ELK GROVE WATER DISTRICT

CROSS-CONNECTION CONTROL PROGRAM

October 2018

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Forms

Elk Grove Water District
Cross-Connection Control Program

1 Requirement for Program

1.1 **Elk Grove Water District*, Public Water System No. 3410008,*** (EGWD), has the responsibility to protect the public water system from contamination due to cross connections. A cross connection may be defined as "any actual or potential physical connection between a potable water line and any pipe, vessel, or machine that contains or has a probability of containing a non-potable gas or liquid, such that it is possible for a non-potable gas or liquid to enter the potable water system by backflow."

1.1.1 All public water systems are required to develop and implement cross-connection control programs (CCCP). The CCCP requirements are contained in the *California Code of Regulations (CCR), Title 17, Sections 7583-7605 "Regulations Relating to Cross-Connections."* The minimum required elements of a CCCP are as follows:

1.1.1.1 The adoption of operating rules or ordinances to implement the cross connection program,

1.1.1.2 The conducting of surveys to identify water user premises where cross connections are likely to occur,

1.1.1.3 The provisions of backflow prevention by the water user at the user's connection or within the user's premises or both,

1.1.1.4 The provision of at least one person trained in cross-connection control to carry out the cross-connection program,

1.1.1.5 The establishment of a procedure or system for testing backflow prevention devices, and

1.1.1.6 The maintenance of records of locations, tests, and repairs of backflow prevention devices.

1.2 **Other requirements of a CCCP include:**

1.2.1 Public education of customers;

1.2.2 Coordination with the local fire and City officials, such as building or planning departments, regarding cross-connection control activities;

1.2.3 Response to backflow incidents;

1.2.4 Inclusion of a written CCCP; and

1.2.5 Prohibition of the intentional return of used water.

2 Program Objectives

2.1 The objective of the CCCP is to:

2.1.1 Reasonably reduce the risk of contamination of the public water system.

3 Required Elements of CCCP

3.1 Adoption of *Ordinance 10.17.18.01, An Ordinance of the Florin Resource Conservation District Board of Directors Defining Backflow and Cross-Connection Control Requirements for the Elk Grove Water District*

3.1.1 The EGWD has adopted an Ordinance, *An Ordinance of the Florin Resource Conservation District Board of Directors Defining Backflow and Cross-Connection Control Requirements for the Elk Grove Water District*, which authorizes the EGWD to implement a CCCP to protect the public water system.

3.1.1.1 The primary method for protecting the public water system shall be the installation of a backflow prevention device by the customer, at the customer's expense.

3.1.1.2 The Ordinance also authorizes EGWD to terminate water service to customers who do not comply with the Ordinance.

3.2 Requirements and Schedules for Cross-Connection Surveys and Backflow Prevention Devices

3.2.1 Initial Cross-Connection Surveys

3.2.1.1 The procedures for evaluating the backflow prevention requirements for new and existing customers are as follows:

3.2.1.1.1 For all ***new non-residential services***, the EGWD shall require that the customer submit with the application for water service a "Water Use Questionnaire". If the customer's questionnaire indicates special plumbing or hazardous water use on the premises, the customer shall permit the EGWD Cross-Connection Control Specialist (CCCS) to conduct a cross-connection survey to determine the appropriate type of backflow prevention device. For those facilities and activities listed under section 3.2.2.1.1.2 of the CCCP, the backflow prevention devices prescribed shall be the minimum level of backflow protection installed.

3.2.1.1.2 For all ***new residential services***, the EGWD shall require that the customer submit with the application for water service a completed "Water Use Questionnaire". If the customer's questionnaire indicates special plumbing, including a lawn sprinkler system without vacuum breakers, or hazardous water use on the premises, the customer shall permit the EGWD CCCS to conduct a cross-connection survey to determine if the customer's water system poses a hazard to the public water system. The CCCS shall determine the appropriate backflow prevention device if required.

3.2.1.1.3 For all ***existing non-residential services***, when deemed necessary by the EGWD CCCS, the customer shall permit the EGWD CCCS to conduct a cross-connection survey to determine if the customer's water system poses a hazard to the public water system. The CCCS shall determine the appropriate backflow prevention device if required. For those facilities and activities listed under section 3.2.2.1.1.2 of the CCCP, the backflow prevention devices prescribed shall be the minimum level of backflow protection installed.

3.2.1.1.4 For all ***existing residential services***, when deemed necessary by the EGWD CCCS, the customer shall permit the EGWD CCCS to conduct a cross-connection survey to determine if the customer's water system poses a hazard to the public water system. The CCCS shall determine the appropriate backflow prevention device if required. For those facilities and activities listed under section 3.2.2.1.1.2 of the CCCP, the backflow prevention devices prescribed shall be the minimum level of backflow protection installed.

3.2.1.1.5 As an alternative to the above requirements for a cross-connection survey, the EGWD CCCS may use discretion and specify that a backflow prevention device be installed as a condition of service.

3.2.2 **Backflow Prevention Device Requirements**

3.2.2.1 The following policy shall apply to all new and existing customers:

3.2.2.1.1 **Requirements for premises isolation.** The EGWD has chosen to supplement *Section 7585 Evaluation of Hazard of CCR, Title 17* by identifying premises types for which premises isolation is mandated.

3.2.2.1.1.1 **Minimum level of backflow protection for specific facilities and activities.** The following list includes those facilities and activities requiring backflow protection with the minimum level indicated. This list may be subject to change based on the findings of EGWD's survey of the premises. This is a non-exclusive list and any facility or activity not shown may be required to install backflow prevention devices as determined by the CCCS.

Minimum Level of Backflow Protection:

1. Automotive Repair and Service Facilities – RPBA
2. Autopsy Facilities – RPBA
3. Auxiliary Water Systems (residential and non-residential)– RPBA
4. Bars - RPBA
5. Beverage Bottling Plant – RPBA
6. Breweries – RPBA
7. Buildings
   a. Any building with sewage pumps or ejectors – RPBA

b. Any building containing non-potable water reuse systems utilizing pumps – RPBA
c. Any building containing mechanical equipment using chemicals with a potable water makeup line connected to the mechanical equipment. – RPBA
d. Any building containing a carbonator (soft drink dispenser) -RPBA
e. Any non-residential or non-single family residential with an ornamental fountain– RPBA
f. Multi-storied building with over 40 feet in height from service connection or that uses booster pumps or elevated storage tank to distribute water on site – RPBA
g. Any commercial structure in which the specific business activity cannot be ascertained or is subject to change without a building permit - RPBA

8. Fire Protection Services.
   a. Serving Commercial Fire Sprinkler Systems and/or Private Fire Hydrants
      1. Systems utilizing only the EGWD water supply –DCVA
      2. Systems utilizing the EGWD water supply and that also contain chemical additives, on site water storage, auxiliary water supplies or fire booster pumps – RPBA
   b. Serving Residential Fire Sprinkler Systems
      1. Systems utilizing only the EGWD water supply through a combination service connection (domestic and fire) – DCVA
      2. Systems utilizing only the EGWD water supply through a separate service connection (fire only) – DCVA
      3. Systems utilizing the EGWD water supply through a combination service connection (domestic and fire) and that also contain chemical additives, on site water storage, auxiliary water supplies or fire booster pumps – RPBA
      4. Systems utilizing the EGWD water supply through a separate service connection (fire only) and that also contain chemical additives, on site water storage, auxiliary water supplies or fire booster pumps – RPBA
      5. Systems utilizing only the EGWD water supply that are constructed using a passive purge system where potable water flows completely through the piping (no dead ends) to prevent stagnant water.
9. Chemical Plants – Any premises, where the manufacturing, storing, compounding, or processing of chemicals occurs. Where chemicals are used as additives in the processing of products.- RPBA
10. Commercial Kitchens or Food Preparation Facilities - RPBA
11. Convalescent Homes - RPBA
12. Dairy Processing Plants - RPBA
13. Dental Clinics - RPBA
14. Dry Cleaning Facilities – RPBA
15. Fuel Storage or Dispensing Facilities - RPBA
16. Film Processing Facilities – RPBA
17. Florists - RPBA
18. Grocery Stores – RPBA
19. Hazardous or potentially hazardous treatment processes with pumping equipment. -RPBA

