



Policy Number:	6030
Policy Title:	Cross-Connection & Backflow Prevention

1. GENERAL

1.1. The Fair Oaks Water District (FOWD) shall maintain a cross-connection and backflow prevention program that meets current regulatory requirements.

2. PURPOSE

2.1. The purpose of this policy is to protect the FOWD public water system from pollution and contamination due to cross-connections by establishing and implementing a cross-connection and backflow prevention plan that meets the requirements of both the California State Water Resources Control Board (State Water Board) Cross-Connection Control Policy Handbook (CCCPH) and California Uniform Plumbing Code (UPC).

2.2. The cross-connection and backflow prevention plan shall promote the elimination and control of both actual and potential cross-connections and backflow between the public water system and all other sources.

3. AUTHORITY

3.1. The FOWD Cross-Connection and Backflow Prevention Program will be coordinated by the FOWD Cross-Connection Control Program Coordinator under the direction of the General Manager.

4. DEFINITIONS

4.1. "Air-Gap Separation" (AG) means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, plumbing fixture, receptor, or assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet, and never less than one (1) inch, and conform with California UPC.

4.2. "Auxiliary Water Supply" means any water supply on a parcel, or available to a customer, other than water supplied by the FOWD. Auxiliary water supply includes private wells, water supplied by a non-FOWD source, reclaimed water

systems, recycled water systems, ornamental fountains with recirculating pumps, ponds, storage tanks, streams, reservoirs, swimming pools, rain barrels, etc.

- 4.3. “Backflow” means an undesired flow of water and/or other liquid, gases, or other substance into the public water system’s distribution system.
- 4.4. “Backflow Prevention Assembly” (BPA) means an air gap or a plumbing device that is intended to prevent the backflow of liquids or gases into the public water system. Such devices must be accepted or acceptable under applicable specifications or standards stated or cited in this policy or accepted as suitable for the proposed use under procedures and authority of the FOWD.
- 4.5. “Care Facility” means buildings where there is health care provided. Care facilities include hospitals, doctor’s offices, dental offices, chiropractic offices, urgent care centers, surgery centers, medical clinics, nursing homes, pharmacies, medical laboratories, convalescent homes, day nurseries, veterinary offices, sanitariums, etc.
- 4.6. “Certified Backflow Prevention Assembly Tester” means a person who has been certified as having the necessary training and competence to test backflow prevention assemblies by the California-Nevada Section of the American Water Works Association.
- 4.7. “Commercial Facility” means buildings or land intended to generate a profit including industrial and manufacturing operations. Commercial facility includes automotive repair shops, automotive sales, bars, beverage bottling plants, breweries, businesses that use a carbonator, businesses that use chemical spray or cleaning equipment, canneries, car washes, cemeteries, chemical processing plants, concrete sales, cold storage shops, crematories, dairy processing plants, dry cleaning shops, dye works, film processing stores, florist shops, gas stations, green houses, grocery stores, hair salons, hotels, ice manufacturing plants, indoor fitness clubs with spa or pool, laundromats, metal manufacturing/processing/fabricating plants, mobile home parks, morgues, mortuaries, multifamily housing complexes, nail salons, office buildings, oil/gas production and storage businesses, packing houses, paper manufacturing plants, pet stores, plastic manufacturing plants, plating shops, public swimming pools, radiator shops, radioactive materials or substances processing and/or storage plants, restaurants, retail stores, rubber manufacturing plants, sand and gravel yards, sewage treatment plants, shopping centers, taxidermists, warehouses, etc.
- 4.8. “Contamination” A degradation of the quality of the potable water by any foreign substance which creates a hazard to public health, or which may impair the usefulness or quality of the water.

- 4.9. “Cross-Connection” means any actual or potential connection or structural arrangement between the public water system and any source or system containing an unapproved substance as determined by the FOWD.
- 4.10. “Cross-Connection Control Specialist” means a person certified as a cross-connection control specialist by the California-Nevada Section of the American Water Works Association.
- 4.11. “Customer” means any person or entity receiving water from the FOWD.
- 4.12. “Dedicated Irrigation Service” means a water service connection designated to supply outdoor watering.
- 4.13. “Degree of Hazard” means an evaluation of potential risk to public health and the adverse effect of the hazard upon the public water system.
- 4.14. “EMD” means the Sacramento County Environmental Management Department.
- 4.15. “FOWD” means the Fair Oaks Water District and the authorized representatives of the Fair Oaks Water District.
- 4.16. “Fire Protection Service” means a water service connection designated to supply water to a private fire protection system.
- 4.17. “Health Hazard” means any condition that may introduce a substance into the public water system that may adversely affect public health.
- 4.18. “Looped System” means two or more interconnected public water system connections on a single parcel.
- 4.19. “Non-Potable Water” means water that is not safe for human consumption as described by the public health authority having jurisdiction.
- 4.20. “Pollution” means the presence of any foreign substance in water that tends to degrade its quality, create a potential non-health hazard or impair the usefulness of the water.
- 4.21. “Potable Water” means water that is safe for human consumption as described by the public health authority having jurisdiction.
- 4.22. “Parcel” means a piece of land that has a specific Sacramento County assigned parcel number, together with any buildings and appurtenances located on that land.
- 4.23. “Public Water System” means the water supply infrastructure owned and operated by the FOWD.

