

ORDINANCE 25-01

(Amending and Restating Ordinance 88-1)

CONTROL OF BACKFLOW AND CROSS-CONNECTIONS

WHEREAS, the Board of Directors of the Calaveras Public Utility District (the "District"), is required by the California State Water Resources Control Board to be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection; and

WHEREAS, in furtherance of this responsibility, in 1988 the District adopted Ordinance 88-1, "Control of Backflow and Cross Connections"; and

WHEREAS, the Board of Directors desires to revise and update Ordinance 88-1 to reflect the current "Standards and Principals for California's Public Water Systems-(PWS)", which apply to all California public water systems as defined in California's Health and Safety Code (CHSC, section 116275 (h)); and

WHEREAS, on May 20, 2025 and June 17, 2025, the Board of Directors conducted hearings on this ordinance to consider public testimony prior to its adoption.

NOW THEREFORE, the Board of Directors hereby adopts the following ordinance revising and updating Ordinance 88-1 for the control of backflow and cross-connections as follows:

SECTION 1

SECTION 1. CROSS-CONNECTION CONTROL - GENERAL POLICY

a) Purpose. The purpose of this Ordinance is:

- i)** To protect the public potable water supply of CALAVERAS PUBLIC UTILITY DISTRICT (CPUD) from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the consumer's private water system(s) such contaminants or pollutants which could backflow into the public water systems; and,
- ii)** To promote the elimination or control of existing cross- connections, actual or potential, between the consumer's in-plant potable water system(s) and non-potable water system(s), plumbing fixtures and industrial piping systems; and,
- iii)** To provide for the maintenance of a continuing Program of Cross-Connection Control which will systematically and effectively prevent the contamination or pollution of all potable water systems.

b) **Responsibility.** CPUD is responsible for the protection of the public potable water distribution/system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. If, in the judgement of CPUD an approved backflow prevention assembly is required at the customer's water service connection; or, within the customer's private water system for the safety of the water system, CPUD shall give notice in writing to said customer to install such an approved backflow prevention assembly(s) at specific location(s) on customer's premises. The consumer shall immediately install such an approved assembly(s) at the consumer's own expense; and failure, refusal or inability on the part of the customer to install, have tested and maintained said assembly(s) shall constitute a ground for discontinuing water service to the premises until such requirements have been satisfactorily met.

SECTION 2. DEFINITIONS

- a) **Calaveras Public Utility District (CPUD).** A public utility formed under the Public Utility District Act of the State of California originally enacted May 31, 1921.
- b) **“Air-gap separation” or “AG”** means a physical vertical separation of at least two (2) times the effective pipe diameter between the free-flowing discharge end of a potable water supply pipeline and the flood level of an open or non-pressurized receiving vessel, and in no case less than one (1) inch.
- c) **“Approved water supply”** means a water source that has been approved by the State Water Board for domestic use in a public water system and designated as such in a domestic water supply permit issued pursuant to section 116525 of the CHSC.
- d) **“Auxiliary water supply”** means a source of water, other than an approved water supply, that is either used or equipped, or can be equipped, to be used as a water supply and is located on the premises of, or available to, a water user.
- e) **“Backflow”** means an undesired or unintended reversal of flow of water and/or other liquids, gases, or other substances into a public water system's distribution system or approved water supply.
- f) **“Backflow prevention assembly” or “BPA”** means a mechanical assembly designed and constructed to prevent backflow, such that while in-line it can be maintained and its ability to prevent backflow, as designed, can be field tested, inspected and evaluated.