20. Hospitals – RPBA
21. Ice Manufacturing Plants – RPBA
22. Indoor Fitness facilities with a Spa or Pool – RPBA
23. Irrigation systems with capabilities for injecting fertilizers, or hazardous chemicals. –RPBA
24. Irrigation systems only single use meter – RPBA
25. Laboratories – including, but not limited to, teaching institutions, biological and analytical facilities.- RPBA
26. Laundries (Commercial) – RPBA
27. Lawn irrigation system – Vacuum Breaker
28. Massage Therapy Clinics and Spas - RPBA
29. Medical Building and Clinics – RPBA
30. Metal Manufacturing, Cleaning, Processing or Fabricating Plants - RPBA
31. Morgues – RPBA
32. Mortuaries – RPBA
33. Multiple Services: Includes two or more interconnected services provided by one or more water suppliers to a single Owner and/or Operator complex – RPBA
34. Nursing Homes - RPBA
35. Oil/Gas Production, Storage or Transmission premises – RPBA
36. Paper and Paper Products Manufacturing Plants – RPBA
37. Pet Stores – RPBA
38. Plastic Manufacturing, Extruding and Injection Molding – RPBA
39. Plating Plants – RPBA
40. Public or Commercial Swimming Pool – RPBA
41. Portable Spray or Cleaning Equipment which can be connected to the EGWD water system – RPBA
42. Radioactive Materials or Substances processing or storage – AG
43. Recycled Water – This includes premises where recycled water is used with no interconnection to the EGWD water system – RPBA
44. Restaurant - RPBA
45. Restricted, Classified, or Other Closed Facilities – RPBA
46. Rubber Manufacturing – RPBA
47. Salon, Hair and/or Nails - RPBA
48. Sand and Gravel Plants – RPBA
49. Sanitariums - RPBA
50. Schools, Colleges and University – RPBA
51. Sewer Treatment Facilities- AG
52. Solar Heating
    a. Solar collection systems that contain any hazardous materials and have a direct connection to the EGWD water system. – RPBA
    b. Solar system that is once through such as domestic hot water systems do not require protection.
53. Tank Trucks – AG
54. Vehicle Washing Facilities – RPBA
55. Veterinary Facilities, Kennels, Animal Boarding- RPBA

3.2.2.1.2 Purchased and installed by the customer (at the customer's expense) as close as practical to the discharge of the water meter or point-of-connection of the fire service, in accordance with the EGWD's Standard Construction Specifications and Standard Detail Drawings (EGWD Standards); and

3.2.2.1.3 Maintained, tested, and inspected in accordance with the EGWD Standards.

3.2.2.2 For new customers, the EGWD will not turn on water (except for testing purposes) at the meter until the customer complies with the above requirements for installation, testing and maintenance.

3.2.2.2.1 The failure of the customer to comply with the EGWD's installation, testing and maintenance requirements may result in termination of water service.

3.2.3 **Approved Backflow Prevention Devices Installation**

3.2.3.1 EGWD will ensure that approved backflow prevention devices protect the public water system from contamination. Any backflow prevention device required herein shall be of a type, make, model and size approved by University of Southern California Foundation for Cross Connection Control and Hydraulic Research (USCFCCCHR). The term "Approved Backflow Prevention Device" shall mean a device that has been manufactured in full conformance with the standards established by the American Water Works Association titled:

> AWWA/ANSI C510 07 *Standard for Double Check Valve Backflow Prevention Device*; AWWA/ANSI C511 07 *Standard for Reduced Pressure Principle Backflow Prevention Device*; and, have met completely the laboratory and field performance specifications of USCFCCCHR established in the most current edition of the Manual of Cross *Connection Control*.

3.2.3.1.1 Said AWWA and USCFCCCHR standards and specifications have been adopted by EGWD. Final approval shall be evidenced by a "Certificate of Compliance" for the said AWWA standards and a "Certificate of Approval" for the said USCFCCCHR Specifications, issued by an approved testing laboratory.

3.2.3.1.2 The following testing laboratory has been qualified by the SWRCB to test and approve backflow prevention devices and said qualification is adopted by EGWD:

Foundation for Cross Connection Control and Hydraulic Research
University of Southern California Research Annex 219
3716 South Hope Street
Los Angeles, California 90089-7700

3.2.3.2 All backflow prevention devices shall be installed accordingly:

3.2.3.2.1 As close as practical to the discharge of the water meter or point-of-connection of the fire service.

3.2.3.2.1.1 In no case shall a cut, tee, or tap be made between the customer's point of connection to the public water system and the backflow prevention device.

3.2.3.2.1.2 Backflow prevention devices shall be installed 12 to 36 inches above finished grade and with at least 12 to 24 inches of horizontal side clearance.

3.2.3.2.1.3 The orientation for which they are approved;

3.2.3.2.1.4 No post-manufacture modifications to backflow prevention devices shall be accepted.

3.2.3.2.1.5 In a manner and location that facilitates their proper operation, maintenance, and testing or inspection, and in compliance with safety regulations.

3.2.3.2.1.6 In a manner that protects them from flooding and freezing.

3.2.3.2.1.6.1 A Christy's backflow security freeze blanket (or comparable product), sized to properly fit, shall be installed over the backflow prevention device.

3.2.3.2.1.7 In accordance with the installation standards outlined in the most recently published edition of the USCFCCCHR *Manual of Cross-Connection Control*, unless the manufacturer's requirements are more stringent.

3.2.3.2.1.8 All backflow prevention device installations shall be inspected by the EGWD prior to backfill, to ensure compliance with these requirements.

3.2.3.2.1.9 All air gap separations shall be installed in conformance with the State adopted UPC.

3.2.3.2.1.10 Installations shall conform to the most current version of the EGWD Standards.

3.2.3.2.2 All presently installed backflow prevention devices which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation shall be excluded from the requirements of these rules if approved by the CCCS. . However, when the existing device is moved from the present location, or when the EGWD finds that the device constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention device meeting the requirements of EGWD.

3.2.3.2.3 Improper installations such as installation in a confined space or in an unapproved orientation shall be retrofitted with an approved method of backflow prevention installed in accordance with EGWD's installation requirements, at the expense of the customer, when repair of the device is required to pass a functional backflow test.

3.2.3.2.4 The EGWD has no regulatory responsibility or authority over the installation and operation of the customer's plumbing system. The customer is solely responsible for compliance with all applicable regulations and for prevention of contamination of the plumbing system from sources within his/her premises. Any action taken by the EGWD to survey plumbing, inspect or test backflow prevention devices, or to require premises isolation (installation of DCVA or RPBA on service) is solely for the purposes of reducing the risk of contamination of the EGWD's public water system.

3.2.4 **Schedule for Installation of Backflow Prevention Devices**

3.2.4.1 The following table shows the schedule that the EGWD will follow for installation of backflow prevention devices when they are required (based on the hazard evaluation).

Type of Service	Schedule
New Connections with cross-connection hazards	Before service is initiated
Existing connections with CCR Title 17 Table 1-type hazards and other contaminant cross-connection hazards	Within 30 days after notification
Existing connections other than CCR Title 17 Table 1-type hazards or pollutant cross-connection hazards	Within 60 days after notification
Existing fire protections systems using chemicals or supplies by unapproved auxiliary water source	Within 30 days after notification
Existing fire protection systems not using chemicals and supplied by EGWD's water	Within 90 days after notification

The EGWD may consider granting an extension of time for installation of a backflow prevention device for an existing service connection if requested by the customer.

3.2.5 **Program Administration**

3.2.5.1 The responsibility for administration of the CCCP rests with the EGWD. General policy direction and risk management decisions are established by the EGWD's General Manager.

