

Western Heights Water Company  
Cross-Connection  
Ordinance III



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## **1.0 INTRODUCTION**

Western Heights Water Company (WHWC), owns and operates the Potable Water distribution system which provides Potable Water to Customers within the WHWC's service area. The potable water produced by WHWC complies with all federal, state, and local regulations for safe drinking water.

## **2.0 PURPOSE**

The purpose of this Ordinance is to provide for the protection of the Potable Water distribution system in accordance with applicable federal, state, and local regulations.

## **3.0 POLICY**

WHWC shall protect the Potable Water distribution system by the implementation of a cross-connection control program (Cross-Connection Control Program) through the elimination of cross-connections between potable and non-potable sources. Cross-connections may be physically eliminated or protected through the installation of approved backflow prevention assemblies.

## **4.0 INTENT**

It is the intent of the Cross-Connection Control Program to protect the Potable Water distribution system through the elimination of Cross-Connections between potable and non-potable sources. Cross connections may be physically eliminated or protected through the installation of approved Backflow Prevention Assemblies.

## **5.0 SCOPE**

The Potable Water distribution system, from the point of entry to the last Customer tap consists of two elements: (1) those facilities owned and operated by WHWC and (2) those facilities owned and operated by the Customer. WHWC is responsible for the elimination of Cross-Connections at the facilities and distribution systems owned and operated by WHWC. The Customer is responsible for protection from cross-connections at facilities owned and operated by the Customer.

## **6.0 DEFINITIONS**

Accessible: When referring to a Backflow Prevention Assembly, capable of being reached for testing and maintenance. However, it first may require the removal of an access panel, door, or similar obstruction.

Air Gap Separation (AG): A physical separation between the free-flowing discharge end of a Potable Water supply pipeline and an open or non-pressure receiving vessel. An approved air gap shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the receiving vessel; but in no case less than 1inch (2.54cm). (See also, ASME A112.12-2004 Air Gaps in Plumbing Systems, California Code of Regulations, Title 17).

Authorized Backflow Prevention Assembly Tester (Tester): Any person who has a current backflow assembly tester certification from the San Bernardino County Health Department and has met the WHWC Requirements and Orientation Program for Backflow Prevention Assembly Testers, as outlined in Section 8.4 of this Ordinance.

Approved Water Supply: Any Potable Water supply which has been investigated and approved by the Health Agency having jurisdiction. The system must be operating under a valid health permit and approved by WHWC.

Auxiliary Water Supply: Any water supply on or available to the premises other than the Water Purveyor's approved public Potable Water supply. These auxiliary waters may include water from another purveyor's public Potable Water supply or any natural source such as a well, spring, river, stream, harbor, etc. These sources may contain Pollutants or Contaminants, or they may be objectionable and constitute an unacceptable water source over which the Water Purveyor does not have sanitary control.

AWWA Standard: An official standard developed and approved by the American Water Works Association.

Backflow: The undesirable reversal of flow of water, or mixtures of water, and other liquids, gases, or other substances into the distribution pipes of the potable supply of water from any source or sources.

Backflow Prevention Assembly(ies) (BPA): A general term referring to all types of Backflow Prevention Assemblies, including, but not limited to DC, DCDA, RP and RPDA. An approved BPA is any backflow prevention assembly that is found on the current list of approved Backflow Prevention Assemblies maintained by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC FCCC), for an application that is approved by the California Department of Public Health in accordance with the California Code of Regulations Title 17.

Backpressure: Any elevation of pressure in the downstream piping system (by pump, elevation of piping, steam pressure, etc.) above the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow.

Backsiphonage: A form of Backflow due to a reduction in system pressure which causes a sub-atmospheric pressure to exist at a site in the water system. An indirect Cross-Connection is a Cross-Connection which is subject to backsiphonage only.

Best Management Practices for Backflow Prevention Assembly Tester (BMPs): A document produced by WHWC providing a guideline for the practice of WHWC accepted BPA Testers.

California Code of Regulations, Title 17: Sections 7583 through 7605 contain the regulations of the Regulations of the State of California that govern Backflow prevention and Cross-Connection Control Programs.

Consolidated Schedule of Rates, Fees and Charges: A schedule adopted by the Board of Directors as needed, establishing, or revising rates, fees, or charges.

Contaminant: Any substance that shall impair the quality of water in such a way as to create an actual hazard to the public health through poisoning, the spread of disease, etc. A contaminant is also referred as a "Health Hazard."

Contamination: An impairment of the Potable Water supply which creates an actual hazard to the public health. Contamination is also referred to as a "Health Hazard."

Critical Service: A water service that can never be interrupted due to the critical nature of the facility involved.

