OLIVENHAIN
Municipal Water District

Cross-Connection Control Policy

Adopted: 5/21/2025

Effective: 5/21/2025

Table of Contents

1. Chapter 1. Policy Overview

1.1. Purpose

The purpose of this policy is to:

- Protect the public potable water system from actual or potential cross-connections with water users' private plumbing systems.
- Eliminate existing connections between the potable water system and auxiliary water supplies not approved as safe and potable for human consumption.
- Provide a continuing cross-connection control program that systematically and effectively prevents contamination or pollution of the public potable water system within the District's boundaries.

1.2. Authority

This policy is established pursuant to the District's authority under the Municipal Water District Law of 1911 and the State Water Resources Control Board's Cross-Connection Control Policy Handbook (CCCPH), effective July 1, 2024.

1.3. Prohibition

The District prohibits unprotected cross-connections or potential cross-connections between plumbing served by the District and any other water source.

1.4. Responsibility

The Board oversees the protection of the District's system from pollution or contamination due to backflow through metered service connections.

1.5. Administration

The District will designate at least one Cross-Connection Control Program Coordinator, who is certified as a cross-connection control specialist per Article 4, Chapter 3 of the CCCPH. The Coordinator, a certified specialist, oversees the program ensuring CCCPH compliance.

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

2.1. What is a Cross-Connection?

A cross-connection is a risky link between clean drinking water and a source of contamination, like dirty water, gases, or chemicals. This can happen through pipes, hoses, or devices—like temporary connections or faulty valves—that accidentally let harmful stuff flow back into the drinking water system. Backflow is when this reverse flow occurs, and it can happen in two ways: backsiphonage, when a drop in water pressure pulls contaminants in (like during a pipe break or heavy firefighting), or backpressure, when a stronger force from a contaminated source (like a pump or elevated piping) pushes them in. Either way, cross-connections can let unsafe substances from homes, businesses, or factories mix into our drinking water. Special devices, called backflow preventers, are used to stop this from happening by keeping the water flowing in the right direction.

2.2. Importance of a Cross-Connection Control Program

A Cross-Connection Control Program is essential to delivering safe, reliable, and high-quality drinking water while ensuring compliance with all regulatory standards. It prevents cross-connections from allowing contaminants that pose health risks or pollutants that

degrade water quality to flow back into the public water system. The program achieves this by identifying actual or potential cross-connections, ensuring that backflow prevention devices are installed to stop reverse flow, and verifying their functionality through regular inspections. Additionally, it establishes plumbing regulations and provides education to prevent errors that could compromise water purity. Through diligent oversight of these hazards, the program maintains water quality, adheres to safety requirements, and safeguards public health.

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

This Policy provides the basis for the District's Cross-Connection Control Program and backflow prevention to protect the District's potable distribution system. Activities or uses outside of the scope of the authority of the District to regulate water use on the property are not regulated by this policy, including the California Plumbing Code requirements and definitions not related to this policy.

The District's recycled water distribution system is not regulated by this policy and is instead regulated by the District's Rules and Regulations Governing the Use of Recycled Water, although properties that use recycled water are regulated by this policy to ensure that the District's potable distribution system has adequate backflow protection from a recycled water system.

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

3.1. Definitions and General Requirements

3.1.1. Definitions

The following definitions apply to the terms used in the District's Cross-Connection Control Policy.

"**ABPA**". The term "ABPA" is defined as American Backflow Prevention Association.

"Air-gap separation" or "AG". The term "air-gap separation" or AG is defined as 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. Wherever used in this Policy, the term" air-gap separation" shall mean an installation inspected and approved according to the requirements of this Policy.

"**Approved Backflow Prevention Assembly**". The term "approved backflow prevention assembly" is defined as an assembly, that while in-line, can be maintained and its ability to prevent backflow which has passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the California Department of Public Health.

"**Approved Water Supply**". The term "approved water supply" is defined as any water supply whose potability is regulated by the State or local health agency.

"**Auxiliary Water Supply**". The term "auxiliary supply" is defined as any water supply on or available to the premises other than the approved water supply.

"**AWWA Standard**". The term "AWWA Standard" is defined as the official standard developed and approved by the American Water Works Association (AWWA).

"**Backflow**". The term "backflow" shall mean the undesirable reversal of flow of water, other liquids, mixtures, or substances caused by a backpressure or a backsiphonage

condition into the District's public potable water system from any source or sources other than its intended source.

"**Backpressure**". The term "backpressure" shall mean any elevation pressure in the downstream piping system (by pump, elevation of piping or steam and/ or air pressure) above the District's supply pressure at the point of water service connection. This would tend to cause an unapproved water source to enter into the District's potable water supply.

"**Backsiphonage**". The term "backsiphonage" is a backflow condition caused by a reduction in District system pressure which causes negative or sub-atmospheric pressure. This would tend to cause an unapproved water source to enter the District's water supply.

"**CCCPH**". The term "CCCPH" shall mean "Cross-Connection Control Policy Handbook" which serve as the Standards and Principles for California's Public Water Systems.

"**Certified Backflow Prevention Assembly Tester**". The term "Certified Backflow Prevention Assembly Tester" shall mean a person with valid certification from a certifying organization recognized by the State Water Board pursuant to Article 4 of the CCCPH.

"**Contamination**". The term "contamination" shall mean 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.

"**Cross-Connection**". The term "cross-connection" as used in this Policy shall mean 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. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other assemblies through which backflow could occur, shall be considered a cross-connection.

“**Cross-Connection Control Specialist**”. The term "Cross-Connection Control Specialist” shall mean a person is certified as a cross- connection control specialist from a certifying organization recognized by the State Water Board pursuant to Article 4 Chapter 3 of the CCCPH.

“**Days**”. The term “days” shall mean calendar days.

“**District**”. The term “District” shall mean the Olivenhain Municipal Water District and references in this document where action is to be taken by the District shall mean action taken by the General Manager of the District or his/her approved representatives.

“**Double Check Detector Assembly**”. The term “double check detector assembly” or “DCDA” shall mean 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.

“**Double Check Detector Assembly Type-II**”. The term “double check detector assembly type-II” or “DCDA-II” shall mean 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.

“**Double Check Valve Assembly**”. The term “double check valve assembly" or “DC” shall mean an assembly of two internally loaded, independently acting check valves, including, resilient seated shut-off valves on each end of the assembly and test cocks for testing the water tightness of each check valve.

“**Hazard Assessment**”. The term “hazard assessment” shall mean an evaluation of a user premises designed to evaluate the types and degrees of hazard.

“**Health Agency**”. The term "health agency” shall mean the California Department of Public Health or the local health agency with respect to a small water system.

“**Livestock**”. The Term “livestock” means cattle, calves, sheep, swine, horses, mules, goats, fowl, or other domestic animals corralled, penned, tethered, or otherwise enclosed or held.

“**Local Health Agency**”. The term “local health agency" shall mean the County of San Diego Department of Environmental Health and Quality.

“**Person**”. The term "person" shall mean an individual, corporation, company, association, partnership, municipality, public utility, or other public body or institution.

“**Premises**”. The term “premises” shall mean any and all areas on a water users property which are served, or have the potential to be served by the public water system.

“**Recycled Water**”. The term "recycled water” shall mean a wastewater which, as a result of treatment, is suitable for uses other than potable use.

“**Reduced Pressure Principle Assembly**”. The term "reduced pressure principle assembly" or “RP” shall mean an assembly incorporating two internally loaded, independently operating check valves and an automatically operating differential relief valve located between the two checks, including resilient seated shutoff valves on each end of the assembly, and equipped with necessary test cocks for testing the assembly.

“**Reduced Pressure Principle Detector Assembly**”. The term "reduced pressure principle detector assembly" or “RPDA” shall mean 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 showing a registration for all rates of flow.

“**Reduced Pressure Principle Detector Assembly Type-II**”. The term "reduced pressure principle detector assembly type II" or “RPDA-II” shall mean 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.

“**Service Connection**”. The term "service connection" refers to the point of connection of a user's piping to the water suppliers' facilities.

“**User Supervisor**”. The term "user supervisor" refers to the person responsible for the monitoring of the backflow prevention assemblies and for avoidance of cross-connections.