3.2.5.2 The EGWD CCCS shall implement the CCCP.

3.2.5.3 The following cross-connection related tasks shall be performed by or under the direction of the EGWD's CCCS:

3.2.5.3.1 Recommendations regarding changes to the CCCP;

3.2.5.3.2 Performance of cross-connection control surveys;

3.2.5.3.3 Determinations on the type of backflow prevention device to be installed;

3.2.5.3.4 Inspections of backflow prevention device for proper application and installation;

3.2.5.3.5 Reviews of backflow prevention device inspection and test reports;

3.2.5.3.6 Recommendations and/or the granting of exceptions to mandatory requirement of backflow prevention device;

3.2.5.3.7 Investigations of backflow incidents or water quality problems related to cross-connections;

3.2.5.3.8 Completion of Backflow Incident Reports.

3.2.5.3.9 Completion of the Cross-Connection Control Section of the Annual Report to the Drinking Water Program required by the State Water Resources Control Board.

3.2.5.4 The EGWD may delegate other CCCP activities to other personnel who are not certified CCCSs, including clerical support staff. These activities include:

3.2.5.4.1 Administration of paperwork related to the CCCP;

3.2.5.4.2 Mailing, collecting, and initial screening of Water Use Questionnaires;

3.2.5.4.3 Mailing of device testing notices;

3.2.5.4.4 Receiving and screening of device testing reports;

3.2.5.4.5 CCCP database administration and record keeping;

3.2.5.4.6 Dissemination of public education material.

3.2.5.5 The following table identifies the current CCCS employed by EGWD:

Current Cross Connection Control Specialist Contact Information

Name of CCCS	Steve Shaw
Address	9257 Elk Grove Blvd.
City, State, Zip	Elk Grove, CA 95624
Telephone Number	(916) 585-9386
CCCS Certification Number	02079

3.2.6 Backflow Prevention Device Inspections and Testing

3.2.6.1 Inspection and Testing of Backflow Prevention Devices

3.2.6.1.1 All backflow prevention devices that the EGWD relies upon for protection of the public water system shall be subject to inspection and testing.

3.2.6.1.2 Inspection of backflow prevention devices shall be as follows:

3.2.6.1.2.1 The EGWD's CCCS shall inspect backflow prevention devices for proper application (i.e., to ensure that the device installed is commensurate with the assessed degree of hazard).

3.2.6.1.2.2 The CCCS or CA/NV AWWA-certified Backflow Assembly Tester (BAT) pre-approved by the EGWD shall inspect backflow prevention devices for correct installation.

3.2.6.1.3 Customers with a backflow prevention device on their premise shall have the device inspected and tested at least annually by an approved BAT.

3.2.6.1.4 When backflow prevention devices are determined to be defective, they shall be repaired or replaced by the customer within (14) calendar days in accordance with *Section 3.2.6.7,* or service will be discontinued as specified in *Section 3.2.6.8*.

3.2.6.2 Frequency of Inspection and Testing

3.2.6.2.1 Inspection and testing of backflow prevention devices shall be conducted:

3.2.6.2.1.1 At the time of installation;

3.2.6.2.1.2 Annually after installation;

3.2.6.2.1.3 After a backflow incident; and

3.2.6.2.1.4 After repair, reinstallation, relocation, or re-plumbing.

3.2.6.2.1.5 Any time the device is found to not be in good repair.

3.2.6.2.2 All air gap separations shall be inspected annually and after modifications to the installation.

3.2.6.2.3 The EGWD may require a backflow prevention device to be inspected and/or tested more frequently than once a year, when it protects against a high-health hazard or when it repeatedly fails tests or inspections.

3.2.6.3 Responsibility for Inspection, Testing and Repairs

3.2.6.3.1 The customer shall be responsible for inspection, testing and repair of backflow prevention devices and air gaps owned by the customer. The customer shall employ, at the customer's expense, a CA/NV AWWA-certified BAT pre-approved by the EGWD to conduct the inspection and test within the time period specified in the testing notice sent by the EGWD. The original test report shall be completed and signed by the BAT, and returned to the EGWD, before the due date specified by the EGWD.

3.2.6.3.2 The customer may request an extension of the due date for returning a test report by submitting a written request to the EGWD.

3.2.6.4 **Notification of Inspection and/or Testing**

3.2.6.4.1 The EGWD will notify in writing all customers who own backflow prevention devices that are relied upon to protect the public water system to have their backflow prevention device(s) tested. Notices will be sent out not less than 30 days before the due date of the test. The notice will also specify the date by which the inspection/test report must be received by the EGWD. If the District has not received a passed test report in the designated time frame, the enforcement policies in *Section 3.2.6.8.3* shall be applied.

3.2.6.5 **Approved Test Procedures**

3.2.6.5.1 The EGWD will require that all devices relied upon to protect the public water system be tested in accordance with CA/NV AWWA -approved test procedures as specified by the USCFCCCHR established in: "Field Test Procedures" – current edition of the *Manual of Cross-Connection Control.* Any proposal to use alternate test procedures must be approved by the EGWD's CCCS.

3.2.6.6 **Backflow Prevention Device Test Reports**

3.2.6.6.1 Test results shall be submitted within five (5) calendar days of the test date. Test results may be submitted electronically in PDF format or by mail or in person in original hard-copy format to:

Elk Grove Water District
Attention: Cross-Connection Control Program
9257 Elk Grove Blvd.
Elk Grove, CA 95624
crossconnection@egwd.org

3.2.6.7 **Repairs**

3.2.6.7.1 Any device that fails routine testing shall be repaired within fourteen (14) days of the initial test date.

3.2.6.7.2 The customer must notify EGWD if repairs cannot be made within the specified period.

3.2.6.7.3 Only Original Equipment Manufacturer (OEM) parts shall be used to repair backflow prevention devices. If OEM replacement parts are not available, then an approved new backflow prevention device must be installed to replace the existing device.

3.2.6.7.4 "Pursuant to section 116875 of California Health and Safety Code, any failed device that is not "lead free", that is not specifically exempted by section 116875, must be replaced with an approved "lead free" device rather than being repaired."

3.2.6.8 **Enforcement**

3.2.6.8.1 To enforce the Ordinance, it may become necessary to discontinue water service to a customer. Conditions that warrant discontinuance of service include but are not limited to the following:

3.2.6.8.1.1 When EGWD identifies a customer's water use that represents a clear and immediate hazard to the public water system that cannot be immediately abated.

3.2.6.8.1.2 Direct or indirect connection between the customer's water system and a sewer line.

3.2.6.8.1.3 Unprotected direct or indirect connection between the public water system and an auxiliary water system.

3.2.6.8.1.4 Refusal to inspect an air gap separation.

3.2.6.8.1.5 Refusal to install a required backflow prevention device.

3.2.6.8.1.6 Refusal to test a backflow prevention device.

3.2.6.8.1.7 Refusal to repair or replace a faulty backflow prevention device.

3.2.6.8.1.8 Refusal to upgrade a backflow prevention device to the necessary level of protection.

3.2.6.8.1.9 Any refusal to comply with the regulations set forth in this CCCP.

3.2.6.8.2 For conditions 3.2.6.8.1, EGWD shall notify the customer in writing specifying the corrective action needed and the time period in which it must be done. If no action is taken within the allowed time periods, water service shall be terminated and the customer's water system may be physically separated from the public water system. The water service shall remain inactive until correction of violation has been approved by EGWD.

3.2.6.8.2.1 To protect the public water system, EGWD reserves the right to immediately and without prior customer notification discontinue water service to a customer's premises by providing a physical break in the service line until the customer has corrected the condition(s) that warranted the discontinuance of service.

3.2.6.8.3 When a customer fails to send in the inspection/test report within 7 days after the due date specified, and the EGWD has not approved an extension to the due date, the EGWD shall take the following enforcement action:

3.2.6.8.3.1 The EGWD will send a second notice by certified mail giving the customer an additional 7 days to send in the inspection/test report.

3.2.6.8.3.2 If the customer has not sent in the inspection/test report within 7 days of the due date given in the second notice, the EGWD will hang a third notice (a 10-day shutoff notice) in a conspicuous location of the property where the backflow prevention device is located giving the customer an additional 10 days to send in the report. The notice will also inform the customer that failure to satisfactorily respond to this notice will result in water service shut-off.