Cross-Connection: An actual or potential connection or structural arrangements between a potable water system used to supply drinking water and any source or system containing unapproved water or substance that is or cannot be approved as safe, wholesome, and potable. Bypass arrangements, jumper connections, removable sections, swivel, or change-over devices and other temporary or permanent devices through which or because of which Backflow can occur are Cross-Connection. A direct Cross-Connection is a Cross-Connection which is subject to both backsiphonage and backpressure.

Cross-Connection Control Specialist: An individual who is authorized to perform Site Surveys on behalf of WHWC for the purpose of identifying Cross-Connections and determining Degree of Hazard. The individual shall be certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements.

Degree of Hazard: The evaluated level of risk that a premise poses to the Public Potable Water System as either a Pollutant (Non-Health Hazard) or Contaminant (Health Hazard): derived from the assessment of the materials, which may come in contact with the distribution system through a Cross-Connection.

Detector Check Assemblies: Shall only supply water to on-site (private) building fire sprinkling systems and/or fire hydrants and shall not be used for any other purpose than extinguishing fires. If used for any other purpose, District shall have the right to either (1) install a meter, at customer's expense, and charge for all water used; or (2) shut off the water supply. Installation of approved backflow prevention is required in the form of a Reduced Pressure Principle Detector Assembly (RPDA) for high hazard, or a Double Check Detector Assembly (DCDA) for low hazard, is required and must include a tattle tale meter to detect water usage, including but not limited to illegal connections and water leaks.

Double Check Valve Backflow Prevention Assembly (DC): An assembly composed of at least two independently acting, approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. This assembly shall only be used to protect against Pollutants.

Double Check Detector Backflow Prevention Assembly (DCDA): A specifically designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accurately for only up to 2 gallons per minute (gpm) and shall show a registration for all rates of flow. This assembly shall only be used to protect against Pollutants. The DCDA is primarily used on fire sprinkler systems.

Double Check Detector Backflow Prevention Assembly-Type II (DCDA-II): A specially designed assembly composed of a line-sized approved double check valve assembly with a bypass around the second check containing a specific water meter and a check valve. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow. This assembly shall only be used to protect against Pollutants. The DCDA-II is primarily used on fire sprinkler systems.

Flow-Through Fire System: A fire system that does not have a fire department pumper connection. They are constructed of approved Potable Water piping and materials to which sprinkler heads are attached. The system terminates at a connection to a toilet or other plumbing fixture to prevent the water from becoming stagnant.

Graywater: Untreated wastewater which has not been contaminated by any toilet discharge, affected by infectious, contaminated, or unhealthy bodily wastes, and which does not present a threat from

Contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

Health Agency: Health authority having jurisdiction: The State Water Resources Control Board and the San Bernardino County Department of Environmental Health.

Industrial Fluids: Any chemical, biological, or other fluid or solution which would constitute a Contaminant if introduced into an Approved Water Supply.

Industrial Piping System: Any system used to transmit, confine, or store any fluid, solid or gaseous substance other than an Approved Water Supply. Such a system would include all pipes, conduits, tanks, receptacle, fixtures, equipment, and appurtenances used to produce, convey, or store substances which are, or may be, Polluted or Contaminated.

Isolation Assembly: Any backflow assembly that is located downstream of the Service Protection assembly on the Customer's Premises. It is the responsibility of the Customer to test and maintain these Backflow Prevention Assemblies as required by Section 603.3.3 of the California Plumbing Code (current edition) and the Health Agency having jurisdiction.

Lead Free Law: Pursuant to Health and Safety Code Section 116875, if the water flowing through a backflow prevention device is ultimately provided for human consumption, the device must be lead-free.

It is the responsibility of the backflow Tester and/or backflow installer to ensure that backflow assemblies installed or replaced after January 1, 2010 on water systems intended for human consumption and culinary purposes meet the requirements of the Lead-Free Law.

Lead Free: California Health and Safety Code, Section 116875 defines Lead Free as "not more than 0.2 percent lead when used with respect to solder and flux and not more than a weighted average of 0.25 percent when used with respect to the wetted surfaces of pipes and pipe fittings, plumbing fittings, and fixtures."

Non-Potable Water: Water that is not acceptable for human consumption as determined by federal, state, and local drinking water standards.

Parallel Installation: Two or more Backflow Prevention Assemblies of the same type having common inlet, outlet, and direction of flow.

Person: An individual, corporation, company, association, partnership, municipality, public utility, or other public body or institution.

Pollutant: Any substance which may cause or contribute to aesthetically objectionable conditions, such as those which alter the color or odor of water. A Pollutant is considered a non-health hazard.

Pollution: 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 is considered a non-health hazard.

Potable Water: Water from a source which has been investigated and approved for human consumption by the Health Agency having jurisdiction.

