CITY OF East Palo Alto

CROSS-CONNECTION CONTROL PLAN

IN ACCORDANCE WITH THE CROSS-CONNECTION CONTROL POLICY HANDBOOK

City of East Palo Alto
December 2025

Cross-Connection Control Plan

Prepared for

City of East Palo Alto

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City of East Palo Alto Cross-Connection Control Program Contact Information			
Title	Name	Contact Information	Backflow Certifications
Director of Public Works	Humza Javed	Hjaved@cityofepa.org 650-853-3130	NA
City Engineer	Anwarbeg Mirza	Amirza@cityofepa.org 650-853-3113	NA
Utility Manager	Matthew Vining	Mvining@cityofepa.org 650-229-3818	NA
Cross-Connection Specialist/ CCCP Coordinator	Noel Xia, San Mateo County Environmental Health	Zxia@smc.gov 650-313-4552	
Emergency - Veolia Water	**650-304-4432 –**Veolia Water is the Operations and Maintenance contractor for the City of East Palo Alto water system. Veolia water will be the first responder to any water emergency including backflow events.		

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LIST OF ACRONYMS AND ABBREVIATIONS

AG	Air Gap
AMI	Advanced Metering Infrastructure
ANSI	American National Standards Institute
BPA	Backflow Prevention Assembly
CCCP	Cross-Connection Control Plan
CCCPH	Cross-Connection Control Policy Handbook
City	City of East Palo Alto
co	City Ordinance
DC	Double Check Valve Backflow Prevention Assembly
DCDA	Double Check Detector Backflow Prevention Assembly
DCDA-11	Double Check Detector Backflow Prevention Assembly -Type II
DDW	Division of Drinking Water
ERP	Emergency Response Plan
FY	Fiscal Year
Program	City of East Palo Alto Cross-Connection Control Program
PVB	Pressure Vacuum Breaker Backflow Prevention Assembly
PWS	Public Water System
RP	Reduced Pressure Principle Backflow Prevention Assembly
RPDA	Reduced Pressure Principle Detector Backflow Prevention Assembly
RPDA-11	Backflow Prevention Assembly-Type II Recycled Water
SVB	Spill-Resistant Pressure Vacuum Breaker Back siphonage Prevention Assembly
Swivel-Ell	Swivel-Ell Backflow Prevention Assembly
SWRCB	State Water Resource Control Board
Worker	Utility Maintenance Worker

1.0 *CROSS-CONNECTION CONTROL PLAN*

1.1 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 is July 1, 2024, replacing the previous regulations covered under Title 17, Chapter V, Sections 7583-7622 under California Code of Regulations (Title 17). The 2023 adopted version of the CCCPH is included in Appendix A of this document. Title 17 became inoperative and repealed 90 days after July 1, 2024. The CCCPH expands on the previous Title 17 requirements for initial and follow-up hazard assessments, 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 any 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).

1.2 Purpose

The intent of this document is to describe the Program implemented and administered by the City of East Palo Alto (City). The purpose of this CCCP is to protect the health of the water customers by:

1. Proper installation and maintenance of backflow preventers on services to premises where actual or potential cross-connections exist. The presence of backflow preventers is intended to prevent the backflow or back-siphonage of contaminants or pollutants from a customer's premises into the PWS.
2. Promoting the elimination of existing or future cross-connections through inspection and regulation of plumbing and water piping within or between a customer's premises and the PWS.

1.3 City of East Palo Alto Service Area

The city is a public community water system managed by the city government and overseen by an elected City Council. The city owns and maintains the public water system, sewer collection system, and stormwater system. The PWS includes four purchased water connections with the SFPUC. The City of East Palo Alto has contracted out the service of its distribution system to Veolia Water, who serves 30,000 residents through 4,000 connections. The other 20% of the City is separately owned and operated by Palo Alto Park Mutual and O'Connor Collective.

2.0 DEFINITIONS

The following definitions describe terms and phrases pertinent to the various elements of this CCCP. The definitions presented in this section are divided into three groups, within which each definition is listed alphabetically: 1) Water and Water System Definitions; 2) Agencies/Personnel; and 3) Equipment Definitions.

2.1 Water and Water System Definitions

Air Gap Separation (AG)
The term "air gap separation" shall mean a physical break between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An "approved air gap separation" 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.

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 customer.

Backflow
The undesirable flow of water or other liquids, gases, mixtures, or substances, under pressure, into the distributing pipes of a potable supply of water from any source other than an approved water supply. Back-siphonage or backpressure are the two conditions that cause backflow to occur.

City Water System
The City water system consists of the source facilities and distribution system under the control of the City water utilities department up to and including water meters. The City water system may also be referred to as the public water system or the distribution system.

Contamination/Contaminant
Any impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree that creates an actual hazard to the public health through poisoning or through the spread of disease.

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 customer or available to the water customer, and any source or distribution system containing liquid, gas, or other substances not from an approved water supply.

Customer's Water System
All facilities beyond the water meter. The customer's system or systems may include both potable and non-potable water systems.

Distribution System
Shall include the network of conduits used for the delivery of water from the source to the customer's water system. See also City Water System.

Hazard, Degree of
A hazard assessment must identify the degree of hazard (or no hazard) to the City's distribution system through evaluation of customer premises based on the following classifications:

High Hazard Cross-Connection
A cross-connection that poses a significant 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.

Low Hazard Cross-Connection
A cross-connection that has been found to not pose a significant 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.

No Hazard Cross-Connection
A cross-connection that poses no hazard to potability or safety of the public water supply.

Isolation
Otherwise known as Internal Protection. The appropriate type or method of backflow prevention within the customer's potable water system at the point of use, commensurate with the degree of hazard.

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

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

Premises Containment
Protection of a PWS distribution system from backflow from a customer's premises through the installation of one or more air gaps or backflow prevention assemblies, installed as close as practical to the customer's service connection at the water meter, in a manner that isolates the water customer's water supply from the PWS distribution system.

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 per year. Additionally, a PWS consists of the source facilities and the distribution system and shall include all those facilities of the water system under the complete control of the City up to the point of the service connection at the water meter to the customer's water system.

Recycled Water
Wastewater that is suitable for uses other than potable use due to appropriate levels of treatment. Currently the City of East Palo Alto does not use or distribute any recylced water.

Service Connection
The point where a water customer'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. Typically, this location is immediately after the water meter.

Used Water
Any water supplied by the City from the PWS to a customer's water system after it has passed through the service connection at the water meter and is no longer under the control of the City.

Water System
The water system shall be considered as made up of two parts: The PWS and the customer's water system.

2.2 Agencies/Personnel

Backflow Prevention Assembly Tester
A person who is certified as a Backflow Prevention Assembly Tester pursuant to Section 4 of this CCCP. A certified Backflow Prevention Assembly Tester is authorized to test backflow prevention assemblies at customer premises.

Cross-Connection Control Program Coordinator
The designated individual, under the guidance of the Public Works Division Manager- Engineering, that is involved in the development of and being responsible for reporting, tracking, and other administration duties for the CCCP. This person must hold a Cross-Connection Control Specialist Certification.

Cross-Connection Control Specialist
A person who is certified as a Cross-Connection Control Specialist pursuant to Section 4 of this CCCP. A certified Cross-Connection Control Specialist must obtain a Backflow Prevention Assembly Tester Certificate prior to becoming a Cross-Connection Control Specialist. Only a Cross-Connection Control Specialist is authorized to assess the hazard level present at customer premises. A Cross-Connection Control Specialist that maintains a Backflow Prevention Assembly Tester certificate is also able test backflow prevention assemblies.

State Water Resources Control Board
Unless otherwise specified, means the SWRCB, Division of Drinking Water (DDW) or the local primacy agency having been delegated authority by the SWRCB to enforce the requirements of Chapter 3 of the CCCPH.

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

Water Supplier
The person who owns or operates the approved water supply system. The City owns and operates the public community water system and is the Water Supplier.

Water Customer
Any person or entity obtaining water from an approved water supply system.

2.3 Equipment Definitions

Backflow Prevention Assembly (BPA)
A generic term referencing multiple types of 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 field tested, inspected, and evaluated. The assembly must have passed laboratory and field evaluation tests performed by a recognized testing organization that has demonstrated its competency to the SWRCB, Division of Drinking Water.

Double Check Detector Back/low Prevention Assembly (DCDA)
A double check valve backflow prevention assembly that includes a bypass with a water meter and a double check backflow prevention assembly, with the bypass water meter accurately registering flow rates up to two gallons per minute and visually indicating all rates of flow. This type of assembly may only be used for protection from back-siphonage and backpressure events (low-hazard connection). These devices are not allowed for new installations unless approved by the City Engineer.

Double Check Detector Back/low Prevention Assembly - Type II (DCDA-11}
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 indicating all rates of flow. This type of assembly may only be used for protection from back-siphonage and backpressure events (low-hazard cross-connection). These devices are not allowed for new installations unless approved by the City Engineer. 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 back-siphonage and backpressure events (low-hazard cross-connection). These devices are not allowed for new installations unless approved by the City Engineer.

Pressure Vacuum Breaker Back/low 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 back siphonage (low hazard and high hazard cross-connection) events and is not to be used to protect from backpressure events. These devices are not allowed for new installations unless approved by the City Engineer.

Reduced Pressure Principle Back/low 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 back siphonage and backpressure events (low-hazard and high-hazard cross-connections). To be approved, these assemblies must be accessible for in-line maintenance and testing and be installed per City Standards. A schematic of this assembly is provided in Appendix D.

Reduced Pressure Principle Detector Back/low 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 water meter accurately registering flow rates up to two gallons per minute and visually indicating all rates of flow. This type of assembly may be used for protection from back-siphonage and backpressure events (low-hazard and high-hazard cross-connections). To be approved, these assemblies must be accessible for in-line maintenance and testing and be installed per City Standards. A schematic

Reduced Pressure Principle Detector Back/low Prevention Assembly - Type II (RPDA-11}

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 indicating all rates of flow. This type of assembly may be used for protection from back siphonage and backpressure events (low-hazard and high-hazard cross-connection). To be approved, these assemblies must be accessible for in-line maintenance and testing and be installed per City Standards. A schematic of this assembly is provided in Appendix D.

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 back siphonage events (low hazard-connection) and is not to be used to protect from backpressure events. These devices are not allowed for new installations.

Swivel-Ell Back/low Prevention Assembly (Swivel-Ell)
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. These devices are not allowed for new installations.

3.0 CCCP ADMINISTRATION

This section describes the legal authority and administration of the CCCP.

3.1 Legal Authority (CCCPH 3.1.3 & EPA CO 15.44)

The City administers the Program in accordance with City Ordinance (CO), 15.44 - Backflow Prevention & Cross-Connection Control. The original adoption was in 1988 in agreement with Title 17, Chapter V, Sections 7583-7622, California Code of Regulations. The CO will be amended in Fiscal Year (FY) 25-26 to include new elements presented in this CCCP and in compliance with CCCPH.

The CO includes the authority to implement corrective actions if a water customer fails to comply in a timely manner with provisions regarding the installation, inspection, field testing or maintenance of a BPA required by the CCCPH. Additional authority exists to eliminate existing or future cross-connections through inspection and regulation of plumbing and water piping within a customer's premises, PWS or between them. The City's corrective actions include the ability to discontinue water service until all violations or non-compliant conditions have been corrected.

The current Municipal Code is included in Appendix B.

3.2 CCCP Administration

The program administrator for the cross-connection control program is the city's public works director or designee. At a minimum, the program administrator must be in a supervisor capacity and must be a cross-connection specialist certified by ABPA or AWWA. The city has a contract with the county division through an agreement to implement portions of the program, as allowed by state law and regulations, and any future SWRCB requirements. City and the city's water provider are ultimately responsible for the implementation of the program.

The Program is administered within the City's Public Works Department by the Utilities Engineering Section, in partnership with the San Mateo County Department of Environmental Health. Program administration includes cross-connection control reporting, backflow testing & hazard assessment notification, record keeping, and enforcement. For privately-owned BPA's the City typically requires the water customer to

perform annual inspection/testing, initial hazard assessment and as-needed hazard assessment through a City prescribed process detailed in the CCCP. In FY24-25 the City conducted initial hazard assessments at high-hazard non-residential premises. City-owned BPA's have these services performed either by San Mateo County or certified private contractor.

The San Mateo County Backflow Prevention Ordinance (Chapter 4.72) allows Environmental Health to issue administrative enforcement orders and fines to owners of backflow prevention assemblies within the City of East Palo Alto water system service area for failure to comply with annual testing of backflow prevention assemblies, failure to install backflow prevention assemblies as directed by Environmental Health, and all other violations of the County Backflow Prevention Ordinance, thus supporting the City's water system's cross-connection control program. While Veolia water system staff are primarily responsible for hazard assessments within its service area, Environmental Health and the backflow prevention testers approved through Environmental Health's programs, also support our cross-connection control program in identifying actual or potential cross-connection hazards, degree of hazard, and any backflow protection needed.

Environmental Health implements the BPA testing portion of the City's water system cross-connection control program. Environmental Health implements the BPA testing portion of the City's water system cross-connection control program. Through the Environmental Health programs, as described in more detail below, Environmental Health ensures that all BPAs are field tested, inspected and maintained in accordance with CCCPH section 3.3.3.

Environmental Health maintains all records related to testing of BPAs within the water system service area, as well as records of all certified/approved BPA testers testing within the water system service area.

The Cross-Connection Specialist reports directly to the San Mateo County Department of Environmental Health. The Specialist is responsible for carrying out the administrative responsibilities of the CCCP under the guidance of the Public Works Division Manager. Professional consultant and contract services are used as needed.

Public Works Call Center: 650-853-3189 - The Public Works Call Center is the City's emergency water phone number answered during normal business hours. For calls received during non-business hours, the calls are automatically forwarded to 911 police department dispatch. For all calls, the operator will dispatch calls to the correct personnel and department. Veolia Water staff will be the first responders to any water emergency. The San Mateo County cross-connection Control Specialist or a designee on-call water operator will be notified as necessary to investigate a potential backflow event.

4.0 CERTIFICATION REQUIREMENTS

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

4.1 Backflow Prevention Assembly Tester Certification Requirements

Chapter 3, Article 4 of the CCCPH provides the requirements of a SWRCB recognized and American National Standards Institute (ANSI) accredited organization certifying Backflow Prevention Assembly Testers. Within an accredited organization, the program must include provisions for revocation of a backflow prevention assembly 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 Back/low Prevention Assembly Tester & Specialist Lists (CCCPH 3.4.1 & SMC 4.72.080)

San Mateo County Department of Environmental Health maintains a list of testing companies who have Backflow Prevention Assembly Tester qualified to perform backflow related work within the City. This list is available by contacting the San Mateo County Department of Environmental Health.

Environmental Health always maintains at least one AWWA Cross-Connection Control Special on staff. Contact information for Environmental Health can either be general phone 650-372-6200, and email backflow@smchealth.org, or can include current Environmental Health staff contact information as long as the PWS is willing to keep the information up-to-date in their plan.

4.2 Cross-Connection Control Specialist Certification Requirement {CCCPH 3.4.1 & EPA CO 15.44.090)

Cross-Connection Control Specialists that maintain their Backflow Prevention Assembly Tester certification can perform BPA inspection and testing in addition to conducting onsite hazard assessments.

Cross-Connection Control Specialists 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 than every three years.
- Recertification through an exam, 12 contact hours of continuing education, or a combination of both.

Cross-Connection Control Specialist from the certifying organization must contain:

- Provisions for revocation of a specialist's certification.
- Publicly available list of certified specialists.
- For initial certification or when an examinee has not held a valid certification for three or more years, a valid backflow prevention assembly tester certification will be required as well as completion of an instructional training course.

San Mateo County Department of Environmental Health will require testing companies to annually submit applications to be considered qualified as a Cross-Connection Control Specialist.

The requirements to be listed as a County qualified Cross-Connection Control Specialist are:

- All other requirements as required for the approved backflow tester.
- The specialist must hold a valid certification for Cross-Connection Specialist from a recognized certification organization.
- The specialist must register and utilize the City's online platform for hazard assessment report submissions.

Cross-Connection Control Specialists may be removed from the County's qualified lists for the same reasons as Backflow Prevention Assembly Testers may be removed.

5.0.1 CROSS-CONNECTION CONTROL PROTECTION REQUIREMENTS (CCCPH 3.2.2 & EPA CO 15.44.050)

Unprotected cross-connections with the PWS are prohibited. No water service connection to any premises shall be installed or maintained by the City unless the water supply is protected from contamination and pollution. Whenever backflow protection is found to be necessary, the City will require the water customer to install, test, and maintain an approved backflow prevention assembly at the expense of the water customer for continued water service or before a new water service will be granted.

EPA CO 15.44.050 allows customers with non-compliant assemblies (but were compliant at the time of installation), and which have been properly maintained, to not replace the assembly if the City Engineer is assured that the assembly will satisfactorily protect the PWS.

When Environmental Health becomes aware of the existence of a cross-connection and the BPA installed is not commensurate with the user premises' hazard or no BPA has been installed, Environmental Health will work with the PWS to require current BPA be upgraded to an appropriate type or require proper BPA protection be installed to properly protect the public water supply. PWS can notify Environmental Health of a cross connection via email to backflow@smcgov.org, or a phone call to any cross-connection control program staff.

Directive letters written by Environmental Health typically allow facilities 30 days to comply with requirements, with extensions provided in cases where calculations of fire systems are required before installation of BPA, or BPA in vaults are required to be replaced above grade. Additional extensions may be granted upon request by facility depending on individual circumstances. In all cases, Environmental Health tracks all requirements, including status of compliance, through use of our Salesforce-based database.

Failure to comply with directives results in the same potential enforcement action on facilities as failure to test BPA annually, including potential administrative enforcement orders, fines, and possible termination of water service.

When Environmental Health receives a report indicating a BPA failed annual testing, and the BPA in question no longer provides adequate protection from the associated hazard or is not installed appropriately as required by the CCCPH, Environmental Health will require the BPA be replaced with a BPA that provides the proper degree of protection against the associated hazard or installation criteria is corrected to align with CCCPH requirements.

Facilities are given 30 days to repair or replace BPA after failure. Failure to comply with repair or replacement directives results in the same potential enforcement action on facilities as failure to test BPA annually, including potential administrative enforcement orders, fines, and possible termination of water service.

Wherever backflow protection is found to be necessary on a water supply line entering a water customer's premises, then all water supply lines from the City's potable mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention assembly.

The type of assembly to be installed will be in accordance with the requirements of this Chapter. If it is found that a backflow protection control or assembly has been removed or bypassed, water service will be discontinued until corrected, and fines may be imposed.

Topics addressed in this section include:

- Open for Inspection
- Approval of Assemblies
- Evaluation of Hazard

- Existing Customers - With a Non-Complying Device

5.1 Backflow Protection Requirements {EPA CO 15.44.050)

A. New Construction, Remodels and Tenant Improvements.

1. Residential (Single-Family, Duplexes and Multiple Family), Commercial, Industrial and Institutional.

a. Domestic Water. City may require an approved backflow prevention assembly to be installed on the facility as close as possible to the service connection. The assembly shall be a lead-free reduced pressure principle backflow prevention assembly. If it is determined that a backflow prevention assembly is required, the customer may also need to install a thermal expansion tank in accordance with the California Plumbing Code.

b. Irrigation System. City requires an approved backflow prevention assembly to be installed on the facility on the branch line serving an irrigation system. The assembly shall be a pressure vacuum breaker, reduced pressure principle backflow prevention assembly, or atmospheric pressure vacuum breaker as determined by the city.

c. Fire Suppression System. All facilities with an installed fire suppression system must have an approved backflow prevention assembly, excluding flow-through fire systems, on the branch line serving the fire suppression system. The assembly shall be a double check valve backflow prevention device, a double check detector assembly, a reduced pressure principle backflow prevention assembly, or a reduced pressure principle detection assembly or as determined by the city. Flow-through fire protection systems shall be constructed with approved potable water piping and materials.

B. Fire Protection System. Except as noted below, a public water system must ensure its distribution system is protected with no less than double check detector assembly protection for a premises with a fire protection system.

1. A high hazard cross-connection fire protection system, including, but not limited to, fire protection systems that may utilize chemical addition (e.g., anti-freeze) or an auxiliary water supply, must have no less than a reduced pressure principle backflow prevention assembly protection. An air gap is required for customers where the fire system is supplied from the public water system and interconnected with an unapproved auxiliary water supply.

C. Sewage and Hazardous Substances.

1. An air gap is required for facilities where there are waste water pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single-family residence that has a sewage lift pump.

2. An air gap is required for facilities where hazardous substances are handled in any manner in which the substances may enter the potable water system. This does not include a single-family residence that has a sewage lift pump.

3. A reduced pressure principle backflow prevention assembly is required for facility's where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.

D. Auxiliary Water Supplies.

1. An air gap is required for facilities where there is an unapproved auxiliary water supply which is interconnected with the public water system.

2. A reduced pressure principle backflow prevention assembly is required for facilities where there is an unapproved auxiliary water supply and there are no interconnections with the public water system.

E. Recycled Water.

1. A reduced pressure principle backflow prevention assembly or another city-approved device that is in accordance with the SWRCB is required for facilities where the public water system is used to supplement the recycled water supply.

2. A reduced pressure principle backflow prevention assembly is required for facilities where recycled water is used and there is no interconnection with the potable water system.

F. Existing Service Connection. When it is determined in a survey by the city or county cross-connection control program specialist that an actual or potential cross-connection or backflow condition is present on an existing facility, the installation of an appropriate backflow preventer shall be required. Should an existing backflow prevention assembly be in place that does not meet the city's installation requirements, does not comply with this section, or does not provide adequate protection with the degree of hazard found on-site, the assembly shall be replaced or upgraded as required by the city, at the expense of the customer or responsible party.

Protection is required when the following conditions exist:

- When a premises contains an auxiliary water supply, the water supply to the premises shall be protected against backflow.
- When a premises has the potential for any onsite industrial fluid or any other objectional substance handled in such a manner that could permit the fluid or substance to enter the water system, the PWS shall be protected against backflow from the premises.
- When a premises has internal cross-connections that cannot be permanently corrected or controlled to the satisfaction of the state, local health department, or City Engineer, the PWS shall be protected against backflow.
- 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, the PWS shall be protected against backflow.
- When a premises has a history of repeated cross-connections being established or reestablished, the PWS shall be protected against backflow.

5.2 Hazard Assessments (CCCPH Article 2, 3.2.1 & EPA CO 15.44.060)

A. Identification of Survey Candidates.

1. City may identify specific industries that might pose an actual or potential backflow hazard to the public water supply. Some of these industries are identified from common lists of industries where cross-connections are likely to be found, as provided by the State of California, the USC Foundation, and other recognized organizations. From these lists, specific facilities in the city's service area may be identified by directories, mailing lists, associations, and business licenses.
2. Surveys may take the form of office surveys or field surveys. Office surveys may include determination of facility hazards based on business type or known water use on the facility. Office surveys could also include evaluation of responses to mailed or on-line surveys.

B. Procedures for surveying and retrofitting existing facilities and for plan review and inspection of new construction:

1. Backflow preventers are tested annually, and the city's contracted water system operator works with the county when devices are out of compliance or needs testing. City recognizes and follows all state, county, and other jurisdictional authorities' procedures and guidelines. New construction is analyzed on a case-by-case basis by city.
2. Existing backflows will be identified, and those backflows will be tested per state testing procedures, at least annually. Customers with noncompliance backflow systems will be notified as outlined in Section 15.44.100 and required to come into compliance.

3. Portable backflows must be tested annually and or retested when disconnected or removed from any approved location. Anyone connecting to the public water system, by hydrant, temporarily or other, must have an acceptable and approved backflow preventer assembly and or plan from city. If the device is moved from place to place it must be tested by a city-approved certified tester.

C. Field surveys may include evaluation of water use by observations made from public or private areas not on the subject facility, or physical inspection on all or a portion of the facility. When possible, a request to survey the facility shall be made at least twenty-four (24) hours in advance, and a date and time agreed upon with a responsible party. Should the request to survey be denied by a responsible party, notice shall be sent to the customer or responsible party directing installation of a lead-free reduced pressure principle backflow assembly, at the water meter, based on best available knowledge of the water use and potential hazards at the facility.

During the survey many factors are considered to determine if activities or water use on facility are or could be a potential hazard to the public water supply. Factors that may be considered include:

1. Alternative sources of water on-site (auxiliary water supplies).
2. Piping configurations on-site.
3. Uses of water on-site.
4. Types of water using equipment.
5. Condition of water using equipment.
6. Complexity and elevations of plumbing on-site, and the potential for alterations of that system.
7. Storage and use of hazardous materials on-site.

All the factors found and recorded during the survey shall be considered in the determination of the degree of potential hazard (degree of hazard) to the public water supply. This information shall be considered in the determination of the appropriate backflow preventer. The customer or responsible party shall be informed of the requirement to provide backflow protection and the type of backflow prevention assembly required in accordance with Title 17 of the California Regulations Related to Drinking Water or any future state water resource control board requirements and regulations for cross-connection control, or the direction of the San Mateo County Health Officer.

Environmental Health will ensure each BPA (or AG) in inventory is field tested (or AG is visually inspected) at a frequency of at least once per calendar year by a BPA tester that is both currently certified by a State Water Board-recognized organization and authorized to test in San Mateo County by Environmental Health.

Local City building department, or Environmental Health, will require initial installation and test of BPA with results submitted to Environmental Health to allow BPA to be inventoried in the Environmental Health database. Additionally, any BPAs discovered during initial or subsequent hazard assessments, as described in section 3.2.1, will be added to the Environmental Health inventory of BPAs.

Each BPA (and AG) in the Environmental Health BPA database is assigned a “next test due date” between January and September of each calendar year (none between October and December to allow for delinquent testing to occur before December 31). To ensure testing occurs, a reminder notice to test is sent to a facility via US mail 30 days before its BPA “next test due date”. If a completed test report is not received, a second notice to test is sent to the facility on the “next test due date”. If a completed test report is still not received, an Administrative Enforcement Order (AEO) is sent to the facility 30 days after the “next test due date”. If a completed test report is not received within 14 days from the date on the AEO, Environmental Health will coordinate with the _____ water system on enforcement action, which may include:

- Hand delivery of AEO to the delinquent facility by PWS;
- AEO with fine sent by Environmental Health to the delinquent facility;
- Potential water termination threat by the PWS;
- Water termination to the delinquent facility by PWS;
- Other action as seen fit by PWS until compliance is met.

After results are received, next test due dates for each BPA move forward one calendar year to ensure a notice is mailed out at the appropriate time the following year.

BPA testers are required by Environmental Health Ordinance 4.72 to submit BPA results to Environmental Health within 10 days of testing.

(6) Environmental Health will only accept BPA test reports completed by individuals who are authorized through Environmental Health. The authorization process includes:

- Ensuring individuals are currently certified to test BPA through a State Water Board-recognized organization;
- Have a field test kit or gauge equipment that has been calibrated within the last calendar year;
- Have completed an examination created by Environmental Health to demonstrate that the tester understands their responsibilities as detailed in the County Backflow Prevention Ordinance;
- Have paid an annual tester fee to Environmental Health.

After initial authorization, Environmental Health will ensure BPA tester certifications and calibration reports remain current by tracking expiration dates in a database containing individual accounts of BPA testers.

To ensure the quality of BPA test result reports submitted by BPA testers, each report is reviewed upon submittal before being entered into the BPA database. Each BPA test record must, at a minimum, in addition to BPA information and test result information, include:

- Tester name;
- Test date;
- Repair or replacement date (if applicable);
- Tester certification number;
- Signature of the BPA tester;
- Backflow tag number purchased through Environmental Health that is unique to each test.

When an online portal that syncs to the Environmental Health BPA database becomes available to Environmental Health authorized testers for submittal of basic passing tests on existing assemblies, results will only be accepted if they contain all required criteria. In addition, random quality control checks on testers are conducted by Environmental Health to ensure results submitted match physical BPA description on the report and the tag number submitted matches the one attached to the BPA by the tester.

Environmental Health Ordinance includes the ability to suspend or revoke an Environmental Health BPA tester authorization. Environmental Health will report to the certifying agency if a tester's authorization has been suspended or revoked.

(9) Environmental Health maintains a Salesforce-based database containing records for each BPA that is initially submitted to Environmental Health as "new" on a blank test report. Each individual record contains, at a minimum:

- The associated hazard type (service, internal, fire);
- Site address;
- Location of BPA within the facility;
- Owner;
- Owner mailing;
- Type of BPA;
- Manufacturer and model of BPA;
- Size of BPA;
- Installation date of BPA;
- Next test due date of BPA;
- Last passed test date of BPA;
- Serial number of the BPA.

Additionally, a field is currently available under each BPA record to be populated with a hazard level of high, low, or none, to comply with the CCCPH recordkeeping requirement of maintaining the BPA associated hazard.

BPA test records are tied to BPA records and maintained in the Environmental Health database (including reports indicating failure, repair, replacement, or relocation) for at least 3 calendar years to comply with the CCCPH.

5.2.1 Follow Up Hazard Assessments

Unless protection is provided by an RP, and unless the RP continues to successfully pass the annual tests, the customer's Cross-Connection Control Specialist selected per Section 4.2 will perform subsequent assessments under the following criteria:

1. If a customer's premises changes ownership, excluding single-family residences
2. If a customer's premises is newly connected to the PWS
3. If evidence exists of potential changes in the activities or materials on a customer's premises
4. If backflow from a customer's premises occurs
5. If the SWRCB requests a hazard assessment of a customer's premises
6. If the City concludes an existing hazard assessment may no longer be correct

Notification to the customer of this requirement will be in each annual test notice. Additionally, internal City coordination will occur between the Planning and Finance Departments with the Water Engineering Section to monitor changes in business licenses and permit applications.

Follow up hazard assessments require the Cross-Connection Control Specialist to have hazard results uploaded to the online City portal managed by the City's Cross-Connection Specialist.

5.2.2 Hazard Assessment Outcomes

Following completion of either initial hazard assessments or subsequent assessments completed by the certified Cross-Connection Control Specialist selected per Section 4.2, the customer may need to address various outcomes related to backflow protection as further described below.

5.2.3 Non-Complying Assembly

Existing non-residential backflow prevention assemblies that do not meet the requirements (per the amended EPA CO 15.44.090 and as set forth in the CCCPH) will be required to either repair or replace the backflow prevention assembly to meet the requirements. This will occur for both high hazard locations assessed by the City and customer completed assessments.

Notices received by customers that have up to 180 calendar days to comply will initially be provided 30 calendar days to comply and through customer due diligence, extensions up to 150 calendar days will be provided.

5.2.4 Without an Assembly

All non-residential customers and premises (except the 483 high-hazard premises already assessed by the City) existing prior to the adoption of the CCCPH are required to have an initial hazard assessment completed by the certified Cross-Connection Control Specialist selected per Section 4.2. Upon upload of this information to the City portal, if it is determined that a premises requires backflow prevention, the City will provide a written notice to the customer to install an approved backflow prevention assembly within 180 calendar days or the City will discontinue water service. Notices received by customers will initially provide 30 calendar days for the installation and through customer due diligence, extensions up to 150 calendar days will be provided.

5.2.5 Non-Residential Fire Sprinkler Systems

Commercial and industrial premises with sprinkler systems have varying hazard levels depending on the class of fire sprinkler system (Class 1, 2, 3, or 4). Whether a fire system uses water only, chemical agents, fire suppression substances or is equipped with a Fire Department connection all new installations and/or replacements will require the installation of an RPDA unless determined otherwise by the City Engineer.

5.2.6 Residential Fire Sprinkler Systems

Single-family and multi-family homes with sprinkler systems typically have a low hazard level. These systems will require the installation of an RP unless determined otherwise by the City Engineer. Hazard assessments of these residential systems are not scheduled, instead administrative tools including, but not limited to, permitting information will be used. In FY25-26 coordination will occur among the Utility Engineering Section, Building, Fire and Finance to determine the number of locations and addresses of residential units with fire sprinkler systems. Once this is complete, public education/outreach will occur prior to notices sent out requiring an assessment. Once the assessment results are known, a timeline to achieve compliance will be set prior to the CCCPH allowed time.

6.0 *BACKFLOW PREVENTION ASSEMBLIES (CCCPH ARTICLE 3)*

This section provides a description of approved backflow prevention assemblies and of backflow prevention assembly installation requirements.

6.1 Location and Approved Backflow Prevention Assemblies (CCCPH 3.3.1 & EPA CO 15.44.070)

Only approved backflow prevention assemblies will be allowed for new installation by a water customer to protect the PWS. Approved backflow preventors, which may be subjected to back-pressure or back siphonage, must be fully tested and granted a certificate of approval by a certified laboratory. The City will provide, upon request, to any water customer required to install a backflow preventer, the City's standard detail that notes approved backflow prevention assemblies.

Approved backflow prevention assemblies 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 backflow prevention assemblies in the Standards of ASSE International current as of 2020; or
- An equivalent testing organization approved by the SWRCB.

Additionally, only backflow prevention assemblies noted in the City's standard detail will be allowed for new installation. Backflow prevention assemblies must not be modified from the configuration granted approval. Backflow Prevention Assembly Testers are required to notify the City if a water customer or City-owned backflow prevention assembly has been modified.