3.2.6.8.3.3 If the owner and/or occupants have not responded satisfactorily to the EGWD within 10 days of the due date specified in the third notice, the EGWD shall implement water service shut-off procedures. If the customer's water service is discontinued due to violations of this CCCP, the customer shall be subject to a Delinquency Shut off Fee specified in EGWD's current Schedule of Charges, Rates, Fees and Deposits Ordinance. Upon seeking renewed service from the EGWD, the backflow prevention device being returned to service must be tested in accordance with *Section 3.2.6*.5

3.2.6.8.4 In addition to the grounds for termination set forth in this section, EGWD may terminate water service to any premises if a required backflow prevention device or air gap is removed by the customer, or if EGWD finds evidence that an installed backflow prevention device or air gap has been bypassed or rendered ineffective.

3.2.6.8.5 If EGWD decides that termination of service is either too difficult or may pose a health issue, EGWD may use EGWD work forces, or use a contractor, to make the necessary repairs, replacements, or installations required to protect the public water system. The cost for such services shall be passed on to the customer. The customer will be notified in writing specifying the corrective actions being taken and time period in which it will be done. If no action is taken by the customer, then work shall begin. If the customer fails to pay the cost within 30 days of notification, EGWD may cause a lien to be placed against the property in accordance with the procedures set forth in Title 14 of the California Civil Code.

3.2.6.9 Fees and Charges

3.2.6.9.1 Administration of this Program requires the collection of fees as appropriate that can be assigned to the customer and services performed that are not considered an appropriate charge under EGWD's Water Rates. These fees are as follows.

3.2.6.9.2 Elk Grove Water District Cross-Connection Control Fee Schedule

Backflow Testing Program

Annual Backflow Testing Tag $25

3.2.7 Certified Backflow Assembly Testers (BAT)

3.2.7.1 **General Requirements**

3.2.7.1.1 Certified Backflow Prevention Assembly Testers shall be responsible for ensuring that all backflow prevention devices at the customer's service connection are identified and tested.

3.2.7.1.2 Upon the completion of a passing backflow device test, an EGWD supplied tag indicating the device has been tested and passed shall be immediately affixed by the BAT to the backflow device. The tag shall contain the name of the BAT, his or her certificate number, date tested, and the backflow prevention device serial number. In the event the tag is removed prior to the next annual inspection, the customer shall obtain a replacement tag and pay a tag replacement fee within 15 days of being notified by the EGWD. Tag fees, both initial issue and replacement, shall be as established by the EGWD and presented in Section 3.2.6.9.

3.2.7.1.3 If a BAT finds a device that has been modified or incorrectly installed, they must immediately report the situation to EGWD and **not test the device.** To report the situation, call the Elk Grove Water District or email the CCCS at crossconnection@egwd.org. All devices must be on the "Approved Backflow Prevention Assemblies" list developed by the USCFCCCHR. Any modification of a device – such as relocation of valves, bypass arrangements, and jumper connections, whether temporary or permanent – invalidates the USCFCCCHR approval and is not permitted. Likewise, a device that has been installed in an orientation for which it was not designed or approved is also not permitted.

3.2.7.1.4 If a BAT finds a cross connection hazard that is unprotected, that is, with no backflow prevention device or the wrong type of device, the tester must inform the customer of the hazard and potential health risk associated with it. The tester must also report the situation to EGWD immediately by calling the Elk Grove Water District or email the CCCS at crossconnection@egwd.org. A device that is a wrong type for the hazard should not be tested.

3.2.7.1.5 If a BAT finds an existing backflow prevention device that is not tagged or is out of compliance with its test date, the tester must inform the customer of the need to test the device and must report the device to EGWD immediately.

3.2.7.1.6 BATs must report the removal or replacement of a backflow prevention device on a Backflow Prevention Assembly Test Report. It is important that the information for both the old and new devices be reported on the same form.

3.2.7.2 **List of Approved Backflow Assembly Testers (BATs)**

3.2.7.2.1 The EGWD will maintain a list of local, CA/NV AWWA-certified BATs that are approved by the EGWD to perform the following activities:

3.2.7.2.1.1 Backflow preventer inspection for proper installation; and

3.2.7.2.1.2 Backflow device testing.

3.2.7.2.2 The list(s) will be revised annually or more frequently if necessary.

3.2.7.3 BAT Approval Qualifications

3.2.7.3.1 BATs who wish to be included on the EGWD's approved list and/or provide testing in the EGWD's service area must apply to the EGWD and furnish the following information:

3.2.7.3.1.1 Evidence of current CA/NV AWWA certification in good standing;

3.2.7.3.1.2 Make, model and serial number of testing equipment;

3.2.7.3.1.3 Evidence of test equipment verification of accuracy and/or calibration within the past 12 months

3.2.7.4 Denial, Suspension or Revocation of Tester Certification

3.2.7.4.1 Tester Certification by EGWD may be denied, suspended or revoked upon any of the following grounds:

3.2.7.4.1.1 A BAT is no longer in possession of a current and valid certificate as a Backflow Prevention Assembly Tester issued by the CA/NV AWWA or equivalent certification as determined by the EGWD.

3.2.7.4.1.2 A BAT is no longer in possession of a current and valid test kit calibration certificate.

3.2.7.4.1.3 EGWD determines that a material misrepresentation was included or omitted by the BAT on the initial or renewal application for BAT certification by EGWD.

3.2.7.4.1.4 EGWD determines that the BAT, in the performance of a test or repair required by the EGWD, commits an act that may pose a threat to public health and safety.

3.2.7.4.1.5 A BAT fails to submit backflow assembly test report forms within five (5) days of performing a backflow device test required by EGWD.

3.2.7.4.1.6 A BAT repeatedly submits incomplete or incorrect test reports to the EGWD.

3.2.7.4.1.7 A BAT fails to report a device that has been modified or incorrectly installed.

3.2.7.4.1.8 A BAT performs a backflow prevention device repair with parts other than OEM parts.

3.2.7.4.1.9 A BAT performs a backflow assembly test using testing procedures other than those accepted by the EGWD.

3.2.7.4.1.10 A BAT fails to install an EGWD supplied tag upon the completion of testing and passing a backflow prevention device.

3.2.7.4.1.11 A BAT fails to report a cross connection hazard that is unprotected, that is, with no backflow prevention device or the wrong type of device.

3.2.7.4.1.12 A BAT fails to report the removal or replacement of a backflow prevention device on a Backflow Prevention Assembly Test Report.

3.2.7.4.1.13 A BAT performs a repair upon a backflow prevention device which has been required to be replaced by the EGWD.

3.2.7.4.1.14 If a BAT has unresolved customer complaints or complaints from multiple customers.

3.2.7.4.1.15 Fraud or gross negligence in the performing of their duties.

3.2.7.4.2 Written notice of the denial, suspension or revocation of an EGWD BAT certification shall be served to the BAT by certified mail with a description of the violation and supporting facts.

3.2.7.4.2.1 The notice shall contain a statement of the right to request an appeal hearing before the EGWD General Manager, or his/her designee.

3.2.7.4.2.2 The notice shall contain a statement of the time period of denial, suspension or revocation.

3.2.7.5 **BAT Appeals**

3.2.7.5.1 The decision of the EGWD CCCS is appealable to the EGWD General Manager.

3.2.7.5.1.1 An appeal must be in writing, and be hand-delivered or mailed to the EGWD General Manager.

3.2.7.5.1.2 The filing of a timely appeal will stay a suspension or revocation pending a decision on the appeal by the EGWD General Manager or his/her designee.

3.2.7.5.1.3 A hearing shall be scheduled within thirty (30) days unless an extension is authorized by the appellant.

3.2.7.5.1.4 No reapplication will be accepted within one (1) year after an EGWD BAT certification is revoked.

3.2.7.5.2 The decision of the EGWD General Manager or his/her designee shall be a final administrative order, with no further administrative right of appeal.

3.2.7.6 **Quality Assurance**

3.2.7.6.1 The EGWD's CCCS will review within 30 days of receipt the backflow preventer inspection/test report forms submitted by pre-approved BATs.

