. Testers must adhere strictly to their registration period and must not conduct any test beyond the expiration date of their registration. Performing tests outside the valid registration period is strictly prohibited.
7. Testers bear the responsibility of promptly informing HCA about any changes in their contact information, including address, emails or phone numbers. To report changes, please contact (714) 433-6000 or email OCBackFlowTests@ochca.com.

Any tester failing to comply with the provisions of this Code of Conduct is subject to disciplinary action. The results of the action can be the loss of testing privileges in Orange County or in a water purveyor's jurisdiction. Also, it can be a misdemeanor violation to knowingly file a false test report.

This comprehensive Code of Conduct aims to uphold professional standards and compliance among backflow prevention assembly testers operating within Orange County and was created in conjunction with the Orange County Cross Connection Control Group.

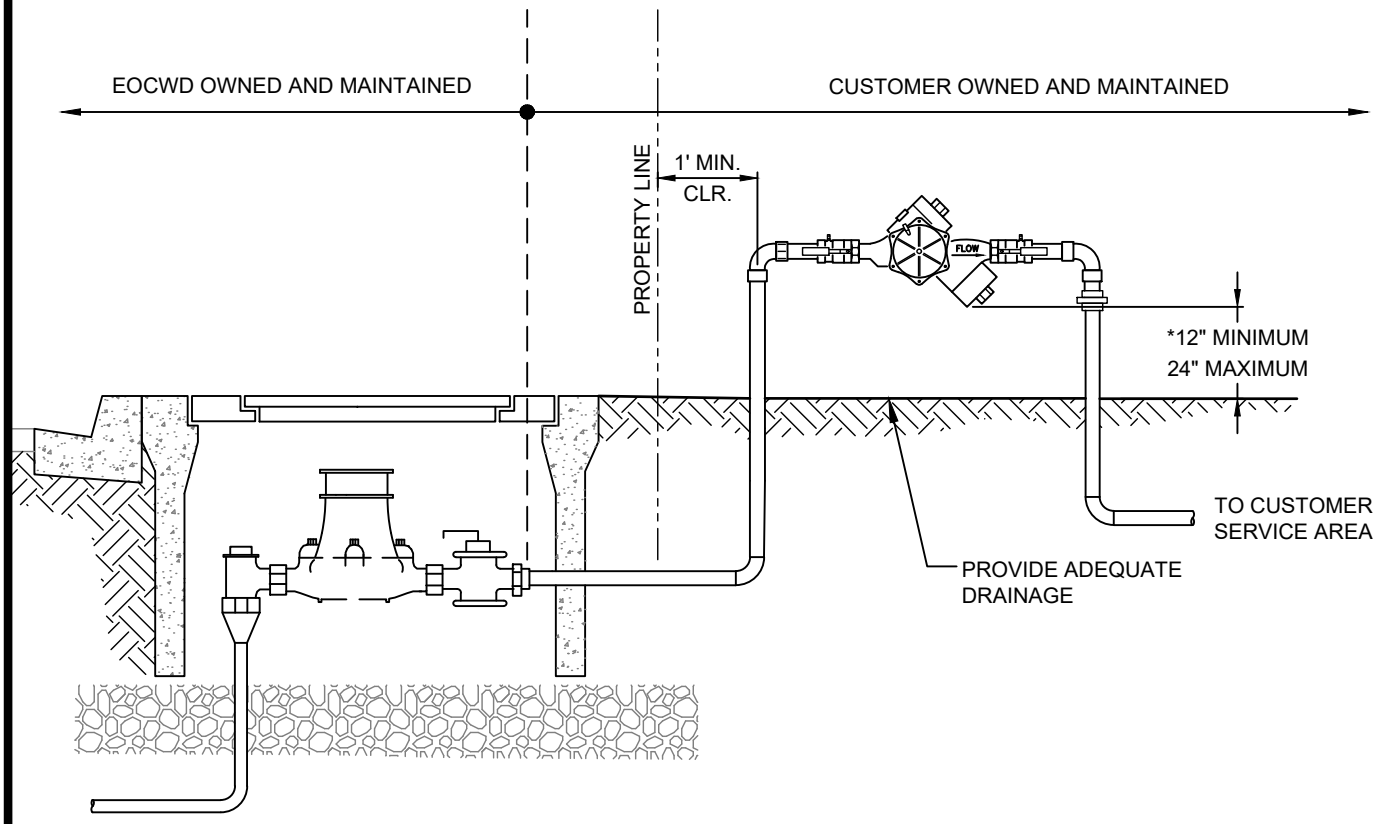
Tester Name: _____ Date: _____

Tester Signature: _____

Click to E-Mail Form Reset Form

Appendix D

EOCWD Standard Drawings for Water Systems W-11



NOTES:

1. BACKFLOW PREVENTION DEVICES SHALL CONFORM TO THE LATEST EDITION OF AWWA C-510 AND SHALL BE APPROVED FOR INSTALLATION BY THE DISTRICT.
2. DEVICE SHALL BE INSTALLED ABOVE GROUND IMMEDIATELY BEHIND AND ON THE CUSTOMER'S SIDE OF THE METER AND SHALL BE READILY ACCESSIBLE FOR TESTING.
3. ALL BACKFLOW DEVICES SHALL BE CERTIFIED BY A BACKFLOW DEVICE TESTER AFTER INSTALLATION.

NO.	APPROVED	DATE

EAST ORANGE COUNTY WATER DISTRICT
ORANGE, CALIFORNIA

APPROVED BY

GENERAL MANAGER — 7/27/2023 DATE

ENGINEERING MANAGER — 7/27/2023 DATE

2" AND SMALLER BACKFLOW PREVENTION DEVICE 1 OF 2

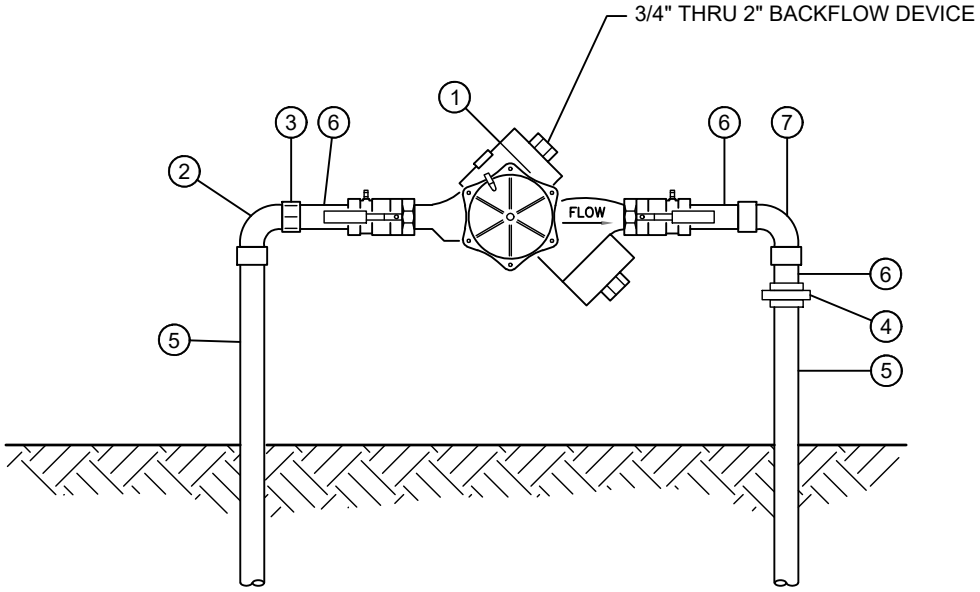
NO SCALE

STANDARD DWG.