6.2 Installation Requirements (CCCPH 3.3.2 and EPA CO 15.44.070)

Backflow prevention assemblies shall be installed by the customer on the customer's water service side according to City standard details and prior to issuance of a final occupancy permit for new water services. The backflow prevention assemblies shall be installed in a manner prescribed in the CCCPH and as close as practical to the customer's service connection on the customer's premises for containment. The City shall provide final authority in determining the required location. If internal protection installed as isolation protection and further proposed for the purpose of containment, the City must be able to access the customer's premises and ensure that the on-site protections meet the requirements of the CCCPH. All backflow prevention assemblies shall be readily accessible for field testing and maintenance. Requirements for the specific elements of backflow prevention assemblies are described in the following subsections.

6.2.1 Air Gap Separation (AG)

The approved AG is to be installed on the customer's premises at the water customer's service connection and in accordance with CCCPH requirements. The received water container must be located on the water customer's premises at the water customer's service connection. Alternate locations must be approved by the City. All piping between the water customer's service connection and the discharge location of the receiving water container must be above grade and accessible for visual inspection. If installed at the customer service connection, the air gap must be approved by the SWRCB prior to installation. The water inlet piping shall terminate a distance of at least two pipe diameters of the supply inlet, but in no case less than one inch above the overflow rim of the receiving tank.

6.2.2 Reduced Pressure Principle Back/low Prevention Assembly (RP)

The approved RP assembly shall be installed on the customer's side of and as close to the service connection as is practical. The assembly 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 18 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 the City. 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 RPDAs.

6.2.3 Double Check Valve Back/low Prevention Assembly (DC) and Pressure Vacuum Breaker Back/low Prevention Assembly (PVA)

Unless authorized by the City Engineer, double check valve backflow prevention assemblies and pressure vacuum breaker backflow prevention assemblies will not be approved. All new applications shall be RP & RPDA.

Existing applications of DC, DCDA, PVA backflow prevention device types will be considered acceptable if they are serviceable.

7.0 TESTING AND MAINTENANCE OF BACKFLOW PREVENTION ASSEMBLIES (CCCPH 3.3.3 AND EPA CO 15.44.080)

This section outlines the testing and maintenance of backflow prevention assemblies and notification procedures followed by the City.

7.1 Testing

7.1.1 Frequency of Testing

The City requires all backflow prevention assemblies with active water services to be field tested upon installation, repair, overhauled, replaced or when relocated/removed, and whenever an assembly is depressurized, which includes all procedures/work listed in this section. Thereafter, the City requires backflow prevention assemblies to be field tested at a minimum of at least once annually by a certified Backflow Prevention Assembly Tester acceptable to the City as described in Section 4.1.1. Prior to the City approving a Water Service Agreement, the City must receive a passing set of backflow prevention assembly test results for the given backflow prevention assembly. For water services that have been suspended, the City will require a backflow assembly test upon initiation of the water service.

The City, at its discretion, may require more frequent testing intervals or inspections than the annual requirement. AG installations providing protection at the water service, and swivel-ell installations will be inspected annually to ensure compliance. Currently, the City does not have any AGs within the City to inspect.

7.1.2 Procedures for Submitting Test Results

Testing results shall be submitted to the County on a City-approved backflow assembly form in electronic format, submitted through an online portal. Backflow Prevention Assembly Testers shall use the most current approved testing procedures. All backflow assembly testing is to be at the expense of the owner. Backflow assembly tests are performed by qualified testers retained by the customer.

7.1.2 New Installation

A passing field test must be received for all newly installed backflow prevention assemblies providing containment protection before water service can be provided. Newly installed assemblies or air gaps must be inspected for compliance with the CCCP and confirm successful passing of the assembly performance test.

7.1.3 Failed Test

Assemblies that fail the field test shall be repaired, overhauled, or replaced and then re-tested immediately. Upon receipt of a failed test report, the City will send a notification requiring that the backflow be repaired or that a new assembly be installed immediately. All repairs and replacements shall be submitted to the City as complete within 30 days of notification. If additional time is needed, the customer may request consideration of an extension from the City.

7.2 Notification Process

It is the responsibility of the customer to ensure that all premises with a backflow prevention assembly receive a passing field test at a minimum of at least once annually. In FY 24-25, customers with a backflow prevention assembly will receive a first notification notice the first week of June each calendar year, providing sixty (60 days to hire a certified backflow assembly tester to perform a field test and submit a test report on the condition of the backflow assembly. If a test report is not received, a second notice will be sent on August 15th, providing 45 days to have the assembly tested. In cases where a backflow assembly test has still not been received, a third notification notice will be sent with a 30-day compliance deadline. The City's goal is to work with customers to ensure timely backflow testing. Property owner/water customer communication and correspondence is documented by the City to establish a communication trail.

In situations where no action is taken by the backflow assembly owner after the third notice has been sent, the City will send an additional notice on October 1st that provides a five-day period for the customer to contact the City and advise of customer arrangements for the backflow assembly to be tested within 30 days. If testing does not occur within the 30 days, the water service will be terminated.

At the discretion of the City, a City's Backflow Prevention Assembly Tester will test the backflow assembly in question and charge the water customer a fee according to the City's Municipal Fee schedule. The City will not make repairs to backflow assemblies that did not pass the test.

7.2.1 Yearly Testing Notifications

Annual notification letters to water customers are currently sent out through USPS mail. Beginning in FY25-26, initial notifications will be sent by email to the customer. Second and third notifications (if needed) will continue to be sent through USPS mail. Notifications will include the following information:

- References to the Cross-Connection Control Policy Handbook and the City's ordinance
- City contact information

- Instructions for accessing the list of approved backflow testers
- Processes for submitting the backflow test report
- Due date for submitting test results
- The backflow assembly of records details, including meter number, assembly serial number, model and size, and location
- Requirement for initial hazard assessment and subsequent assessments if changes occur at the premises
- Requirement to notify the City if an imminent or occurring hazard
- Instructions on how to provide customer-provided information

7.2.2 Upgrading

Assemblies that are not noted on City's Standard Details may remain in place at the discretion of the City Engineer until the point of complete failure (repairs and overhauls cannot remedy) if the assembly passes field tests. For non-complying assemblies, refer to the requirements of Section 5.2.3. When an assembly fails the field test, a new assembly shall be installed at the property owner/water customer's expense. Only assemblies that are noted on the City's Standard Details shall be installed unless determined otherwise by the City Engineer.

7.2.3 Notification of Imminent Hazard

Backflow assembly property managers and/or water customers are required to notify the City within 24 hours of determining a known backflow or cross-connection incident. This requirement is stated in annual notifications received by the customer from the City.

Upon being notified, the City will immediately investigate and discontinue water service to the premises if an imminent hazard to public health is found. The water service will not be restored until confirmation of a correction is made and a passing backflow assembly field test is received.

8.0 RECORD MAINTENANCE

Cross-Connection control records and associated penalties for non-compliance are described in this section.

8.1 Records

The City will retain the following records in electronic form and make them available to the SWRCB upon request:

8.1.1 Cross-Connection Control Plan

This CCCP will be reviewed every five years and updated as necessary.

8.1.2 Hazard Assessments

Records will be retained for the two most recent hazard assessments conducted according to Section 5.3 of this CCCP.

8.1.3 Assembly Records

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

For each AG installation, the following information shall be kept electronically: associated hazard, location, owner, and as-built plans.

For each swivel-ell, the following information shall be kept electronically: location, appropriate contacts, agreements, and inspection results.

8.1.4 Testing Results

Test results on all assemblies, AGs, and swivel ells will be kept electronically for three calendar years and will include the name, test date, repair date, and certification number of the backflow assembly tester.

8.1.5 Repairs

Records will be retained for all repairs made to backflow prevention assemblies for the previous three calendar years.

8.1.6 Recycled Water Cross-Connection Control Shutdown Tests

The most recent cross-connection control shutdown test will be kept for each recycled water site.

8.1.7 Incident Reports

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

8.1.8 Contracts and Agreements

All contracts and agreements executed related to cross-connection control or backflow will be retained by the City.

8.1.9 Educational Material

Public education and outreach materials will be kept for the previous four (4) years.

8.2 ENFORCEMENT (EPA CO 15.44.100)

A. The county has the authority to take enforcement action as specified in the county ordinance code relating to backflow prevention, consistent with the agreement between the city and county. The city and the city's water provider shall work with the county on enforcement. If the county is unable to reach the customer or responsible party, the city, with support from the city's water provider, will send a notice of violation by certified mail to the customer or responsible party.

B. Failure to comply with any requirement of this chapter may be cause for the discontinuance of water service. The program administrator shall give notice in writing of any violations of this chapter to the customer or responsible party. If appropriate action is not taken within ten (10) days after such notice has been mailed or delivered in person, the program administrator may discontinue delivery of water. However, if the program administrator or the health officer determines that the violation constitutes an immediate

C. All costs incurred by the city for discontinuance of water service and all fees associated with reinstating water service shall be paid by the customer or responsible party. Costs incurred by the county for inspections shall be paid by the customer or responsible party at the rate established by San Mateo County.

D. Any person found guilty of violating any provision of this chapter, or who bypasses or renders inoperative any backflow prevention assembly installed under the provisions of this chapter, shall be fined as follows:

   i. A fine not exceeding one hundred dollars ($100.00) for the first violation;

   ii. A fine not exceeding two hundred dollars ($200.00) for a second violation within twelve (12) months;

   iii. A fine not exceeding five hundred dollars ($500.00) for each additional violation within twelve (12) months.

E. In partnering with Environmental Health, the County Backflow Prevention Ordinance allows Environmental Health both legal authority and enforcement and administrative fine mechanisms in the event a water user fails to comply in a timely manner with the provisions of the City cross-connection control program that are implemented by Environmental Health.

F. The San Mateo County of Public Health Environmental Health shall have the authority to enforce this chapter as follows.

   (1) Environmental Health may require a water purveyor to discontinue water service to any facility wherein violations of this Chapter exist.

   (2) Any person who violates any provision of this Chapter, or bypasses or renders inoperative any backflow prevention assembly installed under the provisions of this Chapter may, in addition to other penalties provided by law and this Chapter, shall be subject to discontinuance of water service. Water service shall not again be reinstated until such violations have been corrected as determined by Environmental Health. Costs incurred by Environmental Health for inspections

shall be paid by the facility owner at the rates set forth in San Mateo County
(3) Ordinance code section 5.64.070.

(3) Pursuant to section 116820 of California Health and Safety Code, any person who violates any provision of Article 2 of Chapter 5 of Part 12 of Division 104 of the California Health & Safety Code, violates any order of Environmental Health pursuant to this article, or knowingly files a false statement or report required by Environmental Health pursuant to this article is guilty of a misdemeanor punishable by a fine not exceeding five hundred dollars ($500) or by imprisonment not exceeding 30 days in the county jail or by both such fine and imprisonment. Each day of a violation of any provision of Article 2 or of any order of Environmental Health beyond the time stated for compliance of the order shall be a separate offense.

9.0 INCIDENT RESPONSE AND NOTIFICATION

The City will investigate for possible backflow incidents when the following triggers are reported:

- Water quality complaint that cannot be explained as a normal aesthetic problem; especially receiving multiple reports indicating multiple properties impacted
- Advanced Metering Infrastructure (AMI) meters reporting negative usage
- A backflow incident suspected or known to have occurred
- Unknown increase in system pressure reported
- Unknown decrease in system pressure reported

Additionally, the City will initiate a notification and water quality sampling procedures when a water main break or power outage causes a negative loss of water pressure within a significant area of the distribution system as a precautionary measure in case of a potential back siphonage event.

The incident response procedures, notification procedures, and associated record keeping requirements are addressed below.

9.1 Incident Response Procedure (CCCPH 3.5.2)

The City will implement their Water Emergency Response Plan (ERP) if contamination of the City's distribution system is observed. The ERP contains the City's plan for notifying customers and other officials of a water emergency, contact information for internal and external pertinent staff, conditions for activating the Emergency Operations Center, and a description of roles and responsibilities of water staff. The ERP is intended to be a living document evaluated regularly for updates. The latest version is found in Appendix G of this report.

In the event of a potential backflow-related incident, the City will take the following steps, each of which is described in this subsection:

- Incident Investigation
- Isolation of Sources of Contamination
- Cleaning and Disinfection
- Notification and Coordination with Outside Agencies
- Notification of Affected Population

9.1.1 Incident Investigation

The City's Public Works Department will begin an investigation by sending a Utility Maintenance Worker (Worker) to the location of the reported incident. Through a field investigation, the Worker will determine if contamination is present in the PWS and the extent of the impacted area. Workers will perform the following actions to investigate for potential cross-connections:

- Survey area for possible main breaks
- Visit the premises to observe possible sources of contamination

9.1.2 Sources of Contamination Isolation

Once the cross-connection responsible for the system contamination is located and isolated from the PWS, the City will also isolate the portion of the system suspected of being contaminated by closing isolation valves and notifying customers impacted of the disruption of water.

9.1.3 Cleaning and Disinfection

The City will work with the SWRCB to establish procedures to remove the contamination and disinfect the PWS. A sampling plan will also be established and implemented to confirm when the system meets Safe Drinking Water Standards.

9.1.4 Notification and Coordination with Outside Agencies

The City will be responsible for notifying the SWRCB and the County's Public Health Officer as soon as practical to accurately communicate and properly mitigate potential health effects resulting from an incident. The City will use the Water Quality Emergency Notification Plan as outlined in the ERP. The Notification Plan identifies the persons designated to implement the plan and provides the contact information of the appropriate County Health Department personnel.

9.1.5 Notification of Affected Population

As soon as possible following an incident, the City will notify the public using methods outlined in the Emergency Notification Plan within the ERP. Notifications will be provided by any one or all of the following: television media, radio, social media, sound trucks, door hangers, and the City's website.

If the contamination is of a biological nature, the City will issue a Boil Water Order Notice. If the contamination is of a chemical nature, the City will issue an Unsafe Water Alerts as "Do-Not-Use" or "Do-Not-Drink" Notices. Notices will be communicated in English and Spanish. The City has a draft notification template that can quickly be populated with the necessary details and printed for distribution. Notices include instructions on what consumers should do; where potable water is available; and if applicable, dates of notice issuance and expected resolution; and the location where more information can be received.

The City will contact bottled water companies to purchase water for its customers. The City will determine the most efficient way to distribute the bottled water through either a delivery system or a central distribution location.

9.2 Backflow Incident Notification (CCCPH 3.5.3)

The City shall notify the SWRCB of any known backflow incident within 24 hours of the determination. If required by the SWRCB, the City shall issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1. If required by the SWRCB, the City must submit, by a date specified by the SWRCB, a written incident report describing the nature and severity of the backflow, the actions taken by the City 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.

9.3 Record Keeping

Incident notifications, which include results of and follow up actions of all backflow incidents, will be maintained by the City for up to three years. Results will be available to the SWRCB upon request.

10.0 *PUBLIC OUTREACH, EDUCATION, AND COORDINATION*

Topics addressed in this section include public outreach, training, designation of customer supervisors, and inter-agency coordination.

10.1 Public Outreach

The County maintains a Cross Connection Control and Backflow Prevention web page that contains references to the County's and City's Municipal Code and State of California regulations. The webpage describes the purpose of the CCCP, provides details on the annual backflow testing requirements, including links to City Standard Details that note the lists of Approved Backflow Assemblies, the list of qualified Backflow Prevention Assembly Testers, the list of Cross Connection Control Specialists as well as providing testers online access to the City's backflow management software. In addition, the City's Water Quality Report provides a description of backflow testing and the benefits it provides for maintaining water quality.

10.2 Training

The County will offer annual cross-connection control training to County employees who need to be knowledgeable about this CCCP. Employees responsible for parks, street landscape facilities, operations, and maintenance, Public Works Inspectors, Building Inspectors, and Fire Prevention will be included.

10.3 Designation of User Supervisor {CCCPH 3.2.2.-f)

The City may require, at the discretion of the City's Cross-Connection Specialist, a water customer to designate a user supervisor when the customer's premises have a multi-piping system that conveys various types of fluids and where changes in the piping system are frequently made. The designated user supervisor will be responsible for the avoidance of cross-connections during the installation, operation, and maintenance of the water customer's pipelines and equipment. The designated user supervisor must be trained on the fluids used and backflow protection methods present at the premises. The user supervisor will be responsible for informing the City of changes in piping and shall maintain current contact information on file with the City.

The user supervisor will be required to attend a training provided by the City that covers the types of hazards and concerns typically found on customers' premises. Upon successful completion of the training, a user supervisor certificate will be issued with a renewal requirement of every four years. Currently, the City has Recycled Water Site Supervisors trained by the South Bay Water Recycling Program. Part of the training includes the prevention of cross-connections.

10.4 Inter-Agency Coordination

The CCCP is shared with various departments across the organization and with other agencies as shown in Table 10-1.

Table 10-1. Inter-Agency Coordination

Entity	Responsibility	Coordination
Inter-Department Coordination		
Department of Engineering in partnership with San Mateo County Department of Environmental Health Services	• Administers the Cross-Connection Control Program • Performs testing and hazard assessments if not completed by the customer • Performs testing and hazard assessments for all City-owned facilities • Inspects newly installed backflow assemblies for proper installation • Leads on potential backflow investigations • Respond to customer cross-connection questions. • Maintains cross-connection standards and specifications • Ensures appropriate backflow protection is provided for new developments within the City • Coordinates with the SWRCB	• Coordination with customers, City departments, regulatory agencies, testers, and specialists
Public Works/ Veolia Water	• Assists with potential backflow investigations • Customer service staff field phone calls not related to cross-connection and water quality complaints	• Informs Utility Engineering on field investigations • Reporting water main breaks or other water complaints for further investigation
Planning Department	• Reviews and approves development projects	• Coordinates plan review with Utility Engineering
Building Department	• Reviews tenant improvement projects • Enforces building and plumbing codes	• Informs Utility Engineering of the proposed tenant improvements so that an assessment may be completed • Confirms backflow assemblies are installed as part of tenant Improvement permits • Informs Utility Engineering that the new assembly has been installed and tested
Menlo Fire District	• Reviews fire prevention plans • Reviews pressure and operational calculations for backflow retrofits	• Coordinates plan review with Utility Engineering

Finance Department	Track changes in business status (new businesses, ownership, businesses no longer operating)	Notify Utility Engineering of change of business status

Table 10-1. Inter-Agency Coordination

Entity	Responsibility	Coordination
Outside Agency Coordination		
San Mateo County Department of Environmental Health Services	• Oversees public health programs within San Mateo County, including administering Back Flow programs to partnered cities.	• Provides guidance to the City in situations where public health could be affected
SWRCB	• Regulates public water systems	• Provides guidance to the City during water-related emergencies • Perform regular sanitary surveys

City of East Palo Alto
December 2025


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City of East Palo Alto
June 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

California Environmental Protection Agency

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Appendix

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 pipe diameter between the free-flowing discharge end of a potable water supply pipeline and the flood level of an open or non-pressurized receiving vessel, and in no case less than one (1) inch.

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

"**Auxiliary water supply**" means a source of water, other than an approved water supply, 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 more than 3,000 service connections 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; and
(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 two years of the adoption 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 adoption 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 adoption 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 a maximum of thirty-six inches above the finished grade, unless an alternative is approved by the PWS.

(c) DCs installed or replaced after the adoption of the 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]
(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

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

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) An American National Standards Institute (ANSI)-accredited certifying organization, accredited in accordance with subsection (b) and ISO/IEC 17024, 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, 2025.

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, 2025.

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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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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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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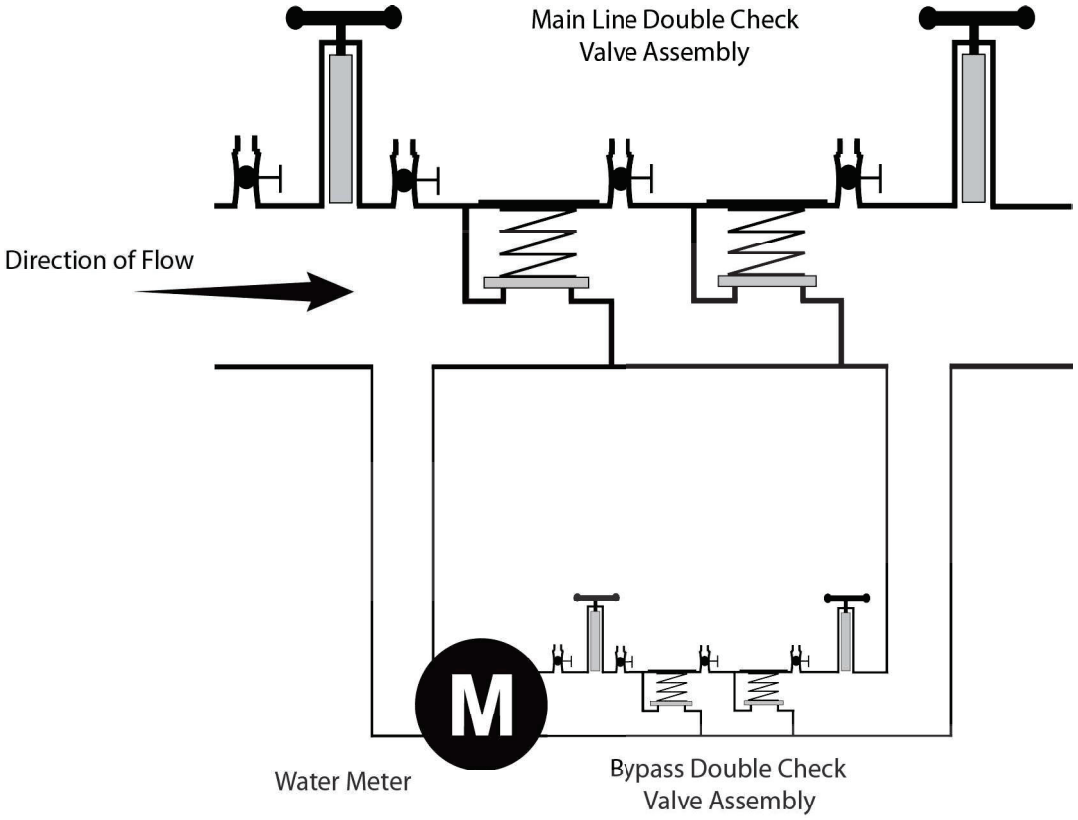
Appendix C

Diagram 1
Double check detector backflow prevention assembly[1]

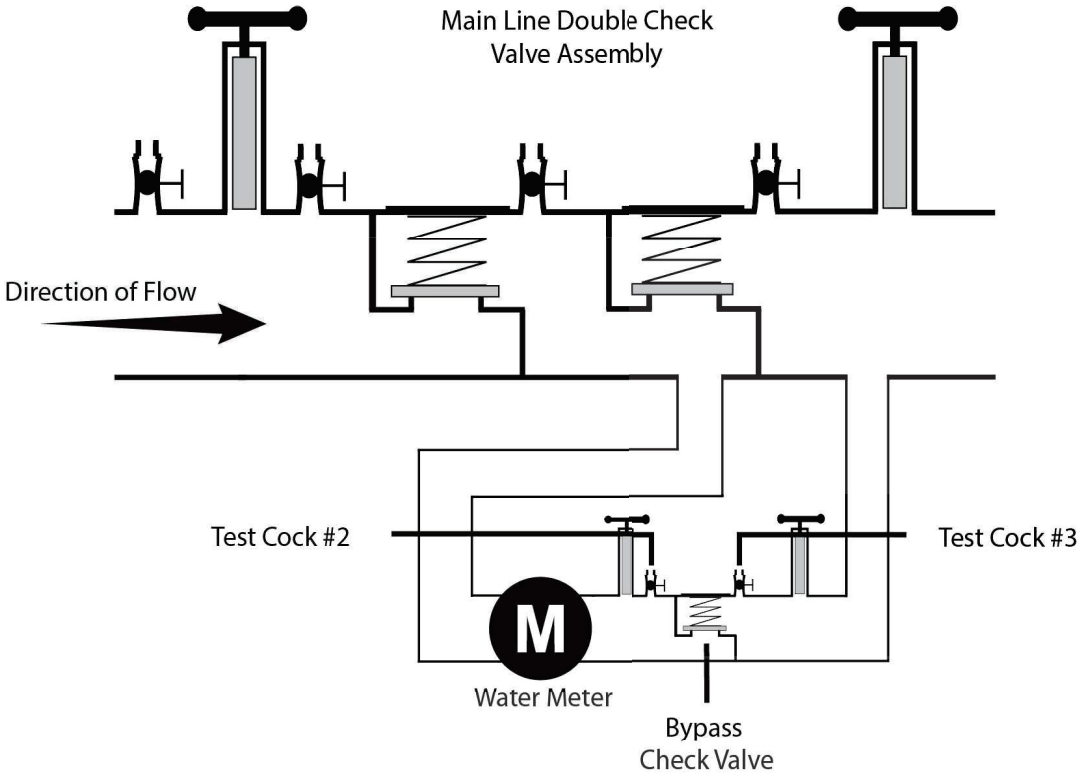


[1] © 2023 University of Southern California. Used with permission.

Appendix C

Diagram 2

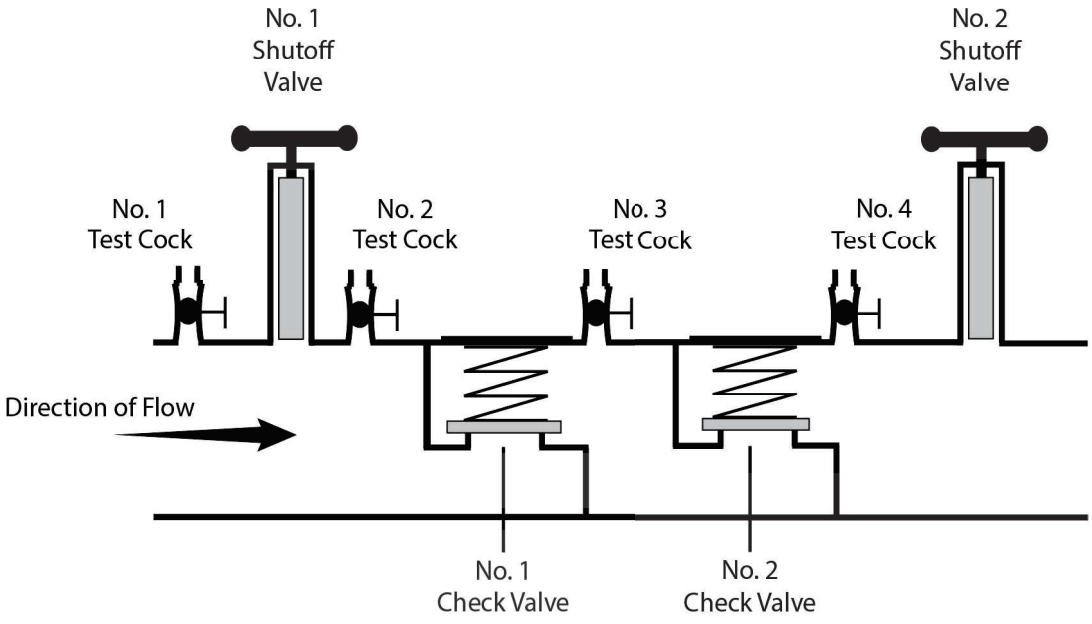
Double check detector backflow prevention assembly – type II [2]



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

Appendix C

Diagram 3
Double check valve backflow prevention assembly[3]

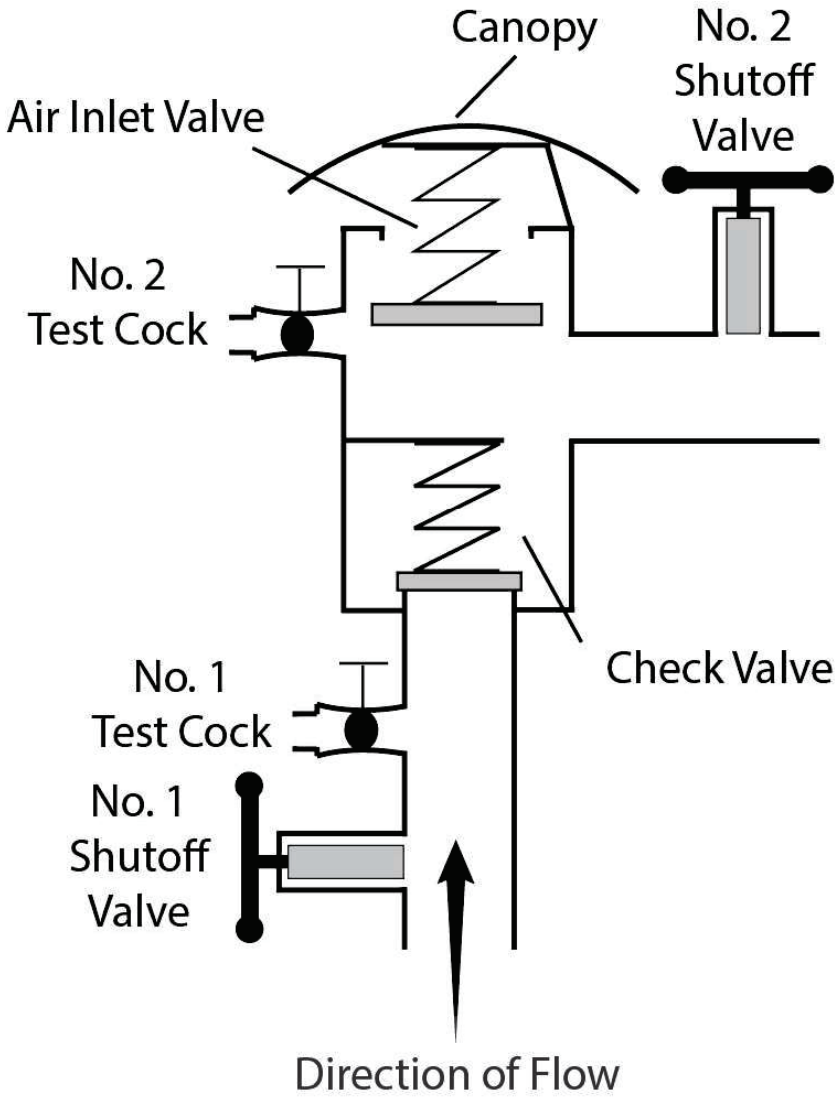


[3] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 4

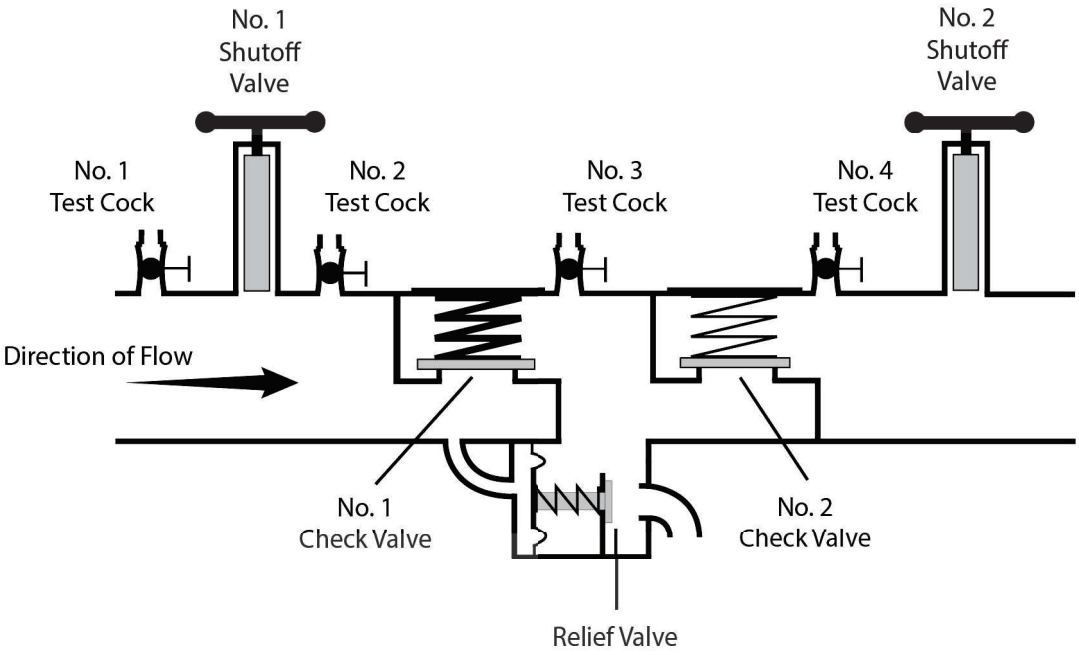
Pressure vacuum breaker backsiphonage prevention assembly [4]



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

Appendix C

Diagram 5
Reduced pressure principle backflow prevention assembly [5]