“**Water Supplier**”. The term "water supplier" shall mean the person who owns or operates the approved water supply system.

“**Water User**”. The term “water user” shall mean any person obtaining water from the District's water supply system.

3.1.2. Applicability

Water users with services connected to the District’s distribution systems must comply with the requirements of this Cross-Connection Control Policy.

3.1.3. Cross-Connection Control Program.

(a) The District will protect the potable water supply through the implementation and enforcement of the cross-connection control program. The District shall not be responsible for the abatement of cross-connections which may exist within a user’s premises. The cross-connection program includes the following elements:

(1) **Cross-Connection Control Ordinance** – The District's Cross-Connection Control Ordinance provides the legal authority to implement corrective actions when a water user fails to comply in a timely manner with the District's requirements regarding the installation, inspection, field testing, or maintenance of backflow prevention assemblies (BPAs) as required by this chapter.

(A) These corrective actions include but are not limited to the District's authority to deny or discontinue water service to a user by locking off or removing the water service connection(s) to the premises.

(2) **Cross-Connection Control Program Coordinator (Coordinator)**– The District will 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. The Cross-Connection Control Program Coordinator must be a certified Cross-Connection Control Specialist.

(3) **Hazard Assessments** – The District will 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 District will ensure that actual and potential cross-connections are eliminated when possible or controlled by the installation of approved RPs or AGs consistent with the requirements of Article 3 of this Chapter.

(5) **Certified Backflow Prevention Assembly Testers and Certified Cross-Connection Control Specialists** – The District will ensure all BPA testers and Cross-Connection Control Specialists used are certified per Article 4 of this Chapter.

(6) **Backflow Prevention Assembly Testing** – The Coordinator(s) will 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 section 3.3.3

(7) **Recordkeeping** – The Coordinator(s) will develop and implement a recordkeeping system in accordance with section 3.5.1

(8) **Backflow Incident Response, Reporting, and Notification** – The Coordinator(s) will 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 District will 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 District will implement this requirement through a variety of methods which include articles in newsletters and bill inserts, social media messaging, and a dedicated webpage. New customers will receive an email and/or letter with information on backflow and cross-connection.

(10) **Local Entity Coordination** – The District will 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 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.

(c) The District must have at least one Cross-Connection Control Specialist as a permanent or contracted employee of the District, and that specialist, or their designee, must be available as needed within one hour.

3.1.4. Plan for the District's Cross-Connection Control.

The District will submit a written Cross-Connection Control Plan for State Water Board review in accordance with CCCPH 3.14 and ensure its Cross-Connection Control Plan is, at all times, representative of the current operation of its Cross-Connection Control program. The Cross-Connection Control Plan will be available to the State Water Board for review upon request. If there is a substantive revision to the Cross-Connection Control Plan, the District will submit the revised Cross-Connection Control Plan to the State Water Board for review.

3.2. Article 2 - Hazard Assessments and Required Protection

3.2.1. Hazard Assessments

Hazard Assessments will be conducted in accordance with Section 3.2.1 of the CCCPH.

(a) The District will conduct an initial hazard assessment of the user premises within its service area. The District will utilize user surveys, and GIS mapping, along with plans, specifications, and on-premises inspections when deemed necessary.
(b) 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.

(c) Each hazard assessment must identify the degree of hazard to the District'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 of the CCCPH and Appendix C of this Policy.

(d) The hazard assessment must determine whether an existing BPA, if any, provides adequate protection based on the degree of hazard.

(e) Subsequent to the initial hazard assessment described in subsection (a), the District 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 District's system;

(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 District's Cross-Connection Control Plan.

3.2.1.1. Condition of Service

(a) As a condition of service for both new and existing service connections, the District may require submission of plans, specifications, and/or a completed cross-connection questionnaire for review.

(b) If the District determines that a backflow prevention assembly is required to safeguard the public water system, the assembly must be installed prior to the initiation of service.

(c) The District may provide and require a cross-connection questionnaire(s) be completed to determine if any new or additional hazards exist when a water user premises changes account holder. This excludes single-family residences.

(d) The District may require an on-premises hazard assessment to further evaluate potential cross connection hazards. The District will notify the affected water user for the need of hazard assessment. If, in the judgment of the District, an approved backflow prevention device is required at any metered water service connection for the safety of the District system, the District shall give notice in writing to the affected water user to install an approved backflow prevention device at each of the premises' metered water service connections. Within the time prescribed by the District, the water user shall install such approved device or devices at the water user's sole expense. Failure, refusal, or inability on the part of the water user to install said device or devices shall immediately constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

(e) The District may, at its sole discretion, require a reassessment for cross connection hazards of any premises to which it serves water. The District will notify in writing the affected water user of the need for assessment. Any water user who cannot or will not cooperate with the hazard assessment, including an on-premises hazard assessment of the on-site piping system if needed, may be required to install the backflow prevention assembly the District considers appropriate. Failure, refusal, or inability on the part of the water user to install said device or devices shall immediately constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

(f) All water user systems shall be open for hazard assessment at all reasonable times to authorized representatives of the District to enable the

District to ascertain the existence of cross-connection or other structural or sanitary hazards, including violations of this policy. When such a condition becomes known, the District shall deny or immediately discontinue service to the premises until the water user has corrected the condition(s) in conformance with State laws, and District ordinances relating to plumbing and water supplies, and with policies pursuant thereto.

(g) If the hazard assessment completed identifies corrective action, the District will notify the water user of the findings, listing the corrective actions to be taken. A period of thirty (30) days will be given to complete all corrective actions required, including installation of backflow prevention assemblies. Failure, refusal, or inability on the part of the water user to install said device or devices shall immediately constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed. A 48-hour disconnection notice will be given to the customer prior to discontinuing service. The District may provide additional notification and/or time to make the necessary repairs as it deems necessary. This will be addressed on a case-by-case basis.

3.2.2. Backflow Protection Required

(a) The potable distribution system will be protected from backflow from identified hazards through the proper installation, continued operation, and field testing of an approved BPA (see Sec. 3.3 for installation and approved BPA criteria). When a DC is required or referenced in this Policy, a DCDA or DCDA-II type of assembly may be substituted if appropriate. When an RP is required or referenced in this Policy, 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 otherwise specified in this Chapter, the District shall, at all times, protect the District's water supply from high hazard cross-connections (refer to Appendix C of this Policy and Appendix D of the CCCPH for examples) through premises containment utilizing air gaps (AGs) or reduced pressure principle assemblies (RPs). The following provisions apply:

(1) An alternate method of premises containment may be permitted in place of a required AG, provided the proposed alternative does not compromise the level of protection for public health. Such alternatives require prior review and approval by the State Water Board.

(2) Where premises containment is deemed infeasible, the District may accept internal protection in lieu of containment, subject to review and approval by the State Water Board.

(d) Unless otherwise permitted or restricted by statute or California Code of Regulations (CCR) Title 22, Division 4, Chapter 3, the District may authorize the use of a swivel-ell in lieu of an air gap (AG) for premises containment protection when temporarily substituting tertiary recycled water use areas with potable water from the District's water supply, provided all of the following conditions are satisfied:

(1) The swivel-ell is approved by the State Water Board.

(2) The use and operation of the swivel-ell follow the details in the District's Cross-Connection Control Plan.

(3) The design and construction of the swivel-ell comply with the criteria specified in Appendix C of the CCCPH.

(4) Inspections by the District will be conducted and documented at least every 12 months to verify ongoing compliance with the design and construction requirements outlined in Appendix C of the CCCPH.

(5) The reduced pressure principle assembly (RP) used in conjunction with the swivel-ell is field tested and confirmed to be functioning properly, adhering to the following:

(A) A visual inspection of the RP shall be completed immediately upon each switchover to potable water use.

(B) A field test of the RP shall be completed within 48 hours of each switchover to potable water use.

(C) Additional field testing shall occur at least every 12 weeks during periods when the recycled system is supplied with potable water.

(6) A Recycled Water Use Agreement, executed by authorized representatives of the District and the Water User, shall be in place and include the following provisions:

(A) The District and The State Water Board shall be notified within 24 hours of each switchover to or from potable water, provided an estimated timeframe for the next switchover, and furnished with the field testing results required under paragraph CCCPH (5)(B).