W-11

8/1/2023

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ELEVATION

LEGEND LIST OF MATERIALS

ITEM	MATERIALS
1	APPROVED BACKFLOW PREVENTION ASSEMBLY COPPER 90 DEGREE COPPER 90°
2	COPPER 90° ELBOW (COMPRESSION)
3	COPPER ADAPTER
4	SOLDER UNION
5	TYPE "K" COPPER (BURIED PORTION WRAPPED WITH PE)
6	BRASS NIPPLES
7	BRASS 90° ELBOW (THREADED)

8/1/2023

N:\EOCWD\EOCWD-2022-001 Water Standards Update\300 Engineering\301 CAD\Planset\W-11-2.dwg

NO.	APPROVED	DATE

EAST ORANGE COUNTY WATER DISTRICT
ORANGE, CALIFORNIA

APPROVED BY

GENERAL MANAGER — 7/27/2023 DATE

ENGINEERING MANAGER — 7/27/2023 DATE

2" AND SMALLER BACKFLOW PREVENTION DEVICE 2 OF 2

NO SCALE

STANDARD DWG.

W-11

Appendix E

Backflow Prevention Device Test and Maintenance Report

East Orange County Water District
185 N Mc Pherson Road
Orange, Ca 92869-3720
Ph: 714-538-5815/ Fax: 714-538-0334
Backflow Prevention Device Test And Maintenance Report

Owner's Name: _____ SERVICE ID: _____

Owner's Address: _____

Service Address: _____

Location of Device: _____

Manufacturer/ Model _____ **TYPE** _____ **SIZE** _____ **SERIAL NO** _____ **LINE PRESSURE** _____

Reduced Pressure Principle Assembly

Double Check Valve Assembly

RP _____
DC _____
PVB _____
SVB _____
DCDA _____
RPDA _____

	Check Valve 1	Check Valve 2	Relief Valve	PVB/ SVB
Initial Test	**Held at** _____ **PSID** **Leaked** _____	**Held at** _____ **PSID** **Closed Tight** _____	**Opened At** _____ **Open** _____ **PSI**	**Air Inlet** **Opened at** _____ **PSID**
		Leaked	**Did Not Open**_____	**Did Not Open**_____
Repairs **Give details of repairs made here**	**Cleaned** _____ **Replaced:** _____	**Cleaned** _____ **Replaced:** _____	**Cleaned** _____ **Replaced:** _____	**CHECK VALVE** **Held at** _____ **PSID** **Leaked** _____
				_____ **Cleaned**
				_____ **Replaced**
Final Test	_____ **PSID**	_____ **PSID** **Closed Tight**_____	**Opened At**_____**PSI**	**Air Inlet** _____ **PSID** **Check Valve** **PSID**

Comments: _____

Initial Test	**Date**	**Time**	**Certified Tester No**	**Passed**	**Failed**
	Tested by (Signature): _____		**Print Name:**		
	Business License No _____		**Company Name:**		
Repair	**Date**	**Time**	**Certified Tester No**	**Passed**	**Failed**
	Tested by (Signature):		**Print Name:**		
Final Test	**Date**	**Time**	**Certified Tester No**	**Passed**	**Failed**
	Tested by (Signature): _____		**Print Name:**		


WEST YOST
Water. Engineered.

PREPARED BY:

WEST YOST
Water. Engineered.



EOCWD
EAST ORANGE COUNTY WATER DISTRICT

EAST ORANGE COUNTY WATER DISTRICT

EOCWD WHOLESALE ZONE WATER SYSTEM ID NO. CA3010093

CROSS-CONNECTION CONTROL PLAN

IN ACCORDANCE WITH THE CROSS-CONNECTION CONTROL POLICY HANDBOOK ADOPTED IN 2023

JUNE 2025

Cross-Connection Control Plan

Prepared for

East Orange County Water District

WHOLESALE ZONE WATER SYSTEM ID NO. CA3010093

Project No. 959-A1-25-06

The information submitted in this Cross-Connection Control Plan is drafted to be in compliance with the Cross-Connection Control Policy Handbook and an accurate description of the Cross-Connection Control Program intended to protect the Public Water System.

July 1, 2025

Public Water System Representative:
David Youngblood, General Manager — Date

July 1, 2025

Prepared by: Courtney Rubin
AWWA Cross-Connection Control Specialist #01854 — Date



July 1, 2025

QA/QC Review: Alex Bucher
AWWA Cross-Connection Control Specialist #10708 — Date

East Orange County Water District Contact Information			
Title	Name	Contact Information	Backflow Certifications
General Manager	David A Youngblood	dyoungblood@eocwd.com	NA
Engineering Manager	Bobby Young	byoung@eocwd.com	NA
Operations Manager/ Cross-Connection Control Program Coordinator	Jerry Mendzer	jmendzer@eocwd.com 714-538-5815	Cross-Connection Control Specialist # TBD[(a)]
Office Manager	Sylvia Prado	sprado@eocwd.com	NA
On-Call Operator Number:	After hours call-ins are instructed to call the duty cell phone for emergencies. Customers call the regular number, and the message directs people to call an on-call Water Operator.		

(a) Currently in the process for re-certifying due to a lapsed certification.