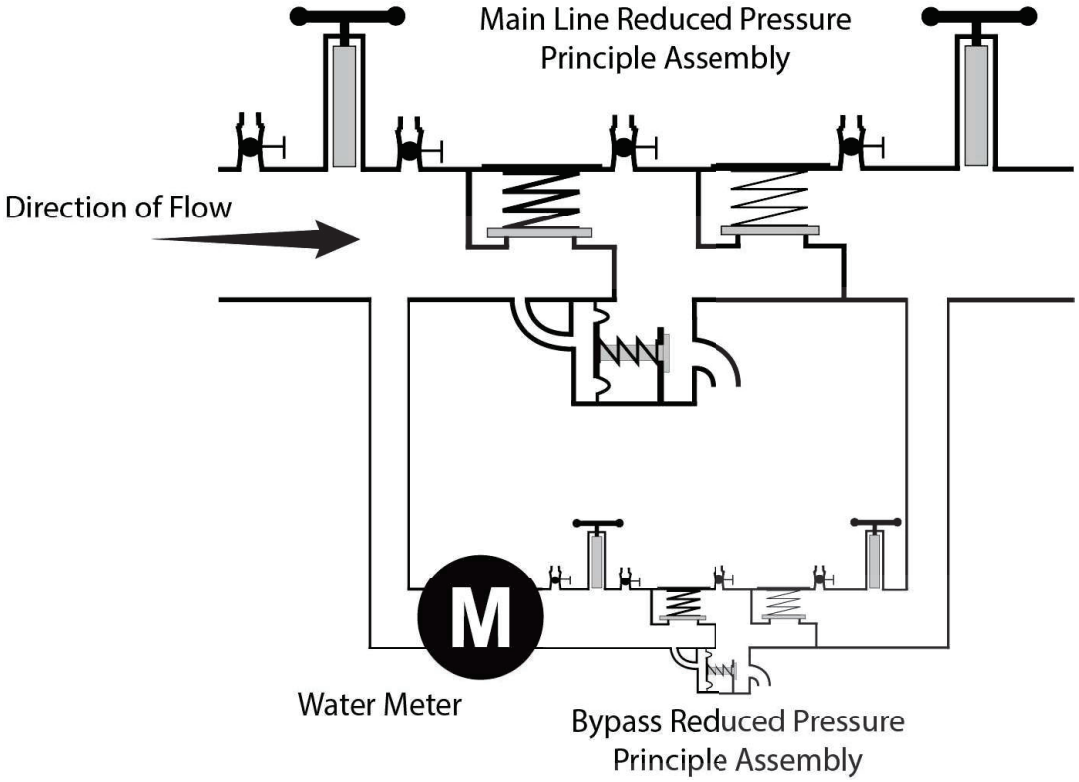


[5] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 6

Reduced pressure principle detector backflow prevention assembly [6]

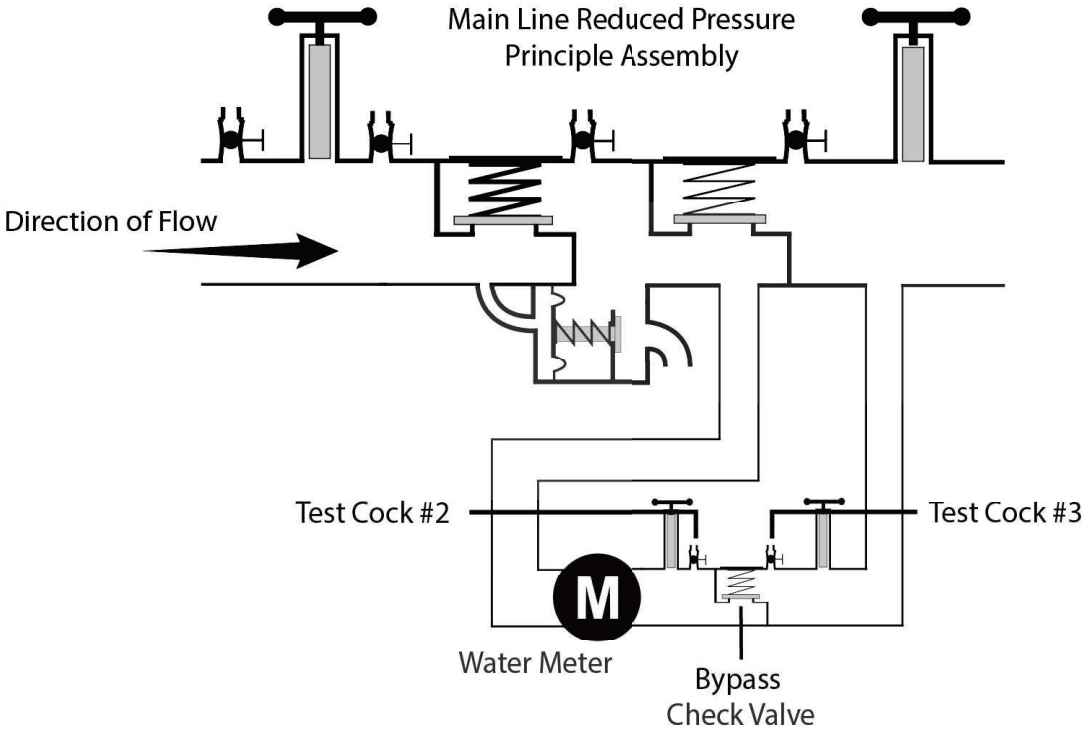


[6] © 2023 University of Southern California. Used with permission

Appendix C

Diagram 7

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

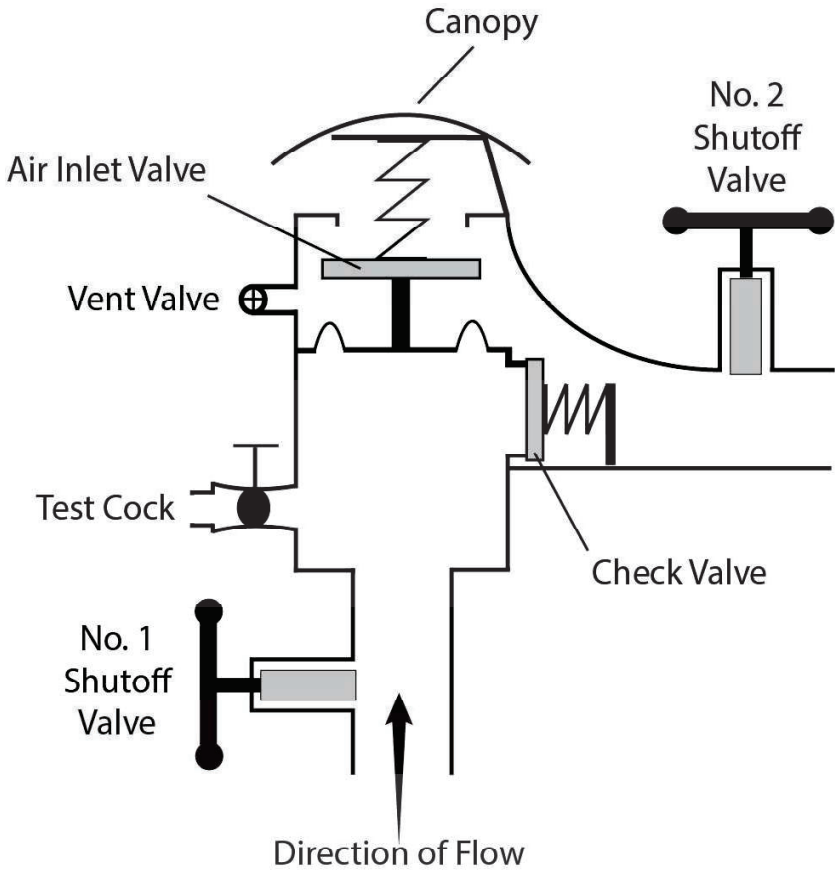


[7] © 2023 University of Southern California. Used with permission

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.

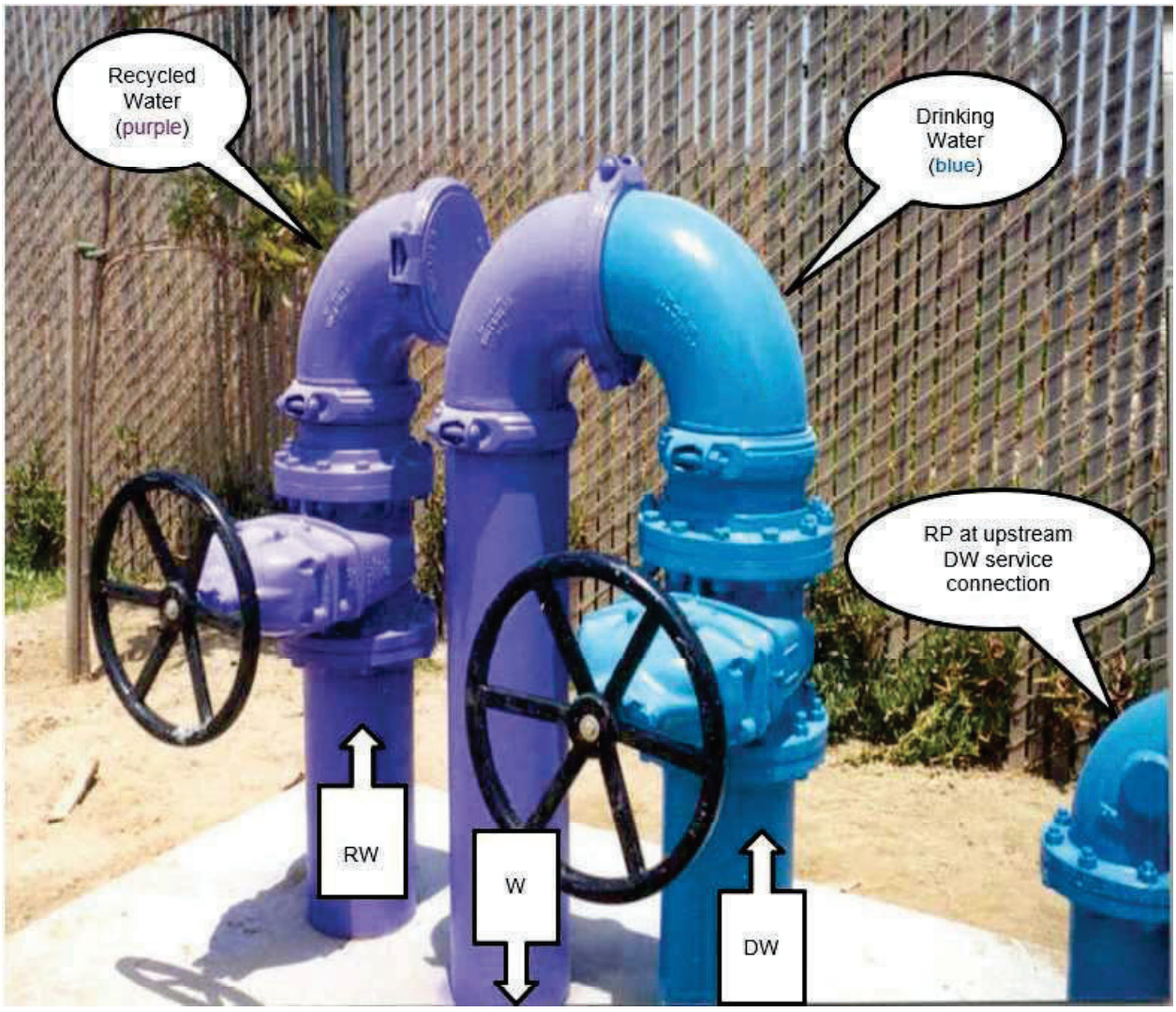
F. The swivel-ell must:

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)

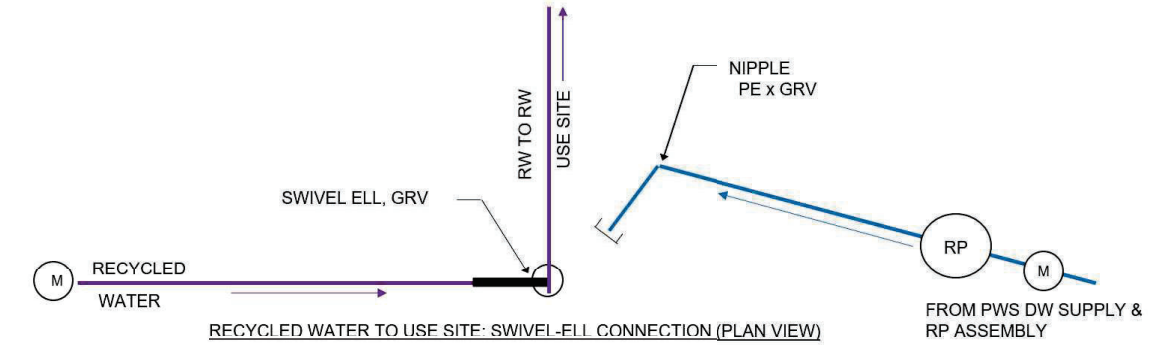
RP = Reduced pressure principle backflow prevention assembly
RW = Tertiary-treated recycled water originating from wastewater treatment facility
DW = Drinking water originating from a public water system
W = Water (tertiary recycled water **or** drinking water) to use site. As pictured, configured for 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)

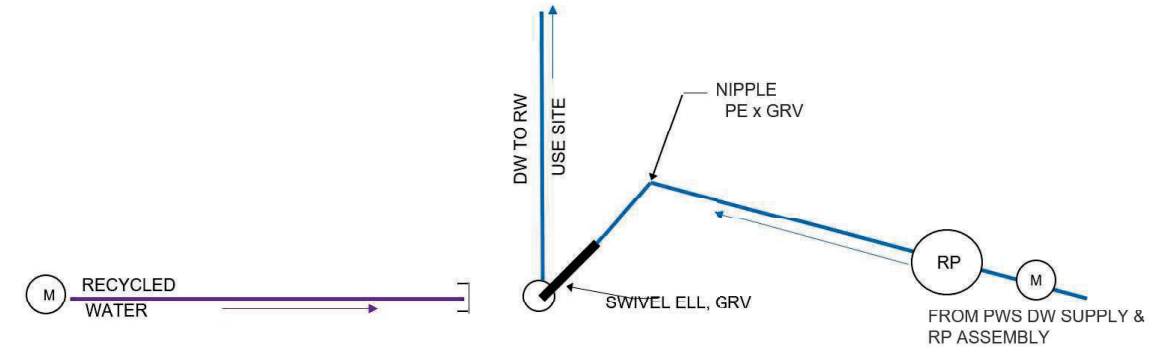


Note: The RP, a required component of an acceptable swivel-ell, is not shown in the picture.

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?

_____

Backflow Originated from:

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

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[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).

Chapter 15.44 - BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL

Sections:

Footnotes:
*--- (**9**) ---*
***Editor's note—** Ord. No. 04-2021, § 1, adopted Oct. 19, 2021, repealed the former Ch. 15.44, §§ 15.44.010—15.44.100, and enacted a new Ch. 15.44 as set out herein. The former Ch. 15.44 was entitled "Backflow Prevention," and derived from Prior Code §§ 6-6.101—6-6.110.*

15.44.010 - Title and purpose.

This chapter shall be known as the "East Palo Alto Backflow Prevention and Cross-Connection Control Ordinance." The purpose of this chapter is:

A. To describe the cross-connection control program implemented by the City of East Palo Alto and its contractors and partners to protect the public water supply against actual or potential contamination through cross-connection and backflow.

B. To protect the water system from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants which could backflow into the public water systems.

C. To promote the elimination or control of existing cross-connections, actual or potential, between the customer's potable water system(s) and non-potable water systems, plumbing fixtures, and industrial piping system.

D. To provide for the maintenance of a continuing program of cross-connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.020 - Scope.

The scope of the cross-connection control program includes all of the elements necessary to ensure compliance with the California Code of Regulations, Title 17, Public Health Sections 7583 through 7605, and any future state water resource control board requirements and regulations for cross-connection control. The City of East Palo Alto has a contract with the San Mateo County Environmental Health Services Division to implement this program, including compliance with required program personnel certifications, surveying of residential, industrial and commercial user facilities for potential cross-connection hazards, designation of appropriate backflow preventers, requirements for testers and testing of backflow prevention assemblies, and maintenance of records.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.030 - Definitions.

The following definitions describe those terms and phrases pertinent to the various elements of a cross-connection control program:

"ABPA" is an acronym for the American Backflow Prevention Association (ABPA).

"Air Gap" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, plumbing fixture, receptor or other assembly and the flood level rim of the receptacle. These vertical physical separations must be at least twice the diameter of the water supply outlet, never less than one inch.

"Approved Backflow Prevention Assembly" means assemblies listed, and installed as prescribed, on the most current List of approved backflow prevention assemblies, published by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC Foundation), and meeting any additional requirements deemed necessary by the city or San Mateo County Environmental Health Services.

"Approved Water Supply" means any water supply whose potability is regulated by a state or local health agency.

"Atmospheric Vacuum Breaker Assembly" means an assembly that contains an air inlet valve, a check seat and air inlet port(s). A shutoff valve immediately upstream may be an integral part of the assembly, but there shall be no shutoff valves or obstructions downstream. The assembly shall not be subject to operating pressure for more than twelve (12) hours in any twenty-four (24) hour period.

"Auxiliary Water Supply" means any water supply on or available to the premises other than the approved water supply as delivered by the water purveyor to the service connection.

"AWWA" is an acronym for the American Water Works Association.

"Backflow" means a flow condition, caused by a differential in pressure, which causes the flow of water or other liquid, gases, mixtures or substances into the distributing pipes of a potable supply of water from any source or sources other than an approved water supply source. Back siphonage is one cause of backflow; back siphonage is caused by negative or reduced pressure in the supply piping. Back pressure is the other cause. Back flow is the undesirable reversal of flow in a potable water distribution system as a result of cross-connections.

"Backflow Preventer" means an approved assembly or means designed to prevent backflow.

"Certified Tester" means a person certified by AWWA or an approved equivalent certificate and authorized by San Mateo County Environmental Health Services to perform backflow prevention assembly testing.

"City" means the City of East Palo Alto.

"Contamination" means a 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.

"County" means San Mateo County Environmental Health Services.

"Cross-Connection" means any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur, shall be considered to be cross-connections.

"Cross-Connection—Control by Contaminant" means the installation of an approved backflow-prevention assembly at the water service connection to any customer's premises, where it is physically and economically unfeasible to find and permanently eliminate or control all actual or potential cross-connections within the customer's water system; or it means the installation of an approved back-flow prevention assembly on the service line leading to and supplying a portion of a customer's water system where there are actual or potential cross-connections that cannot be effectively eliminated or controlled at the point of the cross-connection.

"Cross-Connection—Controlled" means a connection between a potable water system and a non-potable water system with an approved backflow-prevention assembly properly installed and maintained so that it will continuously afford the protection commensurate with degree of hazard.

"Cross-Connection Control Specialist" means a person certified by the California-Nevada Section of the American Water Works Association (AWWA), or an approved equivalent certifying entity, to evaluate the hazards inherent in supplying a customer's water system.

"Customer" or "Responsible Party" means the person that either has applied for water service from the city, or the one who owns or controls water piping or fixtures served by the city water supply.

"Division" means the state water resources control board, division of drinking water.

"Double-Check Detector Assembly" (DCDA) has the meaning defined in the most recent edition of the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research, Manual on Cross-Connection Control.

"Double Check Valve Assembly" means an assembly that consists of two internally loaded check valves, either spring-loaded or internally weighted, installed as a unit between two tightly closed resilient-seated shutoff valves and equipped with properly located resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (a pollutant). Devices must be manufactured in full conformance with the standards established by the American Water Works Association entitled "AWWA C506-78(R83)—Standards for Reduced Pressure Principle (RP) and Double Check Valve Backflow Prevention Devices (DC)" as referenced in 17 CCR § 7602.

"Double Check Valve Detector Assembly" shall mean an assembly that is a specially designed backflow assembly composed of a line-sized-approved double check valve assembly with a bypass containing a water meter and an approved double check valve assembly. The meter shall register accurately for only very low rates and is used to show unauthorized usage or leaks in the customer's system.

"DPW" means the City of East Palo Alto Department of Public Works.

"Facility" means any and all areas on a water user's property which are served or have the potential to be served by the public water system.

"Hose Bibb Vacuum Breaker" means a device that is permanently attached to a hose bibb and acts as an atmospheric vacuum breaker.

"Inspection Tag" means a current-calendar-year backflow tag purchased from San Mateo County Environmental Health Services.

"Person" means an individual, corporation, company, association, partnership, municipality, public utility, or other public body or institution.

"Pollution" means an impairment of the quality of the water to a degree which does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use. Pollution causes impairment to the usefulness of water.

"Pressure Vacuum Breaker Assembly" means an assembly that contains one or two independently operated spring-loaded check valves and an independently operated spring-loaded air inlet valve located on the discharge side of the check or checks. It also includes two tightly closing shutoff valves on each side of the check valves and equipped with properly located resilient-seated test cocks.

"Public Water System" (PWS) means a system for the provision of water for human consumption through pipes or other constructed conveyances that has fifteen (15) or more service connections or regularly serves at least twenty-five (25) individuals daily at least sixty (60) days out of the year.

"Reduce Pressure Principle Backflow Prevention Assembly" means an assembly that consists of two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two tightly closing resilient-seated shutoff valves as an assembly and equipped with properly located resilient-seated test cocks. Devices must be manufactured in full conformance with the standards established by the American Water Works Association entitled "AWWA C506-78(R83)—Standards for Reduced Pressure Principle (RP) and Double Check Valve Backflow Prevention Devices (DC)" as referenced in 17 CCR § 7602.

"Reduced Pressure Principle Detector Assembly" has the meaning defined in the most recent edition of the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research, Manual on Cross-Connection Control.

"Service Connection" means the point of connection of a facility's piping to the water supplier's facilities, usually considered the point at the outlet from the water meter.

"SWRCB" is an acronym for the state water resources control board.

"Water Supplier" means the person who owns or operates the approved water supply system.

"Water User" means any person obtaining water from an approved water supply system.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.040 - Administration of program and authority.

A. Administrative Authority. The city's department of public works is the administrative authority for the cross-connection control program. The authority to administer this program comes from California Code of Regulations Title 17 and any future state water resource control board requirements and regulations for cross-connection control; State of California, Public Utilities Commission

Rule 16c; and State of California, State Water Resources Control Board Division of Drinking Water.

B. Program Administrator. The program administrator for the cross-connection control program is the city's public works director or designee. At a minimum, the program administrator must be at a supervisor capacity and must be a cross-connection specialist certified by ABPA or AWWA. The city has a contract with the county division through an agreement to implement portions of the program, as allowed by state law and regulations and any future SWRCB requirements. City and the city's water provider are ultimately responsible for the implementation of the program.

C. Cross-Connection Control Inspector and Tester. The city representative assigned to the inspection and survey of consumers to determine if backflow prevention is warranted shall be a cross-connection control specialist. The city employee or designee assigned to the testing of city-owned assemblies shall be a ABPA or AWWA certified tester as defined by San Mateo County Ordinance Code Section 4.72.080.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.050 - Appropriate backflow protection.

A. New Construction, Remodels and Tenant Improvements.

1. Residential (Single-Family, Duplexes and Multiple Family), Commercial, Industrial and Institutional.

a. Domestic Water. City may require an approved backflow prevention assembly to be installed on the facility as close as possible to the service connection. The assembly shall be a lead-free reduced pressure principle backflow prevention assembly. If it is determined that a backflow prevention assembly is required, the customer may also need to install a thermal expansion tank in accordance with the California Plumbing Code.

b. Irrigation System. City requires an approved backflow prevention assembly to be installed on the facility on the branch line serving an irrigation system. The assembly shall be a pressure vacuum breaker, reduced pressure principle backflow prevention assembly, or atmospheric pressure vacuum breaker as determined by the city.

c. Fire Suppression System. All facilities with an installed fire suppression system must have an approved backflow prevention assembly, excluding flow-through fire systems, on the branch line serving the fire suppression system. The assembly shall be a double check valve backflow prevention device, a double check detector assembly, a reduced pressure principle backflow prevention assembly, or a reduced pressure principle detection assembly or as determined by the city. Flow-through fire protection systems shall be constructed with approved potable water piping and materials.

B. Fire Protection System. Except as noted below, a public water system must ensure its distribution system is protected with no less than double check detector assembly protection for a premises with a fire protection system.

1. A high hazard cross-connection fire protection system, including, but not limited to, fire protection systems that may utilize chemical addition (e.g., anti-freeze) or an auxiliary water supply, must have no less than a reduced pressure principle backflow prevention assembly protection. An air gap is required for customers where the fire system is supplied from the public water system and interconnected with an unapproved auxiliary water supply.

C. Sewage and Hazardous Substances.

1. An air gap is required for facilities where there are waste water pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single-family residence that has a sewage lift pump.
2. An air gap is required for facilities where hazardous substances are handled in any manner in which the substances may enter the potable water system. This does not include a single-family residence that has a sewage lift pump.
3. A reduced pressure principle backflow prevention assembly is required for facility's where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.

D. Auxiliary Water Supplies.

1. An air gap is required for facilities where there is an unapproved auxiliary water supply which is interconnected with the public water system.
2. A reduced pressure principle backflow prevention assembly is required for facilities where there is an unapproved auxiliary water supply and there are no interconnections with the public water system.

E. Recycled Water.

1. A reduced pressure principle backflow prevention assembly or another city-approved device that is in accordance with the SWRCB is required for facilities where the public water system is used to supplement the recycled water supply.
2. A reduced pressure principle backflow prevention assembly is required for facilities where recycled water is used and there is no interconnection with the potable water system.

F. Existing Service Connection. When it is determined in a survey by the city or county cross-connection control program specialist that an actual or potential cross-connection or backflow condition is present on an existing facility, the installation of an appropriate backflow preventer shall be required. Should an existing backflow prevention assembly be in place that does not meet the city's

installation requirements, does not comply with this section, or does not provide adequate protection with the degree of hazard found on-site, the assembly shall be replaced or upgraded as required by the city, at the expense of the customer or responsible party.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.060 - Surveys.

A. Identification of Survey Candidates. City may identify specific industries that might pose an actual or potential backflow hazard to the public water supply. Some of these industries are identified from common lists of industries where cross-connections are likely to be found, as provided by the State of California, the USC Foundation, and other recognized organizations. From these lists, specific facilities in the city's service area may be identified by directories, mailing lists, associations, and business licenses.

B. Surveys may take the form of office surveys or field surveys. Office surveys may include determination of facility hazards based on business type or known water use on the facility. Office surveys could also include evaluation of responses to mailed or on-line surveys.

C. Procedures for surveying and retrofitting existing facilities and for plan review and inspection of new construction:

1. Backflow preventers are tested annually, and the city's contracted water system operator works with the county when devices are out of compliance or needs testing. City recognizes and follows all state, county, and other jurisdictional authorities' procedures and guidelines. New construction is analyzed on a case-by-case basis by city.
2. Existing backflows will be identified, and those backflows will be tested per state testing procedures, at least annually. Customers with noncompliance backflow systems will be notified as outlined in Section 15.44.100 and required to come into compliance.
3. Portable backflows must be tested annually and or retested when disconnected or removed from any approved location. Anyone connecting to the public water system, by hydrant, temporarily or other, must have an acceptable and approved backflow preventer assembly and or plan from city. If the device is moved from place to place it must be tested by a city-approved certified tester.

D. Field surveys may include evaluation of water use by observations made from public or private areas not on the subject facility, or physical inspection on all or a portion of the facility. When possible, a request to survey the facility shall be made at least twenty-four (24) hours in advance, and a date and time agreed upon with a responsible party. Should the request to survey be denied by a

responsible party, notice shall be sent to the customer or responsible party directing installation of a lead-free reduced pressure principle backflow assembly, at the water meter, based on best available knowledge of the water use and potential hazards at the facility.

During the survey many factors are considered to determine if activities or water use on facility are or could be a potential hazard to the public water supply. Factors that may be considered include:

1. Alternative sources of water on-site (auxiliary water supplies).
2. Piping configurations on-site.
3. Uses of water on-site.
4. Types of water using equipment.
5. Condition of water using equipment.
6. Complexity and elevations of plumbing on-site, and the potential for alterations of that system.
7. Storage and use of hazardous materials on-site.

All the factors found and recorded during the survey shall be considered in the determination of the degree of potential hazard (degree of hazard) to the public water supply. This information shall be considered in the determination of the appropriate backflow preventer. The customer or responsible party shall be informed of the requirement to provide backflow protection and the type of backflow prevention assembly required in accordance with Title 17 of the California Regulations Related to Drinking Water or any future state water resource control board requirements and regulations for cross-connection control, or the direction of the San Mateo County Health Officer.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.070 - Location and configuration of backflow assemblies.

Location and Configuration of Backflow Assemblies. Backflow prevention assemblies shall be installed in accordance with Title 17 of the California Code of Regulations, Section 7603, and any future state water resource control board requirements and regulations for cross-connection control, and the most recent edition of the USC Foundation Manual. Any deviation from these requirements shall require the city's approval. Unless otherwise permitted by the city, all backflow preventers shall be installed on the customer's or responsible party's facility. A public water system must comply with the requirements of any future SWRCB cross-connection control regulations.

A.

Air Gap Separation. The air gap separation shall be located as close as practical to the user's connection and all piping between the user's connection and the receiving tank shall be entirely visible unless otherwise approved. The DPW must ensure that air gap meets the requirements in Section 603.3.1 of the 2019 California Plumbing Code and any requirements in any future updates to the California Plumbing Code. 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 DPW. 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 DPW. Any new air gap installation at a user service connection must be reviewed and approved by the SWRCB prior to installation.

B. Double Check Valve Assembly. A double check valve assembly and double check valve detector assembly shall be installed a minimum of twelve (12) inches above grade and not more than thirty-six (36) inches above grade measured from the bottom of the assembly in a manner where it is readily accessible for testing and maintenance. Below ground installation can be considered by the DPW if it determines no alternative options are available. A minimum of twelve (12) inches side clearance is required in a manner where the assembly is readily accessible for testing and maintenance, except that a minimum side clearance of twenty-four (24) inches must be provided on the side of the assembly that contains the test cocks. See Section 15.44.050 for fire protection and fire suppression system assembly requirements.

C. Reduced Pressure Principle Backflow Prevention Assembly. A reduced pressure principle backflow prevention assembly shall be installed a minimum of twelve (12) inches above grade, unless an alternative is approved by the DPW, and not more than thirty-six (36) inches above grade measured from the bottom of the assembly. With a minimum of twelve (12) inches side clearance in a manner where the assembly is readily accessible for testing and maintenance, except that a minimum side clearance of twenty-four (24) inches must be provided on the side of the assembly that contains the test cocks. See Section 15.44.050 for fire protection and fire suppression system assembly requirements.

D. Pressure Vacuum Breaker. A pressure vacuum breaker check valve assembly shall be installed a minimum of twelve (12) inches above all downstream piping and flood level rims of receptors and in a manner where it is readily accessible for testing and maintenance.

E. Atmospheric Vacuum Breaker. An atmospheric vacuum breaker check valve assembly shall be installed a minimum of six inches above all downstream piping and flood level rims of receptors and in a manner where it is readily accessible for testing and maintenance.

F.

Spill-Resistant Pressure Vacuum Breakers Back-Siphonage Prevention Assembly. A spill-resistant pressure vacuum breaker must be installed a minimum of twelve (12) inches above all downstream piping.

G. Pressure vacuum breakers, spill-resistant vacuum breakers and double check valve assemblies may not be used for premises isolation.

H. Backflow Prevention Assembly Enclosures. A backflow prevention assembly enclosure, cage or locked bag may be required by city to be installed at the customer's expense, to combat against tampering, vandalism or theft. City may require that any enclosure, cage or locked bag be secured to a concrete slab and securely locked.

I. Backflow protection must be located at the water user's service connection unless one or more alternative locations have been approved by the DPW. If internal protection is provided the DPW must obtain access to the user premises and must ensure that the on-site protection meets the requirements of this chapter for installation, testing and inspections.

J. Each backflow prevention assembly and air gap separation must be accessible for field testing and maintenance.

K. Any deviation of installation from the descriptions provided shall require the city's approval prior to installation. All backflow prevention assembly installations shall be inspected by the city to ensure compliance with all relevant statutes, regulations, ordinances, and city requirements.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.080 - Testing maintenance of backflow of backflow preventers.

A. As required by the California Code of Regulations, Title 17 or any future SWRCB requirements and regulations for cross-connection control, the city shall assure that adequate maintenance and annual testing of backflow prevention assemblies are provided by the customer or responsible party, to ensure the proper operation of the assemblies. The customer or responsible party is ultimately responsible for the installation, testing, and maintenance of all required backflow prevention assemblies on or related to the customer's facility.

B. Certified Testers. No person shall test and/or make reports on backflow prevention assemblies to comply with this section unless he or she possesses a current certification issued by the county as defined in the county ordinance code. Additionally, testers must be approved by city.

C.

Frequency of Testing. Backflow prevention assemblies shall be tested by a certified tester immediately after they are installed, relocated or repaired and not placed in service unless they are functioning as required. All backflow prevention assemblies shall be tested at least annually or more frequently if determined to be necessary by the city or county, in accordance with the California Code of Regulations, Title 17 or any future SWRCB requirements and regulations for cross-connection control, and San Mateo County Ordinance Code.

D. Fire Suppression System Backflow Preventer Testing.

1. Single-Family and Duplex Residential. Single-family and duplex residential fire suppression systems with an installed backflow prevention assembly shall be tested upon installation and annually thereafter.
2. Commercial, Industrial, Multiple-family.
   a. Commercial, industrial, multiple-family fire suppression system backflow preventers must be tested annually by a certified tester.
   b. If an existing fire suppression system backflow assembly is located in a vault, and has adequate physical clearance to test, it is considered "existing non-conforming" and approved for testing.
   c. If an existing assembly fails the field test, the assembly must be repaired or replaced with an appropriate, approved backflow prevention assembly, installed to current city standards. If any failed assembly is currently in a vault, the assembly must be relocated above grade, to meet all current codes and city standards.
   d. If an existing fire system does not have testable approved backflow prevention assembly the city shall require that a new appropriate assembly that meets all current codes be installed at customer or responsible party expense.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.090 - Procedures for testing and inspection.