(B) A District representative, certified as a Cross-Connection Control Specialist, shall be present to supervise each switchover.

(C) Within seven days of each switchover, if requested by the State Water Board, the District shall submit a written report detailing compliance with this subsection, including potable and recycled water usage data.

(e) **Fire protection systems** - Except as noted below, the potable distribution system will be protected with no less than DC protection for user premises with a fire protection system by July 1, 2034, per CCCPH Section 3.3.1(g).

a. Prior to the installation of the BPA, the water user shall provide the District proof of approval of the BPA installation from the water users local fire agency.

(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.

- Existing fire protection systems with DCs, DCDAs, or DCDA-IIs installed before July 1, 2024, will be retrofitted to RPDA or RPDA-II by July 1, 2034, unless the District determines no hazard exists, per CCCPH Section 3.3.1(g)(2). Until retrofitted, these assemblies will be tested annually.

(2) Subject to State Water Board approval, existing fire protection systems that do not meet Section 3.2.2 (e)(3) or cannot install DC protection by July 1, 2034, the District 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 residential user premises if the following criteria are satisfied:

(A) the user premises has only one service connection to the District water system;

(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. This is also known as a passive purge system.

(f) The State Water Board and/or the District 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 premises, and must inform the District of changes in piping, and maintain current contact information on file with the District; and

(2) The District 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.

(3) Recycled water user must designate a "Recycled Water Site Supervisor" who is responsible for the recycled water system at each use area under the user's control. Designated recycled water site supervisors shall obtain instruction in the use of recycled water from an institution approved by the State DDW and County DEH.

(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.

(1) The District will identify internal cross-connections and incorporate the associated internal backflow prevention devices into the Cross-Connection Control Program, as outlined in this chapter.

3.3. Article 3 - Backflow Prevention Assemblies

3.3.1. Standards for Types of Backflow Protection

(a) AG must meet the requirements in Table 1, Minimum Air Gaps for Generally used Plumbing Fixtures, page 4 of the American Society of Mechanical Engineers (ASME) A112.1.2-2012(R2017) (See Appendix B of the CCCPH).

(b) Only backflow prevention assemblies which have been approved per Article 3 Section 3.3.1 of the CCCPH shall be acceptable for installation by a water user connected to the District's potable water system.

Upon request, the District will provide a list of approved backflow prevention assemblies.

(c) BPAs must not be modified following approval granted under section 3.3.1 (b). BPA testers are required to notify the District if a water user or District owned BPA has been modified from the CCCPH section 3.3.1 (b) approval.

3.3.2. Installation Criteria for Backflow Protection

(a) **Air-Gaps (AG)** 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 District;

(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 District;

(3) the District will ensure that the AG is installed as specified in CCCPH section 3.3.1 (a); 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) **Reduced Pressure Principle Backflow Prevention Assembly (RP)** 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 District.

(c) **Double Check Valve Assembly (DC)** may only be installed where a health hazard does not exist. DCs installed or replaced after the effective date of the CCCPH, July 1, 2024, 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 District. Below-ground installation of a backflow prevention assembly may only be permitted if approved by the District, provided the District determines that no feasible above-ground alternatives exist.

(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 and may only be permitted if approved by the District, provided the District determines that installation of an RP is not feasible.

(f) A RP or DC installed after the adoption of the CCCPH, July 1, 2024, 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 District 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 District. If internal protection is provided in lieu of premises containment, the District must have access to the user premises and must ensure that the on-site protection meets the requirements of the CCCPH Chapter 3 for installation, field testing, and inspections.

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

(i) BPAs shall be the property of the water user and the District shall have no responsibility or liability for the cost of operation, maintenance, repair, or replacement thereof. The water user shall maintain the physical condition of the BPAs and shall be solely responsible for any claims that may arise from injuries or damages caused by the assemblies.

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

(a) All BPAs installed for the District's Cross-Connection Control Program will be field tested following installation, repair, depressurization for winterizing, or permanent relocation. All required field testing must be performed by certified backflow prevention assembly testers using the current edition of USC Manual of Cross-Connection Control approved test procedures.

(b) BPAs must be field tested at least annually. More frequent field testing for premises with high hazard cross-connection or BPA at increased risk of testing failure may be required at the District's, the State Water Board's, or the local health agency's discretion. These inspections and tests shall

be at the expense of the water user and shall be performed by an approved Certified Backflow Prevention Assembly Tester.

(1) Water User Notification-Annual Backflow Testing and Maintenance

(A) The District will notify each affected water user when it is time for the backflow prevention assembly installed on their service connection to be tested.

The Notice shall contain the following information:

1. The Backflow Assembly location and account number (or other appropriate identification numbers).
2. A statement that the water user is responsible for providing for the routine maintenance, repair, and testing.
3. That the testing requirement is made under the authority of the State Water Resources Control Board, Cross-Connection Control Policy Handbook (CCCPH), and Olivenhain's Cross-Connection Ordinance.
4. A deadline of 30 days by which the assembly must be tested, repaired (if necessary), and a passing test result submitted.
5. That if the water user fails to test or repair an assembly within the time period required by the notice, the District may terminate any or all water service to the affected water user.
6. Instructions for the water user to submit the test results online using backflow testing and maintenance software provided by the District.

(B) A second notice shall be sent to each water user who does not have their backflow prevention assembly tested by the deadline as prescribed in the first notice. The second notice will give the water user a fifteen (15) day period to have their backflow prevention

assembly tested, repaired (if necessary), and a passing test result submitted. This notice shall include all information included on the first notice.

(C) A third notice shall be sent to each water user who does not have their backflow prevention assembly tested by deadline as prescribed in the second notice. The third notice will give the water user a five (5) day period to have their backflow prevention assembly tested, repaired (if necessary), and a passing test result submitted. This notice shall include all information included on the second notice.

(D) A fourth notice shall be delivered to each water user service address who does not have their backflow prevention assembly tested by the deadline as prescribed in the third notice. The fourth notice will give the water user a 48-hour period to have their backflow prevention assembly tested. If no action is taken within the prescribed time period, the District will terminate water service to the affected water user until the subject backflow assembly is tested, repaired (if necessary), and a passing test result submitted.

(2) The District will supply affected water users with a list of persons acceptable to the District to test backflow prevention assemblies. The District will notify affected water users by mail or email when annual testing of an assembly is needed and also supply users with the necessary information needed to submit test results online which must be completed each time an assembly is tested, repaired, or replaced.

(3) Early testing cannot be performed more than 45 days prior to the testing due date provided on the 1st annual notice. If the test report is

submitted in a calendar year that is before the calendar year on the testing notice, the test report will not be accepted.

(4) All passing test results must be submitted within ten (10) days of the date that testing was performed. All failing test results must be submitted within five (5) days of the date that testing was performed.

(c) Air-gap separations must be visually inspected at least annually to determine compliance with Chapter 3 of the CCCPH by persons certified as backflow prevention assembly testers or certified as a Cross-Connection Control Specialist pursuant to Chapter 3 of the CCCPH.

(d) Passing field tests shall be required before the District will provide continuous service to a water user with a newly installed backflow prevention assembly. Devices shall be repaired, overhauled, or replaced at the sole expense of the water user whenever said devices are found to be defective or cannot produce passing field tests.

(e) BPAs that fail a field test must be repaired or replaced. A period of thirty (30) days will be given to repaired or replace, and a passing test result submitted. Failure, refusal, or inability on the part of the water user to repair or replace said device or devices shall immediately constitute grounds for discontinuing water service to the premises until such device or devices have been properly repaired or replace, and a passing test result submitted. A 48-hour disconnection notice will be given to the customer prior to discontinuing service. The District may provide additional notification and/or time to make the necessary repairs as it deems necessary. This will be addressed on a case-by-case basis.

(f) Backflow prevention assembly testers must notify the District 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. The District will immediately conduct an investigation and discontinue service to the user premises if a backflow incident is

confirmed, and water service will not be restored to that user premises until the District receives a confirmation of a passing BPA field test from a backflow prevention assembly tester and the assembly is protecting the Districts potable water system.