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LIST OF ACRONYMS AND ABBREVIATIONS

AG	Air Gap Separation
ANSI	American National Standard Institute
BPA	Backflow Prevention Assembly
BPA Tester	Backflow Prevention Assembly Tester
CCCP	Cross-Connection Control Plan
CCCPH	Cross-Connection Control Policy Handbook
CCR	California Code of Regulation
DC	Double Check Valve Backflow Prevention Assembly
DCDA	Double Check Detector Backflow Prevention Assembly
DCDA-II	Double Check Detector Backflow Prevention Assembly – Type II
EOCWD	East Orange County Water District
EOCWD -Retail Zone	East Orange County Water District – Retail Zone (Water System ID No. CA3010068)
EOCWD -Wholesale Zone	East Orange County Water District -Wholesale Zone (Water System ID No. CA3010093)
Program	Cross-Connection Control Program
PVB	Pressure Vacuum Breaker 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
SVB	Spill-Resistant Pressure Vacuum Breaker
Swivel-ell	Swivel-Ell Backflow Prevention Assembly
SWRCB	State Water Resource Control Board
Title 17	Title 17, Chapter V, Sections 7583-7622 under the California Code of Regulation

Cross-Connection Control Plan

1.0 INTRODUCTION

The State Water Resources Control Board (SWRCB) adopted the Cross-Connection Control Policy Handbook (CCCPH) on December 19, 2023. The effective date for the CCCPH was July 1, 2024, replacing the previous regulations housed under Title 17, Chapter V, Sections 7583-7622 under the California Code of Regulation (CCR) (Title 17). Title 17 became inoperative and repealed 90 days after July 1, 2024, on October 1, 2024. The CCCPH expands on the previous Title 17 requirements for initial and follow-up hazard assessments, program training, backflow prevention testing and certification, maintenance of records, incident response, reporting and notification, public outreach and education, and local entity coordination. The CCCPH requires East Orange County Water District (EOCWD), the Public Water System (PWS), to develop a Cross-Connection Control Plan (CCCP) to describe how the PWS will manage and administer their Cross-Connection Control Program (Program) for their wholesale zone.

Appendix A includes the most recent version to date of the CCCPH (Adopted 2023, Amended June 17, 2025).

1.1 Purpose

The intent of this document is to describe the Program implemented and administered by EOCWD. The purpose of this CCCP is:

1. To protect the PWS against actual or potential contamination that may occur within a water user's premises because of some undiscovered or unauthorized cross-connection on the premises;
2. To eliminate existing connections between potable water systems and other sources of water that are not approved as safe and potable for human consumption;
3. To eliminate cross-connections between potable water systems and sources of contamination; and
4. To prevent the making of cross-connections in the future.

1.2 EOCWD Service Area Description

The East Orange County Water District encompasses an area of approximately 10,000 acres and is a member of the Municipal Water District of Orange County. EOCWD is a public community water system that is governed by a Board of Directors. EOCWD has two systems one serving potable water to retail water customers named EOCWD Retail Zone Water System ID No. CA3010068 (EOCWD-Retail Zone) and a system dedicated to supply wholesale water called EOCWD Wholesale Water System ID No. CA3010093 (EOCWD-Wholesale Zone). EOCWD-Retail Zone has approximately 1,200 retail water services that consists primarily of single-family residential water services along with one school, two parks, and several dedicated irrigation sites. The cross-connection control program for the EOCWD-Retail Zone is described in a separate CCCP.

This CCCP describes the cross-connection control program for EOCWD-Wholesale Zone system. EOCWD-Wholesale Zone consists of four water services serving two customers and supplying wholesale water to five public water agencies through several turnout structures. Three reservoirs are part of the EOCWD - Wholesale Zone system. Table 1-1 provides the EOCWD-Wholesale Zone turnout detail.

Table 1-1. EOCWD-Wholesale Zone Turnout Detail

PWS System	Number of Connections[a]
EOCWD-Retail Zone	2[b]
Golden State Water Company	5
City of Tustin	6
City of Orange	1
Irvine Ranch Water District	1

(a) Sizes range from 6" to 16"
(b) One turn-out is an emergency connection

2.0 DEFINITIONS

Air-Gap Separation (AG)

A physical break between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. The physical break shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the vessel, in no case less than 1-inch in diameter.

Approved Water Supply

A water source that has been approved by the SWRCB for domestic use in a PWS and designated as such in a domestic water supply permit.

Auxiliary Water Supply

A source of water, other than an approved water supply, that 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

The undesirable flow of water or other liquids, gases, mixtures or substances, into the distributing pipes of a PWS from any source other than an approved water supply. Backsiphonage or backpressure are causes of backflow.

Backflow Prevention Assembly (BPA)

A mechanical assembly designed and constructed to prevent backflow, such that while in-line it can be repaired and its ability to prevent backflow, as designed, can be tested. The assembly must have passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated its competency to the State Water Resources Control Board).

Backflow Prevention Assembly Tester (BPA Tester)

A person who is certified as a BPA tester pursuant to Section 4 of this CCCP.

Community Water System

A PWS that serves at least 15 service connections used by yearlong residents or regularly serves at least 25-year-long residents of the area served by the system.

Contamination

Degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health, or which may impair the usefulness or quality of the water.

Cross-Connection

Any actual or potential connection or structural arrangement between a PWS, including a piping system connected to the PWS 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.

By-pass arrangements, jumper connections, removable sections, or other devices through which backflow could occur shall be considered cross-connections.

Cross-Connection Control Program Coordinator

The designated individual involved in the development of and be responsible for reporting, tracking, and other administration duties for the Program.

Cross-Connection Control Specialist

A person who is certified as a Cross-Connection Control Specialist pursuant to Section 4 of this CCCP.

Customer's Water System

All facilities beyond the service meter. The system or systems may include both potable and non-potable water systems.

Distribution System

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

Double Check Valve Backflow Prevention Assembly (DC)

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 for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards.

Double Check Detector Backflow Prevention Assembly (DCDA)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may only be used for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this CCCP.

Double Check Detector Backflow Prevention Assembly – Type II (DCDA-II)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may only be used for protection from low hazard cross-connections, backsiphonage, and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

East Orange County Water District Retail Zone Water System ID No. CA3010068 (EOCWD-Retail Zone)

The potable water system serving residential and commercial customers through the retail zoned system.

East Orange County Water District Wholesale Zone Water System ID No. CA3010093 (EOCWD-Wholesale Zone)

The potable water system serving wholesale water to the EOCWD-Retail Zone and four neighboring agencies through metered turnouts along with two service connections to one EOCWD facility and one commercial customer.

Hazard Assessment

An evaluation of a user premises designed to evaluate the types and degrees of hazard at a user's premises.

High Hazard Cross-Connection

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 Appendix D of the CCCPH.

Low Hazard Cross-Connection

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.

Pollutant

Material which causes a degradation in the quality of the potable water supply which does not create a hazard to the public health, but which does impair the aesthetic quality of water.

Premises

All areas on a customer's property which are served or have the potential to be served by the PWS.

Premises Containment

Protection of a PWS's distribution system from backflow from a user's premises through the installation of one (1) 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 PWS's distribution system.

Pressure Vacuum Breaker Backflow Prevention Assembly (PVB)

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 low or high hazard backsiphonage events and is not to be used to protect from any backpressure events.

A schematic of this assembly is provided in Appendix C of the CCCPH.

Public Water System (PWS)

A system for the provision of piped water to the public for human consumption which has five or more service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year. Additionally, consists of the source facilities and the distribution system and shall include all those facilities of the water system under the complete control of EOCWD up to the point where the Customer's Water System begins the service connection.

Recycled Water (RW)

Wastewater which as a result of treatment is suitable for uses other than potable use.