Premises: Any area within a Customer's property which is served or has the potential to be served Potable Water by the WHWC.

Pressure: A uniform force applied over a surface, measured as a force per unit area. Typically, water pressure is measured in pounds per square inch (PSI) or pounds per square inch differential (PSID).

Program Fees: Fees that are WHWC Board Approved for administration, fines or labor associated with WHWC's Cross-connection/Backflow Program.

Public Potable Water System: Any publicly or privately-owned water system operated as a public utility under a valid health permit to supply water for domestic purposes. This system includes all sources, facilities and appurtenances between the source and the Point of Delivery such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment, and appurtenances used to produce, convey, treat, or store Potable Water for public consumption or use.

Raw Water: Non-Potable Water from a supply source prior to potable treatment.

Recycled Water: Non-Potable Water available from Recycled Water facilities, which may include a combination of treated wastewater, intercepted surface and subsurface stream flows, groundwater and other waters including Potable Water.

Reduced Pressure Principle Backflow Prevention Assembly (RP): An assembly containing at least 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. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly. This assembly is designed to protect against a Pollutant or Contaminant. This assembly shall not be used for Backflow protection of sewage.

Reduced Pressure Principle Detector Assembly (RPDA): A specially designed assembly composed of a line-size approved Reduced Pressure Principle Backflow Prevention Assembly with a specific bypass around the second check valve containing a specific water meter, and an approved check valve. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow. This assembly shall be used to protect against a Pollutant or Contaminant. The RPDA II is primarily used on fire sprinkler systems.

San Bernardino County Department of Environmental Health: The agency which certifies Backflow prevention assembly testers, also having jurisdiction to regulate onsite Cross-Connection control in San Bernardino County (except where Recycled Water is onsite).

Service Connection: The terminal end of a connection from the Public Potable Water System, where it connects to the Customer's water system and the Water Purveyor loses jurisdiction and sanitary control of the water, at the point of delivery to the consumer's water system. If a water meter is installed at the end of the Service Connection, then the Service Connection shall be the downstream end of the water meter.

Service Protection: The appropriate type or method of Backflow protection located at the customer's Water Service Connection, which shall be commensurate with the Degree of Hazard posed to the Public Potable Water System.

Sewage: Sewage is domestic, municipal, or industrial waste products or Recycled Water.

Sewer: The pipes that carry sewage.

Site Surveys (Evaluations): The conducting of surveys to identify locations on consumer's property, including private wells where Cross-Connections are likely to occur.

State Water Resources Control Board, Division of Drinking Water (DDW): The State of California Agency that regulates drinking water.

Used Water: Any water supplied by a Water Purveyor from a Public Potable Water System to a Consumer's Water System after it has passed through the Service Connection and is no longer under the control of the Water Purveyor.

Water Purveyor: The public or private owner or operator of the Potable Water system supplying an Approved Water Supply to the public. In this case, WHWC.

Water Supervisor: The person designated by the Water User to be responsible for installation, operation and maintenance of the water pipelines, systems on the Water User's premises.

Water User: Any person obtaining water from WHWC. Also referred to as Customer or Responsible Owner.

WHWC Fees: Fees as approved by WHWC Board of Directors.

WHWC Tester List: A list maintained by WHWC of BPA Testers who are certified by the San Bernardino County Department of Environmental Health and have complied with the requirements set forth by WHWC in this Ordinance.

## **7.0 REQUIREMENTS**

### **7.1 GENERAL REQUIREMENTS**

California Code of Regulations, Title 17, Section 7604, states, “The type of protection that shall be provided to prevent backflow into the public water supply shall be commensurate with the degree of hazard that exists on the consumer’s premises”.

The type of Backflow protection will be determined by WHWC Operations Branch. BPA's installed on water systems used for human consumption or culinary purposes must meet the requirements of the California Lead-Free Law.

The following are some examples of potentially hazardous conditions which require a BPA:

- Premises where substances harmful to health are handled in a manner which could permit their entry into the Public Potable Water System.
- Premises having an Auxiliary Water Supply.
- Premises that have internal Cross-Connections.
- Premises where Cross-Connections are likely to occur and entry is restricted.
- Premises having a repeated history of Cross-Connections being established or re-established.
- Premises with complex piping systems (Complexity is determined by an inspection of the premises by a Cross-Connection Control Specialist).
- Premises with Potable Water in addition to Non-Potable Water Systems.
- Premises where a Customer has more than one Service Connection.
- Premises where there is a condition that creates a potential hazard to the Public Potable Water System.