- g) **“Backflow prevention assembly tester”** means a person who is certified as a backflow prevention assembly tester.
- h) **“Community water system”** means a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system.
- i) **“Contact hour”** means not less than 50 minutes of a continuing education course.
- j) **“Continuing education course”** means a presentation or training that transmits information related to cross-connection control programs and backflow prevention and protection.
- k) **“Cross-connection”** means any actual or potential connection or structural arrangement between a public water system, including a piping system connected to the public water system and located on the premises of a water user or available to the water user, and any source or distribution system containing liquid, gas, or other substances not from an approved water supply.
- l) **“Cross-connection control specialist”** means a person who is certified as a cross-connection control specialist.
- m) **“Distribution system”** has the same meaning as defined in section 63750.50 of CCR, Title 22, Division 4, Chapter 2.
- n) **“Double check detector backflow prevention assembly”** or **“DCDA”** means a double check valve backflow prevention assembly that includes a bypass with a water meter and double check backflow prevention assembly, with the bypass’s water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 1, Appendix C.
- o) **“Double check detector backflow prevention assembly – type II”** or **“DCDA-II”** means a double check valve backflow prevention assembly that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 2, Appendix C.
- p) **“Double check valve backflow prevention assembly”** or **“DC”** means an assembly consisting of two independently-acting internally-loaded check valves, with tightly closing

shut-off valves located at each end of the assembly (upstream and downstream of the two check valves) and fitted with test cocks that enable accurate field testing of the assembly. This type of assembly may only be used to isolate low hazard cross-connections. See Diagram 3, Appendix C.

- q) **“Existing public water system”** or **“existing PWS”** means a public water system initially permitted on or before July 1, 2024 as a public water system by the State Water Board.
- r) **“Hazard Assessment”** means an evaluation of a user premises designed to evaluate the types and degrees of hazard at a user’s premises.
- s) **“High hazard cross-connection”** means a cross-connection that poses a threat to the potability or safety of the public water supply. Materials entering the public water supply through a high hazard cross-connection are contaminants or health hazards. See Appendix D for some examples.
- t) **“Low hazard cross-connection”** means a cross-connection that has been found to not pose a threat to the potability or safety of the public water supply but may adversely affect the aesthetic quality of the potable water supply. Materials entering the public water supply through a low hazard cross-connection are pollutants or non-health hazards.
- u) **“New public water system”** or **“new PWS”** means a public water system permitted after July 1, 2024 as a public water system by the State Water Board. A new public water system includes a public water system receiving a new permit because of a change in ownership.
- v) **“Noncommunity water system”** means a public water system that is not a community water system.
- w) **“Nontransient noncommunity water system”** means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.
- x) **“Premises containment”** means protection of a public water system’s distribution system from backflow from a user’s premises through the installation of one or more air gaps or BPAs, installed as close as practical to the user’s service connection, in a manner that isolates the water user’s water supply from the public water system’s distribution system.
- y) **“Pressure vacuum breaker backsiphonage prevention assembly”** or **“PVB”** means an

assembly with an independently-acting internally-loaded check valve and an independently-acting loaded air inlet valve located on the discharge side of the check valve; with test cocks and tightly closing shutoff valves located at each end of the assembly that enable accurate field testing of the assembly. This type of assembly may only be used for protection from backsiphonage and is not to be used to protect from backpressure. See Diagram 4, Appendix C.

z) **“Public water system”** or **“PWS”** has the same meaning as defined in section 116275(h) of the CHSC.

aa) **“Recycled Water”** is a wastewater which as a result of treatment is suitable for uses other than potable use.

bb) **“Reduced pressure principle backflow prevention assembly”** or **“RP”** means an assembly with two independently acting internally-loaded check valves, with a hydraulically operating mechanically independent differential-pressure relief valve located between the check valves and below the upstream check valve. The assembly shall have shut-off valves located upstream and downstream of the two check-valves, and test cocks to enable accurate field testing of the assembly. See Diagram 5, Appendix C.

cc) **“Reduced pressure principle detector backflow prevention assembly”** or **“RPDA”** means a reduced pressure principle backflow prevention assembly that includes a bypass with a water meter and reduced pressure principle backflow prevention assembly, with the bypass’s water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. See Diagram 6, Appendix C.