Reduced Pressure Principle Backflow Prevention Assembly (RP)

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. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Reduced Pressure Principle Detector Backflow Prevention Assembly (RPDA)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Reduced Pressure Principle Detector Backflow Prevention Assembly – Type II (RPDA-II)

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 2 gallons per minute and visually indicating all rates of flow. This type of assembly may be used for protection from low and high hazard backsiphonage and backpressure events.

To be approved these assemblies must be accessible for in-line maintenance and testing and be installed per EOCWD Standards. A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

Service Connection

The point where a water user's piping is connected to the PWS or the point in the customer's water system where the PWS can be protected from backflow using an AG or a BPA.

Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly (SVB)

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 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 low hazard cross-connection backsiphonage events and is not to be used to protect from any backpressure events.

A schematic of this assembly is provided in Appendix C of the CCCPH which is included in Appendix A of this document.

State Water Board (SWRCB)

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 Backflow Prevention Assembly

An assembly consisting of a reduced pressure principle backflow prevention assembly combined with a changeover piping configuration (swivel-ell connection) designed and constructed pursuant to Section 5 of this CCCP.

Used Water

Any water supplied by EOCWD from the PWS to a Customer's Water System after it has passed through the service connection and is no longer under the control of EOCWD.

User Supervisor

A person designated by a water user to oversee a water use site and responsible for the avoidance of backflow events.

Water Service Agreement

Shall mean an agreement entered into between the District and a person, persons, firm, corporation, association or agency, or their successors and assignees, who has already, or desires to, install, remove, alter or replace, or cause to be installed, removed, altered, or replaced, any water facility or appurtenance for the purpose of supplying water to a property.

Water System

The water system shall be considered as made up of two parts; the PWS and Customer's Water System

Water Supplier

EOCWD, who owns and operates the PWS.

Water User

Any person(s) or entity obtaining water from EOCWD.

3.0 PROGRAM ADMINISTRATION

3.1 Legal Authority (CCCPH 3.1.3)

The Water District administers the Program in accordance with the Rules and Regulations for Water Service, Cross-Connection and Backflow Prevention, Section 6. The adoption was December 19, 2019, in agreement with Title 17, Chapter V, Sections 7583-7622, California Code of Regulations. The Rules and Regulations for Water Service will be revised to include new elements presented in this CCCP and in compliance with CCCPH. The adoption is expected by August 2025.

The existing Rules and Regulations are included in Appendix B.

3.2 Program Administration (CCCPH 3.1.3)

The Program is administered by the East Orange County Water District (EOCWD). EOCWD is responsible for reporting on several regulatory programs involving water and wastewater. Program administration includes cross-connection control reporting, backflow testing notification and tracking, and performing hazard assessments.

Figure 3-1 shows the current organizational chart for the EOCWD Program. Additional Program activities spanning across other departments are discussed in more detail in Section 9 of this CCCP.

The Operations Manager is the Cross Connection Control Program Coordinator and holds a Cross-Connection Control Specialist certification but EOCWD also hires a consultant to assist with the performance of the program. The Operations Manager reports directly to the General Manager. The Cross-Connection Control Program Coordinator is responsible for overseeing the administrative responsibilities of the program. Additional staff include the Operations supervisor as well as Wastewater Collections and Water Distribution Operators who are available to assist with the administrative duties of the Program.

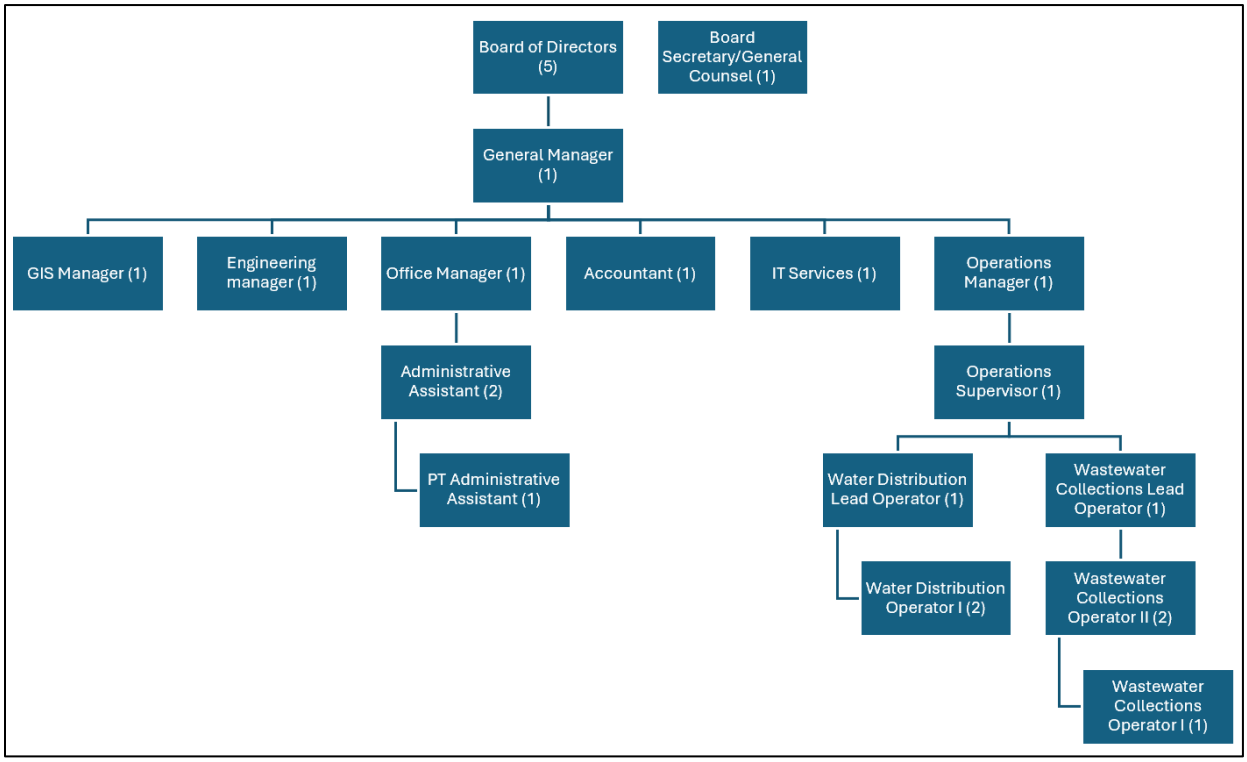


Figure 3-1. EOCWD Organization Chart

4.0 BACKFLOW PREVENTION ASSEMBLY TESTERS AND CROSS-CONNECTION CONTROL SPECIALISTS

This section specifies the certification requirements for Backflow Prevention Assembly Tester (BPA Testers) and Cross-Connection Control Specialists.