- 4.24. “Reduced-Pressure Principle Backflow Prevention Assembly” (RP) consist of two independently acting internally loaded check valves, a differential pressure-relief valve located between the check valves and below the first check valve, four properly located resilient seated test cocks, and two resilient seated isolation valves on upstream and downstream sides of check valves.
- 4.25. “Reduced-Pressure Principle Detector Backflow Prevention Assembly” (RPDA) means an assembly composed of an RP with a bypass containing a water meter and an RP. The meter detects water used for all rates of flow.
- 4.26. “Service Connection” means the point at which the public water system piping connects to a customer’s private water system piping. Typically, this is located at the downstream end of the water meter.
- 4.27. “Shared Service” means water service connection provided by the FOWD to a single parcel that is plumbed downstream of the meter to supply water to the intended parcel and one or more adjacent parcel(s).
- 4.28. “State Water Board” means the California State Water Resources Control Board.

5. CROSS-CONNECTION PROTECTION REQUIREMENTS

- 5.1. A FOWD approved backflow prevention assembly is required at the service connection where an actual or potential health hazard to the public water system exists. FOWD prohibits any unprotected cross-connections to the public water system. Specific conditions that require cross-connection protection are listed below. FOWD will evaluate conditions not listed below on a case-by-case basis.
- 5.1.1. At each service connection to a parcel where substances harmful to health are handled in a manner that could permit entry into the public water system, or that has activity that may cause pollution or contamination of the public water system.
- 5.1.2. At each service connection to a parcel using unapproved water; including water originating from the public water system which is or may be subject to deterioration in water quality.
- 5.1.3. At each service connection to a parcel having a repeated history of cross-connections.
- 5.1.4. At each service connection to a parcel where the specific business activity cannot be ascertained.

- 5.1.5. At each service connection to a parcel where the parcel owner has disallowed FOWD personnel, or FOWD personnel can't access the parcel to inspect for compliance with this policy.
- 5.1.6. At each service connection providing water to:
 - 5.1.6.1. A dedicated irrigation service.
 - 5.1.6.2. A fire protection service.
 - 5.1.6.3. A looped system.
 - 5.1.6.4. A residential domestic fire service.
 - 5.1.6.5. A water tank truck.
 - 5.1.6.6. Construction.
 - 5.1.6.7. New development (future FOWD facilities – not conveyed).
 - 5.1.6.8. Sewer flushing through manhole or clean out.
 - 5.1.6.9. Water mains (private) not owned or maintained by the FOWD.
- 5.1.7. At each service connection to a parcel having, but not limited to, the following:
 - 5.1.7.1. An auxiliary water supply.
 - 5.1.7.2. A building that exceeds forty feet in height as measured from the service connection to the highest water outlet.
 - 5.1.7.3. A building that uses a boiler.
 - 5.1.7.4. A Building that uses a booster pump or elevated storage tank to distribute water.
 - 5.1.7.5. A Building that uses a recirculating pump and/or hot water system.
 - 5.1.7.6. A Building that uses a sewage pump and/or a sewage ejector.
 - 5.1.7.7. A Building that uses a solar heating system.
 - 5.1.7.8. A Building that uses water-cooled compressors, degreasers, and/or water-cooled equipment.
 - 5.1.7.9. A care facility.

- 5.1.7.10. A church.
- 5.1.7.11. A commercial facility.
- 5.1.7.12. An irrigation system.
- 5.1.7.13. A school, college, or university.
- 5.1.7.14. A sewage and/or storm drain facility.

5.2. The type of backflow prevention assembly required to prevent backflow into the public water system shall be commensurate with the degree of hazard that exists on the customer's parcel.

5.2.1. AG – May be required where conditions related to sewage and hazardous substances are handled in any manner which substances may enter the public water system and/or an unapproved auxiliary water supply is interconnected with the public water system.