A. Testable backflow prevention assemblies shall be tested using current USC Foundation test procedures.

B. When a backflow prevention assembly is inspected and has passed the testing procedure, the certified tester shall immediately affix a numbered inspection tag to the assembly purchased from the county.

C. When a backflow prevention assembly fails the testing procedure, the certified tester shall immediately affix a "Failed" inspection tag to the assembly. Records of failed assembly tests shall be filed/submitted as directed within ten (10) days. The "Failed" inspection tag shall remain affixed to the assembly until the assembly is repaired, has passed the testing procedures and has been affixed with a numbered inspection tag.

D. Certified testers are solely responsible to comply with applicable municipal requirements for additional permits or licenses (i.e., local business license, plumbing permit, etc.) to test or repair backflow prevention assemblies within the city limits.

E. Procedures for handling backflow related complaints and emergencies:

1. The city water operator works closely with the county as part of its cross-connection control program regarding backflow prevention. Complaints may be sent to the city water operator and then the operator will coordinate with San Mateo County Environmental Health Services.
2. During emergencies contact the city water provider.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.100 - Enforcement.

A. County has authority to take enforcement action as specified in the county ordinance code relating to backflow prevention, consistent with the agreement between the city and county. The city and city's water provider shall work with the county on enforcement. If the county is unable to reach the customer or responsible party, the city, with support from the city's water provider, will send a notice of violation by certified mail to the customer or responsible party.

B. Failure to comply with any requirement of this chapter may be cause for the discontinuance of water service. The program administrator shall give notice in writing of any violations of this chapter to the customer or responsible party. If appropriate action is not taken within ten (10) days after such notice has been mailed or delivered in person, the program administrator may discontinue delivery of water. However, if the program administrator or the health officer determines that the violation constitutes an immediate threat to the public health or safety or to the integrity of the public water system, the program administrator or the health officer may discontinue delivery of water immediately without prior notice; in such an instance, the program administrator or the health officer shall deliver notice of discontinuance as soon as practicable to the property owner and customer or responsible party. Delivery of water shall not be resumed until all required corrective actions have been made and certified as complete by the city or county.

C. All costs incurred by the city for discontinuance of water service and all fees associated with reinstating water service shall be paid by the customer or responsible party. Costs incurred by the county for inspections shall be paid by the customer or responsible party at the rate established by San Mateo County.

D. Any person found guilty of violating any provision of this chapter, or who bypasses or renders inoperative any backflow prevention assembly installed under the provisions of this chapter, shall be fined as follows:

1. A fine not exceeding one hundred dollars ($100.00) for the first violation;
2. A fine not exceeding two hundred dollars ($200.00) for a second violation within twelve (12) months;
3. A fine not exceeding five hundred dollars ($500.00) for each additional violation within twelve (12) months.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.110 - Reporting.

All reporting by the city required by this chapter shall be the responsibility of the program administrator. This includes any reports to local, state, and federal regulatory or health agencies.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.120 - Maintenance of records.

A. Assembly Records. Records of assembly type, size, manufacturer, installation date, location, account number, customer or responsible party of record, and repair history shall be kept electronically or in hard copy form. Assembly records shall be kept for the life of the assembly by either the city or the county, as appropriate.

B. Testing Records. Test results on all assemblies shall be kept electronically or in hard copy form for a minimum of three years.

C. Backflow Incident Notification.

1. Each public water system must notify the SWRCB of any known incident of backflow within twenty-four (24) hours of the determination. If required by the state water board, a public water system must issue a tier 1 public notification pursuant to California Code of Regulations, Title 22, Section 64463.1.
2. If required by the SWRCB, the public water system must submit, by a date specified by the SWRCB, a written incident report describing the nature and severity of the backflow or cross-connection incident, the actions taken by the public water system in response to the incident, and the follow up actions to prevent future incidents. The written report must contain, at a minimum, the information requested in the California State Water Resources Control Board Backflow Incident Report Form which can be found on the city website.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.130 - Public outreach and education.

Education is a critical component to the control of backflow and cross-connection control. The city shall provide educational information on the backflow and cross-connection control program on the city website.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.140 - Water supply—Sale of devices or materials that may cause pollution.

No person shall advertise locally by local means, sell, or offer for use or sale any water-treating chemical or substance, water-using or water-operated equipment, mechanism or contrivance which may cause contamination or pollution of the domestic water supply if not equipped with an approved backflow prevention device, unless such person states in such advertisement or at the time of such sale or offer that state law and this chapter may require such device in connection with the use of such chemical, substance, equipment, mechanism or contrivance.

(Ord. No. 04-2021, § 1, 10-19-2021)

15.44.150 - Local plumbing codes.

Nothing in this chapter shall exempt any person from compliance with applicable requirements of the local plumbing codes.

(Ord. No. 04-2021, § 1, 10-19-2021)

ORDINANCE NO. 4903

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA

* * * * * *

ORDINANCE REPEALING AND REPLACING CHAPTER 4.72 OF THE SAN MATEO COUNTY ORDINANCE CODE CONCERNING BACKFLOW PREVENTION

SECTION 1. FINDINGS. The Board of Supervisors of the County of San Mateo ("County") hereby finds and declares as follows:

WHEREAS, the County's Backflow Prevention Ordinance, Chapter 4.72 of the San Mateo County Ordinance Code, which was last amended in January 2013, protects potable water supplies from contamination by establishing County requirements for backflow prevention; and

WHEREAS, on December 19, 2023, the California State Water Resources Control Board (SWRCB) adopted new regulatory requirements related to cross-connection control for all public water systems in the form of the Cross-Connection Control Policy Handbook, Standards and Principles for California's Public Water Systems (Policy Handbook); and

WHEREAS, this Policy Handbook, promulgated as regulation, became effective July 1, 2024, with relevant milestones requiring updates to the County's Backflow Prevention Ordinance by July 1, 2025; and

WHEREAS, the Board of Supervisors now wishes to update Chapter 4.72 of the San Mateo County Ordinance Code, codifying County requirements for backflow

prevention, to align the Ordinance Code with the recently enacted Policy Handbook.

NOW, THEREFORE, the Board of Supervisors of the County of San Mateo ordains as follows:

SECTION 2. Chapter 4.72 of the San Mateo County Ordinance Code is hereby repealed in its entirety and is replaced by a new Chapter 4.72 to read as follows:

CHAPTER 4.72 BACKFLOW PREVENTION

4.72.010 Purpose and authority.

The purpose of this Chapter is to ensure the health, safety, and general welfare of the County of San Mateo citizens through protecting the potable water supplies from contamination by establishing County requirements for backflow prevention complementary to those established by the State Water Resources Control Board Cross-Connection Control Policy Handbook ("CCCPH"). Sections 116407, 116800, 116805, and 116810 of the California Health and Safety Code, and Section 3.1.3 of the CCCPH provide the County authority to implement this backflow prevention program, also known as a cross-connection control program, which is described in this Chapter.

4.72.020 Responsibility for administration.

This Chapter shall be administered and enforced by the Director of the San Mateo County Environmental Health Services Division of San Mateo County Health or the Director's designee, on behalf of the County Health Officer.

4.72.030 Scope and application.

Backflow prevention requirements imposed by the CCCPH and this Chapter, and fees enacted in accordance with San Mateo County Ordinance Code section 5.64.070, shall apply to all facilities (businesses, dwellings, activities, and piping systems of whatever sort) within the Water Supplier service areas of Water Suppliers that have entered into an agreement with the County of San Mateo, by and through the Environmental Health Services Division, for backflow prevention and enforcement. Pursuant to section 116800, et seq., of the California Health and Safety Code, this Chapter also applies within all Water Users' premises within the County of San Mateo where public exposure to drinking water contaminated by backflow may occur.

4.72.040 Definitions.

For the purposes of this Chapter, the following definitions shall govern unless the context clearly requires otherwise:

(a) “Authorized tester” is a backflow prevention assembly tester who meets all requirements specified in section 4.72.080 of this chapter and is approved to test backflow prevention assemblies that are included in San Mateo County’s Cross-Connection Control Program.

(b) “Backflow prevention assembly” (“BPA”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(c) “Cross-connection” shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(d) “Cross-Connection Control Policy Handbook” (“CCCPH”) means the Cross-Connection Control Policy Handbook adopted by the State Water Resources Control Board pursuant to California Health and Safety Code Section 116407.

(e) “Director” means the Director of the Environmental Health Services Division of the San Mateo County Health System.

(f) “Division” means the Environmental Health Services Division of the San Mateo County Health System.

(g) “Double check valve backflow prevention assembly” (“DC”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(h) “Double check detector backflow prevention assembly” (“DCDA”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(i) “Double check detector backflow prevention assembly – type II” (“DCDA-II”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(j) “Graywater” shall have the same meaning as defined in California Water Code Section 14876.

(k) “Inspection tag” means a current-calendar-year backflow tag purchased from the Division, at a fee enacted pursuant to San Mateo County Ordinance Code section 5.64.070.

(l) “Lead free” shall have the same meaning as defined in California Health and Safety Code Section 116875.

(m) “Person” means any natural person, partnership, cooperative association, corporation, personal representative, receiver, trustee, assignee, or any other entity.

(n) “Pressure vacuum breaker backsiphonage prevention assembly” (“PVB”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(o) “Public Water System” (“PWS”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(p) "Recycled water” shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(q) “Reduced pressure principle backflow prevention assembly” (“RP”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(r) “Reduced pressure principle detector backflow prevention assembly” (“RPDA”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(s) “Reduced pressure principle detector backflow prevention assembly – type II” (“RPDA-II”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(t) “Spill-resistant pressure vacuum breaker backsiphonage prevention assembly” (“SVB”) shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(u) “State Water Resources Control Board” (“Board” or “SWRCB”) means the California State Water Resources Control Board.

(v) “Water Supplier” shall have the same meaning as defined in section 3.1.1 of the CCCPH.

(w) “Water User” shall have the same meaning as defined in section 3.1.1 of the CCCPH.

4.72.050 Maintenance of cross-connection prohibited.

It shall be unlawful for any Person to have, keep, maintain, install, or allow the existence of a cross-connection.

4.72.060 Correction of cross-connections.

Any BPA installed for the purpose of eliminating a cross-connection shall conform to State law and this chapter. Only BPAs tested and approved in accordance with the CCCPH and this chapter at or before the time of installation shall be approved for use under this Chapter, and such BPAs shall be installed as indicated by the approving entity, pursuant to section 3.3.1(b) and (c) of the CCCPH, and under permit from the local building official. BPAs must not be modified without authorization following approval granted by the approving entity.

4.72.070 Tests of backflow prevention assemblies.

All testable BPAs, including but not limited to a DC, DCDA, DCDA-II, RP, RPDA,

RPDA-II, PVB, and SVB which have been installed to meet the requirements of the CCCPH and this Chapter shall be tested when initially installed and at least once each year thereafter. The annual re-test must occur within thirty (30) days of the anniversary date for the BPA as established by the Division, but never less than once every 395 days, by a Person authorized pursuant to section 4.72.080 of this Chapter. Records of such BPA tests shall be filed with the Division within ten (10) days after such tests. Records shall be on forms provided by, or by mechanism specified by the Division, or on a similar form that includes all the same equivalent data as determined by the Division.

Testable BPAs shall be tested using current University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research test procedures as recognized by the Division. When a BPA is inspected and has passed the testing procedure, the authorized tester shall immediately affix a numbered inspection tag to the BPA. When a BPA fails the testing procedure, the authorized tester shall immediately affix a "failed" inspection tag to the BPA. Records of failed BPA tests shall be filed with the Division within ten (10) days. The "failed" inspection tag shall remain affixed to the BPA until the BPA is repaired, has passed the testing procedures, and has been affixed with a numbered inspection tag. Pursuant to section 116875 of the California Health and Safety Code, any failed BPA that is not "lead free" and that is not specifically exempted by section 116875, must be replaced with an approved "lead free" BPA rather than being repaired.

4.72.080 Authorized testers.

No Person shall test and/or make reports on BPAs unless that Person possesses a current authorization issued by the Division as follows:

(a) The Division shall authorize any applicant who demonstrates competence to test and make reports on BPAs in compliance with the requirements of the CCCPH and this Chapter, and who submits an initial tester application, pays the annual authorization fee enacted pursuant to San Mateo County Ordinance Code section 5.64.070, and provides copies of all test gauge calibration certificates for any BPA test gauges that the BPA tester uses in performing BPA testing in San Mateo County. Such calibration certificates must be from calibration made within the calendar year (365 days) preceding the authorization. Applicants shall demonstrate such competence by complying with all of the following:

(1) Presenting a current valid certificate as a BPA tester issued by the California — Nevada Section of the American Water Works Association or equivalent certification as recognized by the SWRCB as detailed in section 3.4.1 of the CCCPH.

(2) Undertaking and passing an examination administered by the Division. Any such authorized tester may be required to undergo additional training, reexamination, other demonstration of competency or any combination thereof, as may be deemed

necessary by the Division.

(b) Tester authorization may be renewed annually by payment of the annual authorization fee. Payment must be made before expiration of the previous year's authorization. Proof of current certificate that complies with subdivision (a)(1) of this Section must be submitted to the Division with the fee. If there is any lapse in authorization or any suspension or revocation of tester authorization pursuant to Section 4.72.090 of this Chapter, the Division may require the tester to undergo re-examination, additional training, other demonstration of competency, or any combination thereof prior to re-authorization. Additionally, at the time of annual renewal, authorized testers must provide copies of all test gauge calibration certificates for any BPA test gauges that the BPA tester uses in performing BPA testing in San Mateo County. Such calibration certificates must be from calibration made within the calendar year (365 days) preceding the re-authorization.

Authorized testers are solely responsible for complying with applicable municipal requirements for additional permits or licenses (e.g., local business license, plumbing permit, etc.) to test, repair, report on, or install BPAs within that local jurisdiction.

4.72.090 Suspension or revocation of tester authorization.

(a) Reasons. Tester Authorization by the Division may be suspended or revoked upon any of the following grounds:

(1) The Division determines that a tester is no longer in possession of a current and valid certificate as a backflow prevention tester that complies with section 4.72.080 of this Chapter.

(2) The Division determines that the tester has practiced fraud or deception or has displayed gross negligence or misconduct in the performance of their duties, including by, for example, making a material misrepresentation on the initial or renewal application for tester certification to the Division or committing an act that may pose a threat to public health and safety in the performance of a test required by this Chapter.

(b) Procedures. Written notice of the suspension or revocation shall be served on the authorized tester by certified mail with a description of the violation and supporting facts. The notice shall contain an advisement of the right to request an appeal hearing before the Director or the Director's designee.

(c) Time Period of Suspension of Tester Authorization. The Division has discretion to suspend a tester authorization for any period of time between five (5) calendar days and the end of the annual authorization term, depending on the nature and severity of the violation.

(d) Effective Date of Suspension or Revocation. Suspension or revocation issued pursuant to subsection (a) will be effective ten (10) calendar days from the date the written notice was sent by certified mail as described in subsection (b) unless a timely appeal is filed in accordance with subsection (e).

(e) Appeal.

(1) The Division's decision to suspend or revoke tester authorization is appealable to the Director or the Director's designee.

(2) An appeal must be in writing, be addressed to the Director, and be hand-delivered or mailed to the offices of the Division.

(3) An appeal must be received by the Director on or before the effective date of suspension or revocation provided by subsection (d).

(4) The filing of a timely appeal will stay a suspension or revocation pending a decision on the appeal by the Director.

(5) An appeal hearing shall be scheduled within thirty (30) days of receipt of the appeal by the Director unless an extension is authorized by the appellant.

(6) The decision of the Director or the Director's designee following the appeal hearing shall be a final administrative order, with no further administrative right of appeal.

(7) The appellant shall be notified in writing by certified mail of the decision of the Director or their designee following the appeal hearing unless such person was present at the hearing when the decision was rendered, in which case notice shall be deemed to have been given to that person.

(f) Reapplication. No reapplication will be accepted within six (6) months after a tester authorization is revoked.

(g) Evidence. The following rules shall apply to any hearing required by this Chapter. All parties involved shall have the right to offer testimonial, documentary, and tangible evidence bearing on the issues, to be represented by counsel, and to confront and cross-examine witnesses. Any relevant evidence may be admitted if it is the sort of evidence upon which reasonable persons are accustomed to rely in the conduct of serious affairs. Formal rules of discovery do not apply to proceedings governed by this Chapter. Unless otherwise specifically prohibited by law, the burden of proof is on the authorized tester in any hearing or other

matter under this Chapter.

4.72.100 Duty to maintain backflow prevention assemblies.

It shall be unlawful to use any BPA required by the CCCPH, California Health and Safety Code, California Plumbing Code, this Chapter, or any other applicable law unless such assembly is in good repair. Assemblies which are found to not be in good repair shall be repaired and re-tested by an authorized tester, as described in section 4.72.070 of this Chapter, immediately upon discovery, and no later than seven (7) calendar days following the discovery and notice to the owner. A report thereof shall be filed with the Division within ten (10) days after such test.

4.72.110 Local laws and codes.

Nothing in this Chapter shall exempt any Person from compliance with applicable requirements of any local laws and codes, including but not limited to local plumbing and business codes, or any other chapters of the San Mateo County Ordinance Code.

4.72.120 Authority to inspect.

All facilities shall be available for inspection by the Division to determine if protection of the public water supply is required. The frequency of inspection shall be determined by the degree of potential or actual hazard determined for each facility or facility type, and as specified in the CCCPH, or in the operating rules of any Public Water System. Costs incurred by the Division for these inspections shall be paid by the facility owner at the rates enacted pursuant to San Mateo County Ordinance Code section 5.64.070.

4.72.130 Enforcement.

The Division shall have the authority to enforce this Chapter as follows:

(a) The Division may require a water supplier to discontinue water service to any facility wherein violations of this Chapter exist.

(b) Any Person who violates any provision of this Chapter, or bypasses or renders inoperative any BPA installed under the provisions of this Chapter, may, in addition to other penalties provided by law and this Chapter, be subject to discontinuance of water service. Water service shall not again be reinstated until such violations have been corrected as determined by the Division. Costs incurred by the Division for inspections shall be paid by the facility owner at the rates enacted pursuant to San Mateo County Ordinance Code section 5.64.070.

(c) Pursuant to section 116820 of the California Health and Safety Code, any Person who violates any provision of Article 2 of Chapter 5 of Part 12 of Division 104 of the California Health and Safety Code (“Article 2”), violates any order of the Division pursuant to Article 2, or knowingly files a false

statement or report required by the Division pursuant to Article 2 is guilty of a misdemeanor punishable by a fine not exceeding five hundred dollars ($500.00) or by imprisonment not exceeding 30 days in the county jail or by both such fine and imprisonment. Each day of a violation of any provision of Article 2 or of any order of the Division beyond the time stated for compliance of the order shall be a separate offense.

(d) Administrative Fines.

(1) Violations. Upon a finding by the Division that a Person has violated any provision of this Chapter or directive of the Division made pursuant to this Chapter, knowingly filed a false statement or report required pursuant to this Chapter, or bypassed or rendered inoperative any BPA installed under the provisions of this Chapter, the Division may issue an administrative order requiring that the violation be corrected and may issue an administrative fine of up to five hundred dollars ($500.00).

(2) Separate Violations. Each day of a violation as described in subsection (a) shall constitute a separate violation.

(3) Fine Procedures. Notice of the fine shall be served by certified mail with description of the violation and supporting facts. The notice shall contain an advisement of the right to request a hearing before the Director or the Director's designee contesting the imposition of the fine.

(4) Appeals. Appeals must be requested in writing, and shall provide facts disputing the violation. Appeals must be addressed to the Director, and must be received within ten (10) calendar days of the date on which the notice described in subdivision (c) was mailed. The decision of the Director or their designee on the appeal shall be provided to the appellant by certified mail. The decision will constitute a final administrative order with no additional administrative right of appeal.

(5) Failure to Pay Fine. If said fine is not paid within thirty (30) calendar days from the date appearing on the notice of the fine or the notice of determination from the Director or their designee after the appeal hearing, whichever is later, the fine may be referred to a collection agency within or external to the County of San Mateo. In addition, any outstanding fines must be paid prior to the issuance or renewal of the Person's registration or authorization pursuant to this Chapter.

4.72.140 Recycled or graywater systems.

All components of recycled or graywater systems must be designed and installed

in accordance with California law and local Plumbing Codes.

4.72.150 Sections found invalid.

If any provision, clause, section, sentence, or paragraph of this Chapter or the application thereof to any Person or circumstances is held invalid, such validity shall not affect the other provisions of this Chapter which can be given effect without the invalid provision or application, and to this end the provisions of this Chapter are declared to be severable.

SECTION 3. SEVERABILITY. If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of a court of competent jurisdiction, it shall not affect the remaining portions of this Ordinance.

SECTION 4. EFFECTIVE DATE. This Ordinance shall be effective 30 days from the date of adoption.

* * * * * *

ORDINANCE NUMBER: 4903

Regularly passed and adopted this 25th day of March, 2025

AYES and in favor of said ordinance:

Supervisors: *JACKIE SPEIER*

NOELIA CORZO

RAY MUELLER

LISA GAUTHIER

DAVID J. CANEPA

NOES and against said ordinance:

Supervisors: *NONE*

President, Board of Supervisors
County of San Mateo
State of California

Certificate of Delivery

I certify that a copy of the original ordinance filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Deputy Clerk of the Board of Supervisors

Environmental Health Services
San Mateo County Health
2000 Alameda de las Pulgas
Suite 100
San Mateo, CA 94403
smchealth.org

COUNTY OF SAN MATEO

SAN MATEO COUNTY ENVIRONMENTAL HEALTH SERVICES AGREEMENT FOR IMPLEMENTING CROSS-CONNECTION CONTROL PROGRAM WITH PUBLIC WATER SYSTEMS

The Public Water System (PWS) is the primary responsible entity for their Cross-Connection Control (CCC) Program, including compliance, reporting, and recordkeeping as mandated by the Cross-Connection Control Policy Handbook (CCCPH) and the California Health and Safety Code (CA H&SC), and enforced by the Division of Drinking Water (DDW) of the State Water Resources Control Board (SWRCB).

For those PWS that agree to partner with San Mateo County Environmental Health Services (EHS), EHS has a role in implementation of the PWS Cross-Connection Control Program by providing services as described in this document. EHS authority and scope are detailed in Sections 4.72.010 through 4.72.130 of Chapter 4.72 of Title 4 of the San Mateo County Ordinance Code.

The purpose of a CCC Program is to protect the public water supply from backflow, typically achieved by installation of backflow prevention assemblies (BPA) at the service connection (meter) of water users. If authorized by the PWS, BPA may be required within the water user's facility in lieu of meter protection, provided that the facility has been appropriately inspected to ensure that all possible sources of contamination have been eliminated, and therefore, achieves the equivalent of meter service protection. However, backflow protection at the service meter is preferable.

This document describes what elements of a CCC Program that the PWS and EHS will collaborate on. This document does not give the scope of all the PWS's responsibilities as they relate to the CCCPH.

The following is a list of the PWS's responsibilities to provide to EHS:

1. PWS will provide water user account and mailing information as requested by EHS to ensure notices to test BPA are being directed to the correct party and location, and in order for EHS to attempt to make contact with water user facilities as necessary. PWS will also provide EHS with water meter account information (number of meters, type of meters, meter numbers, locations) as requested.

2. PWS will make contact with certain delinquent water users as requested by EHS through a method of their choosing, or by hand delivery of notices-to-test including facility-specific blank test report forms. If deemed necessary, EHS may recommend the PWS discontinue water service to any water user facility for the protection of the public water supply.

3. PWS will provide guidance to water user facilities and follow up with specific cross-connection control related projects including, but not limited to, BPA removal requests, projects requiring a BPA be moved to properly protect the system, replacements with specific types of BPA, or replacement of BPAs above grade.

4. PWS will notify EHS when inspections by the Division of Drinking Water (DDW) are scheduled. EHS will attend inspections (unless otherwise requested) and will be available to DDW staff to provide information on the EHS portion of the PWS cross-connection control program.

5. PWS will notify EHS when there is change in PWS contact/personnel or cross-connection control program coordinator.

6. The PWS shall provide a copy of their operating rules/ordinance to EHS for reference (CCCPH Section 3.1.3(a)(1)).

7. The PWS Cross-Connection Control Program Coordinator will need to work with and be in close contact with EHS Cross-Connection Control Specialists/staff (CCCPH Section 3.1.3(a)(2)).

8. Due to the PWS controlling the current list of their metered accounts, the PWS will have primary responsibility for record-keeping of hazard assessments, as well as performing hazard assessments. However, EHS will assist with a subset of hazard assessments, and provide copies of previously performed surveys/hazard assessments for use by the PWS.

9. The PWS, along with EHS, shall be responsible for ensuring the water system is protected with installation of BPA, and high hazard facilities are protected through appropriate premises containment/meter protection.

10. The PWS, along with EHS and the local building department, will ensure all BPA meet the installation criteria listed in the CCCPH Article 3.

11. The PWS will notify EHS of known or suspected backflow incidents (CCCPH Section 3.5.2).

The following is a list of the EHS responsibilities to provide to the PWS:

1. EHS will, at all times, maintain staff with appropriate certification in cross-connection control as required by the CCCPH.

2. EHS will enforce applicable statutes, regulations and local ordinances as related to cross-connection control for which EHS has authority.

3. EHS will perform a subset of hazard assessments, based on existing BPA and facility inventory, to be provided to the PWS for recordkeeping.

4. EHS will initiate progressive enforcement action for non-compliance by water users with required corrective actions, requirements to install or properly maintain BPA, or any other violation of applicable cross-connection control statute, regulation, or local ordinance.

5. EHS will provide the PWS with an annual (at a minimum) report of surveys, letters, and annual BPA testing compliance statistics for the Electronic Annual Reporting to the DDW.

6. EHS will meet with water purveyors in preparation for and during inspections by DDW staff. EHS will be available to DDW staff to provide information on EHS portion of the Cross-Connection Program, as well as EHS backflow inventory and testing records for the PWS.

7. EHS, upon notification by the PWS, will respond in tandem with PWS field staff to any suspected backflow incidents, and will continue to consult with PWS and DDW staff on backflow incidents and appropriate follow-up.

8. EHS will maintain a backflow prevention assembly tester authorization program as detailed in County Backflow Prevention Ordinance, including maintaining information on individual tester primary certification and tester field test kit or gauge calibration, as well as potential investigation and enforcement action against testers who violate County Ordinance.

9. EHS will maintain records of all known BPA (and air gaps serving as premises containment) within the PWS service area, as well as test records of those assemblies (or record of air gap visual inspection) as required by statute, regulation, and local ordinance.

10. EHS will enforce annual testing of assemblies as required by statute, regulation, and local ordinance, including the following tasks:

    a. EHS will notify water users when their BPA testing is due via United States Postal Service and provide a copy of the blank test forms.

    b. EHS will maintain a current list of San Mateo County-authorized backflow prevention assembly testers for use by water users and their contractors.

    c. EHS will evaluate testing results for inadequacies and needed follow-up.

    d. EHS will maintain individual BPA records as testing reports are received, including any updates or corrections to BPA-specific data as needed.

e. EHS will provide a monthly report of delinquent BPA for use/follow up by the PWS.

f. EHS will implement progressive enforcement of water users for non-compliance of backflow testing as detailed in the County Backflow Ordinance.

11. EHS will respond to phone calls and e-mails from BPA owners and backflow testers regarding test notices, annual testing requirements, mailing address updates, etc.

12. EHS will work with PWS to discuss CCC program questions, backflow issues, and provide recommendations.

SAN MATEO COUNTY HEALTH
ENVIRONMENTAL HEALTH SERVICES

Environmental Health Services
Cross Connection Program
2000 Alameda de las Pulgas, Suite #100
San Mateo, CA 94403
Phone: (650) 372-6200 | Fax: (650) 627-8244
smchealth.org/crossconnection

HAZARD ASSESSMENT REPORT

This assessment is required by the State Water Resources Control Board's Cross-Connection Control Policy Handbook.

FACILITY INFORMATION

Facility Name: _____

Service Address: _____ City: _____ Zip: _____

Water Account Holder: _____

Mailing Address: _____ City: _____ Zip: _____

Phone #: _____ Cell #: _____ Email: _____

Property Type: Commercial Industrial Residential Other, please specify: _____

Average # of Building Occupants: _____

POTENTIAL CROSS CONNECTIONS

Check all that apply.

- Boiler (does not include hot water heaters)
- Booster pump (to increase water pressure)
- Building and/or equipment over three (3) stories high
- Cooling towers
- Darkroom/photo developing equipment (excluding digital)
- Dental office
- Dog grooming
- Drink dispenser using a carbonator
- Fire sprinklers
- Laboratory
- Landscape irrigation system (permanently installed)
- Medical office, medical treatment, or mortuary
- Personal care facility
- Sink, tank, tub, or equipment with submerged inlet
- Solar water heating system
- Steam generating equipment (autoclave, comm. ovens)
- Swimming pool or spa
- Water-cooled equipment
- Water for decorative use (fountain, fish pond)
- Water treatment (softener, filter, or deionization)
- Water well, non-potable, recycled, or rain water recovery system

Other: _____

Describe the type of activity conducted on this property and types of materials used.	
Is there equipment that requires water use? If yes, please describe.	

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Degree of piping system complexity and accessibility: Simple Complex

If complex, describe:

Are there auxiliary water supplies, pumping systems, or pressure systems? Yes No

If yes, describe:

Are there hydraulic gradient differences that would increase the likelihood of a backflow event? Yes No

Facility accessibility: Fully accessible Appointment required Restricted

Any previously known backflow incidents? Yes No

If yes, describe:

What is the facilitiy's degress of hazard to the public water distribution system?
High hazard Low hazard No hazard

EXISTING BACKFLOW PROTECTION

DOMESTIC SERVICE

Backflow Prevention Assembly Type: RP DC PVB No current protection Other: _____

Manufacturer: _____ Serial #: _____

Model: _____ Size: _____

Meter number(s) if known: _____

Are current assemblies properly installed and providing adequate protection based on the degree of hazard?
Yes No

If no, what corrections are required?

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smchealth.org/crossconnection

IRRIGATION SERVICE

Backflow Prevention Assembly Type: RP DC PVB No current protection Other: _____

Manufacturer: _____ Serial #: _____

Model: _____ Size: _____

Meter number(s) if known: _____

Are current assemblies properly installed and providing adequate protection based on the degree of hazard?

Yes No

If no, what corrections are required?

FIRE SERVICE

Main Assembly Type:

RP DC PVB No current protection

Other: _____

Bypass Assembly: Existing Proposed

RP DC PVB No current protection

Other: _____

Manufacturer: _____ Serial #: _____

Model: _____ Size: _____

Meter number(s) if known: _____

Manufacturer: _____ Serial #: _____

Model: _____ Size: _____

Meter number(s) if known: _____

Are current assemblies properly installed and providing adequate protection based on the degree of hazard?

Yes No

If no, what corrections are required?

List any INTERNAL backflow prevention assemblies:

Person performing hazard assessment: _____ Date: _____

Cross connection control specialist certification number: _____

Expiration Date: _____

Signature:

_____

Payments cannot be made to or accepted by inspectors. Payments must be made in person at the Environmental Health Services office, by mail, by phone at (650) 372-6200, or online through the MyEHS Portal.

Emergency Response Plan 2025

EAST PALO ALTO
CALIFORNIA

2025

Site Information

This ERP is Veolia project specific and contains additional emergency related information.