## **8.0 RESPONSIBILITY**

### **8.1 PROGRAM RESPONSIBILITY**

WHWC's Cross-Connection Control Program is responsible for the elimination and/or protection of Cross-Connections at WHWC-owned facilities and WHWC-owned Potable Water distribution system from contaminant or pollutant sources. In addition, the protection of the Potable Water distribution system is accomplished through the installation of Approved BPAs at the Customer's Service Connection, in accordance with California Code of Regulations Title 17, sections 7583-7604. Approved BPAs must be installed in accordance with WHWC specifications and this Ordinance. If WHWC determines that there are potential or actual Cross-Connections on the Customer's property, the Customer must install and maintain the BPAs at no cost to WHWC as a condition to obtaining water service from WHWC.

WHWC's Cross-Connection Control Program is responsible for:

- The adoption of operating rules or ordinances to implement the Cross-Connection program.
- The conducting of Surveys to identify Customer premises where Cross-Connections are likely to occur.
- The provisions of Backflow protection by the Water User at the Water User's connection or within the Water User's premises or both.
- The provisions of at least one person trained in Cross-Connection control to carry out the Cross-Connection Program.
- The establishment of a procedure or system for testing BPAs.
- The maintenance of records of locations, tests, and repairs of BPAs, for a minimum of three years.

## **8.2 WESTERN HEIGHTS WATER COMPANY RESPONSIBILITIES**

WHWC will supply the Customer with the WHWC Tester List. Only Testers who appear on WHWC's List are accepted by the WHWC to test, maintain, and repair BPAs within the WHWC's service area.

WHWC personnel will provide an orientation session to backflow assembly Testers who wish to be placed on WHWC's Tester List.

When a meter protection BPA is not tested by the due date, WHWC will consider this a potential Contamination hazard to the WHWC's Potable Water distribution system. Consequently, the Customer is notified as specified in this section of this Ordinance, and if backflow assembly testing is not performed, WHWC will test the backflow prevention assembly and charge the customers water bill. If unable to test the backflow assembly device, WHWC will discontinue water service until testing is complete and test form is received.

Per the requirements in the recycled water master discharge permit issued by the Regional Water Quality Control Board, WHWC is responsible for the safe use of recycled water on the recycled water use sites and for the prevention of any cross-connections between the potable and recycled water. As an added insurance for the safe use of recycled water, all on-site testable BPAs that are exterior to any on-site buildings will be added to the WHWC's list of testable BPAs testing and maintenance requirements for these on-site BPAs exterior to any on-site buildings will be the same as the requirements for the service protection BPAs.

WHWC reserves the right for qualified personnel to test meter protection BPAs after the BPA has been tested by a Tester on WHWC List. This testing provides an element of quality assurance for the WHWC's Cross-Connection Control Program. Quality assurance testing performed will be at WHWC's cost.

### **8.3 CUSTOMER RESPONSIBILITY**

The Customer has the responsibility to prevent Contaminants or Pollutants from entering the Public Potable Water system, and the prevention of Cross Connections on their premises.

The Customer's water system shall be made accessible for a Site Evaluation at a designated time agreed to by the Customer and a WHWC representative.

If a cross-connection or potential cross-connection has been found on the premises, the Customer shall remedy the cross connection or potential cross connection with the guidance and inspection of the WHWC Cross-connection Specialist or install a BPA on Customer's potable service(s) per the applicable WHWC Standard Drawing.

If a Customer's Service Connection BPA is stolen or removed, the theft or removal of the BPA must be reported to WHWC immediately. If the site has been documented as having potential Contaminants, the water service shall remain off until the BPA is replaced. The installation of any piping configuration other than an approved BPA shall be considered a violation and will result in water service termination. If the site has been documented as having potential Pollutants, the Customer shall have ten (10) working days to replace and test the BPA. After ten (10) working days, the water service will be terminated.

Any unauthorized removal or relocation of a Service Protection BPA will be considered a violation and will result in water service disconnection.

A change of ownership or name change, or type of use or potable system piping may require an On-Site Survey by WHWC personnel.

The Customer must use a Tester which is on the current WHWC List.

The Customer must ensure that the BPA test report is received by WHWC by the due date listed on the BPA test form.

### **8.4 BACKFLOW ASSEMBLY TESTER RESPONSIBILITY**

It is the Tester's responsibility to abide by this Ordinance and to follow all the WHWC's *Best Management Practices for Backflow Assembly Testers*.

To be considered for placement on WHWC's List the following must be submitted to the WHWC's Cross-Connection Specialist:

- A copy of the current San Bernardino County Health Department's Backflow Prevention Assembly tester certification.
- Attendance at WHWC orientation for Backflow Prevention Assembly testers
- A signed orientation check list acknowledging adherence to this Ordinance and WHWC's BMPs.

To remain on WHWC's List, the following must be submitted to the Cross-Connection Specialist.