3.2.7.6.2 The EGWD's CCCS shall provide follow up on backflow devices and/or test reports that are deficient in any way.

3.2.7.6.3 The EGWD's CCCS may conduct follow up tests on backflow devices tested by a BAT at the discretion of the EGWD.

3.2.8 Backflow Incident Response Plan

3.2.8.1 Refer to the Emergency Response Program for the Backflow Incident Response Plan.

3.2.9 Record Keeping

3.2.9.1 Types of Records and Data to be Maintained

3.2.9.1.1 The EGWD will maintain records of the following types of information required by CCR Title 17 Section 7605:

3.2.9.1.1.1 Service connections/customer premises information including:

3.2.9.1.1.1.1 Assessed degree of hazard; and

3.2.9.1.1.1.2 Required backflow preventer to protect the public water system.

3.2.9.1.1.2 Backflow preventer inventory and information including:

3.2.9.1.1.2.1 Air gap (AG) location, installation and inspection dates, inspection results and person conducting inspection;

3.2.9.1.1.2.2 Backflow device location, device description (type, manufacturer, make, model, size, and serial number, meter number if applicable), installation, inspection and test dates, test results and data, and person performing test; and

3.2.9.2 The EGWD will maintain records on all devices that protect the public water system from contamination. At a minimum, the EGWD will maintain test reports on all backflow prevention devices required to protect the public water system for a minimum of three years. Where applicable, the above information will also be maintained for backflow preventers installed for in-premises protection.

3.2.10 Recycled/Reclaimed Water

3.2.10.1 At this time the EGWD does not receive or distribute recycled or reclaimed water.

3.2.11 Prohibition of Return of Used Water

3.2.11.1 The EGWD must prohibit the intentional return of used water to the EGWD's distribution system per CCR, Title 17 Sections 7583-7605.

3.2.11.2 Used water is defined as water that has left the control of the EGWD. This includes water used for heating and cooling purposes and water that may flow back into the distribution system from customers with multiple connections.

3.2.11.3 It is the policy of the EGWD water system to:

3.2.11.3.1 Prohibit the intentional return of used water to the distribution system by any customer served by the public water system; and

3.2.11.3.2 Require that all customers with multiple connections, where the hydraulics permit the potential return of used water, to install a backflow preventer (DCVA or RPBA) commensurate with the degree of hazard at each point of connection.

3.2.12 Unapproved Auxiliary Supplies

3.2.12.1 All water supplies other than those owned by the EGWD are considered unapproved auxiliary supplies as defined in CCR Title 17 Section 7583. The EGWD will require backflow protection for customers with auxiliary supplies on their premises as follows:

3.2.12.2 Per Table 1 of CCR Title 17, the EGWD will require the installation of an RPBA for premises isolation at the service connection to any customer having an unapproved auxiliary supply on the premises where a water service from EGWD's public water system exists, whether or not there is a physical connection between the unapproved auxiliary supply and the EGWD's public water system.

3.2.13 Tanker Trucks

3.2.13.1 The EGWD may allow tanker trucks to obtain water from the EGWD's water system under the following conditions:

3.2.13.2 The tanker truck is equipped with an approved AG.

3.2.13.3 The tanker truck will obtain water from EGWD-designated watering points only. These watering points are equipped with EGWD-installed backflow preventers.

3.2.14 Temporary Water Connections

3.2.14.1 The EGWD will not supply water through temporary connections, such as those used for construction projects or main disinfection, except through a backflow preventer arrangement approved and supplied by the EGWD.

Abbreviations

AG	Air Gap separation
ANSI	American National Standards Institute
AVB	Atmospheric Vacuum Breaker
AWWA	American Water Works Association
BAT	Backflow Assembly Testers
CA/NV AWWA	California Nevada Section of the American Water Works Association
CCCP	Cross-Connection Control Programs
CCCS	Cross-Connection Control Specialists
CL	Critical Level or Critical Installation Level
CCR	California Code of Regulations
DCVA	Double Check Valve Backflow Device
DCDA	Double Check Detector Backflow Device
DCDA-II	Double Check Detector Backflow Device Type II
EGWD	Elk Grove Water District, a division of the Florin Resource Conservation District
FRCD	Florin Resource Conservation District
IAPMO	International Association of Plumbing and Mechanical Officials
IPC	International Plumbing Code
LAA	Local Administrative Authority
NFPA	National Fire Prevention Association
NFSA	National Fire Sprinkler Association
OEM	Original Equipment Manufacturer
PSI	Pounds per Square Inch
PSIA	Pounds per Square Inch Absolute
PSIG	Pounds per Square Inch Gauge
PVB	Pressure Vacuum Breaker Backflow Device
RPBA	Reduced Pressure Principle Backflow Device
RPDA	Reduced Pressure Principle Detector Backflow Device
RPDA-II	Reduced Pressure Principle Detector Backflow Device Type II
RV	Relief Valve
SOV	Shut Off Valve
SVB	Spill Resistant Vacuum Breaker Backflow Device
SWRCB	State Water Resources Control Board
TC	Test Cock
UPC	Uniform Plumbing Code
USCFCCCHR	Foundation for Cross-Connection Control and Hydraulic Research (University of Southern California)

4 Definitions

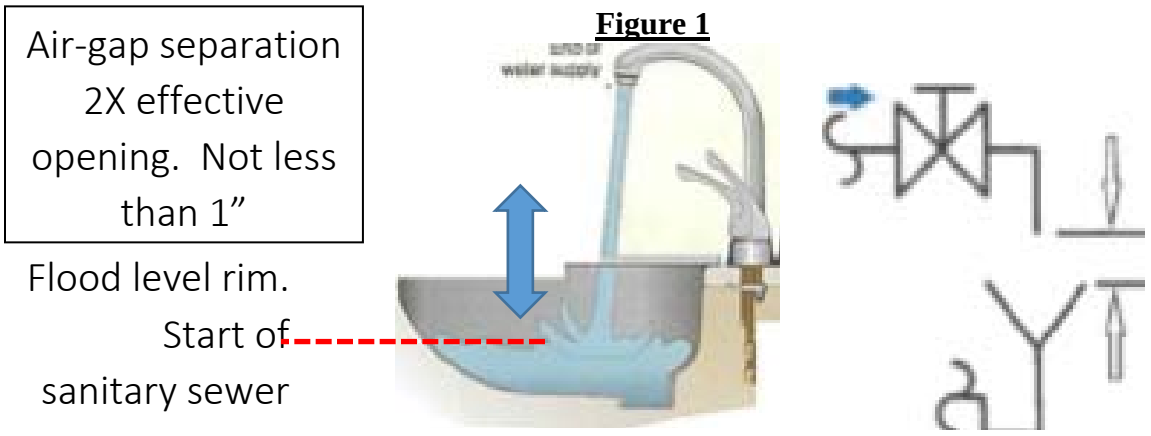
4.1 **Absolute Pressure:** The sum of gauge pressure and atmospheric pressure. Generally measured in pounds per square inch absolute (psia).

4.2 **Accessible:** Capable of being reached for testing and maintenance, when referring to a backflow prevention device. However, it first may require the removal of an access panel, door or similar obstruction.

4.3 **Administrative Authority:** The individual official, board, department, or agency established and authorized by a state, county, city or other political entity created by law to administer and enforce the provisions of the Cross- Connection Control Program. Also referred to as Authority Having Jurisdiction.

4.4 **Air Gap (AG) (ANSI A112.1.2):** 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; in no case less than 1 inch (2.54 cm). See figure 1.

Figure 1



4.5 **Approved Backflow Prevention Device:** A device that has been investigated and approved by the Administrative Authority Having Jurisdiction. The approval of backflow prevention devices by the administrative authority shall be on the basis of a favorable laboratory and field evaluation report by an approved testing laboratory recommending such approval.