5.2.2. RP – Required on all service connections that have a condition/application that is causing a cross-connection, excluding fire protection service connections (see below for fire service protection requirements) and conditions that require an AG.

5.2.2.1. Existing non-testable backflow prevention assemblies must be replaced with an RP.

5.2.3. RPDA – Required on all fire protection service connections dedicated to supply water for fire protection only.

5.2.3.1. Where an existing fire protection service is fitted with a BPA other than an RPDA, the customer is required to have the BPA replaced with FOWD approved RPDA within a timeframe established by the FOWD.

5.3. Other than domestic water supplied to FOWD approved residential community condominiums and/or commercial office complexes, the FOWD does not allow a service connection to provide water to more than one parcel.

5.4. Any customer who bypasses or alters an installed backflow protection assembly, as required by this policy, including connection of any appurtenances to the assembly test valves for use other than assembly testing, is in violation of this policy.

6. APPROVED BACKFLOW PREVENTION ASSEMBLIES

- 6.1. Backflow prevention assemblies required by this policy and the cross-connection control plan must be approved by the FOWD. Proper sizing of the BPA is the responsibility of the owner/operator of the service.
 - 6.1.1. BPAs must be installed in accordance with manufacturer specifications and FOWD requirements.
 - 6.1.2. BPAs must be kept functional and routinely maintained. When an assembly is found to be defective, it must be repaired or replaced.
- 6.2. Existing testable backflow prevention assemblies may be accepted for continued use unless a higher degree of protection is required. If an assembly is no longer on the current list of approved backflow prevention assemblies, continued use of existing backflow prevention assembly may be allowed if the assembly can be properly tested and maintained.

7. BACKFLOW ASSEMBLY TESTING AND REPORTING REQUIREMENTS

- 7.1. Backflow prevention assemblies must be tested by a certified backflow prevention assembly tester at least annually and immediately after installation, relocation, repair or service activation. More frequent testing may be required if deemed necessary by the FOWD.
 - 7.1.1. As a condition of water service, the FOWD will perform the initial backflow prevention assembly testing and certification for all new water service installations at the expense of the customer.
- 7.2. Required air gap separations will be visually inspected by FOWD staff at least annually.
- 7.3. Backflow prevention assembly tests must be performed by a certified backflow prevention assembly tester.
 - 7.3.1. The FOWD shall maintain a certified backflow prevention assembly tester on staff.
 - 7.3.2. The FOWD shall maintain a cross-connection control specialist on staff.
 - 7.3.3. The FOWD may perform backflow prevention assembly testing and certification at the expense of the customer to meet the requirements of this policy.
- 7.4. Backflow prevention assembly test results must be filed with the EMD within twenty (20) calendar days after the test is performed.

- 7.5. When a backflow prevention assembly is tested and fails the testing procedure, the certified backflow prevention assembly tester must affix a “failed” tag to the assembly and notify the FOWD within 24 hours. The customer must have the assembly repaired/replaced and/or retested within 30 days of notification of the failure.
- 7.6. If the customer fails to conduct annual backflow prevention assembly testing by the annual testing date requirement, the EMD will send the customer notification to test the backflow prevention assembly at the service connection within fifteen (15) days of the date of the notice.
- 7.7. If the backflow prevention assembly is not tested by the timeframe given on the first notification, the EMD will send the customer a notice of non-compliance and violation of Sacramento County Code. The notice will direct the customer to correct the violation within 15 days of the date of the notice.
- 7.7.1 The FOWD will receive a copy of the notice of non-compliance from the EMD.
- 7.8. Any customer that receives a notice of non-compliance for failure to conduct annual backflow assembly testing or of having a device in need of repair or replacement is in violation of this policy.
- 7.9. Where the EMD has issued a notice of non-compliance to the customer for failure to conduct annual backflow assembly testing or the customer has not resolved the cross-connection issue, the FOWD will begin the process of shutting off public water supply to the parcel. When determined necessary by the FOWD, FOWD staff will perform backflow prevention assembly testing and certification at the expense of the customer.
- 7.9.1. The FOWD will post a notice at the property at least 48 hours prior to taking action to enforce this policy.
- 7.10. Where the FOWD has performed backflow prevention testing and certification for the customer, the FOWD will bill the customer a backflow device testing fee for each backflow prevention assembly tested.
- 7.10.1. The backflow device testing fee amount is determined and approved during the annual budget process and is listed in the annual budget fee schedule.
- 7.10.2. The backflow testing fee must be paid in accordance with FOWD policies to avoid termination of water service.