4.1 CCCPH Backflow Prevention Assembly Tester Requirements (CCCPH 3.4.1)

Chapter 3, Article 4 of the CCCPH provides the requirements of a SWRCB recognized and American National Standards Institute accredited organization certifying BPA Testers. Within an accredited organization, the program must include provisions for revocation of a BPA, testers certification and a publicly available list of certified backflow prevention assembly testers. Certification from an accredited organization requires completion of a program that includes the following:

- Timed and proctored written exams with prescribed number of test questions and covering specified material.
- Performance of a hands-on exam demonstrating proficiency in accurately determining the operating condition of an RP, DC, PVB, and SVB.
- Recertification no less frequently than every three years including both a written and performance exam.
- Prerequisite of either two years prior experience or completion of an instructional training course.

4.1.1 Approved Backflow Prevention Assembly Tester List

EOCWD hires a backflow tester from a list of certified testers generated from the Orange County Health Care Agency to test backflows within the service area including both EOCWD owned and privately owned BPAs. A handful of customers have certified BPA testers that are registered with the Orange County Health Care Agency on staff, such as the school district and cities. Those select customers are not tested by the EOCWD hired tester if they maintain a valid, registered tester certification. Test reports are reviewed for accuracy and completeness by the Cross-Connection Control Specialists.

Additionally, EOCWD offers a list of certified BPA Testers to assembly owners with failed initial test results who must hire someone to repair or replace the BPA and retest the assembly. EOCWD uses the Orange County Health Care Agency Environmental Health's certified backflow tester list.

Below are the Orange County Health Care Agency's requirements to be included on EOCWD's list.

- A copy of American National Standard Institute (ANSI) accredited organization certificate.
- Completed and signed backflow tester application.
- Completed and signed backflow tester code of conduct.
- Proof of backflow test kit calibration.
- A current head shot photo.
- Valid registration with the Orange County Health Care Agency.

Testers may be removed from the approved list if any of the following conditions apply:

- Certification expires
- Gauge calibration expires
- Improper testing or repairs
- Falsifying results or documents
- Failure to enter completed tests reports online

Orange County Health Care Agency will communicate BPA Testers who falsify records to the certification board. Appendix C includes the BPA Tester Application to be included in the Orange County Health Care Agency list.

4.1.2 Cross-Connection Control Specialist Requirement (CCCPH 3.4.2)

Cross-Connection Control Specialist(s) shall maintain valid certification from a certifying organization recognized by the SWRCB pursuant to CCCPH Chapter 3 Article 4. Certification requires completion of a program that includes the following:

- Timed and proctored written exams with prescribed number of test questions and covering specified material
- Completion of an instructional training course
- Recertification no less frequently than every three years
- Recertification through an exam, 12 contact hours of continuing education, or a combination of both

Similar to program requirements for BPA testers, the program for Cross-Connection Control Specialists from the accredited organization must contain:

- Provisions for revocation of a Cross-Connection Control Specialist's certification
- A publicly available list of certified Cross-Connection Control Specialists
- A valid Backflow Prevention Assembly Tester certification as well as completion of an instructional training course for initial certification or when an examiner has not held a valid certification for three or more years

Cross-Connection Control Specialists working for EOCWD will be required to be certified from an approved accredited organization.

5.0 CROSS-CONNECTION CONTROL PROGRAM REQUIREMENTS

5.1 Program General Requirements (CCCPH 2.2)

Unprotected cross-connections with the EOCWD-Wholesale Zone PWS are prohibited. Whenever backflow protection has been found necessary, EOCWD will require the water user to install an approved backflow protection, by and at the expense of the user, for continued service or before a new service is granted.

The installation and type of backflow protection shall be in accordance with the requirements of this CCCP, EOCWD's Rules and Regulations for Water Service, and Appendix D of the CCCPH. If backflow protection is found to be removed or bypassed, water service will be discontinued until the issue is corrected, and fines may be imposed.

Topics addressed in this section include:

- Backflow Protection Requirements
- Protection Requirements Based on Degree of Hazard
- Hazard Assessments

5.1.1 Backflow Protection Requirements (CCCPH 3.3.2 & Rules and Regulations for Water Service)

5.1.1.1 General Requirements

Backflow protection is required when the following conditions are present or expected to occur:

- When a premises contains an auxiliary water supply the water supply to the premises shall be protected against backflow of water from the premises into the public water system unless the auxiliary water supply is accepted as an additional source by EOCWD and is approved by the public health agency having jurisdiction.
- When a premises on which any substance is handled in such a fashion as may allow its entry into the water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of process waters and waters originating from the EOCWD water system which have been subjected to deterioration in sanitary quality.
- When a premises has internal cross-connections that cannot be permanently corrected or controlled to the satisfaction of EOCWD or local health department.
- When a premises has intricate piping arrangements or where entry to all or portions of the site are restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that no cross-connection exist.
- When a premises has a history of repeated cross-connections being established or reestablished.

EOCWD must ensure its wholesale distribution system is protected from backflow from identified hazards through the proper installation, continued operation, and field testing of an approved BPA according to Section 6 and 7 of this CCCP. When a DC is required or referenced in this CCCP, a DCDA or DCDA-II type of

assembly may be substituted if appropriate. When an RP is required or referenced in this CCCP, an RPDA or RPDA-II type of assembly may be substituted if appropriate.

The BPA installed must be no less protective than that which is commensurate with the degree of hazard at a user premises and as determined based on the results of the hazard assessment as specified in this section.

Unless specified otherwise in this section and in Section 3.2.2 of the CCCPH, EOCWD must, at all times, protect its wholesale distribution system from high hazard cross-connections (see Appendix D of the CCCPH for examples), through premises containment, through the use of AG(s) or RP(s).

Following SWRCB review and approval, EOCWD may use internal protection in lieu of premises containment when premises containment is infeasible.

5.1.2 Protection Requirements Based on Degree of Hazard

The type of backflow protection that is required is determined based on the degree of hazard that is present at a premises. EOCWD will determine the minimum level of protection required, but a water user may opt for a higher level of protection.

See CCCPH Appendix D for additional information on high hazard cross-connection control premises containment.

5.1.2.1 Toxic, Sewage, or Hazardous Substances

1. Premises where toxic or hazardous substances are handled in any manner which may allow for contamination of the PWS shall be protected by an AG or an RP at the service connection.
2. Premises where the PWS is used to supplement the RW supply shall be protected by an AG.
3. Premises where RW is used and there is no interconnection with the potable water system shall have a minimum protection type of an RP.
4. Premises where there are wastewater pumping and/or treatment plants and there is no interconnection with the potable water system shall have a minimum protection type of AG. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by EOCWD.

5.1.2.2 Auxiliary Water Supplies

Protection from auxiliary water supplies shall comply with the following:

1. Premises where there is an unapproved auxiliary water supply which is interconnected with the PWS will use an AG. An RP may be provided in lieu of an AG if approved by EOCWD and the SWRCB.
2. Premises where there is an unapproved auxiliary water supply and there are no interconnections with the PWS will use an RP. A DC may be provided in lieu of an RP if approved by EOCWD.

