



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.

2. PURPOSE

2.1. The purpose of this policy is to protect the public water system from contamination due to cross-connection with the establishment of a continuing cross-connection and backflow prevention program in accordance with California Code of Regulations, Title 17.

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

3. AUTHORITY

3.1. FOWD is responsible for implementing and enforcing this policy.

3.2. The California Environmental Management Department (Department) is the administrator of the FOWD cross-connection and backflow prevention program pursuant to the California Code of Regulations (CCR) Section 7584 and California Health and Safety Code (HSC) Section 116805.

3.3. The Department shall provide general oversight and support to the FOWD by maintaining pertinent backflow prevention assembly testing information, issuance of violation letters and safeguarding cross-connection standards within the FOWD boundaries.

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.

- 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 the flow of water or other liquids, mixtures, or substances into the distributing pipes of the public water system from any source.
- 4.4. "Backflow prevention assembly" 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 facility includes 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 or an organization with equivalent certification requirements.
- 4.7. "Commercial facility" means buildings or land intended to generate a profit including industrial and manufacturing factories. 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" means an impairment of the quality of the water that creates an actual hazard to the public health.
- 4.9. "Cross-connection" means an unprotected actual or potential connection between the public water system and any source or system containing unapproved water or a substance that is not safe, wholesome and potable.
- 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 or an organization with equivalent certification requirements.
- 4.11. "Customer" means any person or entity to which FOWD delivers water.
- 4.12. "Dedicated irrigation service" means a water service connection designated to supply water for outdoor watering of ornamental landscape or turf.
- 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. "Department" means the Division of Drinking Water for State Water Resources Control Board and/or the Environmental Management Department, for the County of Sacramento and the authorized representatives of those Departments.
- 4.15. "FOWD" means the Fair Oaks Water District and the authorized representatives of the Fair Oaks Water District.
- 4.16. "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).
- 4.17. "Fire protection service" means a water service connection designated to supply water to a private fire protection system.
- 4.18. "Health hazard" means any substance introduced in the potable water system that may adversely affect public health.
- 4.19. "Looped system" means two or more interconnected water service connections provided by the FOWD to single parcel.
- 4.20. "Non-potable water" means water that is not safe for human consumption as described by the public health authority having jurisdiction.
- 4.21. "Pollution" means the presence of any foreign substance in water that tends to degrade its quality to constitute a potential non-health hazard or impair the usefulness of the water.

- 4.22. “Potable water” means water that is safe for human consumption as described by the public health authority having jurisdiction.
- 4.23. “Parcel” means a piece of land together with any buildings and appurtenances located on that land.
- 4.24. “Public water system” means the potable water supply system of the FOWD, including all sources and facilities approved by or under the public health supervision of the State Water Resources Control Board Division of Drinking Water.
- 4.25. “Reduced-pressure principle backflow prevention assembly” (RP) means an assembly that consists of two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two tightly closing resilient-seated shutoff valves as an assembly and are equipped with properly located resilient-seated test cocks.
- 4.26. “Reduced-pressure principle detector backflow prevention assembly” (RPDA) means an assembly composed of an RP with a bypass containing a specific water meter and an RP. The meter detects water used for all rates of flow (not for billing).
- 4.27. “Service connection” means the point at which the public water system piping connects to the customer water system piping. Typically, this is located at the downstream end of the water meter.

5. CROSS-CONNECTION PROTECTION REQUIREMENTS

- 5.1. A backflow prevention assembly is required at the service connection in accordance with FOWD specifications where an actual or potential health hazard to the public water system exists. FOWD prohibits any unprotected cross-connections with the public water system. See below for specific conditions that require cross-connection protection. FOWD will evaluate conditions not listed below on a case-by-case basis – see “Authority to Conduct Survey” below.
- 5.1.1. At each service connection to a parcel where substances harmful to health are handled in a manner, which could permit entry into the public water system, or substance is found that the equipment, mechanism, chemical or substance may cause pollution or contamination of the public water system.

- 5.1.2. At each service connection to a parcel using unapproved water or a substance that is not or cannot be approved as safe, wholesome and potable; 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 to inspect the parcel 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 into which fertilizers, herbicides, pesticides are, or can be, injected.
 - 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. A RP backflow prevention assembly may be allowed in lieu of an AG if approved by the Department and the FOWD.
 - 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.
 - 5.2.3. RPDA – Required on all fire protection service connections (dedicated to supply water for fire protection only).
 - 5.2.3.1. Fire protection service connections currently protected with a backflow prevention assembly other than an RPDA will be allowed to remain in service until such system or parcel is disconnected, modified, updated, or assembly is relocated or found defective.

