

## **ARTICLE VIII.**

### **Cross Connection Control**

#### Section 8.1. Cross-connection control.

8.1.1. Purpose. The GCSD Board declares that the purpose of this section is to protect the public water supply against actual or potential cross-connections by:

8.1.1.1. Requiring abandonment of private wells before premises connect to GCSD water supply or by isolating within the premises contamination or pollution that may occur because of some undiscovered or unauthorized cross-connection on the premises; or the installation of a GCSD approved backflow prevention device will be required;

8.1.1.2. To eliminate existing connections between drinking water systems and other sources of water that are not approved as safe and potable for human consumption;

8.1.1.3. To eliminate cross-connection between the drinking water systems and other sources of water or process water used for any purpose whatsoever which jeopardize the safety of the drinking water supply, or the installation of an approved Backflow Prevention Device;

8.1.1.4. To prevent the making of cross-connections in the future;

8.1.1.5. To protect the drinking water supply within the premises, where plumbing defects or cross-connections may endanger the drinking water supply available on the premises;

8.1.2. This section is to be reasonably interpreted. It is the intent of this section to recognize that there are varying degrees of hazard and to apply the principle that the degree of protection should be commensurate with the degree of hazard as determined by the District.

8.1.3. Definitions. For the purpose of this section 8.1, the following words and phrases shall have the meaning respectively ascribed to them by this section:

8.1.3.1. “Air-gap separation” means a physical break between a supply pipe and a receiving vessel. The air-gap shall be at least 2.5 times the diameter of the supply pipe, measured vertically above the top rim of the vessel. Supply pipes less than one-inch diameter shall have a minimum air-gap of 2.5 inches.

8.1.3.2. “Approved” means as approved by GCSD and, where appropriate, Tuolumne County.

8.1.3.3. “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.

8.1.3.4. “Backflow prevention assembly tester” means a person who is certified as a backflow prevention assembly tester.

8.1.3.5. “Double check-valve assembly” means an Approved assembly of two independently acting, approved check valves, including tightly closing shut-off valves on each end of the check-valve assembly and suitable connections available for testing the water tightness of each valve. To be approved these devices must be readily accessible for maintenance and testing and in no case shall be less than 12 inches above the flood level of the surrounding ground or floor and in a location where no part of the assembly will be submerged.

8.1.3.6. “Reduced pressure principle backflow prevention device” means an Approved device incorporating two or more independently acting, approved check valves and an automatically operating differential relief valve located between the two checks, two shut-off valves, and equipped with necessary appurtenances for testing. The device shall operate to maintain the pressure in the zone between the two check valves less than the pressure on the public water supply side of the device. At cessation of normal flow, the pressure between check valves shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve shall operate to maintain this reduced pressure by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere thereby providing an air-gap in the device. To be approved, these devices must be readily accessible for maintenance and testing and installed not less than 12 inches above the flood level of the surrounding ground or floor in a location where no part of the valves max height will be submerged.

8.1.3.7. “Water supply” means any water supply Approved by the GCSD.

8.1.3.8. “Auxiliary water supply” means an Approved water supply originating on the premises that is used exclusively for fire protection or irrigation and is not connected in any manner to the domestic supply system on the premises. An auxiliary supply shall be a water supply that has been developed exclusively for the purpose of either fire protection or irrigation or both. The presence of an auxiliary water supply will require the installation of a GCSD approved backflow prevention device.

8.1.3.9. “Cross-connection” means any physical connections between the piping system from the GCSD service and that of any other water supply that is not, or cannot be, approved as safe and potable for human consumption, whereby water from the unapproved source may be forced or drawn into the GCSD distribution mains.

8.1.3.9. “Health hazard” means an actual or potential threat of contamination of a physical or toxic nature to the public potable water system or the consumer’s potable water system to such a degree or intensity that there would be a danger to health.

8.1.3.10. “Pollution hazard” means an actual or potential threat to the physical properties of the water system or the potability of the public water supply but which would not constitute a health or system hazard as defined.

8.1.3.11. “System hazard” means an actual or potential threat of severe damage to the public potable water system, or the consumer’s potable water system, or of a pollution or contamination which would have a protracted effect on the quality of potable water in the system.