Company: Veolia North America
Service Areas Covered: East Palo Alto, CA 94303

Physical Location (Address): 1475 E Bayshore Road, East Palo Alto, CA 94303
Field Office: 150 Tara Road, East Palo Alto, CA 94303
Mail: 2415 University Ave, East Palo Alto, CA 94303

Communications Information:
Main Office Phone: (650) 322-2083
Crisis Reporting Hotline: (860-676-3372)
Emergency After Hours / On Call: (650) 304-4432
Project Manager: (650) 483-2369 cell / (650) 798-1082 office

Key Personnel	Name	Work Cell Phone	Home Cell Phone
Project Manager	Richard Perez	(650) 483-2369	(650) 483-2369
Manager Customer Service	Daniel McFarland	(650) 304-2389	(602) 739-0308
Customer Service			
Safety Coordinator:			
Operations/OIT:	Erick Tenorio	(650) 519-5860	(415) 840-6892
Operations/OIT:	Matthew Seamons	(650) 272-8152	(801) 336-7055
Operations / OIT	Hunter Suarez	(262) 227-6952	(669 253-8392
Operations / OIT	Ryan Clay	(650) 519-8384	(512) 740-0614

Command Center Features:
X Office / Cell Phones
X Computers/Printers
X Veolia network infrastructure
X Documentation: Emergency Response Manual, Engineering / Distribution Plans, Alarm System information

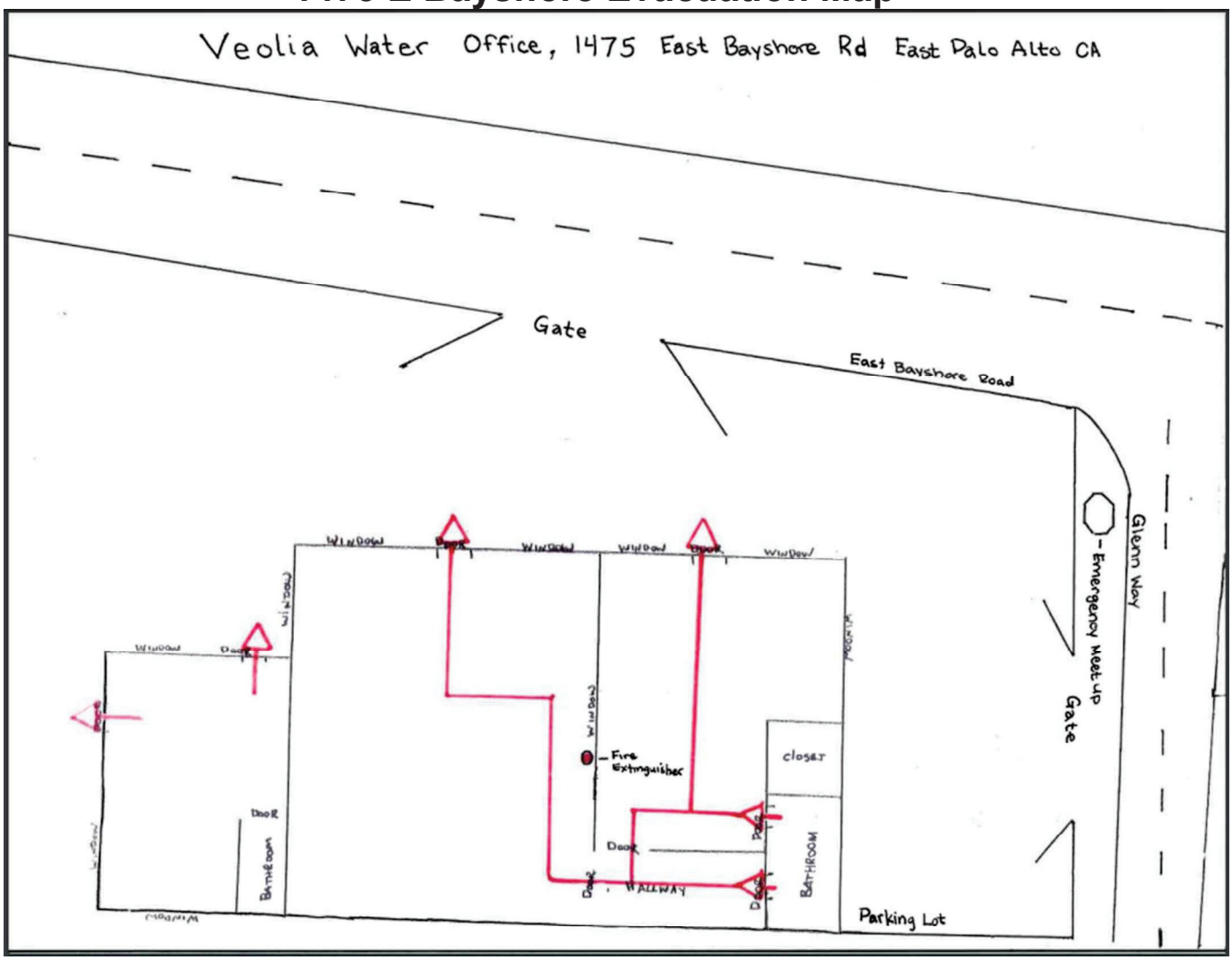
Veolia North America Corporate Information

Company: Veolia North America
Center Designation: Corp. Office – Milwaukie, WI
Service Areas Covered: United States
Physical Location (Address): 125 S 84th STE 175 Milwaukie, WI 53214-1499

Project Emergency Contacts

Richard Perez Project Manager 650-483-2369 c richard.perez@veolia.com EPA Site Safety Coordinator **Medical Emergency: 911**	Gary Timmer Regional Health & Safety Manager (231) 578-3244 c gary.timmer@veolia.com Vice President of Operations Melissa Sandvold 360-975-6361 c melissa.sandvold@veolia.com **Fire - 911**
Hospitals Sequoia Hospital 170 Alameda De Las Pulgas Redwood City, CA 94062 (650) 369-5811 Stanford University Medical Center 300 Pasteur Drive Palo Alto, CA 94305 (650) 723-4000	Kaiser Permanente Medical Center 1100 Veterans Boulevard Redwood City, CA 94063 (650) 299-2000 El Camino Hospital 2500 Grant Road Mountain View, CA 94040 (650) 940-7000
Veolia Director of Human Resources Kam Trejo (630) 778 4821 o (630) 235- 2374 c	**East Palo Alto Public Works** Humza Javed Phone: (650) 853-3117
Veolia Corporate Technical Support Center (888) 477-8778	**SMC Environmental Health / Safety** Phone: (650) 372-6200
Utilities Emergency, S M County: 650-363-4100 Palo Alto Utilities: 650-329-2161 DPW_info@smcgov.org	**SMC Sheriff's office Emergency services** 650-363-4790
Facility/Site Evacuation Route(s): Emergency escape route maps are located throughout the building. All employees are reminded to read and remember the nearest exit. All exits are clearly identified.	Evacuation Assembly Area(s): Office Plan
Bay Alarm (Office Alarm) 510 Myrtle Ave South San Francisco, CA 94080	(800) 610-1000

1475 E Bayshore Evacuation Map



Agency and Utility Contact List

East Palo Alto, San Mateo County

State Water Resources Control Board, division of Drinking Water, Santa Clara 850 Marina Bay Parkway, Building P, 2nd Floor Richmond, CA 94804	510-620-3474/Fax: 510-620-3475 Service Areas: Santa Clara Dt (San Mateo County)
Eric Lacy, P. E. Dt Engineer, Santa Clara Dist. eric.lacy@waterboards.ca.gov	Ofc: 510-620-3453 Cell: 925-299-6936 Fax: 510-620-3455
David Katz P.E, Santa Clara Dist. david.katz@waterboards.ca.gov	Ofc: 510-620-2988
Kate Elgin, Environmental, San Mateo County kelgin@SMCGOV.org	650-399-6919
Environmental Alternate Contact: Greg Smith GJSmith@SMCGOV.org	650-372-6279 650-464-2267
State Office of Emergency Services www.caloes.ca.gov	Service/Intake: 916-845-8510 Emergency: 916-845-8911 (24/7)
HazMat- Clean Harbors 1010 Commercial Street San Jose, CA 95112	(408) 451-5000
City of East Palo Alto Police Department	Non-Emergency: 650-321-1112
San Mateo County Department of Health San Mateo Medical Center 222 W. 39th Avenue San Mateo, CA 94403	Ofc: 650-573-2222 Fax: 650-573-2950 Mobile: 650-573-2786
San Mateo County Fire Department Cecil Juliette	650-308-9081 smcfdpio@fire.ca.gov
San Mateo County Sheriff Office https://www.smcsheriff.com/contact-us	Non-Emergency / After Hours: 650-363-4911
San Mateo County Environmental Health Division envhealth@smcgov.org	Ofc: 650-372-6200 Fax: 650-627-8244
FBI - San Francisco	415-553-7400
Menlo Park Fire District https://www.menlofire.org/contact-us	Ofc: 650-688-8400 Fire Marshall: 650-688-8431
Federal Emergency Management Agency(FEMA)	SF: 415-923-7100 Oakland: 510-627-7100

AT&T Telecom, Inc.	WiFi: 800-331-0500 Internet: 800-288-2020 or 611 from any phone
City of Palo Alto Utilities (CPAU) UtilitiesCustomerService@cityofpaloalto.org	Ofc: 650-329-2161 Emergency: 650-329-2579

Name Organization or Department	Point Person Name or Title	Phone	Alternate Phone	Website or Email
Local Partners				
County Emergency Management/EOC	Mike Callagy	(650) 363-4129		mcallagy@smcgov.org
Police	Chief Albert Pardini	(650) 321-1112	911	https://www.ci.east-palo-alto.ca.us/police
LEPC	Fred W. Mehr	(916) 845-8754	Fax (916) 845-8734	https://www.caloes.ca.gov/cal-oes-divisions/fire-rescue/hazardous-materials/state-emergency-response-commission/local-emergency-planning-committee
Wastewater utility	East Palo Alto Sanitary District	(650) 325-9021		https://www.epasd.com/
State Partners				
Primacy agency CDPH	CDPH	(916) 328-3605	(916) 558-1784	https://www.cdph.ca.gov/Pages/contact_us.aspx
Health Department	CDPH	(916) 328-3605	(916) 558-1784	https://www.cdph.ca.gov/
Police	Chief Carlos G. Bolanos	(650) 363-4911	911	https://www.smcsheriff.com/contact-us

Water Quality Emergency Notification Plan

The following persons are designated to implement the plan upon notification by the State Water Resource Control Board / SFPUC Water Quality Division that an imminent danger exists to the health and safety of the City of East Palo Alto water users.

Name	Position	Day Phone	Evening Phone
Humza Javed	Public Works Director	(650) 322-2083	(650) 906-7482
Richard Perez	Project Manager	(650) 798-1082	(650) 483-2369

Carry out implementation of the plan with the following State and SFPUC Water Division personnel:

Name	Position	Day Phone	Evening Phone
Eric Lacy, P.E	SWRCB – District Engineer	(510) 620-3453	(925) 299-6936
David Katz P.E.	SWRCB – District Engineer	(510) 620-2988	(510) 620-2988
Eddy So P.E.	SFPUC Water Quality Division	(415) 551-3000	24hr (415) 701-2311
Greg Smith	SMC Health Specialist	(650) 372-6279	(650) 867-9434

Notification Plan

Veolia Water in accordance with The City of East Palo Alto will utilize any and all associates to notify the water users in the event of an emergency. Notification will be in the form of a hand delivered notice and / or a phone call. Water users will then be notified in the same manner when the emergency has passed.

Veolia Water in accordance with The City of East Palo Alto will use all local radio channels and television stations, if notification cannot be accomplished in the above manner.

The affected water users are identified by means of Veolia Waters billing system and distribution mapping data for any given section of the system. If needed, copies of these affected areas will be given to all associates along with the hand deliverable notices and bottled drinking water, if necessary. Associates deliver notices/water until all customers affected are notified.
Time needed depending on the affected area – Approximately 15 minutes to 4 hours or more.

Various templates in English / Spanish, Boil Your Water Before Use, Unsafe Water alert, Do not Use Water Alert and Cancellation Notices are provided at: (copies in English and Spanish at the end of this ERP)
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Notices.html

Veolia Water / The City of East Palo Alto will always look for the latest templates from the State Water Resources Control Board on the internet. The link is given below: (copies in English and Spanish at the end of this ERP)
http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Notices.shtml

Public Notification

News Conference Call List

The notification processes that are open to us are:

Radio			
KFJC 89.7 FM	Audio Art/Information	Los Altos Hills	650-941-2500
KFAX 1100 AM	News/Talk	Fremont	510-897-1879
KCSM 91 FM	Jazz	San Mateo	650-574-9136
KKUP 91.5 FM	Music/News	Santa Clara	408-260-2999
Television			
KCAT Channel 15	PBS	Los Gatos	408-395-5228
KGO Channel 7	ABC	San Francisco	415-954-7777
KQED Foundation	KQED	San Francisco	866-733-6786
KTEH TV Foundation	KTEH	San Jose	408-795-5400
KICU Channel 36	NBC	San Jose	408-953-3636
KDTV Channel 14	Univision	San Jose	415-538-8071
KPIX Channel 5	CBS	San Jose	415-765-8601
Newspapers			
San Jose Mercury News		408-920-5000 / Fax: 408-288-8060	
Palo Alto Daily News Group		https://www.mondotimes.com/about/contact.html	
The Almanac		650-854-2626	
Palo Alto Weekly		650-326-8210/Fax: 650-326-3928	

Emergency Preparedness

An emergency may be an injury to a worker, an explosion, facility power failure, evacuation, fire, terrorist attack, flooding, earthquake, chemical release or other. Employees must know what to do if an emergency occurs. This requires preplanning and communication of these plans to employees.

Pre-Emergency Planning

- Perform applicable pre-emergency planning tasks before starting field activities and coordinate emergency response with on-site parties, facility management, and local emergency-service providers as appropriate.
- Review facility emergency and contingency plans where applicable.
- Determine available communication equipment (e.g., two-way radio, air horn).
- Determine requirements for off-site communication equipment (e.g., nearest telephone, cell phone).
- Confirm emergency telephone numbers, evacuation routes, assembly areas, and routes to hospitals; communicate information to on-site personnel.
- Communicate emergency procedures for personnel injury, exposures, fires, explosions, facility power failures, terrorist attack, flooding, earthquakes, and releases.
- Keep areas near exits and extinguishers clear.
- Inventory and check site emergency equipment, supplies, and potable water.

Emergency Equipment and Supplies

Table 1 - Emergency Equipment and Supplies

Equipment/Supplies	Location
20-pound (or two 10-pound) fire extinguishers (A, B, and C classes)	Two (2) - Office One (1) - Corporation Yard One (1) - Each Vehicle Two(2) - Gloria Way Well
First Aid Kits (7)	One in each vehicle; one in Office, one at corporation yard
Potable Water	20 cases min. of water, for regular use.
Generator	Generator (emergency power to run well only)

Gloria Way Well Chemical Storage Facilities		
Location	**Chemical(s)**	**Comments**
2701 Gloria Way	12.5% Sodium Hypochlorite	These are in liquid form and there is both an eyewash and shower station
	25% Sodium Hydroxide	
	40% Ammonia	

Safety Materials	
Type	**Location**
PPE (chemical bibs, eye, hand, foot protection, wattles, spill absorbent	2701 Gloria Way, East Palo Alto, CA 94303
Emergency water & additional PPE (gloves, masks, soap)	150 Tara Road, East Palo Alto, CA 94303 (City of EPA Public Works yard)

Incident Response

In case of personnel injury, exposure, fire, explosions, facility power failures, terrorist attacks, flooding, earthquakes, and releases, take the following actions:

- If appropriate, shut down operations and evacuate the immediate area.
- Notify appropriate response personnel (see Appendix D).
- The Project Manager will account for personnel at the designated assembly area(s).
- Assess the need for site evacuation, and evacuate the site as warranted.
- Instead of implementing a work-area evacuation, note that small fires or spills posing minimal safety or health hazards may be controlled in-house.

Evacuation Procedures

- Follow Office/GWW Evacuation Plan
- Post evacuation routes and assembly areas.
- Ensure personnel assemble at the assembly area(s) upon hearing the emergency signal for evacuation.
- Account for all personnel at the assembly area.
- After the site has been evacuated (if safe), inform local responders of the nature and location of the incident.

Emergency Medical Treatment

The procedures listed below may also be applied to non-emergency incidents. Injuries and illnesses (including overexposure to contaminants) must be reported to Project Manager and or Safety Coordinator. If there is doubt about whether medical treatment is necessary, or if the injured person is reluctant to accept medical treatment, call 911. During non-emergencies, follow these procedures as applicable.

Notify appropriate emergency response authorities listed in Emergency Contacts.

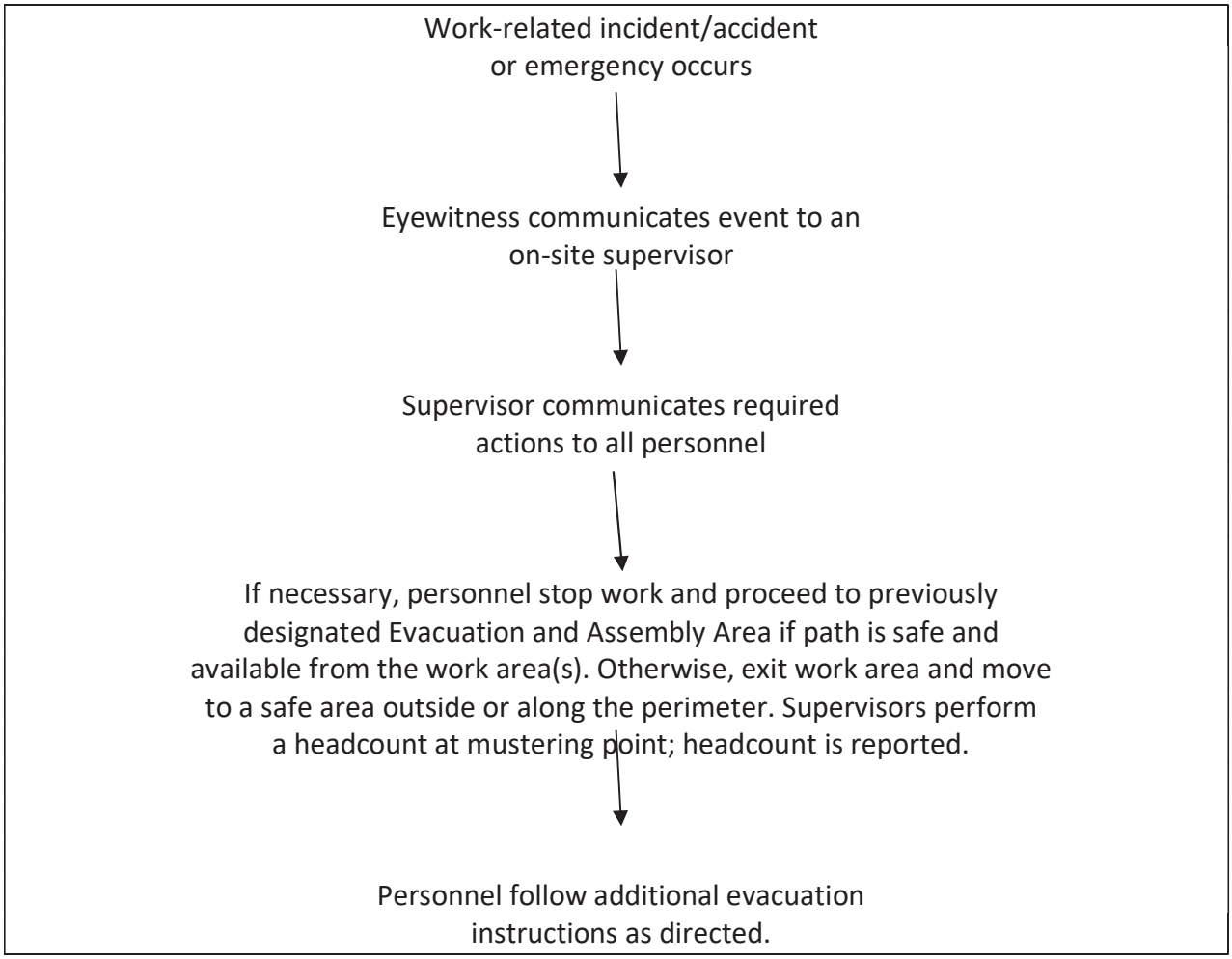
- Project Manager or Safety Coordinator once notified may elect to stay with the injured worker until an ambulance arrives or until the injured person is admitted to the emergency room.

- Project Manager and or Safety Coordinator must contact Veolia Regional Health and Safety Manager and Human Resources.

Emergency Notification Procedures

The following Emergency Notification Procedures have been established for any work-related incidents or accidents.

All events will not necessarily constitute a site evacuation; this is determined by the Project Manager. The Company will communicate required actions to all subcontractor supervisors who in turn follow the procedures as directed.



Critical Customer Contact List

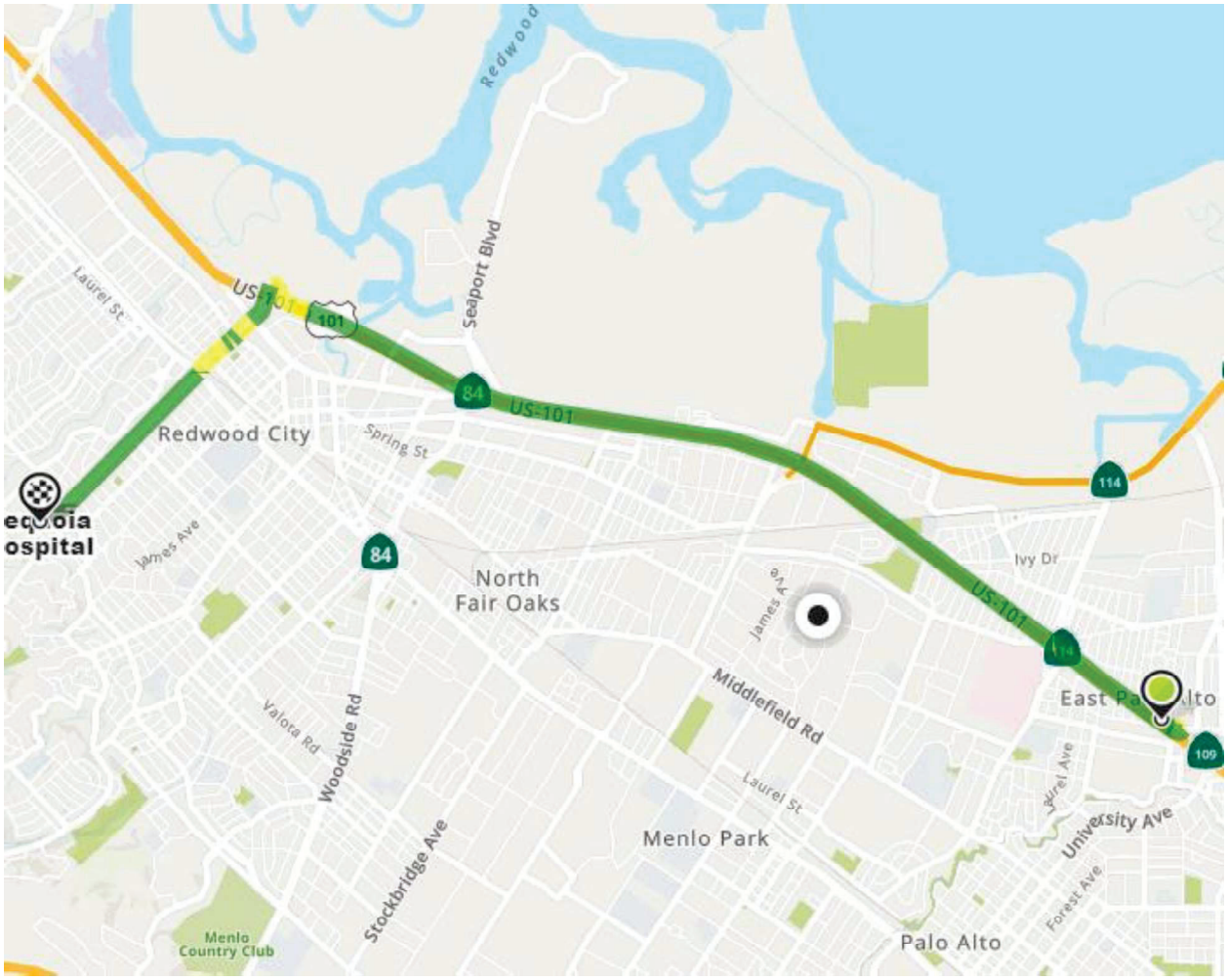
Organization or Department	Point Person Name or Position	Phone	Email or Website
Nursing home	Peoples, Juanita and William	(650) 322-1340	N/A
Hotel	Four Seasons Palo Alto	(650) 566-1200	jessica.fong@fourseasons.com
Large water user	Palo Mobile Estates	(650) 322-5877	palomobile@newportpacific.com
Large water user	Woodland Park	(650) 566-2000	https://www.liveatwoodlandparkapts.com/
Large water user	Bridge Housing	(650) 330-0899	yes_bridgehousing@yesenergymgmt.com
Large water user	Nugent Square	(650) 322-2061	jgonzales@edenhousing.org
Healthcare	RFHC Ravenswood Family	(650) 330-7400	https://ravenswoodfhc.org/

Educational Facilities in East Palo Alto, CA

Costano Elementary 2695 Fordham Street East Palo Alto, CA 94303	650-329-2830
East Palo Alto Charter (Elementary) 1286 Runnymede Street East Palo Alto, CA 94303	650-614-9100
Cesar Chavez Ravenswood Middle School 2450 Ralmar Ave East Palo Alto, CA 94303	650-329-2828
East Palo Alto Academy (High School) 1050 Myrtle St East Palo Alto, CA 94303	650-839-8900
The Primary School 2086 Clarke Ave East Palo Alto, CA 94303	650-396-2779
Oxford Day Academy 1001 Beech St East Palo Alto, CA 94303	650-260-3152
Ravenswood Child Development Center Izzi at Ravenswood 951 O Connor St East Palo Alto, CA 94303	650-838-3460
Eastside College Preparatory School 1041 Myrtle St East Palo Alto, CA 94303	650-688-0850
Los Robles Ronald McNair Academy 2033 Pulgas Ave East Palo Alto, CA 94303	650-329-2888
KIPP Esperanza High School 1039 Garden St East Palo Alto, CA 94303	510-407-8694
Ravenswood City School District Tech Dept. 2160 Euclid Ave Ravenswood Special Education 2110 Euclid Ave East Palo Alto, CA 94303	650-329-2800
Izzi at East Palo Alto 1395 Bay Rd East Palo Alto, CA	650-566-8639

DIRECTIONS TO Sequoia Hospital (from 1475 E Bayshore Rd)

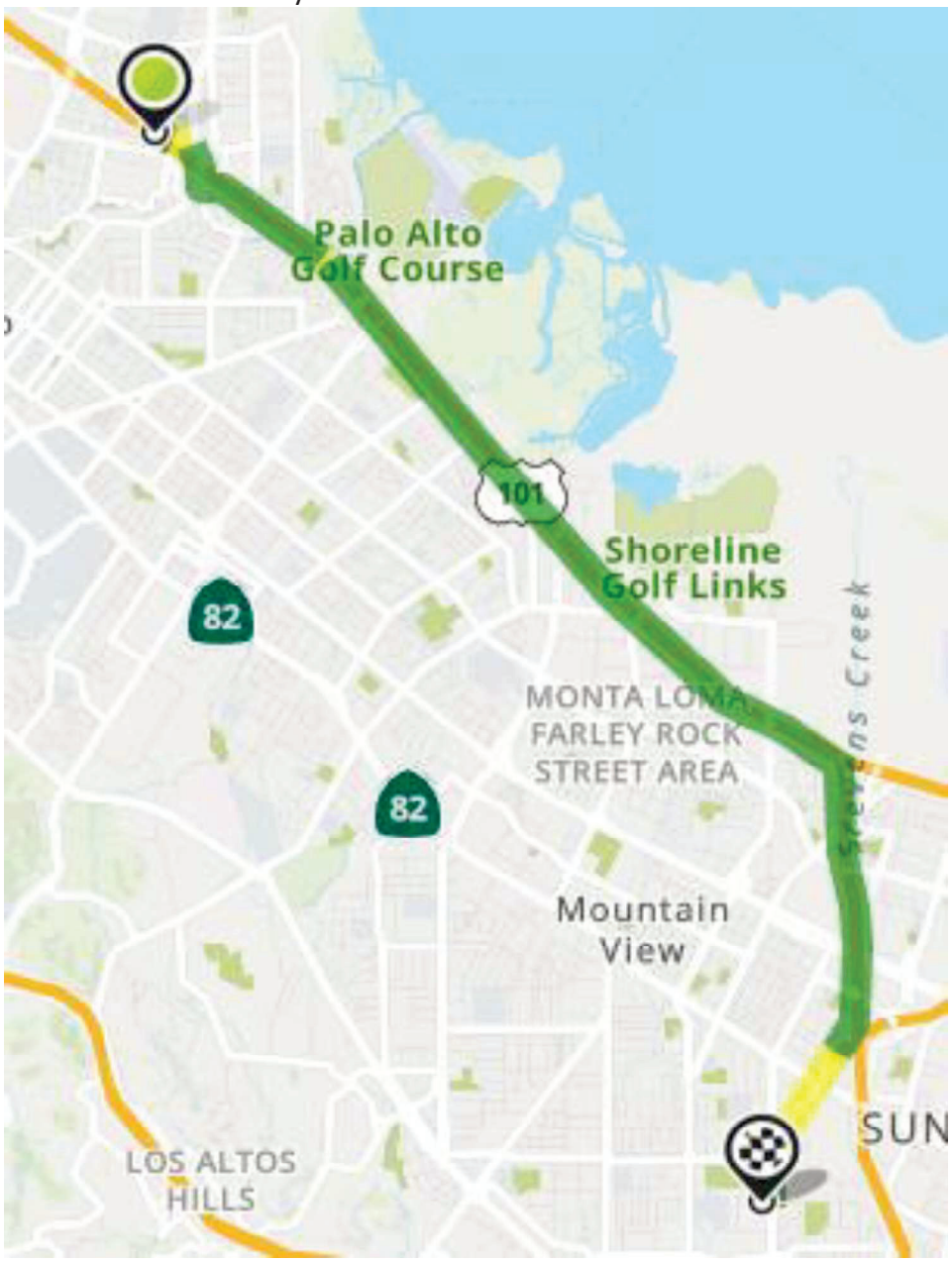
1. Turn Left out of the parking lot onto E Bayshore Rd
2. Turn Right to merge onto US-101 N
3. Take the Whipple Avenue exit (Exit 409).
4. Turn left onto Whipple Avenue.
5. Turn right onto Alameda De Las Pulgas.
6. End at 170 Alameda De Las Pulgas, Redwood City, CA 94062-2751.