dd) **“Reduced pressure principle detector backflow prevention assembly – type II”** or **“RPDA-II”** means a reduced pressure principle backflow prevention assembly that includes a bypass around the second check, with the bypass having a single check valve and a water meter accurately registering flow rates up to two gallons per minute and visually showing a registration for all rates of flow. See Diagram 7, Appendix C.

ee) **“Spill-resistant pressure vacuum breaker backsiphonage prevention assembly”** or **“SVB”** means an assembly with an independently-acting internally-loaded check valve and an independently-acting loaded air inlet valve located on the discharge side of the check valve; with shutoff valves at each end and a test cock and bleed/vent port, to enable accurate field testing of the assembly. This type of assembly may only be used for protection from backsiphonage and is not to be used to protect from backpressure. See Diagram 8, Appendix C.

- ff) **“State Water Board”**, unless otherwise specified, means the State Water Resources Control Board or the local primacy agency having been delegated the authority to enforce the requirements of the CCCPH by the State Water Resources Control Board.
- gg) **“Swivel-Ell”** means a reduced pressure principle backflow prevention assembly combined with a changeover piping configuration (swivel-ell connection) designed and constructed pursuant to this Chapter. See design and construction criteria, as well as Diagrams 9a and 9b, Appendix C.
- hh) **“Transient noncommunity water system”** means a noncommunity water system that does not regularly serve at least 25 of the same persons over six months per year.
- ii) **“User premises”** means the property under the ownership or control of a water user and is served, or is readily capable of being served, with water via a service connection with a public water system.
- jj) **“User’s service connection”** means either the point where a water user’s piping is connected to a water system or the point in a water system where the approved water supply can be protected from backflow using an air gap or backflow prevention assembly.
- kk) **“User Supervisor”** means a person designated by a water user to oversee a water use site and responsible for the avoidance of cross-connections.
- ll) **“Water supplier”** means a person who owns or operates a public water system.
- mm) **“Water user”** means a person or entity who is authorized by the PWS to receive water.

SECTION 3. REQUIREMENTS

a) Water system

- i) The water system shall be considered as made up of two parts: The Utility System and the Customer System.
- ii) Utility System shall consist of the source facilities and the distribution system and shall include all those facilities of the water system under the complete control of the utility, up to the point where the Customer's System begins.

- iii) The source shall include all components of the facilities utilized in the production, treatment, storage and delivery of water to the distribution system.
- iv) The distribution system shall include the network of conduits used for the delivery of water from the source to the Customer's System.
- v) The Customer's System shall include those parts of the facilities beyond the termination of the utility distribution system which are utilized in conveying utility-delivered domestic water to points of use.

b) Policy

- i) No water service connection to any premises shall be installed or maintained by CPUD unless the water supply is protected as required by State laws and regulations and this Ordinance. Service of water to any premises shall be discontinued by CPUD if a backflow prevention assembly required by this Ordinance is not installed, tested and maintained, or if it is found that a backflow prevention assembly has been removed, bypassed or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.
- ii) The Customer's System shall be open for inspection at all reasonable times to authorized representatives of CPUD to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, CPUD shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with the State and County statutes relating to plumbing and water supplies and the regulations adopted pursuant thereto.
- iii) An approved backflow prevention assembly shall also be installed on each service line to a customer's water system at or near the property line or immediately inside the building being served; but, in all cases, before the first branch line leading off the service line wherever the following conditions exist:
 - (1) In the case of premises having an auxiliary water supply which is not or may not be of safe bacteriological or chemical quality and which is not acceptable as an additional source by CPUD, the public water system shall be protected against backflow from the premises by installing an approved backflow assembly in the service line appropriate to the degree of hazard.

plating plants. Further examples can be found in APPENDIX D; HIGH HAZARD CROSS-CONNECTION CONTROL PREMISES in the adopted CCCPH