4.6 **Approved Check Valve:** A check valve that is drip-tight in the normal direction of flow when the inlet pressure is at least 1.0 psi (pound per square inch) and the outlet pressure is zero. The check valve shall permit no leakage in a direction reverse to the normal flow: The closure element (e.g., clapper or poppet) shall be internally loaded to promote rapid and positive closure. An approved check valve is only one component of an approved backflow prevention device (i.e., pressure vacuum breaker {PVB and SVB}, double check valve device {DC} or reduced pressure principle device {RP}).

4.7 **Approved Testing Laboratory:** The Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (FCCCHR) or other laboratory having equivalent capabilities for both the laboratory and field evaluation of backflow prevention devices.

4.8 **Approved Water Supply:** Any public 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. In determining what constitutes an approved water supply, the health agency has final judgment as to its safety and potability.

4.9 **Aspirator:** A device used for creating suction, specifically by flowing water through a venturi or restricted area of flow. At this restricted area of flow the pressure drops to sub-atmospheric, thus suction is created. Usually a tube is attached at this location for aspiration or suction purposes.

4.10 **Aspirator Effect:** The effect created by an aspirator, restricted area of flow or undersized piping.

4.11 **Atmospheric Pressure:** The pressure (or weight per unit area) exerted by the atmosphere on a surface. At sea level the atmospheric pressure is 14.7 psia (pounds per square inch, absolute).

4.12 **Atmospheric Vacuum Breaker Backsiphonage Prevention Device (AVB) (ASSE 1001):** A device containing an air inlet valve, a check seat and an air inlet port(s). (Also known as a non-pressure type vacuum breaker.) The flow of water into the body causes the air inlet valve to close the air inlet port(s). When the flow of water stops the air inlet valve falls and forms a check valve against backsiphonage. At the same time it opens the air inlet port(s) allowing air to enter and satisfy the vacuum. A shutoff valve immediately upstream may be an integral part of the device, but there shall be no shutoff valves or obstructions downstream. The device shall not be subjected to operating pressure for more than twelve (12) hours in any twenty-four (24) hour period. An atmospheric vacuum breaker is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only. See figure 2.

Figure 2

4.13 **Auxiliary Water Supply:** Any water supply on or available to the premises other than the water EGWD's approved public potable water supply. These auxiliary waters may include water from another EGWD's public potable water supply or any natural source such as a well, spring, river, stream, harbor, etc. They may be polluted or contaminated or they may be objectionable and constitute an unacceptable water source over which the water EGWD does not have sanitary control.

4.14 **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. See terms Backpressure (see 4.16) and Backsiphonage (see 4.17).

4.15 **Backflow Prevention Device:** Any effective device used to prevent backflow into a potable water system. The type of device used shall be based on the existing or potential degree of hazard and backflow condition. The types of backflow prevention devices include:

4.15.1 Atmospheric Vacuum Breaker Backsiphonage Prevention Device (see 4.12)

4.15.2 Double Check Valve Backflow Prevention Device (see 4.36)

4.15.3 Double Check Detector Backflow Prevention Device (see 4.37)

4.15.4 Double Check Detector Backflow Prevention Device-Type II (see 4.38)

4.15.5 Pressure Vacuum Breaker Backsiphonage Prevention Device (see 4.63)

4.15.6 Reduced Pressure Principle Backflow Prevention Device (see 4.68)

4.15.7 Reduced Pressure Principle Detector Backflow Prevention Device (see 4.69)

4.15.8 Reduced Pressure Principle Detector Backflow Prevention Device-Type II (see 4.70)

4.15.9 Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Device (see 4.75)

4.16 **Backpressure:** Any elevation of pressure in the downstream piping system (by pump, elevation of piping, steam pressure, air 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.

4.17 **Backsiphonage:** A form of backflow due to a reduction in system pressure, which causes a sub-atmospheric pressure to exist in the water system.

4.18 **Certified Backflow Prevention Device Tester:** A person who has proven ability in field testing backflow prevention devices to the satisfaction of the Administrative Authority Having Jurisdiction, either directly or through a third party certification program. Each person who is certified to perform field tests and prepare reports on backflow prevention devices shall be conversant in applicable laws, rules and regulations and have had experience in plumbing or pipe fitting or have other equivalent qualifications in the opinion of the Administrative Authority Having Jurisdiction.

4.19 **Customer:** The owner or operator of an on-site water system(s) having a service from a public potable water system. Customer includes tenants of single family dwellings, duplexes, and commercial property, owners of real property, and management companies responsible for property management of real property.

4.20 **Customer's Potable Water System:** The portion of the privately owned potable water system lying between the point of delivery and the point of use. This system includes all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store or utilize the potable water.

4.21 **Customer's Water System(s):** Any water system located on the customer's premises whether supplied by a public potable water system or an auxiliary water supply. The system or systems may be either a potable water system or a non-potable water piping system.

4.22 **Containment Protection: Also referred to as Service Protection:** The terminal end of a service connection from the public potable water system, (i.e., where the water supplier may lose jurisdiction and sanitary control of the water at its point of delivery to the customer's water system). If a water meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the water meter.

4.23 **Contaminant / Health Hazard:** 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.

4.24 **Critical Level:** The minimum elevation above the flood level rim of the fixture or receptacle served, downstream piping and water uses on atmospheric vacuum breakers, pressure vacuum breakers and spill-resistant vacuum breakers, at which the unit may be installed. This is indicated by the marking "C-L" or "C/ L." When an AVB, PVB, or SVB does not bear a critical level marking, the bottom of the device shall constitute the critical level.

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

4.26 **Cross-Connection:** Any actual or potential connection or structural arrangement between a public or a customer's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substance other than the intended potable water with which the system is supplied. 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 considered to be cross-connections.

4.27 **Cross Connection Control Specialist:** An individual that has a current certificate as a Cross Connection Control Program Specialist as issued by the CA/NV AWWA and has been designated as an EGWD Cross-Connection Control Specialist by the General Manager of EGWD.

4.28 **Direct Cross Connection:** A direct cross-connection is a cross-connection which is subject to both backsiphonage and backpressure.

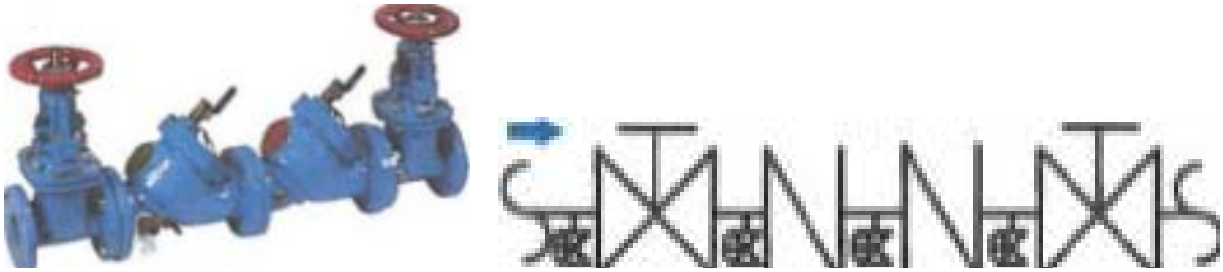
4.29 **Discontinued Service:** Having the water service turned off by EGWD.

4.30 **Indirect Cross Connection:** An indirect cross-connection is a cross-connection which is subject to backsiphonage only.

4.31 **Degree of Hazard:** 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.

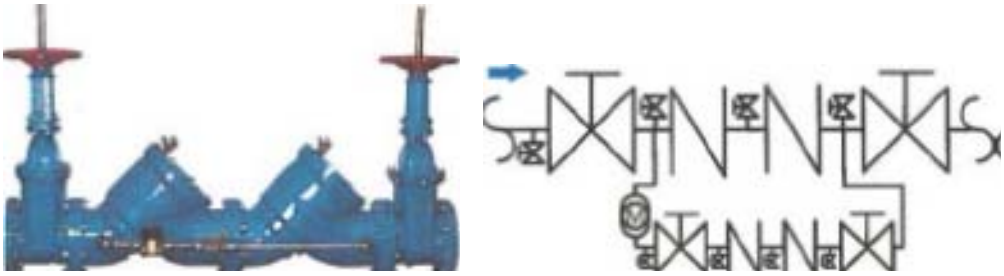
4.32 **Double Check Valve Backflow Prevention Device (DC) (ASSE 1015):** An device composed of two independently acting, approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the device and fitted with properly located resilient seated test cocks. This device shall only be used to protect against a non-health hazard (i.e., pollutant). See figure 3.

