

# ORDINANCE 2015-1 OF QUAIL VALLEY WATER DISTRICT FOR THE CONTROL OF BACKFLOW AND CROSS-CONNECTIONS TO PROTECT THE PUBLIC WATER SYSTEM

## Section 1. CROSS-CONNECTION CONTROL — GENERAL POLICY

### 1.1. Purpose.

The purpose of this Ordinance is:

- 1.1.1. To protect the public potable water supply of Quail Valley Water District from the possibility of contamination or pollution by isolating within the consumer'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,
- 1.1.2. 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,
- 1.1.3. To provide for the maintenance of a continuing Program of Cross-Connection Control which will systematically and effectively prevent the contamination or pollution of the potable water system.

### 1.2. Responsibility.

Quail Valley Water District shall 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. If, in the judgment of Quail Valley Water District an approved backflow prevention assembly is required (at the consumer's water service connection; or, within the consumer's private water system) for the safety of the water system, Quail Valley Water District or its designated agent shall give notice in writing to said consumer to install such an approved backflow prevention assembly(s) at a specific location(s) on his premises. The consumer shall immediately install such an approved backflow prevention assembly(s) at the consumer's own expense; and, failure, refusal or inability on the part of the consumer to install, have tested and maintained said assembly(s), shall constitute grounds for discontinuing water service to the premises until such requirements have been satisfactorily met.

## Section 2. DEFINITIONS

- 2.1. **Air-Gap Separation (AG)**: The term "air-gap separation" means a physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe measured vertically from the flood rim of the vessel and in no case less than one inch.
- 2.2. **Approved Backflow Prevention Assembly**: 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 entitled: AWWA/ANSI C510-2007 Standard for Double Check Valve Backflow Prevention Assemblies; AWWA/ANSI C511-2007 Standard for Reduced Pressure Principle Backflow Prevention Assemblies; and, have met completely the laboratory and field performance standard of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (USC FCCCHR) established in: Standards of Backflow Prevention Assemblies Chapter 10 of the most current edition of the Manual of Cross-Connection Control. Said AWWA and USC FCCCHR standards have been adopted by Quail Valley Water District. Final approval shall be evidenced by a "Certificate of Compliance" for the said AWWA standards; or the appearance of the specific model and size on the List of Approved Backflow Prevention Assemblies published by the USC FCCCHR along with a "Certificate of Approval" for the said USC FCCCHR Standards; issued by an approved testing laboratory. The following testing laboratory has been qualified by Quail Valley Water District to test and approve backflow prevention assemblies:

Foundation for Cross-Connection Control and Hydraulic Research  
University of Southern California  
Los Angeles, California 90089-2531

- 2.3. **Approved Water Supply:** The term "approved water supply" means any water supply whose potability is regulated by a State or local health agency.
- 2.4. **Auxiliary Supply:** The term "auxiliary supply" means any water supply on or available to the premises other than the approved water supply.
- 2.5. **AWWA Standard:** The term "AWWA Standard" means an official standard developed and approved by the American Water Works Association (AWWA).
- 2.6. **Backflow:** The term "backflow" shall mean a flow condition, caused by a differential in pressure that causes the flow of water or other liquids, gases, mixtures or substances into the distributing pipes of a potable supply of water from any source or sources other than an approved water supply source. Backsiphonage is one cause of backflow. Backpressure is the other cause.
- 2.7. **Contamination:** The term "contamination" means a degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health or which may impair the usefulness or quality of the water.
- 2.8. **Cross-Connection:** The term "cross-connection" as used in this Ordinance means any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur, shall be considered to be cross-connections.
- 2.9. **Double Check Valve Assembly (DC):** The term "double check valve assembly" means an assembly of two internally loaded, independently acting check valves, including resilient seated shut-off valves on each end of the assembly and resilient seated test cocks for testing the water tightness of each check valve.
- 2.10. **Health Agency:** The term "health agency" means the California Department of Public Health.
- 2.11. **Local Health Agency:** The term "local health agency" means the county health authority.
- 2.12. **Person:** The term "person" means an individual, corporation, company, association, partnership, municipality, public utility, or other public body or institution.