(g) Records of BPA tests, repairs, overhaul and replacements must be submitted to the District on the online backflow testing and standard maintenance portal assigned by the District. All BPA repairs, performed by the tester or the tester's company, must be recorded. Failure to list all repairs performed constitutes an inaccurate/ falsified record.

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

3.4.1. Backflow Prevention Assembly Tester Certification

(a) BPA required by the District must be field tested by a person with valid certification from a certifying organization recognized by the State Water Board pursuant to Chapter 3, Article 4 of the CCCPH.

(1) Tester Certification Submission

Backflow prevention assembly testers must submit their Backflow Tester's Certification to the District via the District's online backflow testing and standard maintenance portal prior to submitting test reports.

a. The District shall verify that the certifying organization is recognized by the State Water Board.

(2) Field Testing Equipment Standards

Backflow prevention assemblies required by the District shall be field tested using a field test kit or gauge that is regularly maintained and certified for accuracy to National Institute of Standards and

Technology (NIST) standards. Test kits must be calibrated and certified annually, or whenever their accuracy is suspected to be compromised.

a. Backflow testers shall submit annual calibration and certification renewals for their test kits to the District for verification and approval via the District's online backflow portal. Test reports from assemblies tested with an expired gauge calibration or during a period of expired tester certification shall not be accepted by the District.

(b) [Not applicable to this document]

(c) [Not applicable to this document]

(d) [Not applicable to this document]

(e) BPA required by the District must be field tested by a person who has been approved by the District.

The District will only approve testers who have completed the requirements in this Article, and the following:

(1) the tester, the tester's company, or the testers firm has registered with the District's online backflow testing and standard maintenance portal, and

(2) the tester has completed and submitted a Backflow Testers Agreement (Appendix E of this Policy) to the District via the District's online backflow testing and standard maintenance portal.

(f) This Article does not preclude the District from disallowing the use of an individual tester certified pursuant to this Article if the District 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.).

(1) The District must report any evidence of a tester falsifying reports to that tester's certifying organization pursuant to the CCCPH section 3.4.1.(f).

(2) The tester and the tester's company or firm may be removed from the District's Certified Backflow Prevention Assembly Testers list for a minimum of three (3) years.

3.4.2. Cross-Connection Control Specialist Certification

(a) Cross-Connection Control Specialists used pursuant to the CCCPH and the District's Cross-Connection Program must have valid certification from a certifying organization recognized by the State Water Board pursuant to Chapter 3, Article 4 of the CCCPH.

(b) [Not applicable to this document]

(c) [Not applicable to this document]

(d) Not applicable to this document]

(e) [Not applicable to this document]

(f) This Article does not preclude the District from disallowing the use of an individual Cross-Connection Control Specialist certified pursuant to this Article if the District has reason to believe a certified Cross-Connection Control 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.).

(1) The District must report any evidence of a specialist falsifying reports to that specialist's certifying organization pursuant to the CCCPH section 3.4.1.(f).

3.5. Article 5 - Recordkeeping, Backflow Incident Response, and Notification

3.5.1. Recordkeeping

(a) All records listed below will be retained for at least three calendar years, unless otherwise specified:

(1) The two most recent hazard assessments for each user premises, conducted pursuant to this policy and 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 premises, the current contact information for the user supervisor and water user, and any applicable training and qualifications as described by this Chapter and 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.

a. The District shall verify that the certifying organization is recognized by the State Water Board.

3.5.2. Backflow Incident Response Procedure

The District shall maintain procedures within its Cross-Connection Control Plan, as mandated by CCCPH Section 3.1.4, to investigate and respond to suspected backflow incidents, ensuring the protection of the District's water supply. These procedures shall encompass, at a minimum, the requirements outlined in CCCPH Sections 3.5.2 and 3.5.3, including but not limited to the investigation and response protocols specified therein, and shall incorporate the information detailed in Appendix F of the CCCPH. The District shall regularly review and update these procedures, as necessitated by regulatory changes, incident findings, or operational improvements, to ensure ongoing effectiveness and compliance.

3.5.3. Backflow Incident Notification

(a) The District will 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, the District must issue a Tier 1 public notification pursuant to CCR, Title 22, Section 64463.1

(b) If required by the State Water Board, the District will submit, by a date specified by the State Water Board, a written incident report describing the details and affected area of the backflow incident, the actions taken by the District 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 contained in the CCCHP (Appendix F).

Appendices

Appendix A: Backflow Incident Response Plan

Appendix B: Backflow Incident Reporting Form

Appendix C: High Hazard Examples

Appendix D: Cross-Connection Control Priority List

Appendix E: Backflow Tester Agreement

Purpose

The purpose of this Backflow Incident Response Procedure is to establish procedures for identifying, responding to, and mitigating backflow incidents that could compromise the safety and quality of the drinking water supply in the Olivenhain Municipal Water District (OMWD) service area. This Procedure ensures compliance with the California Cross-Connection Control Policy Handbook (CCCPH) and protects public health by preventing contamination of the potable water distribution system.

Scope

This Procedure applies to all operations, personnel, and facilities within OMWD, including approximately 87,000 residents served across Encinitas, Carlsbad, Solana Beach, and unincorporated areas of San Diego County. It covers all service connections, backflow prevention assemblies, and potential cross-connections within the district's potable water system.

Definitions

- **Backflow**: The undesirable reversal of flow of water or other substances into the potable water distribution system.
- **Backsiphonage**: Backflow caused by a negative pressure (vacuum) in the distribution system.
- **Backpressure**: Backflow caused by a downstream pressure exceeding the supply pressure.
- **Cross-Connection**: Any actual or potential connection between the potable water system and a source of contamination or pollution.
- **Backflow Prevention Assembly**: A device installed to prevent backflow, approved per CCCPH standards (e.g., reduced pressure zone [RPZ] assembly, double check valve assembly).

Roles and Responsibilities

- **General Manager**: Oversees the implementation of this Procedure, ensures staff training, and authorizes coordination with regulatory agencies.
- **Operations Staff**: Conduct inspections, respond to incidents, and perform initial containment actions.
- **Backflow and Cross-Connection Coordinator**: Maintains records of backflow prevention assemblies, investigates incidents, and ensures compliance with CCCPH requirements.
- **Public Information Officer**: Communicates with San Diego County Environmental Health and Quality and manages public notifications during incidents.

Identification of a Backflow Incident

A backflow incident may be identified through:

- Customer complaints (e.g., unusual taste, odor, or color of water) reported to OMWD.
- Pressure anomalies detected in the distribution system via SCADA monitoring.
- Reports of cross-connection violations or failed backflow prevention assembly tests submitted to OMWD's Backflow Program.
- Visual evidence of contamination (e.g., discolored water, sediment) observed by staff or customers.
- Alerts from San Diego County Environmental Health or SWRCB.

Immediate Response Procedures

Upon suspicion or confirmation of a backflow incident:

1. **Isolate the Affected Area**:
    - Shut off the water supply to the affected service connection or segment using the nearest isolation valve.
    - Notify downstream customers of the service interruption.
2. **Assess the Situation**:
    - Operations staff will inspect the site to identify the source of backflow (e.g., failed assembly, unauthorized or unprotected cross-connection).
    - Collect water samples from the affected area for testing and record details (e.g., sample location, time) on the Backflow Incident Report Form.
3. **Contain the Contamination**:
    - Install temporary backflow prevention measures (e.g., air gap, additional assembly) if feasible.
    - Prevent further spread by maintaining isolation until the incident is resolved.
4. **Notify Authorities**:
    - Contact San Diego County Environmental Health and Quality at (858) 505-6700 within 24 hours of the incident.
    - Notify the SWRCB Division of Drinking Water, District 14 (Southern California) at (619) 525-4159, as required by CCCPH.
    - If hazardous materials are involved, contact San Diego County Hazardous Materials Division at (858) 505-6657.