- A copy of the current San Bernardino County Department of Environmental Health tester certification and is required every three (3) years upon renewal.
- The Tester is required to calibrate field test gauge(s) at least annually and to re-calibrate whenever a gauge is inaccurate by more than +/- 0.2 PSID. Test gauge calibration must be verified against a reference source that is traceable to the National Institute of Standards and Technology.
- The Tester must retain proof of test gauge calibration and send copies to WHWC Personnel.
- WHWC reserves the right to require a copy of a test gauge calibration certificate during quality check proceedings and at any time deemed reasonable to WHWC.

If a copy of the current BPA Tester's certification is not received within one calendar month of the expiration date, the tester will be removed from the WHWC's List. Any BPA test reports received from a Tester who has been removed from the WHWC List will be considered invalid and returned to the Customer.

Removal from WHWC's List:

- Failure to comply with this Ordinance or WHWC's BMPs, will result in disciplinary action by WHWC, in accordance with the procedures outlined in the BMPs.
- If the San Bernardino County Department of Environmental Health removes a Tester from the County Tester list, that Tester will be immediately removed from the WHWC List and will not be permitted to test, repair, or maintain BPAs within WHWC's service area, until the Tester is recertified by the San Bernardino County Department of Environmental Health and approved by WHWC.

## **9.0 WATER SYSTEM SURVEYS**

### **9.1 HAZARD EVALUATION**

WHWC may require and conduct inspection(s) of premises to evaluate on-site Cross-Connection hazards. This Site Survey will determine the degree of hazard(s) on the Customer's site that may have a negative impact to WHWC's Potable distribution system. The Site Survey will also determine the type of BPA required by applicable State and local regulations and this Ordinance. WHWC may require that the BPA(s) be tested more than once a year based on the Degree of Hazard presented by the Customer's water system. If access to the Customer's water system is denied, the highest level of Backflow prevention shall be required, and service will be suspended until meter protection has been installed and approved by WHWC.

## **10.0 SERVICE PROTECTION**

### **10.1 NEW SERVICE REVIEW PROCESS**

An assessment of all new water service applications will be made to determine the type of Backflow prevention required, if any. If a BPA is necessary, the Customer is required to install

the BPA at Customer's own expense in accordance with WHWC's approved standards, BMPs and this Ordinance. The first backflow assembly test upon initial installation will be performed by WHWC personnel or WHWC approved Tester/Approved Vendor. Subsequent tests may be performed by persons on the "WHWC Backflow Prevention Testers List".

## **10.2 REQUIREMENTS FOR WATER SERVICE PROTECTION**

### **Reduced Pressure Principle Backflow Prevention Assembly (RP):**

No water service connection to any premises shall be installed by WHWC unless the water service is protected as required by applicable statute and/or associated regulations including this Ordinance. Water service to any premises shall be discontinued by the WHWC if the BPAs required by applicable state and local regulations and this Ordinance is not installed, tested, and maintained, or if the BPA has been removed, bypassed, or altered. Water service will not be restored until such conditions or defects are corrected to the satisfaction of WHWC.

An RP is required for all instances of Service Protection per WHWC approved standard drawings; however, at the Customer's request WHWC may perform a Cross-Connection control survey to determine if a lower level of protection may be acceptable.

Water service protection is required in, but not limited to conditions where:

- Premises having an Auxiliary Water Supply. (All wells that have not been properly abandoned or destroyed are considered an Auxiliary Water Supply)
- Premises having a booster pump that is located on a Customer's Potable Water system.
- Premises having chemicals or fertilizers that are applied by injection in the Customer's Potable Water system.
- Premises that have a fire suppression system that uses black iron pipe, chemical additives, booster pumps, or storage tanks.
- Premises that have a fire system with a storage tank or booster pump.
- Premises that have dual-plumbed or dual-sourced Recycled Water, Non-Potable Water, or Graywater systems.
- Premises where a commercial or residential business is being operated that may pose a Contamination risk to the Public Potable Water System.
- Premises that have a Remote Service and it is determined through a site survey that a BPA is needed.
- Premises that have looped potable service piping with more than one point of connection to the WHWC's main distribution system. In this situation, Backflow protection is required on both services.
- Premises where Cross-Connections are likely to occur.
- Premises where an owner denies access to the property for inspection by authorized WHWC personnel.

- Premises having livestock, fertilizer, or manure, per Western Heights Water Company standards.

Note: When a site is dual-plumbed or dual-sourced with Recycled Water, Cross-Connection testing will also be required, at the Customer's expense.