5.1.2.3 Commercial Fire systems

Protection from commercial fire systems shall be no less than a DCDA and comply with the following:

1. A high hazard cross-connection fire system, including but not limited to fire systems that may utilize chemical addition (e.g., anti-freeze) or an auxiliary water supply, must have no less than RPDA protection.
2. Premises where the fire system is directly supplied from the PWS and there is an unapproved auxiliary water supply on or to the premises (not interconnected) will use an RPDA.
3. Premises where the fire system is supplied from the PWS and where either elevated storage tanks or fire pumps which take suction from the private reservoirs or tanks are used will use a DCDA.
4. All fire service connections must receive at least the same level of protection on a premises.

5.1.2.4 Swivel-Ell Assemblies (CCCPH 3.2.2(d))

EOCWD does not currently and will not be utilizing swivel-ell assemblies.

5.1.3 Hazard Assessments (CCCPH 3.2.1 & Rules and Regulations for Water Service)

An evaluation of hazards on the EOCWD-Wholesale Zone system will be performed or reviewed by a certified Cross-Connection Control Specialist to determine whether a high, low, or no hazard is present. The required BPA at a user premises will be determined by the degree of hazard through observed or understood water use. The observations and final determination of the required BPA will be included in a final report that will be maintained by EOCWD for reference.

5.1.3.1 Access for Inspection

EOCWD's Rules and Regulations for Water Service provides for reasonable access to any water user's premises for purposes of conducting cross-connection control surveys, inspections of BPAs, and as otherwise necessary to protect the PWS against cross-connections. If access is refused, EOCWD has the option to discontinue water service to the premises until entry is allowed.

5.1.3.2 New Construction

EOCWD evaluates all new water service requests through review of plans and specifications submitted to EOCWD to assess backflow protection requirements.

If a BPA is required, EOCWD requires it to be installed and tested prior to initiating water service, as is described in Section 3.3.3(a) of the CCCPH.

5.1.3.3 Existing Customers

5.1.3.3.1 Initial Hazard Assessment (CCCPH 3.2.1)

As required by the CCCPH, EOCWD will conduct initial site hazard assessments at existing premises and EOCWD turnout connections to evaluate the potential for backflow into the PWS. The hazard assessment will consider the following items:

1. The existence of cross-connections;
2. The type and use of materials handled and present, or likely to be, present;

3. The degree of piping system complexity and accessibility;
4. Access to auxiliary water supplies, pumping systems, or pressure systems;
5. Conditions that increase the likelihood or a backflow event;
6. User premises accessibility;
7. Any previous backflow incidents on the user premises; and,
8. The requirements and information provided in the CCCPH.

EOCWD will perform the initial assessment using a combination of the following actions:

- Review of Building Permits
- Review of as-built or record drawings
- Date of construction
- Cross reference of billing records with known backflow assemblies
- Field Inspections
- Google Maps and Aerial photos
- Reporting from BPA Testers

Table 5-1 provides the EOCWD- Wholesale Zone customers BPA detail. The initial hazard assessment for the wholesale customers will be complete by July 2026. Table 5-2 includes the EOCWD-Wholesale Zone system water facilities and turnouts. EOCWD will be performing hazard assessments by July 2026 to confirm compliance with the California Plumbing Code.

Table 5-1. EOCWD -Wholesale Zone Customer BPAs and Anticipated Hazard Assessment Completion Date

Customer	Service Size	Current BPA Protection	Hazard	Anticipated Completion Date
Cox Communications	6-inch	DCDA	Fire	July 2026
Cox Communication	¾-inch	DC	Fire Bypass	July 2026
Cox Communication	1.5-inch	DC	Service protection for building	July 2026
EOCWD-Wholesale Zone Reservoir- Peters Canyon	2-inch	RP	Booster Pump	July 2026

Table 5-2. EOCWD- Wholesale Zone Turnout and Water Facility Hazard Assessment Timeframes	
Facility Type	Location
EOCWD-Wholesale Zone Reservoirs	Peters Canyon Newport Andres
EOCWD-Retail Zone	Turnout Emergency Connection
Golden State Water Company	Fox Run Peacock Hill Skyline Cowan heights Lemon Heights
City of Tustin	Ethelbee Prospect Hewes Foothill Newport Gray Newport Green
City of Orange	Chandler Ranch
Irvine Ranch Water District	Jamboree

5.1.3.4 Follow-Up Hazard Assessments (CCCPH 3.2.1(e))

The program administrator or the Cross-Connection Control Specialist will conduct or review hazard assessments during site inspections or when:

1. A user premises changes ownership, excluding single-family residences;
2. A user premises is newly connected to the PWS;
3. Evidence exists of potential changes in the activities or materials on a user's premises;
4. A backflow event from a user's premises occurs;
5. Periodically according to EOCWD's Program;
6. The SWRCB requests a hazard assessment of a user's premises; and
7. EOCWD concludes an existing hazard assessment may no longer be correct.

EOCWD will notify water users through a written notice requesting an inspection appointment. Any water user who cannot or will not allow an on-premises inspection of piping system will be required to install a RP or AG.

5.1.3.5 Hazard Assessment Outcomes

Outcomes following the completion of hazard assessments are described below.

5.1.3.5.1 Meets Requirements

If the presently installed BPA is found to meet the requirements of the CCCPH and is found to be in good working order, then it will remain in place and be considered adequate protection.

5.1.3.5.2 Non-Complying Assembly

All presently installed BPAs which do not meet the requirements set forth in the CCCPH and this CCCP will be required to be upgraded to the appropriate BPA as determined by EOCWD. EOCWD will provide written notice to the customer to install, at their cost and expenses, an approved BPA within 30 calendar days. If corrective actions are not taken, EOCWD will send a second notice that will give the customer an additional two-week period to take required corrective actions. If no action is taken within the two-week period, EOCWD may terminate water service to the affected customer until the required corrective actions are taken.

5.1.3.5.3 New Assembly Required

If it is determined that an existing premises requires backflow protection, EOCWD will provide written notice to the customer to install, at their cost and expenses, an approved BPA within 30 calendar days. If corrective actions are not taken, EOCWD will send a second notice that will give the customer an additional two-week period to take required corrective actions. If no action is taken after the two-week period, EOCWD may terminate water service to the affected customer until the required corrective actions are taken.

5.2 Discontinuation of Water Service (Rules and Regulations for Water Service)

Conditions for discontinuation of water services may include the following items:

- Refusal to install a required BPA
- Refusal to test a BPA
- Refusal to repair a faulty BPA
- Refusal to replace a faulty BPA
- Direct or indirect connection between the PWS and a sewer line
- Unprotected direct or indirect connection between the PWS and a system or equipment containing contaminants
- Unprotected direct or indirect connection between the PWS and an auxiliary water system
- A situation which presents an immediate health hazard to the PWS

EOCWD will make reasonable effort to advise water users, through direct contact or written notices, of the necessary corrective actions. If no action is taken within a reasonable time period, water service will be terminated. The water service will remain inactive until correction of violations has been approved by EOCWD.