Figure 3



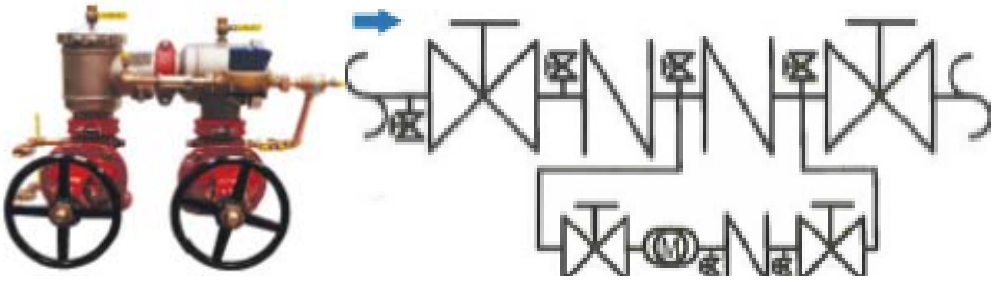
4.33 **Double Check Detector Backflow Prevention Device (DCDA) (ASSE 1048):** A specially designed device composed of a line-size approved double check valve device with a bypass containing a specific water meter and an approved double check valve device. The meter shall register accurately for rates of flow up to 2 gpm (gallons per minute) and shall show a registration for all rates of flow. This device shall only be used to protect against a non-health hazard (i.e., pollutant). The DCDA is primarily used on fire sprinkler systems. See figure 4.

Figure 4



4.34 **Double Check Detector Backflow Prevention Device – Type II (DCDA-II) (ASSE 1048):** A specially designed device composed of a line-sized approved double check valve device 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 device shall only be used to protect against a non-health hazard (i.e., pollutant). The DCDA-II is primarily used on fire sprinkler systems. See figure 5.

Figure 5



4.35 **Fire Department:** The Consumes Community Services District Fire Department

4.36 **Fire Chief:** The Fire Chief of the Consumes Community Services District Fire Department or designee unless otherwise stated or indicated by context.

4.37 **Gauge Pressure:** The pressure above atmospheric pressure.

4.38 **General Manager:** The General Manager of the Florin Resource Conservation District/Elk Grove Water District or designee unless otherwise stated or indicated by context.

4.39 **Grey Water:** Wastewater other than toilet contaminated waste. Wastewater generated by kitchen sinks and dish- washers are not considered grey water.

4.40 **Health Hazard / 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.

4.41 **Health Agency:** The health authority having jurisdiction.

4.42 **Hospital:** Any institution, place, building, or agency which maintains and operates facilities for one or more persons for the diagnosis, care and treatment of human illness, including convalescence and care during and after pregnancy or which maintains and operates organized facilities for any such purpose, and to which persons may be admitted for overnight stay or longer. The term hospital includes sanitarium, nursing home, long term care facility and maternity home.

4.43 **Industrial Fluids:** Any fluid or solution, which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration, which would constitute a hazard if introduced into an approved water supply.

4.44 **Industrial Piping System:** Any system used for transmission of or to confine or store any fluid, solid or gaseous substance other than an approved water supply. Such a system would include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey or store substances which are or may be polluted or contaminated.

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

4.46 **Manifold Device:** A device comprised of backflow prevention devices (DC or RP) of the same manufacturer, model and size. Manifold adaptor fittings on both the inlet and outlet of the manifold device are considered integral components. The size of the manifold device is determined by the inlet and outlet connections of the manifold adaptor fittings.

4.47 **Negative Pressure:** Any pressure below atmospheric pressure.

4.48 **Non-health Hazard:** 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. Also referred to as Pollution or a Pollutant.

4.49 **Parallel Installation:** Two or more backflow prevention devices of the same type installed in parallel, having a common inlet, outlet and direction of flow.

4.50 **Plumbing Hazard:** An internal or plumbing type cross-connection in a customer's potable water system with either a pollutant or contaminant.

4.51 **Point of Delivery:** The terminal end of a service connection from the public potable water system, (i.e., where the water supplier may lose jurisdiction and sanitary control of the water at its point of delivery to the customer's water system). If a water meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the water meter. Also referred to as the Service Connection.

4.52 **Pollution/Pollutant:** 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. Also referred to as a Non-Health Hazard.

4.53 **Potable Water:** Water from any source which has been investigated by the health agency having jurisdiction, and has been approved for human consumption.

4.54 **Premise:** Any and all areas on a customer's property which are served or have the potential to be served by the EGWD water system.

4.55 **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 or psi.

4.56 **Pressure Fluctuation:** The changes of pressure within a system.

4.57 **Pressure Gradient:** A description of the direction and rate of change of pressure over time.

4.58 **Pressure Vacuum Breaker Backsiphonage Prevention Device (PVB) (ASSE #1020):** A device containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The device is to be equipped with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the device. This device is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only. See figure 6.

Figure 6

4.59 **Private Fire Service** A private fire service main and appurtenances installed in accordance with NFPA 24 on private property and maintained by the property owner for the explicit intent of providing fire flows either through fire hydrants, fire sprinkler systems, or other water-based fire protection systems.

4.60 **Public Potable Water System:** Any publicly or privately owned water system operated as a public water system under a valid health permit to supply water for domestic purposes. This system will include 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.

4.61 **Readily Accessible:** Capable of being reached for testing and/ or maintenance, without the need of removing any access panel, door, or similar obstruction.

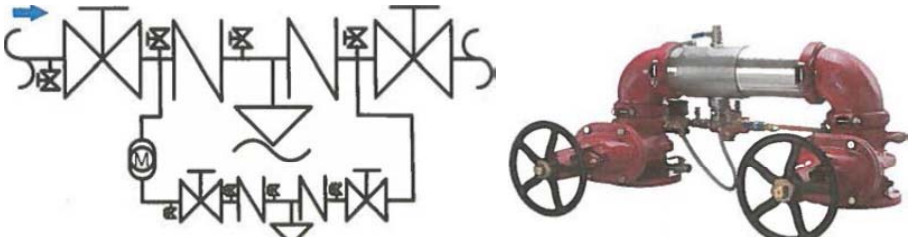
4.62 **Reclaimed Water / Recycled Water:** Water which, as a result of treatment of wastewater, is suitable for a direct beneficial use or a con- trolled use that would not otherwise occur. Reclaimed water is not safe for human consumption. Also referred to as Reused Water.

4.63 **Reduced Pressure Principle Backflow Prevention Device (RP) (ASSE #1013):** A device containing two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time 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 device. This device is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). This device shall not be used for backflow protection of sewage or reclaimed water. (Note: Check with local administrative authority for acceptable uses.) See figure 7.

Figure 7

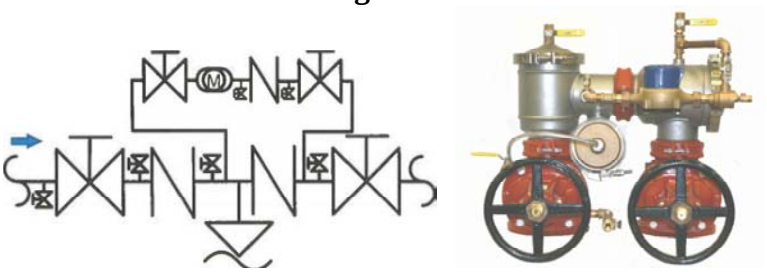
4.64 **Reduced Pressure Principle Detector Backflow Prevention Device (RPDA) (ASSE #1047):** A specially designed device composed of a line-size approved reduced pressure principle backflow prevention device with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention device. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow. This device shall be used to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). The RPDA is primarily used on fire sprinkler systems. See figure 8.