### **10.3 COMMERCIAL AND INDUSTRIAL WATER SERVICE PROTECTION**

#### **Reduced Pressure Principal Backflow Prevention Assembly (RP)**

All new commercial and industrial sites are required to install RPs. All sites determined by WHWC to present an actual or potential hazard to WHWCs Potable Water distribution system are required to install RPs at the Potable Water service meter(s). Commercial, industrial, and government sites are examples of facilities that require Backflow protection at the Potable Water service meter. In certain circumstances where there is low water pressure to the site, the site will be evaluated by a WHWC Cross-Connection Control Specialist to determine if a double check assembly in lieu of an RP would be acceptable to WHWC.

### **10.4 AGRICULTURAL AND LANDSCAPE WATER SERVICE PROTECTION**

#### **Reduced Pressure Principal Backflow Prevention Assembly (RP)**

All new and existing agricultural and landscape sites are required to install RPs at the Potable service meter(s). Agricultural and landscape irrigation systems are subject to exposure to fertilizers, pesticides, fecal material, and various other chemical and biological Contaminants. Agricultural and landscape sites may contain Auxiliary or Non-Potable Water sources, booster pumps, wells, chemical aspirators, and other conditions that represent a hazard to the Public Potable Water System.

### **10.5 RESIDENTIAL WATER SERVICE PROTECTION**

#### **Reduced Pressure Principal Backflow Prevention Assembly (RP)**

Water service protection requirements also apply to private residential water services when any of the above listed hazards are on the premises. Any questions about the following requirements should be directed to WHWC's Cross-Connection Specialist.

### **10.6 RESIDENTIAL FIRE SERVICE PROTECTION**

#### **Double Check Valve Backflow Prevention Assembly (DC)**

Residential water service to a fire sprinkler system shall be installed per WHWC approved standard drawings and require the signing of a "hold harmless agreement" through WHWC office management. Service Protection shall be required in the form of an approved double check backflow prevention assembly or an approved RP device, if there is a high hazard on site such as chemicals, wells, etc.

Fire systems are recommended to be a flow-through design to prevent stagnation of water in the system.

**Reduced Pressure Principal Backflow Prevention Assembly (RP)**

Residential fire sprinkler systems that contain chemical additives or a possible contaminant will require an RP as Service Protection per WHWC approved standard drawings.

Residential Remote Water services will be installed per WHWC approved Specs to serve separate domestic and fire sprinkler systems and shall be installed per WHWC approved standard drawings. Each remote service will be reviewed for proper installation and a determination will be made if backflow protection shall be required in the form of an RP per WHWC drawings.

Note: On premises that require Service Protection for on-site hazards, both domestic and fire branches of the service will require an RP be installed.

**10.7 FIRE SUPPRESSION SYSTEM SERVICE PROTECTION**

**Reduced Pressure Principle-Detector Backflow Prevention Assembly (RPDA)**  
**Double Check Detector Backflow Prevention Assembly (DCDA)**

All new fire suppression systems shall have a hazard evaluation prior to BPA installation conducted by an authorized WHWC representative.

All new wet pipe non-flow through fire sprinkler systems that pose a high health risk (i.e., containing water from auxiliary sources, antifreeze, chemicals used for corrosion control, wetting agents or other chemicals that cannot be considered as Potable) shall have an approved RPDA or an AG installed.

All new wet pipe non-flow through fire sprinkler systems that pose a low health risk, such as with a Pollutant, shall have DCDA installed per WHWC approved Drawing.

When an existing wet pipe fire sprinkler system with a single detector check valve is significantly expanded or modified (requiring hydraulic analysis), the Service Protection must be upgraded to an approved DCDA. If additional hazards exist on the premises an RPDA may be required.

**10.8 CONSTRUCTION SERVICE PROTECTION**

**Reduced Pressure Principal Backflow Prevention Assembly (RP)**

All construction meters must be protected by an RP assembly that is provided by the contractor. The first backflow assembly test upon initial installation and/or relocation will be performed by WHWC personnel, WHWC approved contracted Tester, or approved vendor. The testing will be charged to the water customer's bill. Subsequent tests may be performed by persons on the WHWC Backflow Prevention Testers List.

- Any flushing of new water mains from a Potable Water source prior to WHWC's acceptance must be through a BPA. Any exceptions must be approved by the Water Operations Department or the Cross-Connection Specialist, prior to flushing.

## **10.9 POTABLE WATER HAULER LICENSE INSPECTION**

### **Backflow Prevention Requirement: None with valid license**

Bulk haulers of Potable Water are required to obtain a water hauler license through the local office of the Department of Public Health's Food and Drug Branch.

Bulk haulers must apply through WHWC for a construction meter.

The hauler's vehicles will be inspected by WHWC's Operations personnel or Cross-connection Specialist for compliance on an annual basis and must show at the time of inspection a current Department of Public Health Food and Drug Branch license.