6.0 BACKFLOW PREVENTION ASSEMBLIES

6.1 Approved Backflow Prevention Assemblies (CCCPH 3.3.1)

Only BPAs approved and deemed acceptable by EOCWD shall be allowed for installation by a water user to protect the PWS. Approved BPAs which may be subjected to back-pressure or back-siphonage must have been fully tested and granted a Certificate of Approval by a certified laboratory. EOCWD will provide, upon request, to any water user required to install a backflow preventer a list of approved BPAs.

Approved BPAs must have passed both laboratory and field evaluation tests in accordance with standards found in any of the following:

- The latest edition of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California Manual of Cross-Connection Control;
- The certification requirements for BPAs in the latest edition of Standards of American Society of Safety Engineers International; or
- An equivalent testing organization approved by the SWRCB.

BPAs must not be modified from the approved configuration. The type of device required shall depend on the degree of hazard. Different types of approved BPAs are specified for various scenarios to protect the potable water supply. BPA testers are required to notify EOCWD if a water user or EOCWD owned backflow preventer has been modified.

6.1.1 Installation Requirements (CCCPH 3.3.2)

BPAs shall be installed by the customer and at their expense when found necessary or prior to installation of a new service per EOCWD standards and specifications. The BPAs shall be installed in a manner prescribed in the CCCPH and as close as practical to the user's service connection on the user premises. The final authority in determining the required location shall be EOCWD. If internal protection is proposed for the purpose of containment, EOCWD must be able to access the user's premises and ensure that the on-site protections meet the requirements of the CCCPH. All BPAs shall be readily accessible for field testing and maintenance.

As soon as the installation of the BPA has been completed, the Customer is to have the assembly tested by a certified tester and submit the test results to the EOCWD within ten days of the test date. Requirements for the specific elements of backflow prevention assemblies are described in the following subsections.

Standard Drawings for a RP BPA is included in Appendix D.

6.1.1.1 Air Gap

An AG is to be installed on the user's premises at the water user's service connection and in accordance with CCCPH requirements. The receiving water container must be located on the water user's premises at the water users service connection. Alternate locations must be approved by EOCWD. All piping between the water users service connection and the discharge location of the receiving water container must be above grade and accessible for visual inspection. No water user shall be provided from any point between the service connection and the AG. If installed at the user service connection after the adoption of the CCCPH, the AG must be approved by the SWRCB prior to installation. The water inlet piping shall

terminate a distance of twice the diameter of the effective opening, but in no case less than 1 inch above the overflow rim of the receiving tank.

6.1.1.2 Reduced Pressure Principle Backflow Prevention Assembly

The approved RP shall be installed on the user's side of and as close to the service connection as is practical. The RP shall be installed such that the lowest point of the assembly is a minimum of 12 inches above the finished grade and not more than 36 inches above grade measured from the bottom of the assembly and with a minimum of 12 inches side clearance, unless an alternative is approved by EOCWD. However, a minimum side clearance of 24 inches must be provided on the side of the assembly that contains the test cocks. The assembly should be installed so that it is readily accessible for maintenance and testing.

The same space requirements may be applied to RPDA assemblies.

6.1.1.3 Double Check Valve Backflow Prevention Assembly

DCs installed or replaced after the adoption of the CCCPH must be installed on the user's side of and as close to the service connection as is practical. The DC shall be installed such that the lowest point of the assembly is a minimum of 12 inches above the finished grade and not more than 36 inches above grade measured from the bottom of the assembly and with a minimum of 12 inches side clearance, unless an alternative is approved by EOCWD. However, a minimum side clearance of 24 inches must be provided on the side of the assembly that contains the test cocks. The assembly should be installed so that it is readily accessible for maintenance and testing.

The same space requirements may be applied to DCDA assemblies.

Below ground installation can be considered if approved by EOCWD where no alternative option is available.

6.1.1.4 Pressure Vacuum Breaker Backflow Prevention Assembly

A PVB must be installed a minimum of 12 inches above all downstream piping and outlets. A PVB may only be used for containment when no potential for backpressure is present, such as roadway right-of-way irrigation systems.

The same requirements may be applied to SVB assemblies.

7.0 NOTIFICATION AND TESTING OF BACKFLOW PREVENTION ASSEMBLIES

7.1 BPA Testing and Notification Procedures (CCCPH 3.3.3 & Rules and Regulations for Water Service Sections 6.7 & 6.8)

This section outlines EOCWD's overall BPA testing and notification procedures.

7.1.1 Testing

7.1.1.1 Frequency

EOCWD requires all BPAs with active water services be field tested upon installation, repair, or when relocated. More frequent testing may be deemed necessary based on site condition, hazards present, or as determined by EOCWD such as where successive annual reports indicate defective operation of a Backflow prevention device. Prior to initiating or resuming water service, EOCWD must receive from a BPA Tester a backflow test report form indicating a passing test.

7.1.1.2 Procedures

BPA Testers shall follow the testing procedures according to the latest edition of the University of Southern California's Manual of Cross-Connection Control. All costs associated with testing, repairing, replacing, or overhauling a BPA shall be borne by the water user. Testing results shall be submitted to EOCWD on an approved testing form in electronic format or signed paper form.

A copy of the testing form is included in Appendix E.

7.1.1.3 New Installations

EOCWD must receive a passing field test for all newly installed BPAs providing containment protection before water service can be provided. In addition, visual inspections of all newly installed assemblies will be made to assess proper installation and to validate the information from the initial testing of the assembly.

7.1.1.4 Failed Field Test

BPAs that fail the field test should be repaired or replaced and retested within 30 days. Failed assemblies may be removed for repair or replacement provided the water use is either discontinued until repair is completed and the device is returned to service, or the service connection is equipped with other backflow protection approved by EOCWD. A retest will be required following the repair or replacement of the assembly.

7.1.2 Notifications

7.1.2.1 Notification Process

It is the responsibility of EOCWD to verify that BPAs receive a passing field test at least once a year. EOCWD will send notifications to customers regarding the need for backflow testing. The notice requires that backflows be tested within 30 days by an approved BPA.

If a test report is not completed and EOCWD will not be testing the assembly, a second notice is sent providing a two-week period to have the BPA tested. If no action is taken within the two-week period,

EOCWD may terminate water service to the premises until the subject device is tested and the necessary certification provided to EOCWD.

EOCWD currently hires BPA Testers who proactively test BPA devices on behalf of the customer without requiring any action from the customer.

Notifications include information regarding Cross-Connection Control State Regulations, EOCWD's Rules and Regulations for Water Service and contact information, instructions for accessing the list of backflow tester companies, processes for submitting a backflow test report, and the due date for testing.