8.1.3.12. “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.

8.1.3.13. “Well” means any artificial excavation constructed by any method for the purpose of extracting water from, or injecting water into, the underground. This definition shall not include:

(a) Oil and gas wells, or geothermal wells constructed under the jurisdiction of the Department of Conservation, except those wells converted to use as water wells; or

(b) Wells used for the purpose of dewatering excavation during construction, or stabilizing hillsides or earth embankments.

#### 8.1.4. “Abandonment of Wells”.

8.1.4.1. The owner of property upon which a private well is located shall destroy the well at their expense before being connected to the GCSD Public Water System, or the installation of a GCSD approved backflow prevention device will be required and subject to ongoing maintenance requirements and fees.

8.1.4.2. Abandoned wells shall be destroyed in accordance with the “Well Destruction” standards as set forth in Tuolumne County Well Ordinance 443, Section 3-310, or as subsequently revised or supplemented.

8.1.4.3. The destruction of an abandoned well shall be inspected by and completed to the satisfaction of the Tuolumne County and the GCSD.

8.1.5. Protection of Public Water System at Service Connection. No water service connection to any premises shall be installed or maintained by the GCSD unless the water supply is adequately protected in accordance with the requirements and regulations of Title 17 of the California Administrative Code and these regulations:

8.1.5.1. Each service connection from the public water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system.

8.1.5.2. Each service connection from the public water system for supplying water to premises on which any substance is or may be handled in such fashion as to permit entry into the water system shall be protected against backflow of the substance from the premises into the public system. This shall include the handling of process water and waters originating from the public water supply system which have been subject to deterioration in sanitary quality.

8.1.5.3. Approved backflow prevention devices shall be installed on service connections to any premises where internal cross-connections exist.

~~8.1.5.4. The District property owner coordinates, schedules and~~ conducts annual testing and/or maintenance ~~that will be billed to the property owner. The Property owner can choose to test and maintain of the~~ protective device, ~~completed by with~~ a certified backflow Tester ~~certified from CA by~~ CA/NV AWWA, and must submit results to the District annually, ~~in accordance with the schedule established by the District.~~

8.1.6. Types of Protection.

8.1.6.1. The protection device required shall depend upon the degree of hazard. An air-gap separation or a reduced pressure backflow prevention device shall be used where there is an existing or potential health or system hazard. A double check-valve assembly may be used where there is an existing or potential pollution hazard determined by the District.

8.1.6.2. The public water system shall be protected at the service connection as specified below at the cost of the Property Owner:

(a) At the service connection to any premises where there is allowed an auxiliary water supply, handled in a separate piping system with no known or easily established cross connection, the public water supply shall be protected by an approved double check-valve assembly. When the auxiliary water supply may be contaminated, an air-gap or approved reduced pressure principle backflow prevention device shall be installed at the service connection.

(b) At the service connection to any premises on which a substance that would be objectionable, but not hazardous to health, if introduced into the public water supply, is handled so as to constitute a cross-connection, the public water supply shall be protected by an approved double check-valve assembly.

(c) At the service connection to any premises on which there is an auxiliary water supply where cross-connections are known to exist, the public water supply shall be protected by an approved reduced pressure principle backflow prevention device.

(d) At the service connection to any premises on which a material dangerous to health or toxic substance in toxic concentration is or may be handled in such a manner as to permit its entry into the water system, the public water supply shall be protected by an air-gap separation. The air-gap shall be located as close as practicable to the meter and all piping between the meter and receiving

tank shall be entirely visible. If these conditions cannot be reasonably met, the public water supply shall be protected with an approved reduced pressure principle backflow prevention device, providing the alternative is acceptable to both the GCSD and the Tuolumne County health officer.

(e) At the service connection to any sewage treatment plant, sewage pumping station, or storm water pumping station, the public water supply shall be protected by an air-gap separation. The air-gap shall be located as close as practicable to the meter and all piping between the meter and receiving tank shall be entirely visible. If these conditions cannot be reasonably met, the public water supply shall be protected with an approved reduced pressure principle backflow prevention device, providing there are no direct connections to sewage pumps or waste lines and this alternative is acceptable to both the GCSD and county health officer. Final decision in this matter shall rest with the State Department of Health.