## **10.10 AIR GAP INSPECTION**

### **Backflow Requirement Air Gap (AG)**

An AG inspection in-lieu of an RP shall be considered on a case-by-case basis and approved by the Operations Division and the Cross-Connection Specialist.

## **11.0 SUPERVISORS**

### **11.1 WATER SUPERVISOR**

WHWC and/or the Health Agency may, at either's sole discretion, require a Non-Potable Water, Recycled Water, or other Water User to designate a Water Supervisor, when the Water User's premises have a multi-piping system that conveys various types of fluids, some of which may be hazardous; where changes in the piping system are frequently made; or where other circumstances make designation of a supervisor appropriate. The Water Supervisor shall be responsible for the prevention of Cross-Connections during the installation, operation, and maintenance of the Water User's on-site water system. The Water User's Non-Potable Water or Recycled Water system shall have a Site Survey conducted by WHWC personnel on an annual basis and whenever a change occurs.

## **12.0 RETROFITS**

### **12.1 RETROFIT REQUIREMENTS**

Following a Site Survey, WHWC will notify the Responsible Owner/Water User of the results of the survey and the required corrective action. If meter protection is required, a period of fifteen (15) days will be given to complete all required corrective action(s). In the interim customer's service may stay active unless a High Hazard condition exist onsite.

A second notice in letter form, a phone call, or a door knocker, will be sent to each Responsible Owner/Water User who does not take the required corrective action prescribed in the first notice, and such corrective action is not taken within the time period specified. Such Responsible Owner/Water User may be subject to service discontinuance. All costs incurred by WHWC, including administrative costs, associated with correcting the non-compliance will be charged to the Responsible Owner/Water User in accordance with fees established by WHWC Board of Directors.

## **13.0 INSTALLATIONS**

### **13.1 INSTALLATION REQUIREMENTS FOR BACKFLOW PREVENTION ASSEMBLIES**

BPAs shall be installed according to current WHWC approved specifications and standard drawings:

RPAs shall be installed per WHWC approved standard drawing.

DCDAs and RPRDAs shall be installed per WHWC approved standard drawing.

Residential fire sprinkler system Double Check Assemblies (DC) shall be installed per WHWC approved standard drawing.

## **14.0 WATER SERVICE DISCONTINUANCE**

### **14.1 CONDITIONS OF SERVICE DISCONTINUANCE**

Shut-off procedures in Section 14.2 of this Ordinance shall be initiated when:

- Conditions posing a clear and immediate hazard to the Potable Water supply are determined to exist and those conditions cannot be immediately abated; or
- Failure to comply with Federal, State, or local laws, including this ordinance, regarding testing and/or repair of a device.

Specific conditions requiring water shut-off shall include, but not be limited to, the following:

- Any refusal to test BPA(s).
- Any refusal to install, repair or replace faulty BPAs.
- Any direct or indirect connection between a Potable Water system and a Non-Potable Water system.
- Any unprotected direct or indirect connection between a Potable Water system and a system or equipment containing a Contaminant.
- Any unprotected direct or indirect connection between a Potable Water system and an Auxiliary Water system.
- Any Refusal to grant access for Water System Survey or non-compliance testing.

### **14.2 WATER SHUT OFF PROCEDURE**

Customer must meet requirements of the California Code of Regulations, Title 17 at the Customer's Service Connection. BPAs must be installed in accordance with WHWC approved specifications and this Ordinance. If WHWC determines that there are potential or actual Cross-Connections on the Customer's property, it is the responsibility of the Customer to install and maintain the BPA(s) at no cost to WHWC as a condition to obtaining water service from WHWC.

When it becomes necessary to shut-off a Water User's Potable Water connection, the following steps shall be followed:

- WHWC personnel shall determine the Degree of Hazard to WHWC's Potable Water distribution system.
- Determine whether the service is a qualifying service where water service cannot be immediately terminated for health reasons such as a kidney dialysis center or medical facility. In such cases, the Regional Water Quality Control Board will be notified, and a non-compliance fee will be assessed.
- Water service to a fire sprinkler system normally will not be shut-off. However, refusal to test and maintain the BPA of a fire system will result in fees for testing by a WHWC representative as specified in the fees approved by WHWC Board of Directors.

If it is determined that there is an immediate hazard to WHWC's Potable Water distribution system, the following steps shall be taken:

- Immediately discontinue of the Water User's Potable Water service, except in cases of Critical Service; i.e.: Hospital, Convalescent Facility, and Home Dialysis Care.
- Verbally notify the Water User of the discontinuance and the reason for the action.
- Notify WHWC office personnel and create a work order and then document reasons.
- Follow up with a letter to the Water User listing the corrections required prior to restoring Potable Water service.
- If WHWC personnel suspect that a Backflow incident is likely to create or has created a Contamination risk, WHWC will notify the Regional Water Control Board and local health departments.