- (4) In the case of any premises where there is sewage treatment plant an approved air-gap separation will be mandatory, in accordance with the adopted CCCPH; APPENDIX D, HIGH HAZARD CROSS-CONNECTION CONTROL PREMISES.
 - (5) In the case of any premises where there are "uncontrolled" cross-connections, either actual or potential, the public water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly at the service connection.
 - (6) In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the public water system shall be protected against backflow from the premises by either an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly on each service to the premises.
- v) Any backflow prevention assembly required herein shall be a model and size approved by CPUD. The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association (AWWA) entitled:

- AWWA C506-84 Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices;

and have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (FCCC&HR) established by

- Specifications of Backflow Prevention Assemblies – Proper section of the most current issue of the MANUAL OF CROSS-CONNECTION CONTROL.

Said AWWA and FCCC&HR standards and specifications have been adopted by CPUD. Final approval shall be evidenced by a "Certificate of Approval"

issued by an approved testing laboratory certifying full compliance with the said AWWA standards and FCCC&HR specifications.

The FCCC&HR testing laboratory has been qualified by CPUD to test and certify backflow preventers. Testing laboratories other than the FCCC&HR will be added to an approved list as they are qualified by CPUD.

Backflow preventers which may be subjected to backpressure or backsiphonage that have been fully tested and have been granted a Certificate of Approval by said qualified laboratory and are listed on the laboratory's current list of "Approved Back flow Prevention Assemblies" may be used without further test or qualification.

- vi)** It shall be the duty of the customer-user at any premises where backflow prevention assemblies are installed to have certified inspections and operational tests made at least once every 12- month period of time. In those instances where CPUD deems the hazard to be great enough, certified inspections may be required at more frequent intervals. Those inspections and tests shall be at the expense of the water user and shall be performed by CPUD personnel or by a certified tester approved by CPUD. Inspections and tests performed by CPUD personnel will be charged to the customer at rates established by CPUD. It shall be the duty of CPUD to see that these tests are made in a timely manner. The customer-user shall notify CPUD in advance when the tests are to be undertaken so that an official representative may witness the tests if so desired. These assemblies shall be repaired, overhauled or replaced at the expense of the customer-user whenever said assemblies are found to be defective. Records of such tests, repairs and overhaul shall be kept and made available to CPUD.
- vii)** All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall be accepted until such time that it can no longer be maintained and tested in accordance with the CPUD requirements. Whenever an existing device is moved from the present location, can no longer be tested, or requires more than minimum maintenance or when CPUD finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow preventer assembly meeting the requirements of this section.

NOW, THEREFORE, BE IT ENACTED BY THE BOARD OF DIRECTORS OF THE CALAVERAS PUBLIC UTILITY DISTRICT AS FOLLOWS:

SECTION 2

Ordinance 88-1 is hereby amended, restated and superseded in its entirety by this Ordinance 25-01.

SECTION 3

This Ordinance shall go into effect on July 1, 2025.

SECTION 4

This Ordinance was first introduced at a regular meeting of the Board of Directors held on May 20, 2025.

SECTION 5

Upon final passage, this Ordinance, or a summary of this Ordinance, shall be published once a week for two successive weeks in a newspaper of general circulation within the District, pursuant Government Code Section 6066.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Calaveras Public Utility District on this 17th day of June 2025 by the following vote:

AYES: Directors Dell'Orto, Sparks, Hesser, and Blood

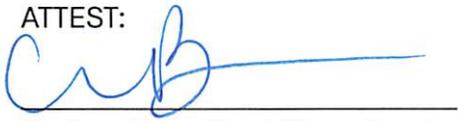
NOES: None

ABSTAIN: None

ABSENT: Director Tressler

CALAVERAS PUBLIC UTILITY DISTRICT

Signed: 
Richard Blood, Vice President of the Board of Directors

ATTEST: 
Carissa Bear, Clerk/Secretary to the Board