Total Estimated Time: 12 minutes Total Estimated Distance: 7.5 miles

DIRECTIONS TO El Camino Hospital (from 1475 E Bayshore Rd)

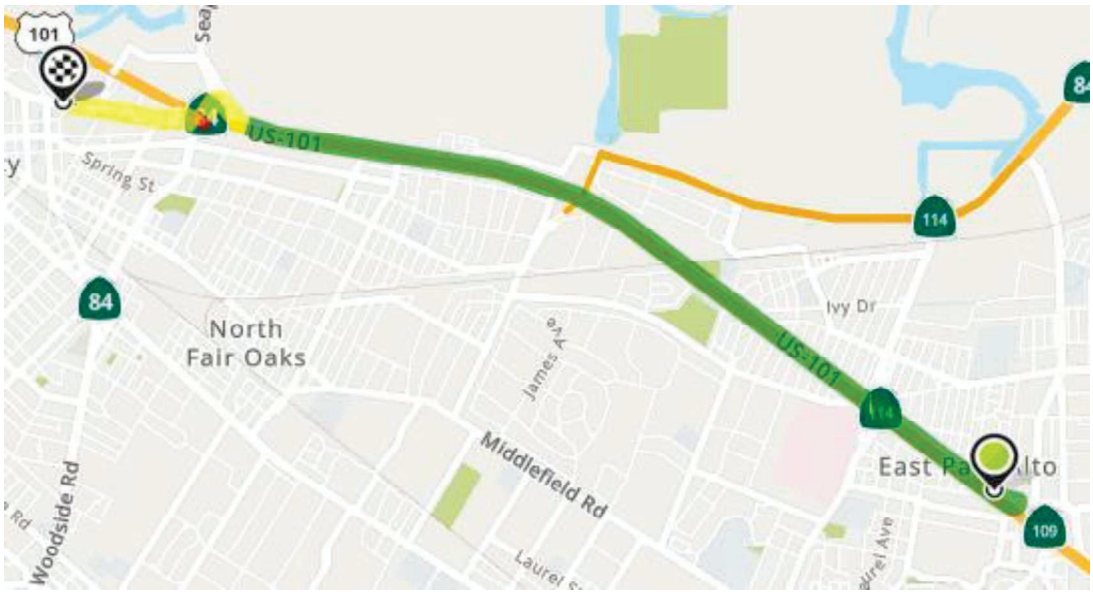
1. Turn left out of the parking lot onto E. Bayshore Rd toward University
2. Turn Right onto University Ave
3. Use left 2 lanes to turn left onto US-101 S ramp
4. Take exit 398B for CA-85S toward Cupertino/Santa Cruz
5. Take exit 22a toward El Camino Real/ Mountain View/CA-82 N
6. Merge onto CA-237 W
7. Continue Straight onto Grant Rd
8. Turn Right onto North Rd
9. Destination will be on your left



Total Estimated Time: 12 minutes Total Estimated Distance: 8.6 miles

DIRECTIONS TO Kaiser Permanente Medical Center (for non-emergencies; from 1475 E Bayshore Rd)

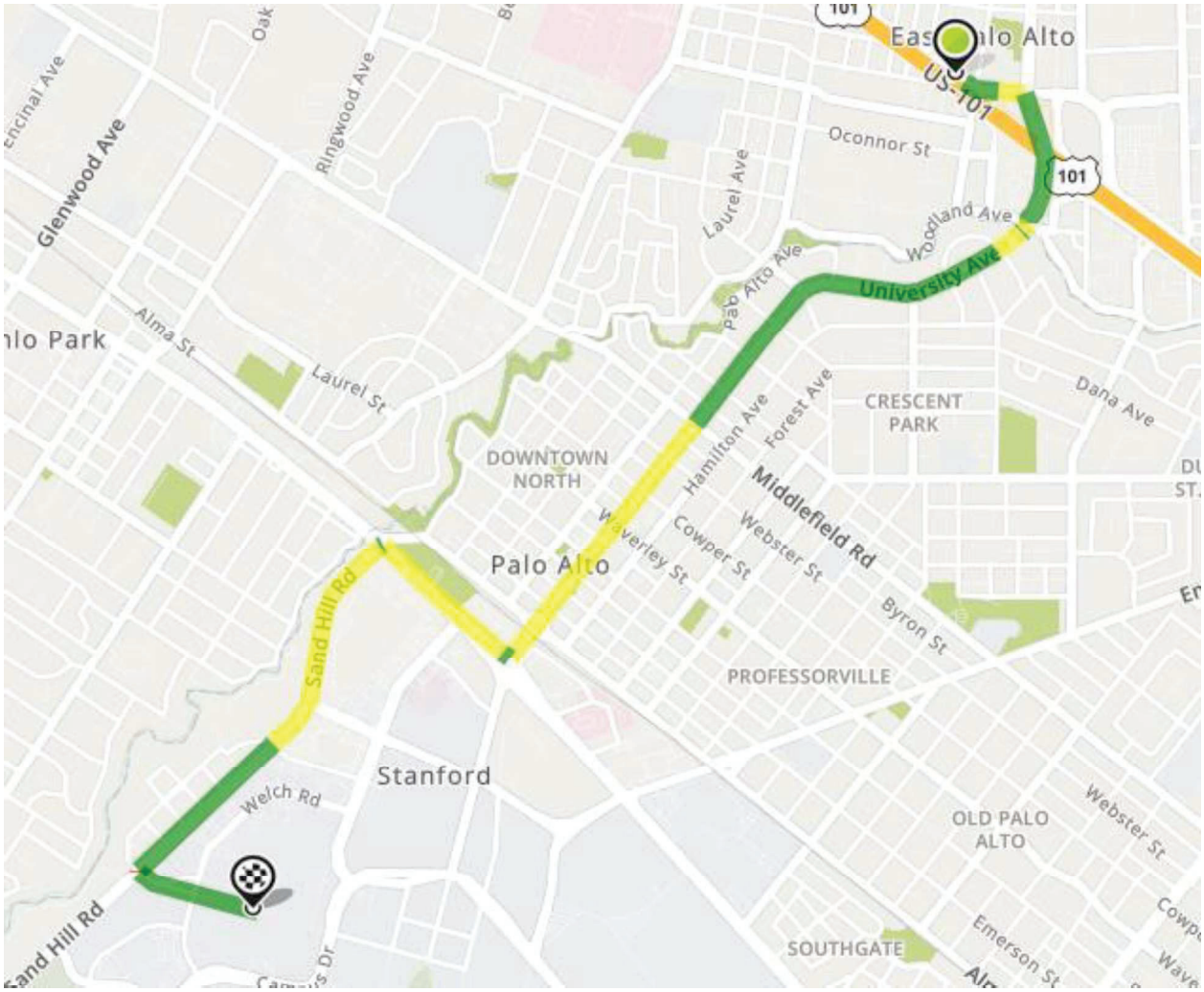
1. Turn Left out of the parking lot onto E Bayshore Rd
2. Turn Right to merge onto US-101 N
3. Take exit 408 for CA-84 W/Woodside Rd
4. Keep left toward Woodside Rd
5. Turn right onto Veterans Blvd
6. Turn left into Parking garage (walk across Maple to hospital buildings)



Total Estimated Time: 7 minutes Total Estimated Distance: 5.2 miles

DIRECTIONS TO Stanford Hospital (for non-emergencies; from 1475 E Bayshore Rd)

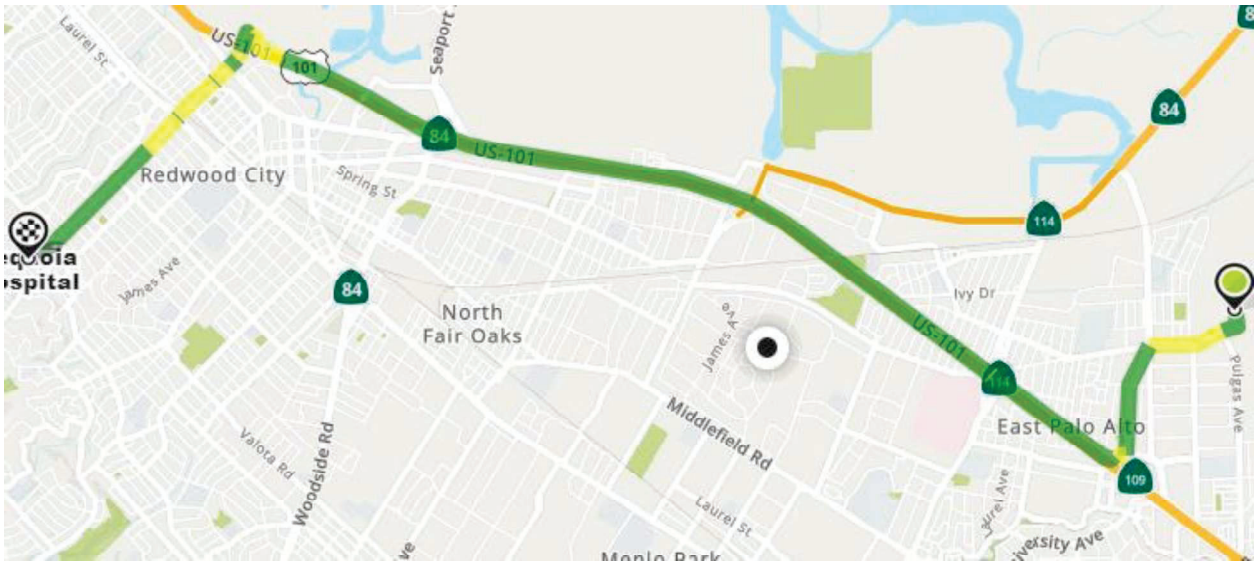
1. Turn left out of the parking lot onto E. Bayshore Rd toward University
2. Turn Right onto University Ave
3. Take CA-82 N ramp and merge onto El Camino Real
4. Turn left onto Sand Hill Rd
5. Turn left onto Pasteur Dr
6. Arrive at destination



Total Estimated Time: 15 minutes Total Estimated Distance: 4.1 miles

DIRECTIONS TO Sequoia Hospital (from field office—150 Tara Road, East Palo Alto, CA 94303)

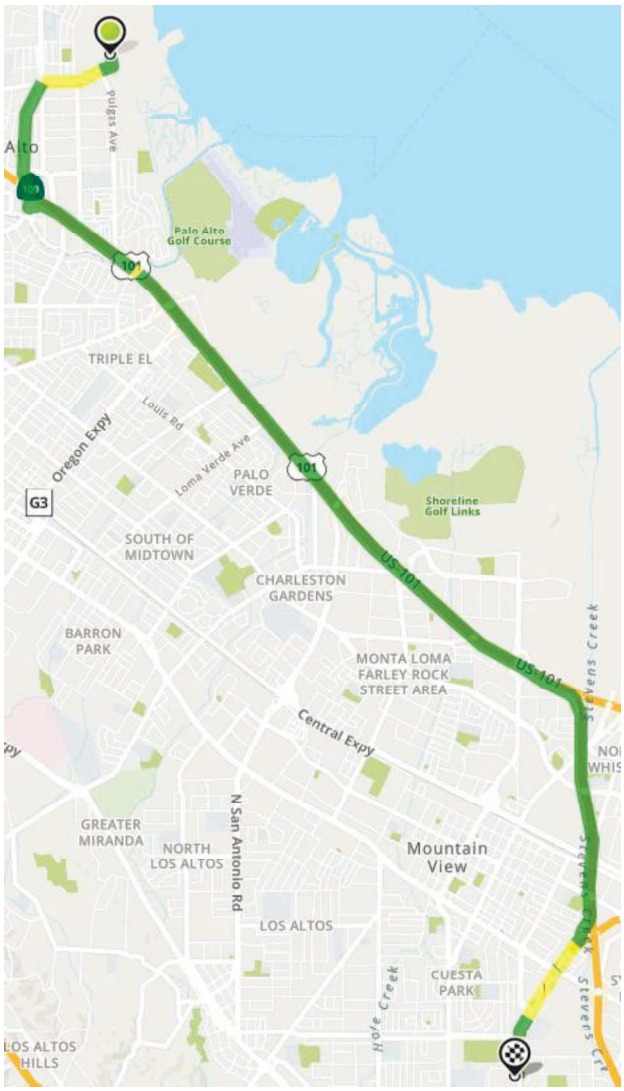
1. Start out going West on Bay Road toward Pulgas Avenue.
2. Turn left onto University Avenue/CA-109.
3. Turn right onto Donohoe Street.
4. Merge onto US-101 North via the ramp on the left toward San Francisco.
5. Take the Whipple Avenue exit (Exit 409).
6. Turn left onto Whipple Avenue.
7. Turn right onto Alameda De Las Pulgas.
8. End at 170 Alameda De Las Pulgas, Redwood City, CA 94062-2751.



Total Estimated Time: 14 minutes Total Estimated Distance: 8.57 miles

DIRECTIONS TO El Camino Hospital (from field office—150 Tara Road, East Palo Alto, CA 94303)

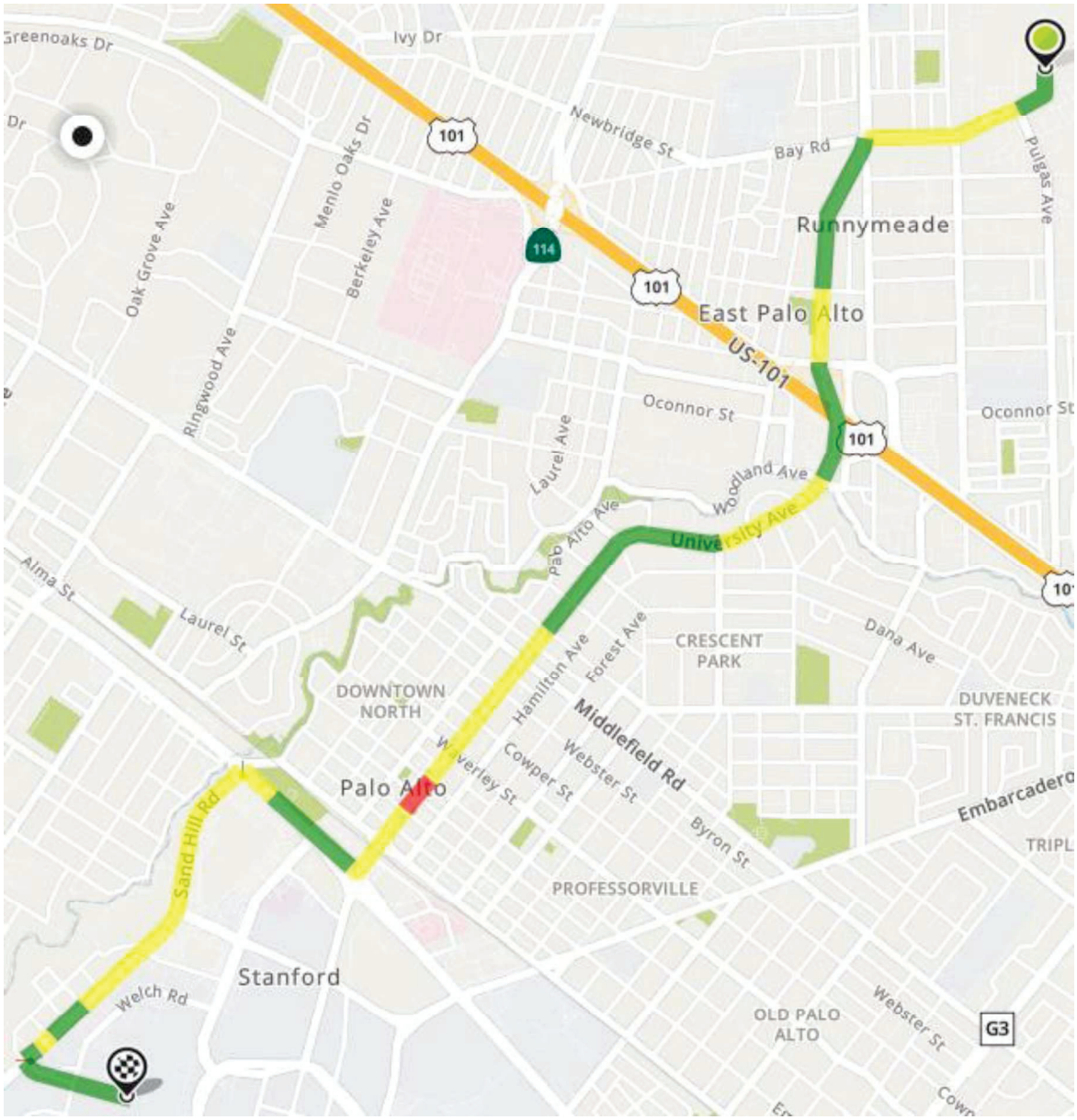
1. Start out going West on Bay Road toward Pulgas Avenue.
2. Turn left onto University Avenue/CA-109 South.
3. Merge onto US-101 South via the ramp on the left.
4. Merge onto CA-85 South toward Cupertino/Santa Cruz.
5. Merge onto CA-237 West/Mountain View Alviso Road toward CA-82 North/El Camino Real/Grant Road/Mountain View; CA-237 West/Mountain View Alviso Road becomes Grant Road.
6. Make a U-Turn onto Grant Road.
7. End at 2400 Grant Road, Mountain View, CA 94040-4302.



Total Estimated Time: 14 minutes Total Estimated Distance: 9.66 miles

DIRECTIONS TO Stanford University Medical Center (for non-emergencies; from field office—150 Tara Road, East Palo Alto, CA 94303)

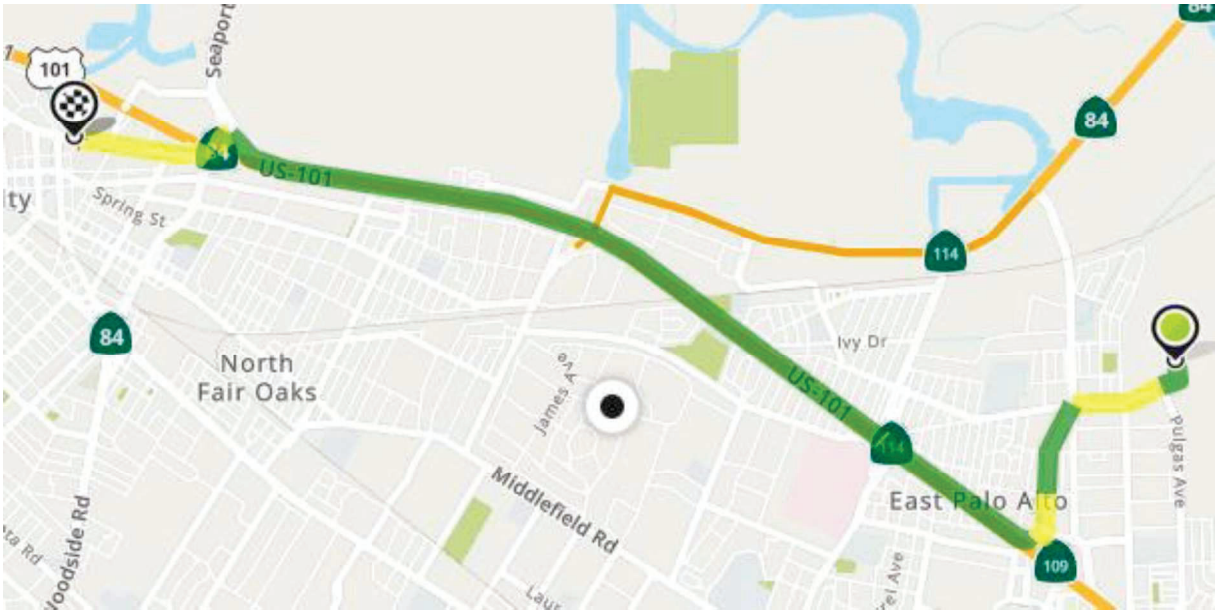
1. Start out going West on Bay Road toward Pulgas Avenue.
2. Turn left onto University Avenue/CA-109 South; University Avenue becomes Palm Drive.
3. Turn right onto Arboretum Road.
4. Turn left onto Sand Hill Road.
5. Turn left onto Pasteur Drive.
6. End at 300 Pasteur Drive, Palo Alto, CA 94304-2204.



Total Estimated Time: 14 minutes Total Estimated Distance: 4.96 miles

DIRECTIONS TO Kaiser Permanente Medical Center (for non-emergencies; from field office—150 Tara Road, East Palo Alto, CA 94303)

1. Start out going West on Bay Road toward Pulgas Avenue.
2. Turn left onto University Avenue/CA-109.
3. Turn right onto Donohoe Street.
4. Merge onto US-101 North via the ramp on the left toward San Francisco.
5. Take the CA-84 West/Woodside Road exit (Exit 408) toward Seaport Boulevard.
6. Merge onto Woodside Road/CA-84 West.
7. Turn right onto Veterans Boulevard.
8. End at 1150 Veterans Boulevard, Redwood City, CA 94063-2037.



Total Estimated Time: 10 minutes Total Estimated Distance: 6.31 miles

Training

The Emergency Response Plan will be reviewed during employee orientation and occasionally during site safety briefings. These briefings include:

- Emergency procedures for fires, explosions, chemical and vapor release, personnel injuries, and suspected overexposure as they apply to the site.
- Location of on-site emergency equipment and supplies of clean water.
- Local emergency contacts, hospital routes, evacuation routes, and assembly points.
- Site communication and location of telephone nearest to the site.
- Procedures for contacting the Project Manager & Site Safety Coordinator.

Perform emergency drills periodically, but at least once per year. Upon completion of each drill, evaluate the Emergency Response Plan to determine its effectiveness. Correct any problems or concerns identified during the evaluation.

Internal Resources

Vehicle Information

Vehicles	Plate #s
2015 Chevrolet Silverado C1500	43147V1
2014 Toyota Tundra SR 5	86721G2
2014 Nissan Frontier	30283H2
2012 Chevy Malibu	6ZHC212
2017 Ford Transit	14656H2

System Description

Water Systems

The East Palo Alto District's water systems serve an estimated 30,000 people in the City of East Palo Alto, California. The service area primarily consists of residential, light industrial, and light commercial customers, with one well of 150 GPM located at 2701 Gloria Way and approx. 282 fire hydrants.

The service area purchases 100% treated water from the San Francisco Public Utilities Commission (SFPUC) and transmits through three pressure-reducing stations using a total of 137 water mains over 20 easements.

Populations Served and Number of Service Connections

System	# Connections	Population Served
East Palo Alto	3841	29519 (Permit)

Water System Descriptions

Table 2 lists the water systems owned and operated by the Company.

Table 2 - Water Systems Owned and Operated by East Palo Alto District

System	PWSID	Sources of Supply
City of East Palo Alto (EPA)	4110024-002	Treated water from San Francisco Water District (SFWD)
City of East Palo Alto (EPA)	4110024-001	Gloria Way Well

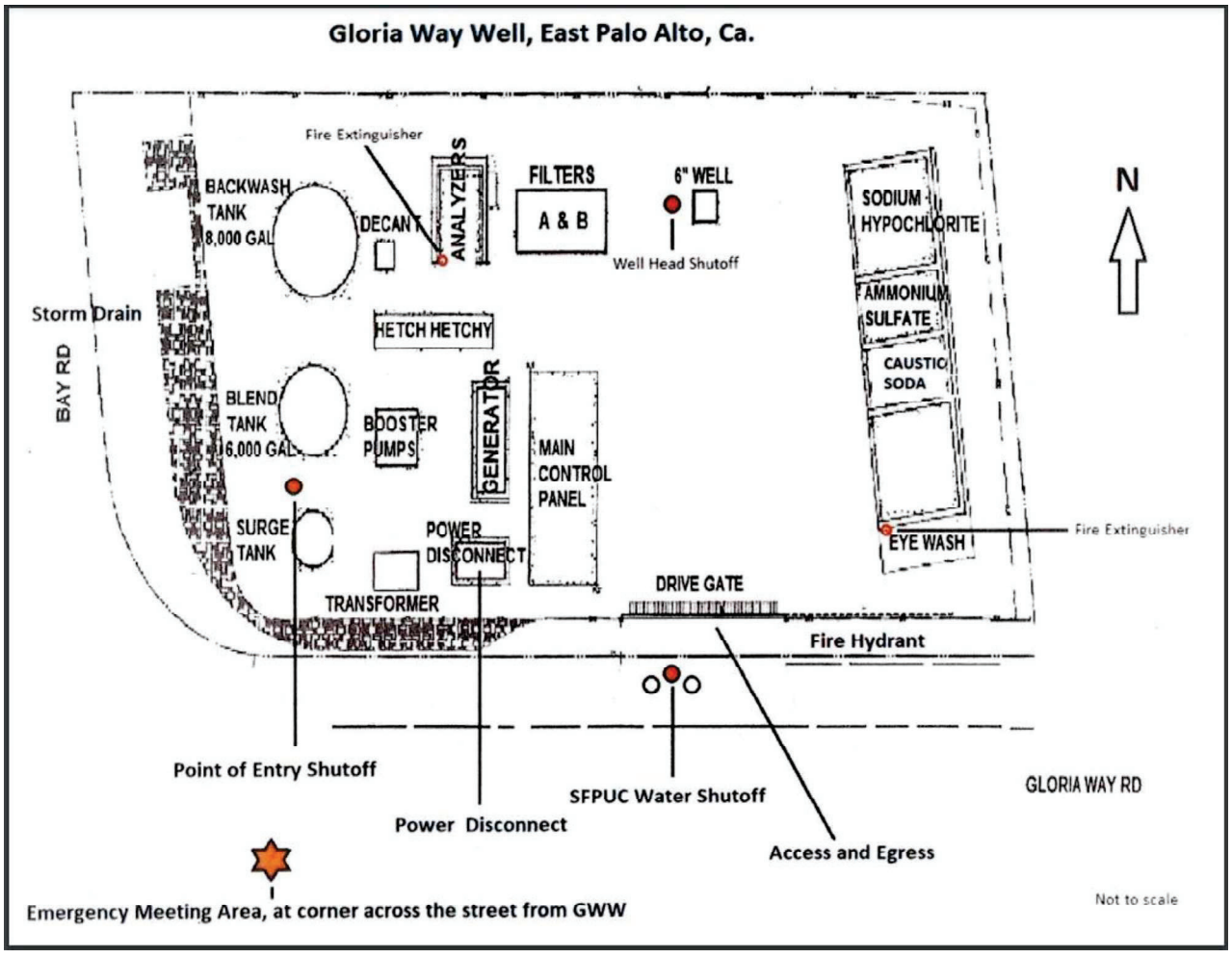
Gloria Way Well

Well Name	Depth/Location	Available Yield	Treatment Requirements/Associated Treatment Plant
Gloria Way Well	350 feet 2701 Gloria Way	150 GPM	Blend ground water with purchased SFPUC, 12.5% Sodium Hypochlorite, 25% Sodium Hydroxide, 40% Ammonia

Gloria Way Well (continued)

Plant Name	Location	Capacity	Chemicals on site
Gloria Way Well	2701 Gloria Way	No storage. 6000 gallon blending tank	Blend ground water with purchased SFPUC, 12.5% Sodium Hypochlorite, 12% Sodium Hydroxide, 40% Ammonia
Gloria Way Well	2701 Gloria Way	8,000 gallon backwash tank	Backwash performed everyday water is produced

GWW Map



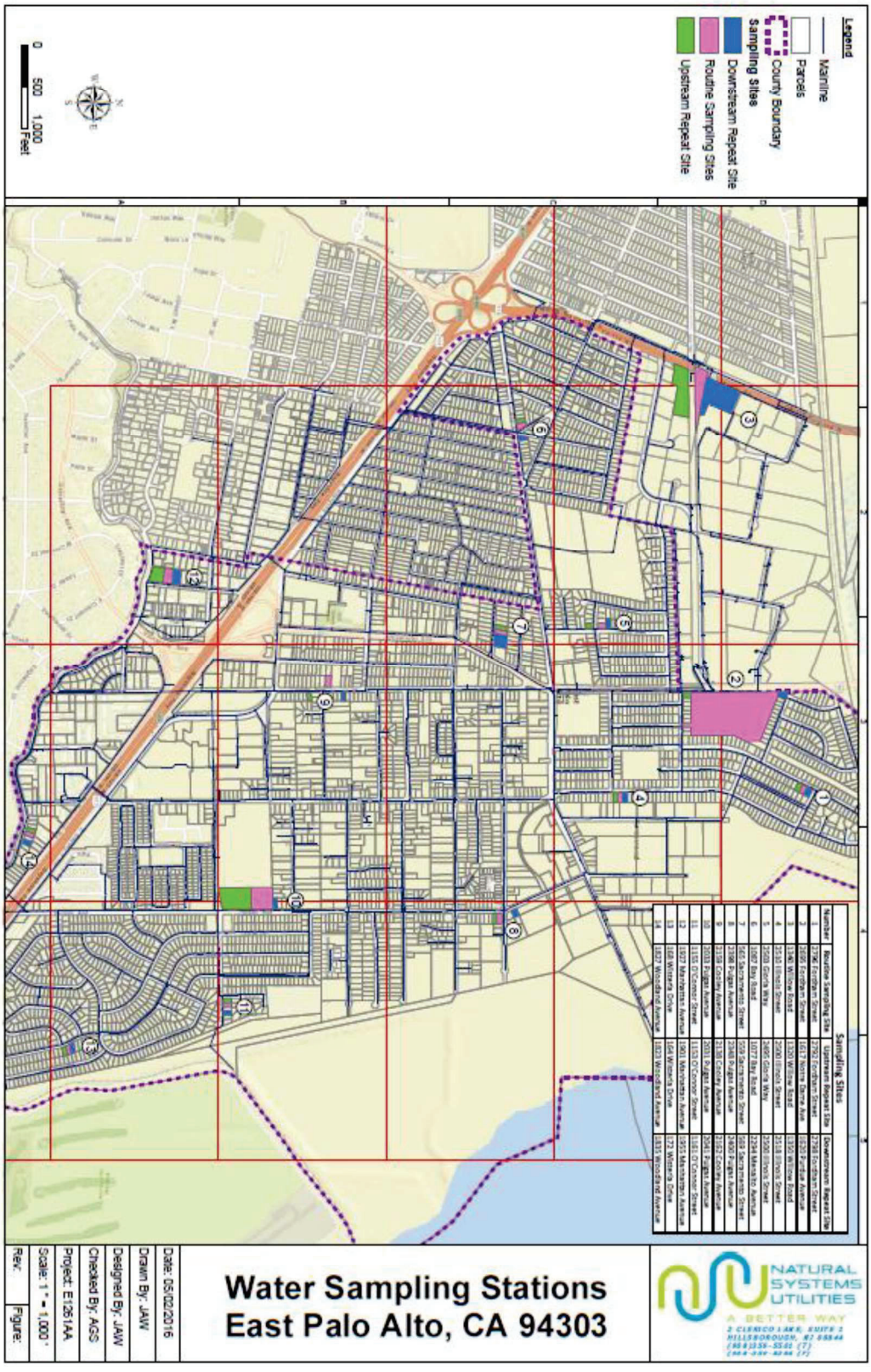
Interties

Emergency Interties are available at several points in the East Palo Alto District water system, which allows either one-way or two-way transfer of water. Table 3 describes these points.

Table 3 - Interties

East Palo Alto Interties	
Purveyor:	**San Francisco Water Department**
Division:	Hetch Hetchy Bay Division
Description:	Viaducts #1 and 2 – Bay Division Pipelines 1, 2 & 5
Intersection:	1351 O'Brien Drive (University Avenue/O'Brien Drive), City of Menlo Park
Purveyor:	**San Francisco Water Department**
Division:	Hetch Hetchy Bay Division
Description:	Viaduct #3 – Bay Division Pipelines 1 & 2
Location:	1240 O'Brien Drive City of Menlo Park
Purveyor:	**San Francisco Water Department**
Division:	Hetch Hetchy Bay Division
Description:	Viaduct #3 – Bay Division Pipelines 1, 2 & 5
Location:	1330 Willow Road, City of Menlo Park
East Palo Alto Emergency Interties	
Purveyor:	**City of Palo Alto**
Location:	Woodland & University Avenue – Not connected since 2003
Purveyor:	**City of Menlo Park**
Location:	Willow Road (across from Water Receiving Station) One Way to MP
Purveyor:	**O'Connor Tract Water Company**
Location:	East O'Keefe Road – One direction only to O'Conner
Purveyor:	**Palo Alto Park Mutual Water Company**
Location:	Green x Poplar Ave – One direction only to PAPM (In operable since 2018)

Mapping (Customer Service Areas, Facilities, Pipelines)



Security

Terrorist Attack or Other Malevolent Acts

The East Palo Alto District completed a Risk-Based Vulnerability Assessment of its drinking water systems. The report describes the vulnerability assessment process and discusses the threats facing the East Palo Alto Service Area specific to the drinking water production and distribution systems, and makes general and site-specific recommendations on how to mitigate the risks that have been assessed.

The assessment identified the facilities and operations that are most critical to achieving the core mission goals of providing reliable, high-quality, potable water to our customers. The assessment process helped decide where security measures can be most effectively applied within the constraints of limited time and resources.

The performance-based risk assessment described in the report evaluated the water system's ability to withstand the described threat conditions. The results indicate that while the extensive nature of the system results in good redundancy and reliability with relatively low consequences, there are specific high priority facilities requiring security improvements.

The specific threats to the East Palo Alto water system which result in the most risk are blast destruction threats, and to a lesser degree, contamination threats.

The relative risk to the water system was computed for each facility and each threat condition using the RAM-W equation: R = Pa x C x (1-Pe). Each facility was assessed against a Design Basis Threat (i.e. contamination, destruction, hazardous chemical release, blast and cyber) and the relative risk values reflect that for the individual threat condition. The goal was to achieve a risk value (R) of 0.25 or lower. The recommendations address any high-risk areas as well as other security recommendations appropriate for the facility and water system. Additionally, general security and operational recommendations were provided that were appropriate across all facilities. The most probable threats are intruder contamination and blast destruction.

The risk values for all of the East Palo Alto facilities fell below the desired maximum value of 0.25. This is mostly the result of having inherently secure underground turnouts, which have already been modified to increase their security effectiveness.

For specific information on facilities, refer to the Risk & Resilience Assessment (RRA).

Threat Notification

Use the Threat Notification Form to report any incidents.

Risk Reduction Recommendations

Distribution Water Contamination

Distribution system contamination is one of the most challenging problems facing the water utility industry. Distribution piping networks having a large geographic footprint and multiple points of entry make protection of this critical infrastructure difficult. While the challenge is great and the industry is searching for a solution to this problem, every reasonable step to protect or mitigate the consequences of this type of event should be evaluated and implemented. The Company has initiated the following actions relative to distribution system contamination risk reduction.

- Regular Sampling – Chlorine Residual, PH, Odor & Color
- Strict Hydrant Restrictions with local enforcement.
- Isolate inactive services.
- Emergency sampling and laboratory protocol in place in case of a water quality concern or emergency.
- Communication with Healthcare and Emergency Response Agencies.
- Investigation of Backflow Devices For Service Lines. San Mateo County's Cross connection Control Dept is managing the Cross Connection Control Program for East Palo Alto, CA.

Homeland Security Threat Level Based Security Plan

Critical Infrastructure owners and operators, including water and wastewater systems, have been requested to have security plans that are responsive to the Homeland Security Threat Advisory System (Low – Green, Guarded - Blue, Elevated – Yellow, High – Orange, Severe - Red).

The Company has developed and implemented such a plan.. This plan reflects four levels of security beginning at the "Elevated" (Yellow) level, escalating to "High" (Orange) and "Severe" (Red).

Recommendations to Guard against Insider Threats

The VA presents the threat assessment including consideration of insider threats to a water utility. The Company has reviewed the actions available to guard against insider threats and these are implemented as follows:

- Assess control measures to critical facilities and assets (employees, visitors, contractors, etc.)
- Personnel Surety Programs (New employees, existing workforce in "positions of trust", vendors, maintenance and service providers, etc.)
- Two-Level Deep Alarm Monitoring
- CCTV, ACS and Other Means of Attribution of Insider Acts

- Supervisor Training for Indicators of Insider Threats

General Security Recommendations – All Facilities

The VA report includes a discussion and checklist that has been prepared by the Company to assist utility managers with security of water systems and other facilities. It is a good reference and is presented to further assist in implementing an effective and comprehensive security program at all facilities.

Special Considerations for Toxic Chemicals & Hazardous Material

Water system contamination and the dangers of hazardous chemical release have been prominently highlighted in this assessment.

Public and Regulatory Agency Interface

WRCB and Other Regulatory Agency Notifications

Agency & Utility Contacts has contacts for the State CA Water Resources Control Board, Drinking Water Field Operations Branch in Richmond, CA (serving Santa Clara District), and the State Office of Emergency Services.

Public Notifications

For public notification procedures in the event of water quality emergencies, refer to Public Notification Procedures.