Investigation and Mitigation

- **Investigate the Cause**:
    - Review OMWD's backflow prevention assembly database for testing and maintenance history.
    - Conduct a Hazard Assessment per OMWD Cross-Connection Control Policy. inspect the site for cross-connections or plumbing violations per OMWD's Cross-Connection Control Policy.
    - Interview affected customers or property owners, if applicable.
- **Mitigate the Incident**:
    - Notify the affected water user to repair or replace any failed backflow prevention assemblies at their metered service connection(s) per CCCPH-approved standards and OMWD's Cross-Connection Control Policy. OMWD will verify completion of repairs or replacements.
    - Flush and disinfect the affected portion of the distribution system per AWWA standards and Title 22 of the California Code of Regulations.
    - Test water quality (e.g., coliform, chlorine residual) to confirm safety before restoring service; record results on the Backflow Incident Report Form.

Public Notification

- If contamination is confirmed or suspected to have impacted public health, or if required by the State Water Board,
    - issue a Tier 1 public notification (e.g., 'Do Not Drink' or 'Boil Water' advisory) pursuant to CCR, Title 22, Section 64463.1, in coordination with San Diego County Environmental Health and SWRCB.
    - Notify affected customers via OMWD's website (www.olivenhain.com), email, social media, and/or reverse 911 system.
    - Provide updates until the incident is resolved and water is deemed safe by regulatory authorities.
    - log notification details on the Backflow Incident Report Form.

Documentation and Reporting

- Maintain detailed records of the incident, including:
    - Date, time, and location of the incident.
    - Actions taken (e.g., isolation, repairs, notifications).
    - Water quality test results.
    - Communications with regulatory agencies and customers.
- If required by the State Water Board, submit a written report, based on the completed Backflow Incident Report Form, to San Diego County Environmental Health and SWRCB District 14 by a date specified by the State Water Board, as required by CCCPH. The report shall detail the cause, affected area, response actions taken by OMWD, and follow-up measures to prevent future backflow incidents. Maintain detailed records of the incident using the Backflow Incident Report Form, including:
    - Date, time, and location of the incident.
    - Actions taken (e.g., isolation, repairs, notifications).
    - Water quality test results.
    - Communications with regulatory agencies and customers."

Post-Incident Review

- Conduct a debriefing with OMWD staff to evaluate response effectiveness and review the Backflow Incident Report Form.
- Update this Procedure or the Cross-Connection Control Policy based on lessons learned, if necessary.
- Ensure the affected water user has all impacted backflow prevention assemblies at their metered service connection(s) retested and certified by an certified tester per OMWD's Cross-Connection Control Policy and Backflow Program; verify compliance.

Training and Preparedness

- Train all OMWD staff annually on backflow prevention, cross-connection control, and this response Procedure, including proper use of the Backflow Incident Report Form and enforcement of the Cross-Connection Control Policy.
- .
- Conduct periodic drills to simulate backflow incidents and test response readiness.
- Maintain an updated inventory of all backflow prevention assemblies (currently over 4,000 district-wide), including location, type, and testing history, per CCCPH requirements.

Contact Information

- **OMWD Emergency Line**: (760) 753-6466 (24/7)
- **San Diego County Environmental Health and Quality**: (858) 505-6700
- **SWRCB Division of Drinking Water, District 14**: (619) 525-4159
- **San Diego County Hazardous Materials Division**: (858) 505-6657
- **OMWD Backflow Program**: (760) 753-6466 or backflow@olivenhain.com

Appendix B

WATER SYSTEM INFORMATION

Water System Number: **CA3710029**

Water System Name: **OLIVENHAIN MWD**

Water System Classification: **Community**

Related Regulating Agency: **DISTRICT 14 - SAN DIEGO**

Form Instructions: Complete all applicable fields to document a backflow incident. Attach supporting documents (e.g., photos, test reports) as needed. Submit to the Backflow and Cross-Connection Coordinator for review. Use this form to prepare the written report for San Diego County Environmental Health and SWRCB, if required.

---

1. Incident Identification **Incident ID**: BF-_____

Date and Time of Incident Detection: _____

Reported By:

Name: _____

Contact Info: _____ (Phone/Email)

Role: [ ] OMWD Staff [ ] Customer [ ] Other (specify: _____)

---

2. Location and Affected Area

Premise Location Backflow Originated from: _____

Service Connection Address: _____

Account Number: _____ **Service Type**: _____

Account Name: _____

Contact Name: _____ Title: _____

Contact Info: Phone: _____ Email: _____

Affected Area Description: _____

_____

(e.g., “123 Main St. and downstream connections”)

Estimated Number of Affected Persons: _____

---

3. Incident Details

Type of Backflow Suspected: [ ] Backsiphonage [ ] Backpressure [ ] Other (specify: _____)

Source of Contamination (if known): _____
(e.g., “Irrigation system backflow, suspected fertilizer”)

Description of backflow substance: _____

MSDS or Chemical Description Form Attached? *[ ] Yes [ ] No*

Cause of Incident: _____
(e.g., “Failed RPZ assembly at meter #1234”)

Was the backflow fluid contained within the user side? [ ] YES [ ]NO

Backflow Prevention Assembly Details:

Type: _____ (e.g., RPZ, Double Check Valve)

Serial Number: _____

Location at Service Connection: _____ (e.g., “Near meter at property line”)

Last Test Date: _____ (MM/DD/YYYY)

Last Test Result: [ ] Pass [ ] Fail (attach report if available)

---

4. Consumer Complaints and Health Impacts

Number and Description of Consumer Complaints Received:

Number: _____ (e.g., “5 complaints”)

Description: _____
(e.g., “Customers reported foul odor and cloudy water”)

Did Any Consumers Report Illness?: [ ] Yes [ ] No

If Yes, Describe: _____
(e.g., “Two residents reported nausea after consuming water”)

---

5. System and Sampling Data

Area System Pressure: _____ (e.g., “60 psi”)

Is this within typical range?: [ ] Yes [ ] No

Typical Pressure: _____ (e.g., “55-65 psi”)
Was a Sample of Contaminated Water Collected and Stored Before Flushing?: [ ] Yes [ ] No

If Yes, Describe Storage Location: _____ (e.g., “Stored at OMWD lab, sample #BF123”)
Sampling Parameters (per DDW Recommendations):

Total Coliform: [ ] Tested (Result: _____) [ ] Not Tested

E. coli: [ ] Tested (Result: _____) [ ] Not Tested

Free Chlorine Residual: [ ] Tested (Result: _____ mg/L) [ ] Not Tested

Total Chlorine Residual: [ ] Tested (Result: _____ mg/L) [ ] Not Tested

pH: [ ] Tested (Result: _____) [ ] Not Tested

Odor: [ ] Tested (Result: _____) [ ] Not Tested

Turbidity: [ ] Tested (Result: _____ NTU) [ ] Not Tested

Temperature: [ ] Tested (Result: _____ °C) [ ] Not Tested

Color: [ ] Tested (Result: _____) [ ] Not Tested

Additional Sampling (at staff discretion): _____
(e.g., “Tested for nitrates”)
Was Chlorine Residual Increased After Discovery?: [ ] Yes [ ] No

If Yes, Describe: _____ (e.g., “Increased to 2.0 mg/L on MM/DD/YYYY”)

---

6. Response Actions

Isolation Actions:

Description: _____ (e.g., “Shut off valve at meter #1234 at 10:00 AM”)

Date/Time: _____ (MM/DD/YYYY, HH:MM)
Containment Measures:

Description: _____ (e.g., “Installed air gap at service connection”)

Date/Time: _____ (MM/DD/YYYY, HH:MM)
Water User Actions:

Description: _____ (e.g., “Water user replaced RPZ on MM/DD/YYYY”)

Date Completed: _____ (MM/DD/YYYY)

OMWD Verification: [ ] Yes [ ] No (if Yes, date: _____)
System Mitigation:

Description: _____ (e.g., “Flushed 500 ft of mainline, disinfected per AWWA standards”)

Date/Time: _____ (MM/DD/YYYY, HH:MM)

7. Notifications

Regulatory Notifications:

Was the Division or Local County Health Notified Within 24 Hours?: [ ] Yes [ ] No

San Diego County Environmental Health and Quality:

Date/Time: _____ (MM/DD/YYYY, HH:MM)

Method: [ ] Phone [ ] Email [ ] Other (specify: _____)

Contact: (858) 505-6700

SWRCB Division of Drinking Water, District 14:

Date/Time: _____ (MM/DD/YYYY, HH:MM)

Method: [ ] Phone [ ] Email [ ] Other (specify: _____)