- 2.13. **Premise:** The term “premise” means any and all areas on a water user’s property which are served or have the potential to be served by the public water system.
- 2.14. **Public Water System:** The term “public water system” means a system for the provision of piped water or other constructed conveyances to the public for human consumption which has fifteen or more service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year.
- 2.15. **Reclaimed Water:** The term “reclaimed water” means a wastewater which as a result of treatment is suitable for uses other than potable water.
- 2.16. **Reduced Pressure Principle Backflow Prevention Assembly (RP):** An assembly containing two internally loaded, independently acting 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 assembly shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves located at each end of the assembly.
- 2.17. **Reduced Pressure Principle Detector Assembly (RPDA):** An assembly composed of a line size approved reduced pressure principle backflow prevention assembly with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow.
- 2.18. **Service Connection:** The term “service connection” refers to the point of connection of a user’s piping to Quail Valley Water District’s facilities.
- 2.19. **Used Water:** Any water supplied by a water purveyor from a public potable water system to a consumer’s water system after it has passed through the service connection and is no longer under the control of the water purveyor.
- 2.20. **Water Supplier:** The term “water supplier” means the person who own or operates the approved water supply system.
- 2.21. **Water User:** The term “water user” means any person obtaining water from an approved water supply system.

### **Section 3. CROSS-CONNECTION PROTECTION REQUIREMENTS**

#### **3.1. Water System.**

- 3.1.1. The water system shall be considered as made up of two parts: Quail Valley Water District’s System and the Consumer’s System.
- 3.1.2. Quail Valley Water District’s 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 consumer’s system begins.
- 3.1.3. The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.
- 3.1.4. The distribution system shall include the network of conduits used for the delivery of water from the source to the consumer’s system.

3.1.5. The consumer's system shall include those parts of the facilities beyond the termination of the water supplier distribution system which are utilized in conveying potable water to points of use.

### **3.2. Policy.**

3.2.1. No water service connection to any premise shall be installed or maintained by Quail Valley Water District unless the water supply is protected as required by State of California laws and regulations and this Ordinance for the Control of Backflow and Cross-Connection. Service of water to any premises shall be discontinued by Quail Valley Water District if a backflow prevention assembly required by this Ordinance for the Control of Backflow and Cross-Connection 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.

3.2.2. The consumer's system should be open for inspection at all reasonable times to authorized representatives of Quail Valley Water District to determine whether unprotected cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, Quail Valley Water District shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the consumer has corrected the condition(s) in conformance with the State of California statutes relating to plumbing and water supplies and the regulations adopted pursuant thereto.

3.2.3. An approved backflow prevention assembly shall be installed on each service line to a consumer'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:

3.2.3.1. 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 Quail Valley Water District, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard.

3.2.3.2. In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line commensurate with the degree of hazard. This shall include the handling of process waters and waters originating from the water supplier's system which have been subject to deterioration in quality.

3.2.3.3. In the case of premises having (1) internal cross-connections that can not be permanently corrected or protected against, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow prevention assembly in the service line.

3.2.4. The type of protective assembly required under subsections 3.2.3.1., 3.2.3.2., and 3.2.3.3. shall depend upon the degree of hazard which exists as follows:

- 3.2.4.1. In the case of any premise where there is an auxiliary water supply as stated in subsection 3.2.3.1. of this section and it is not subject to any of the following rules, the public water system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly.
- 3.2.4.2. In the case of any premise where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system shall be protected by an approved double check valve backflow prevention assembly.
- 3.2.4.3. In the case of any premise where there is any material dangerous to health, which is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, and mortuaries and plating plants.
- 3.2.4.4. In the case of any premise where there are unprotected cross-connections, either actual or potential, the public water system shall be protected by an approved air gap or an approved reduced pressure principle backflow prevention assembly at the service connection.
- 3.2.4.5. In the case of any premise 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 or an approved reduced pressure principle backflow prevention assembly on each service to the premise.

3.2.5. Any backflow prevention assembly required herein shall be a make, model and size approved by Quail Valley Water District. 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 entitled: AWWA/ANSI C510-2007 Standard for Double Check Valve Backflow Prevention Assemblies; AWWA/ANSI C511-2007 Standard for Reduced Pressure Principle Backflow Prevention Assemblies; and, have met completely the laboratory and field performance standard of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (USC FCCCHR) established in: Standards of Backflow Prevention Assemblies Chapter 10 of the most current edition of the Manual of Cross-Connection Control. Said AWWA and USC FCCCHR standards have been adopted by Quail Valley Water District. Final approval shall be evidenced by a "Certificate of Compliance" for the said AWWA standards; or the appearance of the specific model and size on the List of Approved Backflow Prevention Assemblies published by the USC FCCCHR along with a "Certificate of Approval" for the said USC FCCCHR Standards; issued by an approved testing laboratory. The following testing laboratory has been qualified by Quail Valley Water District to test and approve backflow prevention assemblies:

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University of Southern California  
Los Angeles, California 90089-2531

Testing laboratories other than the laboratory listed above will be added to an approved list as they are qualified by Quail Valley Water District.

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 backflow prevention assemblies may be used without further approval test or qualification.