Emergency situations, by their very nature, are unexpected and disruptive. Because their consequences may be far-reaching, they are very often matters of public and news media interest. Also, our employees and customers have a right to know information concerning disaster or other emergencies that might impact them. It is the Company's responsibility to provide timely, accurate information to all parties who must respond to or are impacted by incidents.

Releasing accurate news stories to the public as soon as possible after an emergency or disaster is in the Company's best interest. Being responsive to the communication needs of the public when emergencies occur means releasing factual, first-hand information, generally through the news media. Such information, however, must be consistent with security of company property and safety of all company personnel and the public. When dealing with media representatives, an attitude of honesty, reasonableness, and cooperation should be maintained at all times.

If service to only a small number of customers is affected by an emergency situation, every attempt should be made to contact each customer. A prepared notice or message should be formulated to ensure that each customer receives the most accurate and useful information available. Acceptable methods used to contact customers include:

- Telephone
- Door-to-door canvassing with Company personnel wearing Company ID badges
- Public address canvassing with the assistance of local emergency forces
- If time allows, pre-recorded telephone messages.
- In many cases, emergencies affect a large number of customers and could impact the general public as well. The most effective means of communicating with the public is through the media. See Appendix E for a list of local media contact numbers. For a local emergency, press representatives should be contacted in this order:
- Local radio stations
- Local television stations
- Daily newspapers
- Other publications
- Other methods available to disseminate information include:

- Press conference
- News briefings
- Public service. announcements
- Public speaking engagements
- Employee meetings
- Personal visits

Post-Emergency Recovery

Once normal service has resumed, customers should be notified if any restriction or demand management programs have been lifted. Communications with those who have provided the Company external assistance should also continue. If problems have occurred, they should be discussed and procedures or guidelines should be initiated to avoid such problems in the future. The reactions and input of state and local regulatory agencies should be sought. Finally, as a last priority, a letter of gratitude to those who were helpful in providing special services or assistance may be in order.

Personnel and Resource Accounting and Reimbursement

Establish an emergency work order for all extraordinary purchases and services required during the emergency event. Call the work order a Maintenance Task Order and give it a number corresponding to the year of the emergency. Once normal service has resumed and no additional emergency charges are expected, close the work order. Analyze the emergency expenses and transfer the charges to the appropriate accounts.

Post-Emergency Reports, Critique and Follow-up

State Water Resources Control Board Reports

Following a situation that had the potential to impact water quality or water supply, the Company provides incident details per SWRCB requirements. Typically operational and water quality details are communicated verbally to SWRCB during the situation, with written follow-up in letterform following the incident.

Insurance Claims

It may be possible to recover all or a portion of these costs through the company's property and casualty insurance policies. Use a preplanned, emergency task order numbering system to identify costs related to a disaster or catastrophic event. Specifically code all emergency task orders to identify them as being related to the emergency.

After-Action Reporting and Review Meeting

At the conclusion of each incident, the Project Manager/Safety Coordinator interviews involved staff and external agencies. From this data, the Operations Manager reconstructs the incident for an After-Action Report. The purpose of the After-Action Report is to evaluate the preparedness of the Company and its ability to react to emergencies, and to assess the impact

of the emergency on the operations of the Company. The reports should contain, at a minimum, the following information: regarding activities during the emergency.

- Key emergency responsibilities and how they were carried out.
- Description of disruption to normal service.
- Problems with emergency preparedness or response.
- Contacts with outside agencies or officials.
- Special expenses or purchases.

The Post-Incident Review meeting reviews the After-Action Report and critically reviews the progress of the emergency condition, especially with regard to failures of communication systems and logistics, deficiencies in personnel training and readiness, deficiencies in preparedness planning, and problems associated with the functioning of the Incident Command System. Attendees should be encouraged to offer any recommendations for improvement of preparedness or response to similar future incidents, including recommended revisions to this Emergency Response Plan.The Project Manager or Safety Coordinator prepares meeting minutes and distributes to all attendees.

Administration and Coordination

The purpose of this section is to describe in general terms the external entities with which East Palo Alto District has set up coordination for emergencies. The Project Manager or Safety Coordinator is responsible for establishing all coordination agreements (Memoranda of Understanding, mutual aid agreements, internal corporate agreements), and reviewing them periodically for accuracy and functionality.

East Palo Alto 9-1-1 Dispatch Contacts

The following East Palo Alto District staff are on a list to be contacted by 9-1-1 dispatch if an emergency situation affects the Division's facilities or operations. The first person is to be called, then the second if the first person does not respond.

Callout personnel #1 Veolia On Call Phone - (650) 304-4432

Callout personnel #2 Richard Perez / Project Manager – (650) 483-2369

Plan Development, Maintenance and Training

Emergency Response and Operations Training

Types of Training

Orientation Sessions

All new employees must read and abide by ERP. Periodically review.

Functional Exercises

Project manager and/or Safety Coordinator will conduct exercises periodically.

Emergency Response Plan Orientation

This Emergency Response Plan document is the source for course materials to be used in Emergency Response Plan awareness training.

Inter-Agency, Drills and Exercises

East Palo Alto personnel participate in locally conducted workshops organized by the San Mateo County Office of Emergency Services.

Area-Wide Functional Exercises and Emergency Drills

No area-wide exercises or drills have been scheduled by San Mateo County OES.

Program Document Administration

The Project Manager / Site Safety Coordinator with the Regional Health & Safety Manager has the responsibility of keeping this Emergency Response Plan current and enforcing its provisions, and for coordinating emergency response planning with company and external entities.
The Project Manager/Safety Coordinator has the responsibility of interviewing incident participants (both company and offsite responders), preparing After-Action Reports, holding a post-incident critique session, following up on any committed actions resulting from critiques, and preparing and submitting incident follow-up reports to local, state, and federal agencies as required.

Action Tracking Procedure

Track actions affecting the Emergency Response Plan resulting from After-Action Reports, Tabletop and area-wide emergency response exercises, periodic plan reviews, employee suggestions, and any other source, until completed. The Project Manager/Safety Coordinator maintains the Action Plan Log form. This form will be reviewed with appropriate personnel.

Glossary of Terms

TERM	GLOSSARY DEFINITION
Action Plan	Plan prepared in an Emergency Operations Center (EOC), unified command center, or field command post, containing the emergency response objectives of a specific Standardized Emergency Management System (SEMS) level reflecting overall priorities and supporting activities for a designated period. The plan is shared with supporting agencies.
Activation of EOC:	Activation refers to the opening of the Emergency Operations Center. The Emergency Operations Center can be activated by any employee.
Agency	Division of government with a specific function, or a non-governmental organization (e.g., private contractor, business) that offers a particular kind of assistance. In the incident command system, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation) or assisting and/or cooperating (providing resources and/or assistance).
Agency Representative	Individual assigned to an incident from an assisting or cooperating agency that has been delegated authority to make decisions on matters affecting that agency's participation at the incident.
American Red Cross	A federally chartered volunteer agency that provides disaster relief to individuals and families. Major responsibilities include providing lodging, food, clothing, and registration and inquiry service.
ANSI	American National Standard Institute
APs	Action Plans
ASDWA	Association of State Drinking Water Administrators
Assisting Agency	Agency directly contributing tactical or service resources to another agency.
AWWA	American Water Works Association
BCP	Business Continuity Plan
Bioterrorism Act	Public Health Security and Bioterrorism Preparedness and Response Act of 2002.
BOD	Biochemical Oxygen Demand
CalARP	California Accidental Release Prevention
CAMEL Net	California Mutual Aid Laboratory Network
Care and Shelter	A function that provides food, clothing, and housing needs for people on a mass care basis.
CCR	California Code of Regulations
CDC	Centers for Disease Control and Prevention

CDPH	California Department of Public Health
CFR	Code of Federal Regulations
Chain of Command	Series of management positions in order of authority.
Checklist	A list of actions taken by an element of the emergency organization in response to a particular event or situation.
CHEM TREC	(Chemical Transportation Emergency Center) is dedicated to assisting emergency responders deal with incidents involving hazardous materials. 24-hour HAZMAT Communications Center Hotline: 1-800/262-8200.
Contamination:	Deposits of radioactive or other toxic materials that occur on the surfaces of structures, areas, objects, people's bodies, flora, and fauna.
Contamination Site:	Location where a contaminant is known or suspected to have been introduced into a wastewater system. For example, a distribution system storage tank where a security breach has occurred may be designated as a suspected contamination site. The contamination site will likely be designated as an *investigation site* for the purpose of *site characterization*.
Contingency Plan	A sub or supporting plan that deals with one specific type of emergency, its probable effect on the jurisdiction, and the actions necessary to offset these effects.
Cooperating Agency	Agency supplying assistance, other than direct tactical or support functions, or resources to the incident control effort (e.g., Red Cross, telephone companies).
Coordination	Process of systematically analyzing a situation, developing relevant information, and informing the appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra- or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc.
CPR	Cardio Pulmonary Resuscitation
DAFT	Dissolved Air Flotation Thickener
DAT	Damage Assessment Team
dBA	Decibels A-scale
Decontamination/Contamination Control	*Radioactive Materials* The reduction or removal of radioactive material from a structure, area, person or object. A surface may be treated, washed down, or swept to remove the contamination. Contamination can also be controlled by isolating the area or object contaminated and letting the material stand. *Other*

	Hazardous Materials: Decontamination consists of removing contaminants or changing their chemical nature to innocuous substances. Contamination control is facilitated by containment, such as diking.
DHS	Department of Homeland Security
Disaster:	A single or multiple event with many agencies involved that requires resources beyond local resources that lasts over a substantial period of time and requires the activation of the EOC.
Disaster Service Worker	Any person registered with a disaster council or State OES to provide disaster service without pay. Disaster service workers include public employees, registered volunteers, and persons pressed into service during an emergency by persons authorized to command such services.
District Emergency:	Any employee may declare a District emergency when conditions warrant and when normal operational resources are likely to be insufficient to manage the emergency or disaster to its completion. If the EOC is activated, a de facto declaration is made. As time allows, all declarations should be made in consultation with the District Supervisor.
DOT	Department of Transportation
DPC	Distributed Process Controllers
Drinking Water Primacy Agency	*Agency* that has primary enforcement responsibility for national drinking water regulations, namely, the Safe Drinking Water Act as amended. Drinking water primacy for a particular state may reside in one of a variety of agencies, such as health departments, environmental quality departments, etc. The drinking water primacy agency is typically the State Health Agency or the State Environmental Agency. The drinking water primacy agency may also play the role of *technical assistance provider* to drinking water utilities.
DTSC	Department of Toxic Substance Control
Emergency (Federal definition—see also Local Emergency and State of Emergency)	Any hurricane, tornado, storm, flood, high-water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, or other catastrophe in any part of the United States which requires federal emergency assistance to supplement State and local efforts to save lives and protect public health and safety or to avert or lessen the threat of a major disaster.
Emergency Management	The provision of overall operational control or coordination of emergency operations at each level of the California Emergency Organization, whether by the actual direction of field forces or by the coordination of joint efforts of governmental and private agencies.

Emergency Operations	Those actions taken during the emergency period to protect life and property, care for the people affected, and temporarily restore essential community services.
Emergency Operations Center (EOC)	A centralized location from which emergency operations can be directed and coordinated.
Emergency Plans	Documents that describe principles, policies and methods to be applied in carrying out emergency operations and rendering mutual aid during emergencies, including such elements as continuity of government, emergency functions of government agencies, mobilization of resources, and public information.
Emergency Response Plan	Document that describes the actions that a wastewater utility would take in response to various emergencies, disasters, and other unexpected incidents.
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
ERAP	Emergency Response Action Plan
ERP	Emergency Response Plan
Event	Planned, non-emergency activity (e.g., parades, concerts, sporting events).
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
Field Command Post	An on-scene operations (police, fire, medical) location for assembly of necessary staff and equipment. A field command post may be established, if appropriate, at or near the scene of the emergency by the responding supervisor or officer focusing initial efforts directly on control of the emergency. The field supervisor at the command post will identify resources needed at the scene and communicate these needs to the Emergency Operations Center (EOC).
Field Treatment Site	Site designated by emergency officials for the congregation, triage, austere medical treatment, holding, and evacuation of casualties following a major disaster.
Hazardous Material	A substance or combination of substances that, because of quantity, concentration, physical, chemical, radiological, explosive, or infectious characteristics, poses a substantial present or potential danger to humans or the environment. Generally, such materials are classed as explosives and blasting agents, flammable and nonflammable gases, combustible liquids, flammable liquids and solids, oxidizers, poisons, disease-causing agents, radioactive

	materials, corrosive materials, and other materials including hazardous wastes.
Hazardous Material Incident	Any release of a material (during its manufacture, use, storage, or transportation) that is capable of posing a risk to health, safety, and property. Areas at risk include facilities that produce, process, transport, or store hazardous material, as well as all sites that treat, store, and dispose of hazardous material.
HAZMAT	Hazardous Material Response Team
HAZWOPER	Hazardous Waste Operator
HHS	Health and Human Services
HSAS	Homeland Security Advisory System
Immediate Operational Response	Action taken in response to a "possible" contamination threat in an attempt to minimize the potential for exposure to the potentially contaminated wastewater. Immediate operational response actions will generally have a negligible impact on consumers.
Incident	Confirmed occurrence that requires response actions to prevent or minimize loss of life or damage to property and/or natural resources. A wastewater contamination incident occurs when the presence of a harmful contaminant has been confirmed.
Incident Command System	Standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure appropriate for the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.
Incident Commander	Individual responsible for the management of all incident operations.
Incident Objectives	Statements of guidance and direction necessary for the selection of appropriate strategy/ies and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.
Investigation Site	Location where site characterization activities are performed. If a suspected *contamination site* has been identified, it will likely be designated as a primary investigation site. Additional or secondary investigation sites may also be identified due to the potential spread of a contaminant.
Jurisdiction	Range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be

	political/geographic (e.g., city, county, State, or Federal boundary lines) or functional (e.g., police department, health department).
LEPC	Local Emergency Planning Commission
LCC	Local Command Center
LO	Liaison Officer
Local Emergency (State definition)	The duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, earthquake or other conditions which are, or are likely to be, beyond the control of the services, personnel, equipment, and facilities of a political subdivision and require the combined forces of other political subdivisions to combat.
LPoC	Laboratory Point of Contact
LRN	Laboratory Response Network
Major Disaster (Federal) -- see also Emergency	Any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, or other catastrophe which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Federal Disaster Relief Act.
Media	All means of providing information and instructions to the public, including radio, television, and newspapers.
Mitigation	Pre-event planning and other actions, which lessen the effects of potential disasters.
Mutual Aid	A statewide system, developed under the authority of the California Emergency Services Act, designed to ensure that adequate resources, facilities, and other support are provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.
MSDS	Material Safety Data Sheets
Multi-Jurisdiction Incident	Incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In Incident Commander, these incidents will be managed under Unified Command.
National Interagency Incident Management System	Program developed by the National Wildfire Coordinating Group consisting of five major subsystems which collectively provide a total systems approach to all-risk incident management. The subsystems are the Incident Command System, Training, Qualifications and Certification, Supporting Technologies, and Publications Management.

National Warning System	The federal portion of the civil defense warning system, used to disseminate warning and other emergency information from the warning centers or regions to warning points in each state.
NIMS	National Incident Management System
NIPC	National Infrastructure Protection Center
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic & Atmospheric Administration (US)
Notification	Process of communicating information to interested parties.
NRC	National Response Center
NRR	Noise Reduction Ranking
NRWA	National Rural Water Association
OES	Office of Environmental Services
Office of Emergency Services (OES)	Part of the Governor's office, the primary State agency responsible for the coordination and administration of statewide operations to support emergency mitigation, preparedness, response, and recovery activities within California.
Operational Area	An intermediate level of the State emergency services organization, consisting of a county and all political subdivisions within the county.
Opportunity Contaminant	Contaminants that might be readily available in a particular area, even though they may not be highly toxic or infectious or easily dispersed and stable in wastewater.
OSHA	Occupational Safety and Health Administration
PG&E	Pacific, Gas, and Electric
PIDS	Primary Influent Discharge Structure
PIO	Public Information Officer
Plan	As used by OES, an emergency management document that describes the broad, overall jurisdictional response to potential extraordinary emergencies or disasters.
PLC	Programmable Logic Controller
POL	Petroleum, Oil, And Lubricant
POTWS	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
PSMP	Process Safety Management Plan
Public Information Officer	Individual responsible for interfacing with the public and media or with other agencies requiring information directly from the incident. Under the Incident Commander, there is only one Public Information Officer per incident.

Quality Assurance	Integrated system of management activities involving planning, implementation, documentation, assessment, reporting, and quality improvement, to ensure that a process, item, or service is of the type and quality needed and expected by the client.
Quality Control	Overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the client; operational techniques and activities that are used to fulfill requirements for quality.
Recovery Manager	The Recovery Manager is responsible for selecting a recovery team and developing a recovery strategy prior to emergency termination.
Response Guidelines	Manual designed to be used during the response to a wastewater contamination threat. Response Guidelines should be easy to use and contain forms, flowcharts, and simple instructions to support staff in the field or decision officials in the *Emergency Operations Center* during management of a crisis.
RMP	Risk Management Plan
Robert T. Stafford Disaster Relief and Emergency Assistance Act P.L. 93-288 as amended	Gives the President broad powers to supplement the efforts and available resources of state and local governments in carrying out their responsibilities to alleviate suffering and damage resulting from declared emergencies or disasters.
RQ	Reportable Quantity
RWCF	Regional Wastewater Control Facility
SCADA	Supervisory Control and Data Acquisition
SCBA	Self-Contained Breathing Apparatus
Secure Area	Locked space, such as a cabinet or vault, with access restricted to authorized personnel.
Site Characterization	Process of collecting information from an *investigation site* in order to support the evaluation of a wastewater contamination threat. Site characterization activities include the site investigation, *field safety screening*, *rapid field testing* of the wastewater, and sample collection.
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflow
SSORP	Sanitary Sewer Overflow Response Plan
Safety Officer	Safety Officers are trained in emergency response and play a vital role in the plant safety structure and in building evacuations.
Search	Systematic investigation of an area or premises to locate persons trapped, injured, immobilized or missing.

SEMS	The Standardized Emergency Management System (SEMS) is the group of principles developed for coordinating state and local emergency response in California. SEMS provides for a multiple level emergency response organization and is intended to structure and facilitate the flow of emergency information and resources within and between the organizational levels: the field response, local government, operational areas, regions and the state management level.
Standard Operating Procedures	A set of instructions having the force of a directive, covering those features of operations that lend themselves to a definite or standardized procedure. Standard operating procedures support an annex by indicating in detail how a particular task will be carried out.
State Emergency Plan	The State of California Emergency Plan, as approved by the Governor, which serves as the basis for statewide emergency planning and response.
State of Emergency	According to Section 8558 (b) of the Emergency Service Act, a State of Emergency means: "Other duly proclaimed existence of conditions of disaster or of extreme peril or the safety of persons and property within the State caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infection or disease, the Governor's warning of an earthquake or volcanic prediction, or an earthquake, or other conditions, other than conditions resulting from a labor controversy or conditions causing a 'state of war emergency,' which conditions, by reason of their magnitude are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city, and require the combined forces of a mutual aid region or regions to combat or with respect to regulated energy utilities, a sudden and severe energy shortage requires extraordinary measures beyond the authority vested in the California Public Utilities Commission." OR The "condition which exists immediately, with or without a proclamation thereof by the Governor, whenever this State or nation is attacked by an enemy of the United States, or upon the receipt by the state of a warning from the federal government indicating that such an enemy attack is probable or imminent."
Technical Assistance Provider	Any organization or individual that provides assistance to wastewater utilities in meeting their mission to provide an adequate and safe treatment of wastewater for their customers. The *wastewater primacy agency* may serve as a technical assistance provider.

Threat	Indication that a harmful *incident*, such as contamination of wastewater, may have occurred. The threat may be direct, such as a verbal or written threat, or circumstantial, such as a security breach or unusual wastewater quality.
Threat Evaluation	Part of the threat management process in which all available and relevant information about the threat is evaluated to determine if the threat is "possible" or "credible", or if a contamination *incident* has been "confirmed". This is an iterative process in which the threat evaluation is revised as additional information becomes available. The conclusions from the threat evaluation are considered when making *response decisions*.
Threat Management	Process of evaluating a contamination threat and making decisions about appropriate response actions. The threat management process includes the parallel activities of the *threat evaluation* and making *response decisions*. The threat management process is considered in three stages: "possible", "credible", and "confirmatory". The severity of the threat and the magnitude of the response decisions escalate as a threat progresses through these stages.
Threat Warning	Unusual occurrence, observation, or discovery that indicates a potential contamination incident and initiates actions to address this concern.
TSS	Total Suspended Solids
UERM	Utility Emergency Response Manager
Unified Command	Unified team effort which allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility, or accountability.
Unity of Command	Concept by which each person within an organization reports to only one designated person.
UOCM	Utility Emergency Operations Center Manager
U.S. EPA	U.S. Environmental Protection Agency
USAMRID	U.S. Army Medical Research Institute of Infectious Diseases
Volunteers	Individuals who make themselves available for assignment during an emergency who are not paid for the work they do.
Vulnerability Assessment	Systematic process for evaluating the susceptibility of critical facilities to potential threats and identifying corrective actions that can reduce or mitigate the risk of serious consequences associated with these threats.

Water Contamination Incident	Situation in which a contaminant has been successfully introduced into the system. A water contamination incident may or may not be preceded by a water contamination threat.
Water Contamination Threat	Situation in which the introduction of a contaminant into the water system is threatened, claimed, or suggested by evidence. Compare *water contamination threat* with *water contamination incident*. Note that threatening a water system may be a crime under the Safe Drinking Water Act as amended by the Bioterrorism Act.
Water ISAC	Water Information and Security Analysis Center

Emergency Scenarios

Action Plans

An Action Plan (AP) is the set of actions that will be used to address specific vulnerabilities or high-risk threat scenarios identified in the Water System Vulnerability Assessments and to provide a specific response to a given incident. Typically, APs complement actions already initiated in an ERP.

An AP is an accessible, "rip and run," document that can be detached and taken to the field by the Project Manager/Site Safety Coordinator or any other emergency responder. An AP typically includes the following information:

- Special notification requirements
- Special response steps to be taken upon ERP activation
- Recovery actions to bring the water system back into operation

EMERGENCY RESPONSE ACTION PLAN (ERAP)
INITIAL DISCOVERY AND RESPONSE ACTION
Veolia North America Water

Action Plan No. 1

Bomb Threat		
Do not use cellular telephones or portable radios during a bomb threat. Use of these communication devices may cause a possible transmission detonation of an explosive device.		
☐	**Line No.**	**Task**
	1	Review **Section 4, Security**.
	2	If a bomb threat is received by telephone, do not hang up the phone even after the conversation is over.
	3	Record details of telephone bomb threat with a checklist on the backside of this sheet.
	4	Call (or ask someone else to call) 911 and report the emergency.
	5	Based on the threat, determine if the building or facility should be evacuated. If yes:
		a) Evacuate the building or facility in accordance with the instructions in Action Plan #8.
		b) Account for all personnel and visitors in the designated assembly area.
		c) Notify the Incident Commander.
		d) Determine and implement search procedures for the building or facility, if appropriate. Instruct employees not to disturb any suspicious items and not to use cellular telephones or portable radios.
	6	If no suspicious items are found and the threat does not appear to be credible, coordinate building or facility re-entry.
	7	If suspicious items are found and/or the threat does appear to be credible:
		a) Report suspicious items or credible threats to local law enforcement officials.
		b) Provide technical support and resources to local emergency response agencies, as requested.
	8	If a bomb explodes, follow other applicable emergency response action plans.
	9	Coordinate building re-entry with the Incident Commander.
	10	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Bomb Threat Checklist

Time and date received _____
How received (phone, mail, etc.) _____
If a bomb threat is received by mail or in person, **do not handle letters, envelope, or package. Immediately dial 911.**
If threat is by telephone, record exact words of the caller _____
Questions to ask:

1. When is the bomb going to explode? _____
2. Where is the bomb located? _____
3. What kind of bomb is it? _____
4. What does it look like? _____
5. Why did you place the bomb? _____
6. Where are you calling from? _____

Description of caller's voice:

○	Male	○	Old	○	Nervous	○	Laughing
○	Female	○	Middle Age	○	Excited	○	Speech Impediment
○	Young	○	Accent	○	Intoxicated	○	Other_____ ___

Is the voice familiar? _____ If so, who does it sound like? _____
Background noise? _____
Time caller hung up _____
Remarks:
_____
_____

Action Plan No. 2

Chemical Shortage		
Chemical shortages may be caused by inclement weather, transportation accidents, or deliberate acts of violence. Plans should be in place to store additional supplies, when possible, when bad weather is predicted or homeland security threat levels are elevated to orange or red. Additionally, pre-negotiated agreements to supply critical chemicals should be in place with alternate vendors.		
□	**Line No.**	**Task**
	1	When chemical supplies drop below the minimum onsite quantity and/or other potential delivery problems occur, contact the Incident Commander.
	2	Review current chemical inventory.
	3	Contact chemical supplier.
		a) If possible, resolve the delivery problem.
		b) If the supplier is not able to deliver within a reasonable period of time, contact an alternate vendor.
	4	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place "N/A" in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the nature and extent of the emergency event.

Action Plan No. 3

Chemical/Hazardous Material Release		
Chemicals may be released into the ambient environment because of an accident during normal operations, storage, or delivery. These chemicals may also be released as an intentional act of sabotage or terrorism. Follow hazard-specific Standard Operating Procedures (SOPs) as appropriate such as in the event of a chlorine release. In addition, consult appropriate sections of the RMP/PSMP and material safety data sheet (MSDS).		
☐	**Line No.**	**Task**
	1	Call 911 to report the alarm or potential leak/spill.
	2	Investigate alarm or potential leak/spill to determine if a chemical release has occurred.
	3	Announce the release to nearby employees and direct other personnel to remain clear of the affected area.
	4	Evacuate or shelter personnel, if needed.
	5	Don applicable PPE prior to response or investigation.
	6	If possible, direct trained personnel to stop additional releases from occurring (e.g., closing valve to stop flow to leaking pipe or tank, apply fire suppression) while using appropriate PPE.
	7	Follow other applicable emergency response action plans based on hazard-specific information (i.e., evacuate if explosion potential; block storm drains if spill is outside; use booms on waterways where spill has entered).
	8	Notify the Incident Commander of the incident, response actions, and status.
	9	Determine if the release can be cleaned up by trained Veolia staff with internal resources. If so:
		a) Ensure that the cleanup is performed safely and that the source of the release is repaired or replaced.
		b) Ensure that contaminated material from cleanup operations is properly characterized and disposed of.
	10	If the nature and extent of the release exceed internal response capabilities, request assistance from the Fire Department.
	11	Provide support and technical resources to the Fire Department, as needed.
	12	If required, implement appropriate cleanup and disposal protocols based on hazard-specific information.
	13	Report all releases to waterways to the appropriate federal, state, and local agencies.
	14	If required, report the release to the appropriate federal, state, and local agencies.
	15	If chemical release appears to be the result of an intentional act, provide support to the police department and other law enforcement agencies (preserve evidence, interview witnesses, etc.).
	16	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Action Plan No. 4

Dam or Levee Failure		
A dam or levee failure can cause loss of life, damage to property, and displacement of persons in the inundation path. Damage to electric facilities can render pumping stations inoperable. Demand on emergency services such as fire, police, and emergency health care will be high, and response times for additional incidents will be increased. Employees living in the expected inundation areas will be adversely affected and their ability to perform assigned duties will be impacted.		
☐	**Line No.**	**Task**
	1	Notify Incident Commander and Regional Director that flooding is imminent.
	2	Veolia Water facilities located in the expected inundation areas should be prepared to be shut down if necessary.
	3	Electric transmission lines may become unstable if utility pole foundations are flooded. Veolia should prepare for extended loss of electric power at some facilities.
	4	Shut off power and de-energize circuits.
	5	Shut off all electric motors in the area and de-energize circuits.
	6	Move all portable equipment to areas safe from flooding.
	8	Shut off natural gas if applicable.
	9	Have the electrical company crew standby to disconnect power to pumps.
	10	Sandbag around the well site to minimize flooding.
	11	When floodwaters recede, begin system water quality testing.
	12	Employ other relevant action plans as needed.
	13	Inspect all electrical panels that were subjected to flood waters for integrity of circuits, dry out all panels before energizing.
	14	Place well pump units back in operation.
	15	Check all equipment for proper operation.
	16	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.
	17	The San Mateo County OES has prepared an evacuation plan in the event of a dam or levee failure.
	18	Major roadways and railways may be shut down. Vendors and suppliers of critical resources should be contacted and alternate delivery methods implemented.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Action Plan No. 5

Destruction/Failure of any Part of the Water System		
Routine pipeline failure/breaks will be handled in accordance with applicable Standard Operating Procedures (SOPs) and manuals. Procedures in this action plan provide additional guidance for non-routine failures that may require response from multiple Veolia staff and/or external agencies.		
☐	**Line No.**	**Task**
	1	If local emergency response assistance is required, call 911.
	2	Notify both the Incident Commander and the Regional Director. Provide periodic status updates, as requested.
	3	Coordinate media notification between Veolia staff and San Mateo County external affairs,
	4	Decide whether, when, and how to notify customers and the news media.
	5	Assemble a team of operations, maintenance, engineering, and other Veolia staff (as needed) to assess damage and identify possible solutions.
	6	If the damage appears to be the result of an intentional act, treat the site as a crime scene. Consult with the police department and other law enforcement agencies to ensure that evidence is preserved.
	7	Notify local emergency responders about potentially hazardous materials that may be present at the site.
	8	Determine the impact of the destruction/failure on the ability of the water system to serve public needs.
	9	Based on the extent of the damage, consider alternative (interim) treatment and/or conveyance schemes.
	10	Develop and implement a recovery plan.
	11	If the damage appears to be intentional, increase security measures at the facility and related facilities to discourage further attack.
	12	Notify customers when the system is returned to service.
	13	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the nature and extent of the emergency event.

Action Plan No. 6

Evacuation		
Evacuation of buildings or facilities may be required during certain types of emergencies, including fire/explosion, bomb threat, and chemical release.		
☐	**Line No.**	**Task**
	1	Assess the situation to determine if evacuation is appropriate. If evacuation is necessary, then:
		a) Determine if designated personnel need to remain in the building for any reason (for example, equipment shutdown).
		b) Make an announcement directing all occupants to evacuate the building. Indicate which exits to use and identify the designated assembly area. The assembly area should be upwind and unaffected by the emergency event.
		c) If an incident is a bomb threat, include instructions not to disturb suspicious items and not to use cellular telephones or portable radios.
	2	Meet at a predetermined assembly area.
	3	Ensure that local emergency responders (911) have been notified of the incident and that they are directed to the appropriate area upon arrival.
	4	Facilitate witness interviews, brief the local emergency response agency's Incident Commander, and provide technical support and resources to response agencies.
	5	Ensure that evacuated personnel are assembled at designated areas.
	6	Ensure that personnel and visitor accountability is complete within 30 minutes of evacuation.
		a) Take a headcount to ensure all personnel who were at the site can be accounted for.
		b) Document the headcount.
		c) If anyone is not accounted for, notify the Incident Commander.
	7	Direct personnel to an alternate assembly area if the designated assembly area becomes unsafe because of the path of the plume or other dangers associated with the emergency weather.
	8	Do not attempt to re-enter the building without the approval of the Incident Commander.
	9	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the nature and extent of the emergency event.

Action Plan No. 7

Fire/Explosion		
If the situation involves a small isolated fire and it is safe to do so, use a fire extinguisher to extinguish the fire and report the incident to your immediate supervisor. If not, follow the steps outlined below.		
☐	**Line No.**	**Task**
	1	When smoke or flames are visible, the fire alarm sounds, or an explosion occurs, call 911 to report the emergency.
	2	Direct personnel to:
		a) Begin evacuating the building through the nearest exit.
		b) Report to the designated assembly area, which should be upwind of the affected area.
	3	Use public address systems such as email in addition to verbal notification to evacuate.
	4	Ensure that local emergency response personnel are directed to the emergency area. Keep them informed of casualty and building conditions.
	5	Account for all personnel and visitors at the designated assembly area.
	6	Assist injured personnel, administer first aid if trained, and transport injured to the nearest medical facility.
	7	Move vehicles to a safe location.
	8	Follow other applicable emergency response action plans (medical emergency, chemical release, etc.).
	9	Notify the Incident Commander of the emergency event, response actions, and status.
	10	Provide technical support and resources to local emergency response personnel, as requested.
	11	Direct personnel to an alternate assembly area if the designated assembly area becomes unsafe because of the path of the plume, other dangers associated with the emergency such as inclement weather.
	12	If fire/explosion appears to be the result of an intentional act, provide support to the Police Department and other law enforcement agencies (preserve evidence, interview witnesses, etc.).
	13	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Fire/Wildfires

Onsite

- Report forest and grass fires to Project Manager / Chief Operator
- If the fire occurs on the facility site, contact the fire department, contain and extinguish the fire using plant water and/or fire extinguishers.
- Move vehicles in the parking lot to a safe location(s).
- If the fire spreads to surrounding property, off the facility site, notify the Fire Department.
- If power to the facility is disrupted, start an emergency generator. (If Applicable)
- Transfer power from the emergency generator to plant circuits.
- When power is restored, transfer power back to the main circuits.
- Place plant equipment back in operation.
- Administer first aid to injured personnel.
- Evacuate injured personnel to the nearest Trauma Center/Hospital.