- 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. Shared service connections found in place create a cross-connection that must be eliminated by physical separation of the private plumbing between parcels; and, if requested by the customer, a new service connection installed to provide water to the affected parcel(s), at the expense of the customer.
- 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 program shall be a model and size as approved by the FOWD. Installed backflow prevention assemblies must conform to manufacturing specifications and laboratory and field performance standards established by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research - list of current approved backflow prevention assemblies.
 - 6.1.1. Backflow prevention assemblies must be kept functional (as designed). No assembly shall be placed in service unless it has been tested and considered functional by a certified backflow prevention assembly tester. When an assembly is found to be defective, it must be repaired or replaced, as required by this policy.
- 6.2. Existing 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 at least annually and immediately after installation, relocation or repair and/or service activation (if not tested within previous one-year period). More frequent testing may be required if deemed necessary by the FOWD and/or the Department.
 - 7.1.1. As a condition of water service, the FOWD will perform the initial backflow prevention assembly testing and certification for all new assembly installations, at the expense of the customer, as required by this policy.

- 7.2. Backflow prevention assembly tests must be performed by a certified backflow prevention assembly tester.
 - 7.2.1. The FOWD shall maintain a certified backflow prevention assembly tester on staff.
 - 7.2.2. The FOWD shall maintain a cross-connection control specialist on staff.
 - 7.2.3. The FOWD will perform annual backflow prevention assembly testing and certification at the request of the customer, at the expense of the customer, as required by this policy.
- 7.3. Backflow prevention assembly test results must be filed with the Department within twenty (20) calendar days after the test is performed.
- 7.4. 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 is allowed to make arrangements to have the assembly repaired/replaced and/or retested.
- 7.5. If the customer fails to conduct annual backflow prevention assembly testing by the annual testing date requirement, the Department 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.
- 7.6. If the backflow prevention assembly is not tested by the timeframe given on the first notification, the Department will send the customer a notice of non-compliance (a 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. The FOWD typically receives a copy of the notice of non-compliance.
- 7.8. Any customer that receives a notice of non-compliance from the Department for failure to conduct annual backflow assembly testing (including devices in need of repair and/or replacement for any reason) is in violation of this policy.
- 7.9. Where the Department has issued a notice of non-compliance to the customer for failure to conduct annual backflow assembly testing, and the customer has not resolved the cross-connection issue, the FOWD may take action and perform backflow prevention assembly testing and certification, at the expense of the customer, for assemblies on active water service connections.
 - 7.9.1. The FOWD will post a notice at the property, at least 48 hours prior to taking action, specifying action (e.g. perform backflow prevention assembly testing and certification) that may be taken if the customer fails to test the assembly by the date specified.

7.9.2. If the customer fails to test the assembly within the time required by such notice (see 7.9.1), the FOWD may take action (as specified on the notice in 7.9.1.).

7.10. Where the FOWD has performed backflow prevention testing and certification for the customer, the FOWD may 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 backflow prevention assembly and all plumbing downstream of the service connection.

8.2. Where a backflow prevention assembly is required by the FOWD, it is the responsibility of the customer to furnish, install and maintain the backflow prevention assembly in accordance with FOWD specifications, as required by this policy, at the expense of the customer.

8.3. It shall be the duty of the customer at any parcel where a backflow prevention assembly is installed, to provide a test report to the Department annually demonstrating the assembly has been tested by a certified backflow prevention assembly tester and is functioning properly, as required by this policy, at the expense of the customer

9. AUTHORITY TO CONDUCT SURVEY

9.1. A FOWD cross-connection control specialist may conduct a survey at any parcel to verify compliance with this policy and shall determine if an actual or potential health hazard poses a threat to the public water system.

9.2. 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.

9.3. If a survey is required, as determined by the FOWD, 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.

- 9.4. 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 service connection, the FOWD will immediately send the survey results to the Department for processing. Typical Department processing is as follows:
- 10.1.1. The Department 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 Department will send the customer a notice of non-compliance (a 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 Department 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 shall include, but are not limited to, the following cross-connection issues:
- 11.1.1. Any customer, who violates any provisions of this policy;
- 11.1.2. Customer refuses to furnish, install or maintain the backflow prevention assembly in accordance with FOWD specifications, as required by this policy;
- 11.1.3. Customer fails to conduct annual backflow prevention assembly testing, as required by this policy;
- 11.1.4. Customer refuses to eliminate a shared water service connection, as required by this policy;

11.1.5. Unprotected direct or indirect service connection between the public water system and a sewer line;

11.1.6. Unprotected direct or indirect service connection between the public water system and a system containing contaminants.

11.2. After reasonable notice to the customer, who is in violation of this policy, the FOWD shall terminate water service by locking off or removing the customer's meter to the service connection with the unresolved cross-connection issue.

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 Department 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 resolved 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 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 Discontinuance and Restoration of Service.

12. NEW DEVELOPMENT

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