Figure 8



4.65 **Reduced Pressure Principle Detector Backflow Prevention Device Type II (RPDA-II) (ASSE #1047):** A specially designed device composed of a line-size approved reduced pressure principle backflow prevention device 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 device shall be used to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). The RPDA-II is primarily used on fire sprinkler systems. See figure 9.

Figure 9



4.66 **Reused Water:** Water which, as a result of treatment of wastewater, is suitable for a direct beneficial use or a con- trolled use that would not otherwise occur. Reclaimed water is not safe for human consumption. Also referred to as Recycled Water or Reclaimed Water.

4.67 **Sanitary Sewer:** A system of underground pipes that carries sewage from bathrooms, sinks, kitchens, and other plumbing components to a wastewater treatment plant where it is filtered, treated and discharged.

4.68 **Service Connection:** The terminal end of a service connection from the public potable water system, (i.e., where the water supplier may lose jurisdiction and sanitary control of the water at its point of delivery to the customer's water system). If a water meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the water meter. Also referred to as the Point of Delivery.

4.69 **Service Protection:** The appropriate type or method of backflow protection at the service connection, commensurate with the degree of hazard of the customer's potable water system.

4.70 **Spill Resistant Pressure Vacuum Breaker Backsiphonage Prevention Device (SVB) (ASSE #1056):** An device containing an independently operating internally loaded check valve and independently operating loaded air inlet valve located on the discharge side of the check valve. The device is to be equipped with a properly located resilient seated test cock, a properly located bleed /vent port, and tightly closing resilient seated shutoff valves attached at each end of the device. This device is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only. See figure 10.

Figure 10

4.71 **Static Pressure:** The water pressure in any system under non-flowing conditions.

4.72 **System Hazard:** An actual or potential threat of severe danger to the physical properties of the public or the customer's potable water system or of a pollution or contamination, which would have a protracted effect on the quality of the potable water in the system.

4.73 **Thermal Expansion:** The resulting effect when water in a closed system, such as a piping system downstream of a back- flow preventer heats up. In effect, the heat causes the water volume to expand, but since the system is closed, the pressure increases.

4.74 **Uniform Plumbing Code (UPC)** Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO), the year being the year adopted by the City of Elk Grove by Ordinance.

4.75 **Used Water:** Any water supplied by a water EGWD from a public potable water system to a customer's water system after it has passed through the service connection and is no longer under the control of the water EGWD.

4.76 **Venturi:** A piping apparatus with a constricted region designed to increase the velocity and thus decrease the pressure of an incompressible fluid in the constricted region.

4.77 **Venturi Effect:** When an incompressible fluid's velocity increases as a result of flowing through a constricted area of piping, the pressure will decrease.

4.78 **Water Supervisor:** The customer or a person on the premises appointed by the customer charged with the responsibility of maintaining the customer's water system(s) on the property free from unprotected cross-connections and other sanitary defects, as required by regulations and laws.

4.79 **Water Supplier:** The public or private owner or operator of the potable water system supplying an approved water supply to the public.

Forms

Preliminary Cross-Connection Control Hazard Assessment Form
Non-Residential Customers

Name of Customer or Business: _____
Address: _____
Phone Number: _____
Description of Business: _____

Is your business or premises of a type included in the table below (check all that apply)?

Agricultural (farm or dairy)		Metal plating industry	
Beverage bottling plant		Mortuary	
Car wash		Petroleum processing or storage plant	
Chemical plant		Pier or dock	
Commercial laundry or dry-cleaners		Radioactive material processing plant or nuclear reactor	
Having both reclaimed water and potable water provided		Survey access denied or restricted	
Film processing facility		Wastewater lift station or pumping station	
Food processing plant		Wastewater treatment plant	
Hospital, medical center, nursing home, veterinary, medical, or dental clinic, or blood plasma center		Having an unapproved auxiliary water supply interconnected with the potable water supply	
Having separate irrigation system using EGWD's water and adding chemicals*		Other (describe) *[EGWD to add other types of premises considered to be high-hazard]*	
Laboratory		Other (describe) *[See above]*	

*e.g., parks, playgrounds, golf courses, cemeteries, estates, etc.

Other potential cross-connection concerns:

☐ Irrigation system

☐ Fire sprinkler system, using ☐ not using ☐ chemicals or anti-freeze

☐ Swimming pool

☐ Other (describe): _____

Note to Customer: *This form is used for preliminary assessment only. The water EGWD may require a more thorough assessment at a later date.*

This form was completed by (print name): _____ Date: _____

Please return completed form by {insert date} and send to: {insert name/address}.

Cross-Connection Control Hazard Survey Report
Non-Residential Customers

Survey date: _____

Customer Information

Premises name: _____Telephone: _____

Address: _____ZIP: _____

Contact person: _____Title: _____

Description of premises: _____

Description of water use: _____

Water Service and Backflow Prevention Device (BPA) Size/Type

Service Type	Service Size	Meter Size	BPA Size	BPA Type
Domestic				
Fire				
Irrigation				
Other				

Cross-Connection Control Specialist (CCCS) Information

Name: _____ Telephone: _____

Company name: _____

Address: _____ZIP: _____

CCCS Certification #: _____ Year certified: _____

Cross Connection Control Survey Report (Continued)
Page 2 of 3

Survey Results

Note: The CCCS's survey shall include an inspection of the premises isolation device to verify that it is installed correctly and is a currently listed DOH-approved device.

Item	Location & Description of Cross Connection	Backflow Prevention Provided/Required

Attach additional sheets if needed.

Surveyor's Comments

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Cross-Connection Control Survey Report (Continued)
Page 3 of 3

Surveyor's Recommendations

I certify that this cross-connection hazard survey accurately reflects the overall risk posed by the customer's plumbing system to the EGWD's distribution system. Based on the above survey, I certify that:

1. I found the following type(s) of premises isolation backflow preventer(s):

   Air Gap ____ RPBA/RPDA ____ DCVA/DCDA _____ None ____.

2. The existing backflow preventer(s) is/are properly installed.

   Yes ____ No ____ N/A ____.

3. The existing backflow preventer(s) is/are commensurate with the degree of hazard.

   Yes ____ No ____ N/A ____.

4. Since no backflow preventer was installed for premises isolation, the premises owner should install a premises isolation backflow preventer of the following type:

   Air Gap ____ RPBA/RPDA ____ DCVA/DCDA ____ N/A ____.

5. The premises owner should replace the existing premises isolation backflow preventer(s) with the following:

   Air Gap ____ RPBA/RPDA ____ DCVA/DCDA ____ N/A ____.

The completed survey report shall be first signed by the CCCS conducting the survey, and then counter-signed by the owner of the premises or the owner's authorized agent.

CCCS Signature: _____Date: _____

As the Owner of the Premises (or Owner's authorized agent), I certify that I have received a copy of this completed Cross-Connection Control Hazard Survey Report.

Signature: _____**Date**: _____

Note: Customers and regulatory agencies should be aware that the EGWD's requirement for this cross-connection hazard survey and/or for the installation of a specific backflow prevention device on a service pipe ***do not*** constitute an approval of the customer's plumbing system, compliance of the customer's plumbing system with the Uniform Plumbing Code or an assurance of the absence of cross connections in the customer's plumbing system.

Water Use Questionnaire
Residential Customers

Customer Account Number (optional)
Customer Name
Address Line 1
Address Line 2

Please indicate whether the special plumbing or activities listed below apply to your premises:

Yes	**No**	**Plumbing or Activity Present on Customer's Premises***
		Underground sprinkler system
		Water treatment system (e.g., water softener)
		Solar heating system
		Residential fire sprinkler system
		Other water supply (whether or not connected to plumbing system)
		Sewage pumping facilities or grey water system
		Boat moorage with water supply
		Hobby farm
		Animal watering troughs
		Swimming pool or spa
		Greenhouse
		Decorative pond
		Photo lab or dark room
		Home-based business. If Yes, list type/describe (e.g., beauty salon, machine shop, etc.): _____ _____ _____

* Based on their knowledge of residential connections served, public water systems may "customize" this list by adding or deleting plumbing categories or activities

Completed by (print name): _____ Date: _____

Resident's Signature: _____