Contact: (619) 525-4159

San Diego County Hazardous Materials Division (if applicable):

Date/Time: _____ (MM/DD/YYYY, HH:MM)

Method: [ ] Phone [ ] Email [ ] Other (specify: _____)

Contact: (858) 505-6657

Other Agencies or Organizations Contacted: _____
(e.g., “Local Fire Department”)
Notification to Affected Persons (if applicable):

Description: _____
(e.g., “Issued Tier 1 ‘Do Not Drink’ advisory via reverse 911 on MM/DD/YYYY”)

Methods Used: [ ] Website [ ] Email [ ] Social Media [ ] Reverse 911 [ ] Other (specify: _____)

Notification Text: _____ (attach or describe)

---

8. Follow-Up Actions

Corrective Actions by Water User:

Description: _____ (e.g., “Installed new RPZ, certified by ANSI-accredited tester”)

Date Completed: _____ (MM/DD/YYYY)

Certification Attached: [ ] Yes [ ] No
OMWD Verification:

Description: _____ (e.g., “Inspected new RPZ on MM/DD/YYYY”)

Date: _____ (MM/DD/YYYY)
Preventive Measures:

Description: _____ (e.g., “Educated customer on cross-connection risks”)
Policy Updates:

Recommended Changes: _____ (e.g., “Update Cross-Connection Control Policy to clarify testing frequency”)

---

9. Personnel and Documentation

OMWD Staff Involved:

Name: _____ Role: _____

Name: _____ Role: _____
Backflow and Cross-Connection Coordinator Review:

Name: _____

Signature: _____

Date: _____ (MM/DD/YYYY)
Attachments:

Laboratory Test Results

Sketch of the Cross-Connection and Modifications

MSDS or Chemical Information Forms (if chemical hazard known)

Applicable Backflow Assembly Test Reports (including most recent test before incident)

Photos

Customer Correspondence

Other (specify: _____)

---

10. Report Submission

Submission Status:

Date Submitted: _____ (MM/DD/YYYY)

Method: [ ] Email [ ] Mail [ ] Other (specify: _____)
SWRCB Deadline (if specified): _____ (MM/DD/YYYY)
Comments/Regulatory Feedback: _____

High Hazard Examples

The following examples of high-hazard conditions help the Olivenhain Municipal Water District (OMWD) and our customers protect our community's drinking water from contamination. These conditions, which include risks like agricultural chemicals or recycled water, require robust backflow prevention to ensure water safety. By identifying these hazards, we work together to keep our water clean and safe for everyone.

Sewage Handling Facilities: Highly hazardous due to pathogenic bacteria and viruses that could cause severe illness if backflow occurs.

Wastewater Lift Stations and Pumping Stations: High hazard from pressurized systems that could force contaminated wastewater into potable water.

Wastewater Treatment Processes, Handling, or Pumping Equipment Interconnected to PWS: High hazard due to direct connection allowing sewage or toxic chemicals to contaminate drinking water.

Petroleum Processing or Storage Plants: High hazard from toxic fuels and chemicals that could pose health risks if introduced into potable water.

Radioactive Material Storage, Processing Plants, or Nuclear Reactors: Extremely hazardous due to radioactive contamination risks, potentially causing long-term health effects.

Mortuaries: High hazard from embalming fluids and biological contaminants that could cause illness if backflow occurs.

Cemeteries: High hazard due to potential for decomposing organic matter or chemicals to contaminate water systems, risking public health.

Sites with an Auxiliary Water Supply Interconnected with PWS: High hazard because non-potable sources (e.g., wells) could introduce unknown contaminants directly into potable water.

Sites with an Auxiliary Water Supply Not Interconnected with PWS: High hazard due to risk of accidental cross-connections introducing non-potable water contaminants.

Premises with More Than One Connection to the PWS: High hazard as multiple entry points increase the likelihood of contaminant backflow from various sources.

Recycled Water (++)(+++): High hazard because non-potable recycled water could introduce bacteria or chemicals if not fully isolated from potable water.

Recycled Water Interconnected to Piping System with PWS: High hazard due to direct connection risking immediate contamination of drinking water with non-potable recycled water.

Graywater Systems Interconnected to PWS: High hazard from soaps, bacteria, or chemicals in household graywater that could contaminate potable water.

Medical Facilities: High hazard due to medical waste, disinfectants, or pathogens that could cause illness if backflow occurs.

Kidney Dialysis Facilities: High hazard from dialysis fluids or medical waste that could introduce harmful contaminants into drinking water.

Dental Office with Water-Connected Equipment: High hazard due to dental chemicals or biological matter that could contaminate potable water.

Veterinarian Facilities: High hazard from animal waste or medical chemicals that could introduce pathogens or toxins into water.

Chemical Plants: High hazard due to toxic chemicals used in manufacturing that could cause severe health effects if backflow occurs.

Laboratories: High hazard from hazardous chemicals or biological agents that could contaminate drinking water.

Biotech Facilities: High hazard due to biological or chemical agents used in research that could pose health risks if backflow occurs.

Electronics Manufacture: High hazard from toxic solvents or chemicals used in production that could contaminate potable water.

Dry Cleaner Facilities: High hazard due to toxic cleaning solvents (e.g., perchloroethylene) that could cause health issues if backflow occurs.

Industrial or Commercial Laundry Facilities: High hazard from detergents or chemicals that could contaminate drinking water.

Metal-Plating Facilities: High hazard due to highly toxic plating chemicals (e.g., cyanide) that could cause severe illness or death.

Business Park with Single Meter Serving Multiple Businesses: High hazard from diverse tenant activities (e.g., chemicals, waste) increasing contamination risk through a shared meter.

Marine-Port Facilities: High hazard from fuel, chemicals, or bilge water that could introduce toxic contaminants into potable water.

Car Wash Facilities: High hazard due to soaps, waxes, or recycled wash water containing chemicals that could contaminate drinking water.

Mobile Home Park, RV Park, or Campgrounds with RV Hookups: High hazard from sewage or chemicals in RV systems that could backflow into potable water.

Hotels/Motels: High hazard due to large plumbing systems with chemicals (e.g., pool treatments) that could contaminate water supply.

Gas Stations: High hazard from fuel or chemical spills that could introduce toxic substances into potable water.

Fire Stations: High hazard from firefighting chemicals or foam that could contaminate drinking water if backflow occurs.

Solid Waste Disposal Facilities: High hazard due to leachate or hazardous waste that could introduce toxins into potable water.

Pet Groomers: High hazard from shampoos or biological contaminants that could contaminate drinking water.

Agricultural Premises: High hazard from pesticides, fertilizers, or animal waste (e.g., from orchards, horse farms) that could cause illness if backflow occurs.

Hazard Assessment Access Denied or Restricted: High hazard due to unknown risks from uninspected systems, potentially hiding severe contaminants.

Railroad Maintenance Facilities: High hazard from fuel, lubricants, or chemicals that could contaminate potable water.

Incarceration Facilities (e.g., Prisons): High hazard from large plumbing systems with potential chemical or waste backflow risks.

Temporary Connections to Fire Hydrants for Miscellaneous Uses, Including Construction: High hazard from contaminants in temporary systems (e.g., construction debris) that could backflow into potable water.

Private Water Distribution Mains: High hazard due to unregulated mains potentially introducing contaminants into the PWS.

Drinking Water Storage Tank Overflow Connected to a Sump or Storm Drain: High hazard as drain contaminants could backflow into potable water via overflow connections.

Airports: High hazard from fuel, de-icing chemicals, or waste that could contaminate drinking water.

Properties with Higher Elevation Than the Water Service Connection: High hazard due to increased backpressure risking contaminant backflow into the PWS.

Chemical Injection Systems: High hazard from direct injection of chemicals (e.g., fertilizers, pesticides) that could contaminate potable water.

Booster Pumps: High hazard as pressurized pumps could force contaminants back into the potable water system.

Confined Animal Facilities: High hazard from animal waste or chemicals (e.g., from horse troughs) that could introduce pathogens or toxins into water.

This list is not all-inclusive. Hazard assessments may identify other risks not listed here, such as unique plumbing or property uses. OMWD conducts thorough evaluations to ensure all potential cross-connection hazards are addressed to safeguard our public water system.