**Note:** See WHWC Backflow SOP for Termination of Water Service.

## **15.0 TESTING AND MAINTENANCE**

### **15.1 BACKFLOW PREVENTION ASSEMBLY TESTING MAINTENANCE AND REPAIR**

BPA's shall be installed and tested in accordance with WHWC specifications and California Code of Regulations, Title 17. The testing, maintenance and repair of water meter protection BPA's must be performed by personnel who are on WHWC Certified Backflow Prevention Assembly Testers List. The WHWC Tester List can be found obtained from WHWC office staff. The BPA providing meter service protection must be approved by WHWC and must be installed and tested according to WHWC approved standards. BPA testing must follow the methodology as specified in the current edition of the USC FCCC Research Manual of Cross-Connection Control.

The cost of any testing, maintenance, repair, or replacement of the BPA is the Customer's responsibility. WHWC is not responsible for work performed by a Tester or any associated costs incurred.

## **16.0 CUSTOMER NOTIFICATION OF TESTING AND MAINTENANCE**

### **16.1 ANNUAL NOTICE**

WHWC or designee will notify each Responsible Owner or Water User of the date by which the required annual testing of the involved BPA must be completed and when the backflow test report must be furnished to WHWC. Written notice will be given by WHWC representatives not less than thirty (30) calendar days before the completion date set forth therein. WHWC or designee will supply to the Customer with the tester name that last tested the customers backflow assembly. A list of Backflow Testers who are on the WHWC's Accepted Tester list shall be made available upon request.

### **16.2 SECOND NOTICE**

Second notice shall be sent, giving a 15-day due date.

### **16.3 FINAL NOTICE**

Final notice shall be sent, or a phone call will be made to the Owner or Water User who does not comply with the requirements of said first and second notice. The final notice will advise the Responsible Owner or Water User that corrective actions will be made by WHWC.

Note: Any backflows not tested by date stated in second notice will be sent to an approved tester to test the non-compliant backflow device. The backflow will be tested, and fee applied to the customer's bill.

### **16.4 REPAIR NOTICE**

Upon receipt of a failed BPA test report WHWC will send the Customer a BPA repair notice, allowing fifteen (15) days for repairs, retest, and submission of BPA test report. (BPA test report must show passing values).

### **16.5 NON-COMPLIANCE**

If a Customer does not comply with the annual BPA testing requirement, or any other requirement made a part of testing requirements, within the specified time-frame, WHWC will have the backflow assembly tested or repaired by an approved tester and the cost of the testing/repair and associated administrative costs will be applied to the customer's bill.

If unable to test the assembly non-compliance, WHWC will notify customer by phone call or door knocker and will discontinue the water supply if requirement is not met.

## **17.0 WELLS**

### **17.1 WELL ABANDONMENT**

To negate the requirement for an RP at the water Service Connection of a property where there is a well on the premises, the well must be properly abandoned/destroyed in per the California

Department of Water Resources Public Health and Safety Code, Part 9.5, Section 115700.

Proof of proper and approved abandonment or destruction from San Bernardino County Department of Environmental Health must be provided to WHWC.

It is the responsibility of the well owner to destroy abandoned wells per code.

Unused and abandoned wells can allow for contamination of aquifers used as drinking water sources. The risk of groundwater contamination increases when other wells are operating, since pumping can draw poor quality water down the abandoned well and into the drinking water aquifer. To prevent unnecessary contamination, wells that are no longer being used must be destroyed.

The deconstruction work must be completed by a State licensed contractor.

## **17.2 WELL BACKFLOW PROTECTION**

Wells equipped with chemical injection devices and/or Non-Potable Water treatment devices, including connections to Recycled or Raw Water shall have a BPA or AG per San Bernardino County Ordinance

Non-Potable Water wells may be interconnected with Recycled Water providing a BPA or AG is installed as well head protection. This well head protection can be a testable double check BPA that is listed on the USC FCCC list of approved BPAs. Interconnections shall only be allowed through cooperation with and approved by WHWC Cross-Connection Control Specialist after an inspection and BPA test has been completed.

If the wells are on a site that uses the aquifer for a small water system, the determination for well head protection should be made by the appropriate regulatory agency, usually the local Health Agency for small water systems.

Dormant or inactive wells shall not be interconnected in any way with Recycled Water.

## **17.3 AGRICULTURAL WELLS**

If use of a well is discontinued, all piping and electrical equipment must be removed from the well, and all well head outlets must be flanged or capped. In addition to proper well abandonment as stated in 17.1.