(f) At the service connection to hospitals, medical buildings, mortuaries and other premises where the county health officer and/or the GCSD determines that a special hazard exists, the public water supply shall be protected by an approved reduced pressure principle backflow device.

(g) Where a health or safety hazard exists on a premises by reason of any existing plumbing installation, or lack thereof, the owner or his agent shall install additional plumbing or make such connection as deemed necessary to abate the hazard and bring the plumbing system into compliance with applicable provisions of this chapter.

8.1.6.3. All Customers with existing and future service connections to ~~its~~ the District's water system shall be subject to the following:

(a) Inspection of all premises for plumbed cross-connections or other actual or potential backflow hazards including but not limited to auxiliary water systems such as private wells, landscape irrigation systems, water-using commercial or industrial equipment, stock-watering facilities, hot tubs, pools, solar panels and HVAC heat exchangers.

(b) Installation of a backflow prevention devices approved by the District as a condition of water service where required by the General Manager. Any premises without an approved backflow prevention device and/or cross connection control shall be subject to shut off and discontinuance of water service. Discontinue water service immediately upon detection of an imminent sanitary threat to the District water supply due to an actual or potential backflow situation on any customer premises, including normal charges for resumption of service and reconnection of a discontinued service after customer fully compliance with District backflow prevention requirements.

(c) All backflow prevention devices shall be installed at or near water service connections (adjacent to water meter) or when such installation is impractical as determined by the General Manager, at another location as determined by the General Manager.

(d) All backflow prevention devices shall be subject to regular inspection as determined by the General Manager and testing upon installation, annual testing and repair or replacement as needed.

(e) The Customer shall be responsible for maintaining and all repairs necessary to insure proper operation of the backflow prevention device at all times.

(f) All backflow prevention devices determined by the District to require major repairs or replacement shall be repaired or replaced at the expense of the Customer.

8.1.6.4. The property owner or consumer who is responsible for any protective device installed on a fire protection system shall have such device inspected and tested in accordance with requirements of the GCSD and county health department. The GCSD shall be furnished with a copy of the test result on an annual basis by July 1st. Persons testing protective devices shall be qualified and approved by the GCSD and county department of public health.

8.1.7. Failure to Comply. Failure to comply with any part of this section may be cause for the discontinuance of water service by the GCSD and/or the county department of public health. The GCSD shall give notice in writing of any violations of this chapter to the property owner and consumer. If no action is taken within 10 days after such notice has been mailed or delivered in person, the GCSD may discontinue delivery of water. If it is determined by either the GCSD or the Tuolumne County health officer that any immediate hazard exists as a result of failure to comply, the GCSD may immediately discontinue service to the premises. Delivery of water shall not be resumed until a protective device has been properly installed and approved as provided in this section.

8.1.7.1 In the event the property owner does not complete and provide documentation of the required annual backflow prevention device testing in accordance with the schedule and deadlines prescribed by the District, the District may contract for the testing of the device and bill all associated costs to the Property owner.

8.1.8. Recordkeeping. GCSD must establish and maintain a recordkeeping system that complies with CCCPH Section 3.5.1.

8.1.9. Backflow Incident Response, and Reporting. GCSD must create and implement procedures for investigating and responding to suspected or actual backflow incidents. These procedures should align with the requirements outlined in Article 5 of the CCCPH chapter.

8.1.10. Public Outreach and Education. GCSD must establish a public outreach and education program focused on cross-connection control and backflow protection. This program should aim to inform staff, customers, and the community about these important topics. To fulfill this requirement, the District may use various methods, including periodic inserts in water bills, pamphlet distribution, new customer documentation, email communications, and consumer confidence reports.

8.1.11. Local Entity Coordination. GCSD must collaborate with relevant local entities involved in cross-connection control or public health protection. This coordination is essential for conducting hazard assessments, ensuring the provision of appropriate backflow protection, and assisting in the investigation of backflow incidents. Relevant local entities may include plumbing and permitting officials, health departments, law enforcement agencies, fire departments, maintenance personnel, and both public and private organizations.