7.1.2.2 Notification of Imminent Hazard

BPA testers are required to notify EOCWD within 24 hours if a backflow incident or an unprotected cross-connection is observed at a user premise during field testing. EOCWD will immediately investigate the incident as described in Section 9 of this CCCP.

8.0 RECORD MAINTENANCE

EOCWD will retain the following records, described in the sections below, in either electronic or hardcopy form and make them available to the SWRCB upon request. EOCWD utilizes Continental Utility Services, a utility billing and asset management software program, to track cross-connection control related activities.

8.1 Cross-Connection Control Plan

This CCCP will be retained and reviewed every five years to evaluate for necessary updates.

8.2 Hazard Assessments

EOCWD will retain the two most recent hazard assessments conducted according to Section 5.1.3 of this CCCP.

8.3 Assembly Records

For each BPA type, the associated hazard, location, owner, manufacturer and model, size, installation date, serial number, account number, consumer of record, and repair history shall be kept electronically.

EOCWD uses Continental Utility Services for recordkeeping . Hardcopy and/or electronic copies are kept within EOCWD files.

For each AG installation: the associated hazard and the location, owner, and as-built plans of the AG.

8.4 Testing Results

Test results on all BPAs and AGs will be kept electronically for three calendar years and will include the name, test date, repair date, and certification number of the BPA tester.

8.5 Repairs

All repairs made to BPAs for the previous three calendar years.

8.6 User Supervisors

Current contact information for the user supervisor and water user, and any applicable training and qualifications as described by Section 10.3 of this program.

8.7 Incident Reports

Descriptions and follow-up actions related to all backflow incidents for the most recent 10 years will be retained.

8.8 Cross-Connection Control Shutdown Tests

The most recent shutdown tests or dye tests will be retained.

8.9 Contracts or Agreements

All contracts or agreements that pertain to the Cross-Connection Control Program will be retained.

8.10 Public Outreach and Educational Materials

Elements required per the CCCPH will be saved for the previous three calendar years.

9.0 INCIDENT RESPONSE AND NOTIFICATION

EOCWD will investigate potential backflow incidents when any of the following events are reported:

- Water quality complaints that cannot be explained as a “normal” aesthetic problem
- Backflow incident has been suspected or has known to have occurred
- Unknown increase or decrease of system pressure reported

Additionally, EOCWD will initiate notification and water quality sampling procedures when a water main break or power outage causes a complete loss of water pressure within the wholesale transmission system.

9.1 Incident Response Procedure (CCCPH 3.5.2)

In the event of a potential backflow or cross-connection related incident, EOCWD will take the following steps.

9.1.1 Incident Investigation

The EOCWD operations team will investigate a potential incident by dispatching either the Operations Manager, Operations Supervisor, or Water Operator lll to the location of the reported incident. Through a field investigation, it will be determined if contamination is present in the PWS and the extent of the impacted area. The operations personnel will perform the following tasks to investigate for the potential cross-connections:

- Survey the location and surrounding area for possible main breaks
- Investigate the location to observe for potential source(s) of contamination
- Observe the domestic meter(s) for negative consumption
- Interview affected customers
- Survey hydrants, blow offs, and air inlet valves for possible sources of contamination

If a backflow incident is discovered, EOCWD will discontinue water service to that location until a corrective action is taken.

If a backflow incident is suspected during off-hours the initial investigation will begin with on-call personnel familiar with cross-connection control. The response will be within an hour. The on-call personnel will relay findings to the Cross-Connection Control Specialist when the shift begins and the specialist will continue with the investigation and notification process.

9.1.2 Source of Contamination Isolation

EOCWD will isolate the portion of the system suspected of being contaminated by closing isolation valves or the water service and will notify impacted customers.

9.1.3 Notification and Coordination with Outside Agencies

EOCWD will be responsible for notifying, within 24 hours, the SWRCB and the Orange County Health Care Agency of a potential incident.

9.1.4 Sampling Plan

A sampling plan will be implemented to confirm that the potable system meets Safe Drinking Water Standards. The Sampling Plan will be submitted to the SWRCB and Orange County Health Care Agency and will describe the steps required to identify the contaminants, assess the extent of the contamination, and define the necessary remediation efforts.

9.1.5 Notification of Affected Customers

When required, EOCWD will issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1. If the contamination is of biological nature, EOCWD will issue a Boil Water Order Notice. If the contamination is of chemical nature, EOCWD will issue Unsafe Water Alerts as "Do-Not-Use" or "Do-not-Drink" Notices. Notices include instructions on what consumers should do, where potable water is available, and if applicable, dates of notice issuance and expected resolution and location where additional information can be obtained.

9.1.6 Incident Reporting (CCCPH 3.5.3)

If required by the SWRCB, EOCWD will submit to the SWRCB a written incident report describing the nature and severity of the backflow, the actions taken by EOCWD in response to the incident, and any follow up actions required to prevent future incidents. The written report will contain, at a minimum, the information provided in Appendix F of the CCCPH.

10.0 PUBLIC OUTREACH, EDUCATION, AND COORDINATION

10.1 Public Outreach and Education

EOCWD uses public outreach as an opportunity to educate the general public, staff, and BPA owners on EOCWD's Program and the importance of testing and maintaining BPAs. Public outreach may include:

- Fliers or pamphlets
- New construction packets for developers
- Water bill inserts
- Consumer confidence report
- Emails
- District's website

EOCWD will be creating public outreach material to compliment the hazard assessments to be performed to help water customers understand the process, need for backflows and hazard assessments, and provide resources when necessary.

10.2 Training

EOCWD encourages its employees and other staff to obtain and maintain water related certifications such as BPA tester and Cross-Connection Control Specialist certifications.

10.3 User Supervisors (CCCPH 3.2.2)

EOCWD may require, when necessary and at its discretion, a water user to designate a user supervisor. The water user shall inform EOCWD of the user supervisor's identity on, at a minimum, an annual basis and whenever a change occurs.

The user supervisor will be responsible for monitoring BPAs and avoiding cross-connections. In the event of contamination or pollution of the PWS due to a cross-connection on the premises, EOCWD shall be promptly notified by the user supervisor.

The user supervisor will be required to attend, at the owner's expense, a yearly training provided by EOCWD that covers the Program, types of hazards, and concerns typically found on the user's premises.

At the time of this CCCP, no sites require a User Supervisor.

10.4 Inter-Agency Coordination

EOCWD coordinates, when required, with the Orange County Health Care Agency for environmental and public health concerns. EOCWD coordinates with Water Emergency Response Organization of Orange County with strategies to integrate communication and information sharing.

EOCWD reviews drawings, permits, and performs inspections on new projects requiring water services and remodeling projects involving existing water users. EOCWD coordinates with the following entities in regard to requests for new services:

- City of Tustin Water Department
- City of Orange Water Department
- Orange County Fire Authority
- City of Orange Fire Department
- Orange County Sheriff's Department
- California Office of Emergency Services
- SWRCB, Division of Drinking Water


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