3.2.6. It shall be the duty of the consumer at any premise where backflow prevention assemblies are installed to have a field test performed by a certified backflow prevention assembly tester upon installation and at least once per year. In those instances where Quail Valley Water District deems the hazard to be great enough, field tests may be required at more frequent intervals. These tests shall be at the expense of the water user and shall be performed by Quail Valley Water District personnel or by a certified tester approved by Quail Valley Water District. It shall be the duty of Quail Valley Water District to see that these tests are made in a timely manner. The consumer shall notify Quail Valley Water District in advance when the tests are to be undertaken so that an official representative may witness the field tests if so desired. These assemblies shall be repaired, overhauled or replaced at the expense of the consumer whenever said assemblies are found to be defective. Records of such tests, repairs and overhaul shall be kept and made available to Quail Valley Water District.

3.2.7. Approval must be obtained from Quail Valley Water District before a backflow prevention assembly is removed, relocated, or replaced.

3.2.7.1. Removal: The use of an assembly may be discontinued and the assembly removed from service upon presentation of sufficient evidence to Quail Valley Water District to verify that a hazard no longer exists and is not likely to be created in the future;

3.2.7.2. Relocation: An assembly may be relocated following confirmation by Quail Valley Water District that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the assembly;

3.2.7.3. Repair: An assembly may be removed for repair, provided the water use is either discontinued until repair is completed and the assembly is returned to service, or the service connection is equipped with other backflow protection approved by Quail Valley Water District. A retest will be required following the repair of the assembly; and

3.2.7.4. Replacement: An assembly may be removed and replaced provided the water use is discontinued until the replacement assembly is installed. All replacement assemblies must be approved by Quail Valley Water District and must be commensurate with the degree of hazard involved.

3.2.8. At each premise where it is necessary, in the opinion of Quail Valley Water District, a user supervisor shall be designated by, and at the expense of, the water user. This user supervisor shall be responsible for the monitoring of the backflow prevention assemblies and for the avoidance of cross-connections. In the event of contamination or pollution of the drinking water system due to a cross-connection on the premises, the Quail Valley Water District shall be promptly notified by the user supervisor so that appropriate measures may be taken to overcome the contamination. The water user shall inform Quail Valley Water District of the user supervisor's identity on, as a minimum, an annual basis and whenever a

change occurs.

3.2.9. 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, except for the field testing and maintenance requirements under subsection 3.2.6, be excluded from the requirements of these rules so long as Quail Valley Water District is assured that they will satisfactorily protect the water purveyor's system. Whenever the existing device is moved from the present location or requires more than minimum maintenance or when Quail Valley Water District finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow prevention assembly meeting the requirements of this section.

#### **Section 4. ADMINISTRATIVE PROCEDURES**

##### **4.1. Water System Survey.**

4.1.1. Existing service connections not having a backflow prevention assembly located at the meter are subject to an internal water use survey of the premises for the purpose of identifying real or potential cross-connection hazards. Any customer who cannot or will not allow an on-premise inspection of the piping systems shall be required to install the backflow prevention assembly Quail Valley Water District considers necessary.

4.1.2. Quail Valley Water District shall review all requests for new service to determine if backflow is needed. Plans and specifications must be submitted to Quail Valley Water District upon request for review of possible cross-connection hazards as a condition of service for new service connections. If it is determined that a backflow prevention assembly is necessary to protect the public water system, the required assembly must be installed before service will be granted.

4.1.3. Quail Valley Water District may, at its' discretion, require a re-inspection for cross-connection hazards of any premise to which it serves water. Quail Valley Water District will transmit a written notice requesting an inspection appointment to each affected water user. Any water user who cannot or will not allow an on-premise inspection of his piping system shall be required to install the backflow prevention assembly Quail Valley Water District considers necessary.

##### **4.2. Assembly Installation, Testing, and Maintenance Notification.**

4.2.1. Quail Valley Water District will notify the water user of the survey findings, listing the corrective actions to be taken if any are required. A period of 45 days will be given to complete all corrective actions required, including installation of backflow prevention assemblies. A shorter length of time for completion may be given if Quail Valley Water District determines a severe cross-connection hazard may exist.

4.2.2. A second notice will be sent to each water user who does not take the required corrective actions prescribed in the first notice within the time period prescribed. The second notice will give the user a 15 day period to take the required corrective action. If the corrective action is not completed within the 15 day period, Quail Valley Water District may terminate water service to the affected water user until the required corrective actions are taken. A fee will be charged to the water user's account for water meter removal and all current Quail Valley Water District rules for service will apply for reconnection.