Cross-Connection Control Priority List

The Cross-Connection Control Priority List categorizes properties and facilities based on their potential to introduce contaminants into the potable water system through cross-connections. Organized into three risk tiers—High Priority, Moderate Priority , and Low Priority — the list assesses hazards from biological contaminants, chemical contaminants, and backflow risks associated with plumbing complexity and water usage. High Priority properties, such as water treatment plants and heavy industrial facilities, pose significant risks requiring stringent backflow prevention measures. Moderate Priority properties, including commercial and recreational facilities, present intermediate risks, while Low Priority properties, such as single-family homes, have minimal hazards. This list serves as a guide for prioritizing inspections, installing backflow prevention devices, and implementing protective measures to safeguard public health and ensure compliance with water quality regulations.

Priority	Risk Category	Premises Type	Hazards
1	High	Agricultural - Farm	Chemical contaminants (pesticides, fertilizers), biological contaminants (animal waste, pathogens), complex irrigation systems increasing backflow risk.
1	High	Agricultural - Horse Property	Biological contaminants (manure, pathogens like E. coli), chemical contaminants (pesticides, herbicides, stable cleaning agents), high water usage in irrigation or washing areas increasing backflow risk.
1	High	Agricultural - Nursery/Orchard	Chemical contaminants (pesticides, fertilizers), potential runoff into water systems, complex irrigation systems increasing backflow risk.
1	High	Dump	Chemical contaminants (leachate, hazardous waste), biological contaminants (decomposing materials), high risk of runoff or backflow into water systems.
1	High	Industrial - Biotech Facilities	Hazardous chemicals (solvents, reagents), biological agents (lab cultures), complex water systems (cooling towers, process water) with high backflow potential.
1	High	Industrial - Heavy Industrial	Biological contaminants (pathogens from organic process waste or cooling systems), chemical contaminants (hazardous chemicals like acids, solvents, heavy metals, or

			hydrocarbons), high backflow risk from complex water systems (cooling towers, process water, washing). Risk consistently high due to scale and hazardous materials.
1	High	Medical Building - Dental/Medical Offices	Biological contaminants (pathogens from medical procedures), chemical contaminants (disinfectants, medications), specialized equipment (dialysis, suction systems) increasing backflow risk.
1	High	Medical Building - Veterinary Facilities	Biological contaminants (animal waste, pathogens), chemical contaminants (disinfectants, medications), moderate to high backflow risk from specialized equipment.
1	High	Utilities - Sewer Pump Station	Biological contaminants (sewage, pathogens), chemical contaminants (treatment chemicals), high backflow risk due to system connectivity.
1	High	Utilities - Wastewater Treatment Plant	Biological contaminants (sewage, pathogens), chemical contaminants (treatment chemicals), critical infrastructure with potential for system-wide contamination if backflow occurs.
1	High	Utilities - Water Treatment Plant	Biological contaminants (pathogens like E. coli or Giardia in raw water, concentrated in treatment sludge), chemical contaminants (chlorine, chloramines, coagulants, pH adjusters), high backflow risk from complex water treatment systems (filtration, disinfection, distribution). Risk consistently high due to public health implications and system scale.
2	Moderate	Commercial - Auto Services (Car Washes, Repair Shops)	Chemical contaminants (oils, solvents, detergents), potential for backflow in washing or cooling systems, moderate risk of contamination.
2	Moderate	Commercial - Camp Site	Biological contaminants (sanitation, waste), chemical contaminants (cleaning agents, pesticides), moderate backflow risk from water hookups.
2	Moderate	Commercial - Food Service (Restaurants, Grocery Stores)	Biological contaminants (food waste, grease), chemical contaminants (cleaning agents, sanitizers), high water usage in kitchens or processing areas increasing backflow risk.
2	Moderate	Commercial - Health Services (Health Care Offices)	Biological contaminants (pathogens from medical procedures), chemical contaminants (disinfectants), moderate backflow risk from specialized equipment.

2	Moderate	Commercial - Hotel/Resort	Biological contaminants (sanitation, pool water), chemical contaminants (cleaning agents, pool chemicals), complex systems (cooling towers, irrigation) with moderate backflow risk.
2	Moderate	Commercial - Nursery	Chemical contaminants (fertilizers, pesticides), moderate backflow risk from irrigation systems, lower biological risk than agricultural nurseries.
2	Moderate	Commercial - Recreation Center	Biological contaminants (sanitation, pool water), chemical contaminants (cleaning agents, pool chemicals), moderate backflow risk from complex plumbing.
2	Moderate	Commercial - Strip-Mall	Biological contaminants (pathogens from restaurant food waste, grease, and multi-tenant sanitation), chemical contaminants (cleaning agents, sanitizers, possible landscaping chemicals like fertilizers), moderate backflow risk from complex shared plumbing (restaurant kitchens, retail restrooms, irrigation). Risk approaches 4 if numerous restaurants or intensive operations are present.
2	Moderate	Industrial - Light Industrial	Biological contaminants (minor pathogens from sanitation or organic process waste), chemical contaminants (cleaning agents, solvents, lubricants, possible landscaping chemicals), moderate backflow risk from plumbing systems supporting cleaning, cooling, or minor irrigation. Risk approaches 4 if extensive operations (e.g., large cooling systems or chemical-intensive processes) are present.
2	Moderate	Institutional - Fire Department	Chemical contaminants (cleaning agents, equipment maintenance chemicals), moderate backflow risk from high-pressure systems or hydrant connections.
2	Moderate	Institutional - Public Service (Child Development, Treatment Facilities)	Biological contaminants (sanitation, medical waste), chemical contaminants (cleaning agents), moderate backflow risk from complex plumbing.
2	Moderate	Institutional - School	Biological contaminants (cafeteria waste, sanitation), chemical contaminants (cleaning agents, lab chemicals in science rooms), moderate backflow risk from complex plumbing.
2	Moderate	Recreational - Golf Course (Bathrooms, Clubhouse, Maintenance)	Chemical contaminants (fertilizers, pesticides), biological contaminants (runoff from maintenance areas), irrigation systems with moderate backflow risk.

2	Moderate	Recreational - Park	Chemical contaminants (fertilizers, pesticides from landscaping), minor biological contaminants (restroom sanitation, concession waste if present), moderate backflow risk from irrigation systems or water features.
2	Moderate	Residential - Agricultural Property	Biological contaminants (manure, pathogens from small-scale livestock or gardening), chemical contaminants (limited pesticides, fertilizers, cleaning agents for animal care), moderate backflow risk from simple irrigation or animal washing systems. Risk may approach Low Priority (1–2) for minimal operations (e.g., small gardens) or escalate to higher Moderate Priority (3) for larger setups (e.g., multiple animals with irrigation).
2	Moderate	Residential - Assisted Living	Biological contaminants (pathogens from medical equipment, sanitation), chemical contaminants (disinfectants, cleaning agents), complex plumbing (laundry, medical areas, irrigation) with moderate backflow risk. Risk approaches 4 if extensive medical services (e.g., dialysis) are present.
2	Moderate	Residential - Church	Biological contaminants (sanitation), chemical contaminants (cleaning agents), moderate backflow risk if irrigation or kitchen facilities are present.
2	Moderate	Residential - HOA Irrigation	Chemical contaminants (fertilizers, pesticides, herbicides from community landscaping), minor biological contaminants (organic debris, stagnant water), moderate backflow risk from irrigation systems in residential common areas.
2	Moderate	Residential - Mental Health & Substance Use Treatment	Biological contaminants (pathogens from medical care, detox sanitation, therapy areas), chemical contaminants (disinfectants, cleaning agents, possible medication residues), moderate backflow risk from complex plumbing (bathrooms, laundry, medical/therapy areas, potential irrigation). Risk approaches 4 if extensive medical services (e.g., inpatient detox or psychiatric units) are present.
2	Moderate	Residential - Specialized Healthcare	Biological contaminants (pathogens from medical care, infection control sanitation, medical procedures), chemical contaminants (disinfectants, cleaning agents, possible medication residues), moderate backflow risk from complex plumbing (bathrooms, laundry, medical areas, potential irrigation). Risk approaches 4 if extensive medical