Offsite

- Report off-site forest and grass fires that may endanger the facility to your Project Manager
- Move vehicles in the parking lot to a safe location(s).
- If power to the facility is disrupted, start an emergency generator (if applicable).
- Transfer power from the emergency generator to plant circuits.
- Contact the power company and determine the duration of the outage.
- Standby with firefighting equipment to protect facility equipment and buildings.
- When power is restored, transfer power back to the main circuits.
- Place plant equipment back in operation.
- Shut off the emergency generator.
- Administer first aid to injured personnel.
- Evacuate injured personnel to the nearest Trauma Center/Hospital.

In-Plant

- Notify Department Supervisor.
- Notify Department Personnel in the area and evacuate.
- Notify Fire Department
- Follow Fire Department instructions.
- Control or extinguish fire.
- Follow-up with Project Manager

Action Plan No.8

Medical Emergency		
Do not move an unconscious injured person unless a more serious injury may occur, such as being left in the path of an advancing fire. Do not assist an unconscious or choking victim unless trained in CPR		
☐	**Line No.**	**Task**
	1	Check the scene for safety before providing emergency assistance.
		a) Consider conditions (traffic, spilled chemicals, downed power lines, etc.) that may affect the safety of potential responders and others at the scene.
		b) Remove, shut down, or minimize any hazards that you can safely control.
	2	Call 911 to report the illness/injury.
	3	If available, ensure the following information is relayed to the 911 Call Center:
		a) Name of individual reporting
		b) Type of emergency
		c) Number of people needing medical care
		d) Whether first aid/CPR is being provided
		e) Gender, age, and medical history of patient(s)
		f) Symptoms of patient(s)
		g) Location (room, floor, building) of patient(s)
		h) Hazards that may be encountered.
	4	Ensure that trained staff members provide First Aid/CPR until emergency response personnel arrive.
	5	Arrange for someone to meet emergency response personnel at the facility entrance and escort them to the patient's location.
	6	Assist local emergency responders, as requested.
	7	Coordinate notification of the employee's family or emergency contact with the employee's supervisor and the Human Resources Department.
	8	If injury appears to be the result of an intentional act, provide support to the Police Department and other law enforcement agencies (preserve evidence, interview witnesses, etc.).
	9	In the event of injury or death, notify the Veolia Legal Department.
	10	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the nature and extent of the emergency event.

Action Plan No. 9

Power Failure		
In case of power failure, emergency generators at the plant will provide sufficient power for emergency lighting and plant controls. The general guidelines below are intended to supplement SOPs for power failure at the plant.		
☐	**Line No.**	**Task**
	1	Activate/check status of emergency power supply.
	2	Assign someone to monitor the status of the emergency power supply during the incident and report any problems to the Incident Commander. If the emergency generator fails to start in automatic status, initiate operation manually only after performing the following:
		a) Verify the Generator Room storage area is open and clear of obstruction
		b) Check the fuel delivery system
		c) Check the starting air pressure is at least 70 psi
		d) Check the Emergency Generator Engine for proper water and oil levels
		e) Check the Emergency Generator Engine block heater
	3	Once power has been restored, reset and restart all affected plant equipment.
	4	Notify PG&E. If applicable, request periodic status updates.
	5	Notify the Incident Commander.
	6	If power failure is due to local equipment failure, develop and implement a recovery plan.
	7	If power failure appears to be the result of an intentional act:
		a) Notify the California State Warning Center (800/852-7550) within two hours.
		b) Provide support to the Police Department and other law enforcement agencies (for example preserve evidence and interview witnesses)
		c) Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Power Failure

- Notify the Project Manager.
- Contact PG & E (Gas and Electric) at 800-743-5002
- Determine duration of outage.
- When line power is restored, transfer power from line power to plant circuits.
- Turn off emergency generator(s).
- Check plant-wide equipment and process for normal operation.

This is a common treatment facility problem which can seriously affect process stability even with backup power generating equipment available. Many types of power interrupting circumstances can leave the plant crippled if action is not taken to minimize the effects.

Power surges may also adversely affect equipment operation and process control. The equipment may require repair, re-calibration, control system replacement, amperage checks, or rewiring before bringing the plant back to normal operation.

Telephone service may be interrupted during power outages. A cellular telephone located in the Operators Control Room would provide continuous communications.

Response Strategy

1. ***Communication***. Determine if the outage is local to the plant or regional and the estimated down time the utility expects. This will provide the operations staff some measure of the seriousness of the situation and organize procurement of additional diesel fuel for the generator or additional generating equipment.

2. ***Process assessment***. Determine which processes are affected and perform changes in plant operation which minimizes the effect of the loss of power. All other equipment can be powered from an emergency generator, however the load should be minimized as much as possible and the status of all equipment checked.

3. ***Generating equipment***. Emergency generators should be tested and run weekly and continuously maintained to be sure the equipment can be utilized.

Alternatively, generating equipment can be rented from vendors. Their availability should be researched in advance.

Action Plan No.10

SCADA Attack/Electronic		
☐	Line No.	Task
	1	Place all affected or potentially affected water treatment and conveyance equipment in LOCAL/ MANUAL and configure as required using last known good process values. Institute tight access control to local plants and equipment to avoid physical attack.
	2	Notify the Incident Commander.
	3	Notify federal, state, and local agencies, as applicable:
	4	Coordinate with the Police Department and other law enforcement agencies to preserve evidence and interview witnesses.
	5	Physically disconnect links of the affected and other potentially affected control systems from local business networks, Internet connections, and dial-up modem connections.
	6	Save all event logs, alarm logs, and historical data files to removable media and place in a secure location for later analysis.
	7	Save all SCADA application and database files to removable media and place them in a secure location for later analysis.
	8	Remove SCADA servers from the control system for later analysis. If possible, do not interrupt the power supply to the servers.
	9	Install spare SCADA server, loaded with latest archived configuration files. Change all passwords. Do not restart SCADA applications until PLCs or DPCs have been reconfigured.
	10	Upload all affected or potentially affected PLC or DPC programs and configurations to removable media and place in a secure location for later analysis.
	11	Completely purge the memory from all affected or potentially affected PLC or DPCs, and download the latest archived configuration and program (if unaffected by the attack).
	12	Save all configuration files from network switches, hubs, and servers to removable media.
	13	Completely purge the memory from all network switches, hubs, servers, and modems. Download latest archived configuration files. Change all passwords. Inspect and validate all archived routing tables.
	14	Restart reconfigured SCADA server application. Verify that the application is current. If not, install any service packs or updates installed since the last backup.
	15	Restart PLC or DPCs on a system-by-system basis, verifying proper operation. Return water treatment and conveyance equipment to AUTOMATIC control on a system-by-system basis, verifying proper operation.
	16	Analyze all archived network device configuration files to determine the cyber-attack entry point and attack method. Reconfigure and enhance systems as required to prevent subsequent successful attacks.
	17	Reestablish links from the enhanced control system, as required, to local business networks, Internet connections, and dial-up modem connections.
	18	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event. Notify required State and Federal agencies based on the situation (intentional intrusion).

Action Plan No.11

SCADA Attack/Physical		
□	Line No.	Task
	1	Place all affected water treatment and conveyance equipment in MANUAL and configure as required using last known good process values.
	2	Notify the Incident Commander.
	3	Notify federal, state, and local agencies, as applicable:
	4	Coordinate with the Police Department and other law enforcement agencies to preserve evidence and interview witnesses.
	5	Refer to vulnerability assessment ranking of the relative importance of the various facilities. Assign evaluation and repair teams and resources based on the relative importance of the affected installations.
	6	Physically examine and/or run electronic diagnostic tests of all affected, or potentially affected, systems to determine which components have been damaged.
	7	Obtain and install replacement components. Maintain records of all newly installed component model numbers, serial numbers, and source of supply. Restart, test, and certify repaired systems.
	8	Return certified systems to AUTOMATIC control mode of operation.
	9	Submit records of all newly installed components for restocking of spare supplies and financial settlement with suppliers.
	10	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Action Plan No. 12

Severe Weather/Natural Disasters		
Natural disasters include ice and snow, cold snap/wind, tornadoes, thunderstorms (and associated lightning), windstorms, flooding, and earthquakes.		
☐	**Line No.**	**Task**
	1	Monitor weather using a NOAA radio, local news media, or Internet weather sites.
	2	During periods of icy or snowy weather, ensure the following actions are taken:
		a) Clear snow and ice from walkways and roads.
		b) Ensure emergency power supply is available.
		c) Prepare equipment and vehicles (fill fuel tanks, check oil and tire pressure, etc.)
		d) Consider releasing non-essential personnel from their duties until the weather improves.
		e) Arrange alternate transportation to work for essential personnel, if necessary.
	3	During a tornado, severe thunderstorm, or windstorm *watch*, ensure the following actions are taken:
		a) Move loose outdoor items into buildings, if possible.
		b) Allow employees to perform *only* essential outdoor activities.
		c) Instruct employees to move to permanent structures and prepare for sheltering.
		d) Listen to weather reports for further announcements and direction.
	4	During a tornado, severe thunderstorm, or windstorm *warning*, ensure the following actions are taken:
		a) Have personnel move to designated shelters, or to the interiors of buildings away from doors and windows.
		b) Direct personnel to get under desks, tables, or other sturdy objects (tornado warning only).
		c) Monitor weather reports to determine when personnel can return to their normal assignments.
		d) If a tornado, severe thunderstorm, or windstorm damages the facility, follow other applicable emergency response action plans.
		e) After the emergency is over, follow damage assessment and recovery procedures. Identify repairs needed immediately in order to ensure adequate service for public needs.
	5	During a flood *watch*, ensure the following actions are taken:
		a) Monitor gauges, as appropriate.
		b) Prepare to activate EOC, if necessary.
		c) Check inventory of equipment, chemicals, and supplies.
	6	During a flood *warning*, ensure the following actions are taken:
		a) If flooding affects the facility, notify the Incident Commander.
		b) Follow other applicable emergency response action plans and SOPs.
		c) Assess electrocution or grounding hazards in flooded or water-damaged areas, and secure those areas.
		d) Initiate Action Plan No. 4 (dam and levee failures), if necessary.

	7	During an *earthquake*, ensure the following actions are taken:
		a) Direct all personnel to find immediate shelter.
		b) See earthquake response strategy below for additional guidance.
		c) Shut off all natural gas, chlorine, and other supply lines.
		d) Inspect buildings and facilities for damage from the outside.
		e) Administer First Aid to injured personnel, if trained.
		f) Evacuate injured personnel to the nearest medical facility.
		g) Monitor the radio for instructions.
		h) After the emergency is over (expect aftershocks), activate the water utility EOC, and follow damage assessment and recovery procedures. Identify repairs needed immediately in order to ensure adequate service for public needs.
	8	Maintain documentation of events and damage for weather-related emergencies that affect employees or damage facilities and/or equipment. Forward this to the Incident Commander at the conclusion of the emergency event.
	9	During an *cold snap*, ensure the following actions are taken:
		a) Establish communication with the Incident Commander.
		b) Inspect all water facilities for damage or additional protective needs.
		c) Install line heaters of cylinder blanket heaters on affected systems.
		d) Monitor water system pressure; activate additional production facilities as needed.
		e) Isolate all leaks in the distribution system and on customer facilities.
		f) Initiate repairs as needed to return the water system to normal operation.
	9	Maintain documentation of events and damage for weather-related emergencies that affect employees or damage facilities and/or equipment. Forward this to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comment section and signature block located on the next page.

4. **Damage assessment**. The first response is to determine the extent and nature of the earthquake by auditing utilities, piping, and processes. The prioritization of this audit will then allow the response to concentrate on the direction and actions required by on-site staff and outside agencies.

   Normally power outages will be the most evident problem with pipe and structural failures also needing immediate attention.

5. **Delegate responsibilities**. Additional staff and assistance for monitoring processes will be necessary for sampling, analysis, equipment repair, manual equipment and process operation, and communication.

   Prioritized activities should be performed by in-house staff and outside agencies. The mutual aid agreements should be utilized and communication with utility companies should be made to estimate the length of time the emergency generator will be required. This may necessitate procurement of an additional supply of diesel fuel or rental of additional generators to provide electrical power.

6. **Process monitoring and control**. Increased water quality sampling analyses will be required to alert operations personnel of unusual conditions.

   Alternative modes of operation may be required, for example, to bypass damaged structures or equipment which is not operational.

   Bypassing flows within the process units, isolating processes, and changing modes of operation to decrease the effects of lost equipment and systems should be performed. Manual operation of equipment, loss of chemical feed pacing, water quality analyzers and control systems may be expected.

Recovery Response

The proper response after an emergency has reached a measure of safety for the personnel, a thorough plant check is in order.

- Assess and record damage
- Report damage to Incident Commander
- Prepare a list of supplies necessary for repairs.

As always, a good preventive maintenance policy could ensure all generators and auxiliary power units were functional prior to an emergency. These units should be checked again after the emergency since they will probably be providing power for the system until the power company can assess and repair their damages.

Action Plan No. 13

Sheltering-in-Place		
Sheltering-in-place may be required when it has been determined that it is safer to remain at a location than to evacuate. Types of emergencies that may involve sheltering-in-place include severe weather, civil disorder, and terrorist attack.		
☐	**Line No.**	**Task**
	1	Notify personnel to shelter in the designated location, or as directed by facility announcements.
	2	Ensure that all windows and doors are closed.
	3	Identify a single door for entry into the building, and post a door monitor.
	4	Do not allow personnel to leave the building unless approved by the Incident Commander.
	5	Maintain a list of all personnel in the building.
	6	Facilitate distribution of emergency supplies (see **Appendix G**), as applicable.
	7	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place "N/A" in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the

Action Plan No. 14

Terrorist/Hostile Attack		
The primary responsibility of the Utility Emergency Response Manager (UERM) is to protect staff and other on-site personnel during such an event.		
☐	**Line No.**	**Task**
	1	Call 911 to report the emergency. Report any suspicious activity or person to the Incident Commander.
	2	Comply with facility announcements and law enforcement instructions.
	3	Notify the Incident Commander of the emergency event, response actions, and status.
	4	Provide technical support and resources to local emergency responders, as requested.
	5	During situations involving violence, such as gunfire and hand grenade blasts:
	6	Direct employees in the immediate area to hide under furniture and hold badges near their faces when approached by emergency responders.
	7	Direct employees outside the immediate area to stay indoors, lock doors, keep away from windows, and follow law enforcement instructions.
	8	Follow other applicable emergency response action plans.
	9	Restore the building to normal operations when authorized by the Incident Commander.
	10	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Action Plan No. 15

Threat and Identification of Contamination to the Water System			
This AP describes procedures for responding to the threat and confirmation of introduction of a contaminant into the water system (at any point within the system) without identification of the contaminant. Both accidental and/or intentional contamination is applicable to this AP. If the substance is known, consult applicable SDSs and any appropriate SOPs to augment this AP.			
□	**Line No.**	**Task**	
	1	Incidents and scenarios under which emergency may evolve:	
		a) Security breach	g) Notification by the news media
		b) Witness account	h) Unusual water quality
		c) Notification by the perpetrator	i) Consumer complaint
		d) Notification by law enforcement officials	j) Notification by public health agencies
		e) Intentional/illicit dumping	k) Hazardous material spills
		f) Decontamination activities by responders	
	2	Notify the Incident Commander of the emergency event, response actions, and status.	
	3	Evaluate the scenario or material to determine if the threat is significant based on dilution, reactivity, environment, location, accessibility, and potential damage to treatment processes.	
		a) If the threat is possible, proceed to Line No. 4.	
		b) If the threat is not possible, proceed to Line No. 11.	
	4	Notify local emergency responders (911), the City of East Palo Alto and San Mateo County Office of Emergency Services, and the Sacramento County Health Department.	
	5	Evaluate the spread of potential contamination and its impact on public health, and select the appropriate operational response. Responses may include containment/isolation, retention, and/or bypass of suspect water.	
	6	Determine if sampling of the water collection system is necessary. If yes, proceed to Line No. 7. If not, proceed to Line No. 8.	
	7	Characterize the suspected contamination site. The characterization may include:	
		a) Determine sampling locations.	
		b) Designate sampling team members.	
		c) Conduct preliminary assessment of potential site hazards.	
		d) Search for physical evidence (discarded containers, etc.)	
		e) Ensure potential ignition sources are eliminated (cigarettes, cell phones, engines, etc.)	
		f) Perform air sampling.	
	8	Collect water samples for laboratory analysis.	
	9	Using the information collected during the threat evaluation and the site characterization, determine if the threat is credible.	
		a) If the threat is credible, send samples for laboratory analysis, continue site characterization activities, and implement measures to protect public health.	
		b) If the threat is not credible, proceed to Line No. 12.	
	10	If contamination is not found, determine if the threat is still credible.	

		a) If the threat is credible, revise sampling and analysis plans and collect additional samples.
		b) If the threat is not credible, proceed to Line No. 12.
		c) If threat is confirmed, proceed to Line No. 11.
	11	If contamination is found:
		a) Initiate operational response selected in Step No. 5. Consult applicable SDSs or SOPs.
		b) Contact the City of East Palo Alto and/or San Mateo County Office of Emergency Services for assistance in responding to the emergency.
		c) Decide whether, when, and how to notify customers and the news media. If applicable, contact the Sacramento County Health Department regarding the issuance of public advisories.
		d) Contact the local emergency response agencies.
		e) Divert the water from the sewer to a pond or other holding vessel, activate the bypass system, ventilate the system, or perform other operational responses until the contamination falls below a level of concern.
	12	Close the investigation and return to normal operations.
	13	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comment section and signature block located on the next page.

Action Plan No. 16

Unauthorized Entry		
Unauthorized entry or criminal activity may occur at any facility. The criminal activity may range from vandalism to terrorist acts that result in major structural damage, chemical or fuel spills, or contaminants entering the water system.		
☐	**Line No.**	**Task**
	1	If unauthorized entry is observed, immediately call 911 and report the emergency.
	2	If possible, record a description of each intruder and the make, model, color, and license number of any vehicle involved. Do not put yourself in danger by confronting the intruder(s).
	3	Direct employees to check their immediate work areas for any suspicious items or damage.
	4	Instruct employees *not* to disturb any suspicious items.
	5	If applicable, evacuate the building or facility. Account for all personnel at the designated assembly area.
	6	Report any suspicious items to the local emergency response agency's Incident Commander.
	7	Provide technical support and resources to local emergency response agencies, as requested.
	8	Determine whether there are any impacts or potential impacts to the operation of water conveyance, treatment, and/or discharge facilities. Report any such impacts to the Incident Commander.
	9	Follow other applicable emergency response action plans.
	10	Ensure that other federal, state, and local agencies have been notified, as applicable.
	11	Coordinate building re-entry with the Incident Commander.
	12	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

The tasks listed above are general guidelines for responding to each type of emergency; specific response actions may vary depending upon the nature and extent of the emergency event.

Action Plan No. 17

Workplace Violence		
The primary responsibility of the Director of Operations is to protect staff and other onsite personnel during such an event. Do not attempt to confront the perpetrator in the absence of law enforcement presence.		
□	**Line No.**	**Task**
	1	Call 911 to report the emergency.
	2	Comply with facility announcements and law enforcement instructions.
	3	Notify the Incident Commander of the emergency event, response actions, and status.
	4	Provide technical support and resources to local emergency responders, as requested.
	5	During situations involving violence, such as gunfire and hand grenade blasts:
	6	Direct employees in the immediate area to hide under furniture and hold badges near their faces when approached by emergency responders.
	7	Direct employees outside the immediate area to stay indoors, lock doors, keep away from windows, and follow law enforcement instructions.
	8	Direct employees to report any suspicious activity or person to the Incident Commander.
	9	In the event of a hostage situation, do not attempt to negotiate or reason with the perpetrator.
	10	Follow other applicable emergency response action plans.
	11	Restore the building to normal operations when authorized by the Incident Commander.
	12	Maintain documentation and forward to the Incident Commander at the conclusion of the emergency event.

Check the box when an item was completed or, if an item was not applicable, place “N/A” in the box. Comments section and signature block located on the next page.

Action Plan Log

Date/Time: _____	Signature: _____
Comments	

Table 4 - Action Tracking Report Information Description

Ref. No.:	A unique number assigned to an action or group of actions presented in a single document or from a single source, such as an After-Action Report.
Source:	The document or source containing the text of the recommendations or where the recommendations originated.
Responsible Individual:	The person responsible to coordinate the activities associated with the recommendations. The activities involve deciding on the specific action to be taken based on a detailed review of the issues, and ensuring that the action is completed.
Evaluation Due Date:	The date by which the Responsible Individual is scheduled to complete the initial evaluation and determine the specific action to be taken.
Action Proposed:	The specific action to be taken to address the recommendation. The specific action should be to implement the recommendation as stated, to implement something similar to the recommendation that achieves the same result, or to decide not to implement the recommendation. If the action proposed is to implement something significantly different than the stated recommendation or to not implement the recommendation at all, then a clear and complete justification should be stated or referenced.
Action Due Date:	The date by which the Action Proposed is scheduled to be completed.
Current Status:	Self-explanatory. This column should contain the date of closure after closure occurs.
Closure Cert. By:	The individual certifying completion of the action.

Action Tracking Report

Action Tracking Report (See Table 4)							
Reference #	Source	Responsible Individual	Evaluation Due Date	Action Proposed	Action Due Date	Current Status	Closure Cert. By

Additional Emergency Resources

Essential Services	
Facility	**Location**
Hospital	Kaiser Permanente Medical Center 1150 Veterans Blvd Redwood City, CA 94063
Gas Station	Chevron 2101 University Ave East Palo Alto, CA 94303
Pharmacy	Kaiser Permanente Medical Center 1150 Veterans Blvd Redwood City, CA 94063
ATM	San Mateo Credit Union 1735 E Bayshore Rd East Palo Alto, CA 94303
Grocery Store	Cardenas Market 1731 E Bayshore Rd East Palo Alto, CA 94303
EPA Police	Non-Emergency: 650-321-1112 141 Demeter St East Palo Alto, CA 94303
Menlo Park Fire	911 2290 University Ave. East Palo Alto, CA 94303

LOCAL CONTRACTORS AND SUPPLIERS

Bay Alarm 510 Myrtle Ave South San Francisco, CA 94080	(800) 610-1000
Bay City Equipment Industries INC PO Box 32993 Phoenix, AZ 85064	Ed Doty - (866) 938-8200 edoty@bcew.com
Blacktop Paving, Inc. (Veolia Vendor) 3118 Rolison Road Redwood City, CA 94063	650-364-1670
Casey Construction 619 Sylvan Way Emerald Hills, CA 94062	Esperanza Buenrostro - (650) 369-1876 apcaseyconstruction@outlook.com
Core & Main (Veolia Vendor) 939 Broadway Street Redwood City, CA 94063	(650) 366-3833
C2R Engineering (Veolia Vendor) PO BOX 1017 Mountain View, Ca.94042	(415) 559-2841
DC Tapping 6525 Crown Blvd #41001 San Jose, CA 94160	Ron Cocanour - (408) 292-3336 cell - (408) 355-5760 dctapping@aol.com
Donovan's Pest Control, Inc. 639 Bair Island Rd Redwood City, CA 94063	Chance Howell - (650) 365-1900 customerservice@controlpests.com
Ferguson Enterprises LLC 12500 Jefferson Ave Newport News, VA 23602	(800) 721-2590
Freyer & Laureta Inc. (City EPA) 777 Mariners Island Blvd 7th San Mateo, CA 94404	(650) 344-9901 (no vendor Contact, city contractor)
Lockworks Unlimited Inc 2671 El Camino Real Redwood City, CA 94061	Jason Demma - (650) 299-9126 serive@lockworksunlimited.com

National Pro Cleaning Systems 699 Lewelling Blvd San Leandro, CA 94579	Charles Merritt - (510) 517-4520 cmerritt@nationalcleaningsystems.com
Telstar Instruments 1717 Solano Way Concord, CA 94520	Joanna Looney - (925) 671-2888 jlooney@telestarinc.com
Toubar (Veolia Vendor) 2535 Pulgas Avenue E. Palo Alto, CA 94303	(650) 322-1256 Jeff Mize - (650) 380-8242 jeffm@touchatt.com

Boil Water Notice

English;

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este aviso contiene información muy importante sobre su agua potable. Para una copia en español, favor de llamar al sistema de agua (650) 322-2083.

East Palo Alto Water by Veolia -- Date: _____

BOIL WATER NOTICE

Boil Your Water Before Drinking or Food Preparation to Avoid Illness

Due to the recent _____

_____,
which occurred on _____, the State Water Resources Control Board, Division of Drinking Water, the San Mateo County Health Department, and the East Palo Alto Water by Veolia Water System are advising residents of East Palo Alto to only use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution to avoid stomach or intestinal illness. The affected area includes: _____

_____

We will inform you when tests show that water is safe to drink, and you no longer need to boil your water. We anticipate resolving the problem within _____.

If you have questions about other uses of tap water, such as bathing and dish washing, please call your water system or read this guidance: https://www.cdc.gov/healthywater/emergency/dwa-comm-toolbox/before/tools/What-to-Do-During-a-Boil-Water-Advisory.docx

Optional: Potable water is available at the following location: A & L Pure Water; 1040 Grant Rd #187, Mountain View, CA 94040

Please bring a clean water container (5 gallons maximum capacity).

Do not drink the water without boiling it first

- Boil all water for one (1) minute (rolling boil).
- Let water cool before drinking.
- Use boiled or bottled water for drinking, brushing teeth, and food preparation until further notice.
- Boiling water kills bacteria and other organisms in the water.

If you are unable to boil your water:

Household unscented liquid bleach

- For clear water, use 8 drops (1/8 tsp.) of bleach for 1 gallon of water. For cloudy water, filter through a clean cloth and use 16 drops (1/4 tsp.) of bleach for 1 gallon of water.
- Mix well. Allow to stand for 30 minutes before using.
- Water may taste or smell like chlorine. This means disinfection has occurred.

Water disinfection tablets

- Please follow the manufacturer's instructions.

For More Information

If you are concerned about your health or the health of a family member, contact your health care provider or CDPH (916) 328-3605.

Water Utility contact: Richard Perez, Project Manager, 650-483-2369, 1475 E Bayshore Rd, East Palo Alto 94303
State Water Resources Control Board District Office: (510) 622-2300
Local Environmental Health Jurisdiction: San Mateo County (650) 372-6200

Please share or post this information with others who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Spanish;

INFORMACION IMPORTANTE SOBRE SU AGUA POTABLE

Este aviso contiene información muy importante sobre su agua potable, por favor léalo bien.

East Palo Alto Water by Veolia -- Fecha: _____

AVISO DE HERVIR EL AGUA

Para Evitar Enfermarse, Hierva Su Agua Antes de Beberla o Preparar Comida

Debido al reciente _____, el cual ocurrió en _____, la Junta Estatal de Control de Recursos de Agua (División de Agua Potable), el San Mateo County Health Department, y el Sistema de Agua East Palo Alto Water by Veolia, están advirtiéndoles a los residentes de East Palo Alto, CA que como precaución de seguridad, solo usen agua de la llave hervida o agua embotellada para beber y para cocinar. Esto es para evitar enfermedad intestinal o del estómago. El área afecta- da incluye: _____

_____

Le informaremos cuando las pruebas muestren que el agua es segura para beber y usted ya no tenga que hervir su agua. Esperamos resolver el problema dentro de _____.

Si tiene preguntas sobre el agua de la llave para otros usos, como para bañarse, y lavar los trastes, favor de llamar a su sistema de agua o lea esta guía: https://www.cdc.gov/healthywater/emergency/dwa-comm-toolbox/before/tools/What-to-Do-During-a-Boil-Water-Advisory.docx

Opcional: En los siguientes lugares hay Agua Potable disponible: A & L Pure Water; 1040 Grant Rd #187, Mountain View, CA 94040 Favor de llevar un contenedor limpio para el agua (de 5 galones máximos de capacidad).

No beba el agua sin antes hervirla

- Hierva toda el agua por un (1) minuto (a punto de ebullición).
- Deje enfriar el agua antes de beberla.
- Hasta nuevo aviso, use agua hervida o embotellada para beber, lavarse los dientes, y para preparar comida.
- Hervir el agua mata las bacterias y otros organismos en el agua.

Si no puede hervir su agua

Puede usar blanqueador sin olor de uso doméstico (household bleach)

- Para agua clara, agregue 8 gotas (1/8 de cucharadita) de blanqueador para 1 galón de agua. Para agua turbia, use una prenda de ropa limpia para filtrarla, y agregue 16 gotas (1/4 de cucharadita) de blanqueador para 1 galón de agua turbia.
- Mezcle bien. Deje reposar el agua por 30 minutos antes de usarla.
- Puede ser que el agua sepa o huela a blanqueador. Esto significa que el agua ha sido desinfectada.

Tabletas desinfectantes de agua

- Siga las instrucciones del fabricante.

Para más información

Si está preocupado por su salud o la salud de un miembro de la familia, contacte a su proveedor de salud o a CDPH (916) 328-3605.

Representante del Proveedor de Servicio de Agua: Richard Perez, Project Manager, 650-483-2369, 1475 E Bayshore Rd, East Palo Alto 94303
Oficina de Distrito de la Junta Estatal de Agua: (510) 622-2300
Jurisdicción de Salud Ambiental Local: San Mateo County (650) 372-6200

Por favor publique o comparta esta información con otras personas que beben esta agua, especialmente aquellos que no hayan recibido este aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona o por correo.

Do Not Drink Notice
English;

Date:

UNSAFE WATER ALERT

East Palo Alto water is possibly contaminated with _____

DO NOT DRINK YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the East Palo Alto Water by Veolia due to a recent _____ at _____ _____.

The State Water Resources Control Board, San Mateo County Health Department, and East Palo Alto Water by Veolia System are advising residents of East Palo Alto to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER. Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice**.

- DO NOT TRY AND TREAT THE WATER YOURSELF. Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

  - Optional: Potable water is available at the following locations:
    A & L Pure Water; 1040 Grant Rd #187, Mountain View, CA 94040

  Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within _____.

For More Information;

- If you are concerned about your health or the health of a family member, contact your health care provider or CDPH (916) 328-3605.
- Water Utility contact: Richard Perez, Project Manager, 650-483-2369, 1475 E Bayshore Rd, East Palo Alto 94303
- State Water Resources Control Board District Office: (510) 622-2300
- Local Environmental Health Jurisdiction: San Mateo County (650) 372-6200

This notice is being sent to you by East Palo Alto Water by Veolia. California Public Water System ID # _____. Date Distributed: _____.

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

Spanish;

Fecha:

ALERTA DE AGUA NO SEGURA

El agua de East Palo Alto Water posiblemente está contaminada con _____

NO BEBA SU AGUA

Si descarta ésta advertencia puede enfermarse

Una sustancia desconocida fue agregada al agua potable suministrada por [Water System Name], esto fue debido a una reciente recent _____ en _____ _____.

. La Junta Estatal de Control de Recursos de Agua, el San Mateo County Health Department, y el Sistema de Agua East Palo Alto Water by Veolia, están advirtiéndoles a los residentes de East Palo Alto que NO USEN EL AGUA DE LA LLAVE PARA BEBER Y COCINAR HASTA NUEVO AVISO.

¿Qué debo hacer?

- **NO BEBA AGUA DE LA LLAVE---SOLO USE AGUA EMBOTELLADA.** Se debería usar agua embotellada para todas las bebidas (incluyendo formula de bebés y jugo), para lavarse los dientes, lavar trastes, hacer hielo y preparar comida **hasta nuevo aviso**.

- **NO INTENTE TRATAR EL AGUA USTED MISMO.** Hervir, congelar, filtrar, agregar cloro (chlorine) u otros desinfectantes, o dejar que el agua repose, no hará que el agua sea segura.

- Optional: Hay agua potable disponible en los siguientes lugares:
  A & L Pure Water; 1040 Grant Rd #187, Mountain View, CA 94040
  Por favor traiga un contenedor limpio para el agua (de 5 galones máximos de capacidad).

Le informaremos cuando las pruebas muestren que el agua es segura otra vez. Esperamos resolver el problema dentro de _____.

Para más información
Si está preocupado por su salud o la salud de un miembro de la familia, contacte a su proveedor de salud o a CDPH (916) 328-3605.

Representante del Proveedor de Servicio de Agua: Richard Perez,
Project Manager, 650-483-2369, 1475 E Bayshore Rd, East Palo Alto 94303
Oficina de Distrito de la Junta Estatal de Agua: (510) 622-2300
Jurisdicción de Salud Ambiental Local: San Mateo County (650) 372-6200

Este aviso es enviado a usted por East Palo Alto Water by Veolia. Núm. de Identificación de California del Sistema de Agua Público _____. Fecha de distribución: _____.

Por favor comparta esta información con todas las demás personas que reciben esta agua, especialmente aquellos que no hayan recibido éste aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona.

Document Version History

Version	Description	Date	By
1	Document converted from AW to Veolia and revised.	6/1/2020	Richard J Perez
2	Veolia Revised	12/1/2021	Richard J Perez
3	Veolia Revised	10/10/2022	Richard J Perez
4			
5			
6			