4.2.3. Quail Valley Water District will notify each affected water user when it is time for the backflow prevention assembly installed on their service connection to be tested. This written notice shall give the water user 30 days to have the assembly tested and supply the water user with the necessary Field Test Report form to be completed by the Certified Backflow Prevention Assembly Tester and submitted to Quail Valley Water District.

4.2.4. A second notice will be sent to each water user that does not submit a completed Field Test form in the time prescribed in the first notice. The second notice will give the user a 15 day period to complete the required test and submit the Field Test Report form to Quail Valley Water District. If the required test is not completed and the required Field Test Report form is not submitted within the 15 day period, Quail Valley Water District may terminate water service to the affected water user until the required test is completed. A fee will be charged to the water user's account for water meter removal and all current Quail Valley Water District rules for service will apply for reconnection.

### **4.3. Water Service Termination.**

4.3.1. When Quail Valley Water District encounters water uses that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, Quail Valley Water District shall institute the procedure for discontinuing Quail Valley Water District water service.

4.3.2. Conditions or water uses that create a basis for water service termination shall include, but are not limited to, the following items:

- 4.3.2.1. Refusal to install a required backflow prevention assembly;
- 4.3.2.2. Refusal to test a backflow prevention assembly;
- 4.3.2.3. Refusal to repair a faulty backflow prevention assembly;
- 4.3.2.4. Refusal to replace a faulty backflow prevention assembly;
- 4.3.2.5. Direct or indirect connection between the public water system and a sewer line;
- 4.3.2.6. Unprotected direct or indirect connection between the public water system and a system or equipment containing contaminants;
- 4.3.2.7. Unprotected direct or indirect connection between the public water system and an auxiliary water system;
- 4.3.2.8. A situation, which presents an immediate health hazard to the public water system.

4.3.3. Water Service Termination Procedures:

4.3.3.1. For conditions 4.3.2.1., 4.3.2.2., 4.3.2.3., or 4.3.2.4., Quail Valley Water District will terminate service to a customer's premise after the two written notices specified in 4.2. have been sent specifying the corrective action needed and the time period in which it must be done. If no action is taken within the allowed time period, water service may be terminated.

4.3.3.2. For conditions 4.3.2.5., 4.3.2.6., 4.3.2.7., or 4.3.2.8., Quail Valley Water District will take the following steps:

- 4.3.3.2.1. Make reasonable effort to advise water user of intent to terminate water service;
- 4.3.3.2.2. Terminate water supply, lock service valve and remove water meter. The water



service will remain inactive until the Quail Valley Water District has approved correction of violations. A fee will be charged to the water user's account for water meter removal and all current Quail Valley Water District rules for service will apply for reconnection.

#### **4.4. Requirements for the Certification as a Backflow Prevention Device Tester.**

4.4.1. Each applicant for certification as a tester of backflow prevention assemblies shall file an approved application with the Quail Valley Water District, together with a fee, as may be established by Quail Valley Water District Board of Directors.

4.4.2. Competency in all phases of backflow prevention assembly testing and repair must be demonstrated by means of education and/or experience in order to obtain certification.

4.4.3. The following are minimum requirements:

4.4.3.1. Applicants shall have had at least two (2) years experience in plumbing or pipefitting or equivalent qualifications;

4.4.3.2. Hold a valid certification from the American Water Works Association (A.W.W.A.) California-Nevada Section, from a County certification program, or have equivalent training in the opinion of Quail Valley Water District and the Health Department.

4.4.3.3. Each applicant for certification as a tester of backflow prevention assemblies shall furnish evidence to show that he/she has available the necessary tools and equipment to properly test such assemblies. He/she shall be responsible for the competency and accuracy of all tests and reports prepared by him/her.

4.4.4. The certificate issued to any tester is valid for a period of one year and may be revoked, suspended, or not renewed by the Quail Valley Water District for improper testing, repairs, and/or reporting.

### **Section 6. AUTHORITY TO ADOPT RULES AND POLICIES**

The Quail Valley Water District is authorized to make all necessary and reasonable rules and policies with respect to the enforcement of this ordinance. All such rules and policies shall be consistent with the provisions of this ordinance and shall be effective thirty (30) days after being filed with the Secretary of Quail Valley Water District.

### **Section 7. SEVERABILITY**

If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this Ordinance, or any part thereof, is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance or any part thereof. The Board of Directors hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases to be declared invalid.

### **Section 8. EFFECTIVE DATE**

This Ordinance shall take effect thirty (30) days from the date of its passage. Before the expiration of fifteen (15) days after its passage, this Ordinance shall be published in the Tehachapi News, a newspaper of general circulation, printed and published in the City of Tehachapi.