			services (e.g., infusion therapy or specialized care units) are present.
2	Moderate	Utilities - Municipal Irrigation	Chemical contaminants (fertilizers, pesticides, herbicides from landscaping), minor biological contaminants (organic debris, stagnant water), moderate backflow risk from irrigation systems connected to municipal water supplies.
2	Moderate	Utilities - Water District Support Facility	Biological contaminants (minor pathogens from office sanitation and fleet wash areas), chemical contaminants (cleaning agents, automotive oils, degreasers, possible water treatment chemicals like chlorine in storage), moderate backflow risk from plumbing systems supporting office restrooms, fleet maintenance wash bays, and minor warehousing needs. Risk approaches 4 if significant quantities of hazardous chemicals are stored.
3	Low	Commercial - Bank	Minimal biological contaminants (sanitation), chemical contaminants (cleaning agents), low backflow risk from basic plumbing systems.
3	Low	Commercial - Garden Center	Minor chemical contaminants (fertilizers, pesticides), low backflow risk unless extensive irrigation systems are present.
3	Low	Commercial - Office Building (General Offices, Post Office, Retail/Office)	Minimal biological contaminants (sanitation), chemical contaminants (basic cleaning agents), simple plumbing with low backflow risk.
3	Low	Commercial - Retail Store	Minimal biological contaminants (restrooms), chemical contaminants (cleaning agents), low backflow risk from basic plumbing systems.
3	Low	Commercial - Self-Storage	Minimal biological or chemical contaminants (basic sanitation, cleaning agents), very low backflow risk due to simple water usage.
3	Low	Commercial - Service Station	Minor chemical contaminants (oils, cleaning agents), low backflow risk unless extensive washing systems are present.
3	Low	Commercial - Shopping Center	Minimal biological contaminants (sanitation), chemical contaminants (cleaning agents), low backflow risk unless food service or auto services are included.
3	Low	Commercial - Warehouse	Minimal biological or chemical contaminants (basic sanitation, cleaning agents), low backflow risk unless industrial processes are present.

3	Low	Institutional - Library	Minimal biological or chemical contaminants (basic sanitation, cleaning agents), very low backflow risk due to simple water usage.
3	Low	Institutional - Police Station	Minimal biological contaminants (sanitation), chemical contaminants (cleaning agents), low backflow risk unless specialized equipment is present.
3	Low	Institutional - Public Building (General)	Minimal biological contaminants (sanitation), chemical contaminants (cleaning agents), low backflow risk from basic plumbing systems.
3	Low	Residential - HOA (Gate House, Clubhouse)	Minimal biological contaminants (sanitation), chemical contaminants (cleaning agents, minor irrigation), low backflow risk unless complex systems are present.
3	Low	Residential - Multi-Family (Apartments, Duplexes)	Minor biological contaminants (sanitation, laundry), chemical contaminants (cleaning agents), slightly higher backflow risk than single-family homes due to shared plumbing but still low overall.
3	Low	Residential - Single Family Home with Fire Service	Minor biological contaminants (bacteria from stagnant water in fire sprinkler lines), minimal chemical contaminants (possible corrosion inhibitors or disinfectants), low backflow risk due to simple system design and backflow prevention devices.
3	Low	Residential - Single-Family Home	Minimal biological or chemical contaminants (household cleaning agents, minor irrigation), low backflow risk unless pools or complex irrigation systems are present.

OLIVENHAIN
Municipal Water District

BACKFLOW PREVENTION ASSEMBLY TESTER AGREEMENT
(Appendix E)

Olivenhain Municipal Water District (OMWD) protects its potable water system from cross-connections and backflow per the State Water Resources Control Board's Cross-Connection Control Policy Handbook (CCCPH) and OMWD's Cross-Connection Control Policy. These require approved backflow prevention devices behind water meters, tested annually by certified testers. This agreement outlines tester expectations in OMWD service areas.

General

1. Testers and/or firms must be listed on the OMWD Approved Backflow Prevention Assembly Testers List to perform certification testing in OMWD service areas. The information listed shall include testing name, email address, phone number, and address (optional).

2. All backflow prevention assembly testers shall maintain a valid testing certification from a certifying organization recognized by the State Water Board pursuant to Chapter 3 Article 4 of the CCCPH. After 07/01/2027 testers must be certified through an ANSI accredited organization.

3. All test gauges used to perform backflow assembly tests shall be regularly maintained and calibrated at least once a year. Backflow testers shall submit annual calibration and certification renewals to the Districts Cross- Connection Control department for verification and approval on an online backflow portal provided by the District. Should a testers' gauge calibration or tester certification expire, backflow assembly tests completed within that expired period will not be accepted.

4. All testers must comply with this tester agreement, OMWD Policy, and the CCCPH while testing in OMWD service areas.

5. Non-compliance with this agreement, Policy, or CCCPH (e.g., lack of proficiency, fraud) will result in the removal of the tester/firm from the OMWD Approved Backflow Prevention Assembly Testers List for a period of three (3) years and will be reported to the certifying organization that issued their certification pursuant to Chapter 3 Article 4 of the CCCPH.

Testing/Reporting

1. Backflow Prevention Assembly Testers shall submit initial passing test reports to the District within ten (10) days of completion.

2. Backflow Prevention Assembly Testers shall submit initial failing test reports to the District within five (5) days of completion.

OLIVENHAIN
Municipal Water District

BACKFLOW PREVENTION ASSEMBLY TESTER AGREEMENT
(Appendix E)

3. Backflow Prevention Assembly Testers shall submit BPA repair test reports to the District within thirty (30) days of the initial failure. All BPA device repairs, performed by the tester or the testers firm, must be recorded. Failure to list all repairs performed constitutes an inaccurate/ falsified record and will be rejected.

4. Any observable backflow incident or actual cross connection must be reported to OMWD within 24 hours. This may include but is not limited to - bypass connections or jumper lines between the meter and backflow, anti-leaking modifications, or use of non-OEM parts.

5. All BPAs supplied with recycled water must use dedicated gauges
for recycled water. This test gauge shall be subject to the same rules and regulations of potable test gauges in OWMD Policy and the CCCPH.

6. Early testing cannot be performed more than 45 days prior to the testing due date provided on the 1st notice. If the test report is submitted in a calendar year that is that is before the due date calendar year on the testing notice, the test report will not be accepted.

Installations/Replacements/Upgrades

1. All newly installed and replacement backflow prevention assemblies shall be installed in accordance with the District's Standard Drawings and Specifications. The District Standard Drawings and Specifications can be found at www.olivenhain.com

2. New BPA installations must be inspected and initially tested by OMWD. Passing field tests shall be required before providing continuous service to a water user.

3. All backflow replacements must be reported to the district regardless of size, circumstance, or application.

4. All fire protection system backflow replacements and upgrades must be reported to the district regardless of size, circumstance, or application prior to the replacement or upgrade taking place.

5. Any new BPA installation that has not been inspected, certified, and approved by OMWD may be subject to removal, excavation, adjustment, or modification to verify compliance. OMWD will not be responsible for any cost associated with the removal, excavation, adjustment, or modification of any new BPA that has not been inspected, certified, and approved by OMWD.

6. Any DC, DCDA, or DCDA-II replacement or upgrade must be reported and approved by OMWD prior to the replacement or upgrade taking place.

OLIVENHAIN
Municipal Water District

BACKFLOW PREVENTION ASSEMBLY TESTER AGREEMENT
(Appendix E)

OLIVENHAIN
Municipal Water District

BACKFLOW PREVENTION ASSEMBLY TESTER AGREEMENT
(Appendix E)

Company Name: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Work Phone: _____

Cell Phone: _____

Email: _____

Tester Name: _____

BPAT Certification Number: _____

I hereby certify that I have read and agree to comply with the Olivenhain Municipal Water District backflow prevention assembly tester agreement. I understand further that any violation of this agreement may result in the removal from the Olivenhain Municipal Water District's approved backflow prevention assembly testers list prohibiting the ability to test in Olivenhain Municipal Water District service area.

Signature: _____ Date: _____

OLIVENHAIN
Municipal Water District

BACKFLOW PREVENTION ASSEMBLY TESTER AGREEMENT
(Appendix E)