8. CUSTOMER RESPONSIBILITY

- 8.1. The customer owns the BPA and all plumbing downstream of the service connection.
- 8.2. The customer is responsible for the proper sizing of the BPA.
- 8.3. Where a backflow prevention assembly is required by the FOWD, it is the responsibility of the customer to furnish, install, maintain and test the backflow prevention assembly in accordance with FOWD requirements.

9. AUTHORITY TO CONDUCT SURVEY

- 9.1. The FOWD will conduct hazard assessment survey of customer premises in accordance with the requirements of the CCCPH and the current FOWD Cross Connection Control Plan.
- 9.2. A FOWD cross-connection control specialist may conduct a survey at any parcel within the FOWD service area to verify compliance with this policy. The survey will determine if an actual or potential health hazard poses a threat to the FOWD public water system.
- 9.3. The customer's parcel, including access to any facilities and pertinent records, shall be accessible for inspection for cross-connection conditions at all reasonable times by the FOWD, and is a prerequisite for receiving water service.
- 9.4. If the FOWD determines that a parcel within the FOWD service area requires a survey, a written notice will be issued to the customer at least five (5) business days prior to the date of the survey. In the event that the customer does not allow the FOWD to conduct the survey or refuses entry to any building or area requiring inspection, the customer is in violation of this policy.
- 9.5. Any customer, who does not allow FOWD personnel to inspect the parcel for compliance with this policy, is required to install a backflow prevention assembly, as required by this policy.

10. SURVEY RESULTS REQUIRE INSTALLATION OF BACKFLOW PREVENTION ASSEMBLY

- 10.1. Where parcel survey results require the installation of a backflow prevention assembly on an existing active water service connection, the FOWD will immediately send the survey results to the EMD for processing. Typical EMD processing is as follows:
 - 10.1.1. The EMD will send the customer notification to install backflow prevention assembly at the service connection within fifteen (15) days of the date of the notice.

- 10.1.2. If the backflow prevention assembly is not installed by the timeframe given on the first notification, the EMD will send the customer a notice of non-compliance and violation of Sacramento County Code. The notice will direct the customer to correct the violation within 15 days of the date of the notice.
- 10.1.3. The FOWD receives a copy of the notice of non-compliance.
- 10.1.4. Any customer that receives a notice of non-compliance from the EMD for failure to install a backflow prevention assembly is in violation of this policy.

11. WATER SERVICE TERMINATION

- 11.1. If it is determined that a backflow prevention assembly is required, the installation of the assembly must be in compliance with this policy and shall be a condition of continued water service. Conditions of water uses that create a basis for water service termination include, but are not limited to, the following cross-connection issues:
 - 11.1.1. Customers that violate any provisions of this policy;
 - 11.1.2. Customers that refuse to furnish, install or maintain the backflow prevention assembly in accordance with FOWD requirements;
 - 11.1.3. Customers that fail to conduct annual backflow prevention assembly testing as required by this policy;
 - 11.1.4. Customers that refuse to eliminate a shared water service connection required by this policy;
 - 11.1.5. Unprotected direct or indirect connection between the public water system and a sewer line;
 - 11.1.6. Unprotected direct or indirect connection between the public water system and contaminants and/or pollutants.
- 11.2. After reasonable notice to the customer who is in violation of this policy, the FOWD shall terminate water service to the property by locking off or removing the customer's water meter.

When the FOWD encounters a clear and immediate health hazard to the public water system that cannot be immediately abated, the procedure for terminating water service may be instituted without notice.

11.2.1. The FOWD will make a reasonable attempt to notify the customer to whom the service is provided, by posting a notice of termination of water service, at least 48 hours prior to termination of water service.

11.2.1.1. Where the EMD has issued a notice of non-compliance to the customer, and the customer has not resolved the cross-connection issue, the FOWD will post a notice at the property specifying date water service will be terminated.

11.2.1.2. If the customer fails to resolve the cross-connection issue within the time required by such notice (see 11.2.1.1.), the FOWD may terminate water service.

11.2.2. The FOWD will notify the customer immediately of the reasons for termination of the water service and the corrective action to be taken by the customer before water service can be restored.

11.2.3. Water service restoration will be in accordance with FOWD Policy 6220.

12. NEW DEVELOPMENT

12.1. As a condition of approval for water service for any new development project, all plans and specifications shall be subject to review by the FOWD for conformance with this policy.

13. RECORD KEEPING

13.1. The FOWD will maintain records in accordance with the requirements of the CCCPH and the current FOWD Cross Connection Control Plan for BPA test results and surveys performed within the FOWD service area.

14. PUBLIC OUTREACH AND EDUCATION

14.1. The FOWD will maintain a public outreach and education program in accordance with the requirements of the CCCPH and the current FOWD Cross Connection Control Plan.