

ORDINANCE NO. 87

**ORDINANCE OF THE BOARD OF DIRECTORS OF THE
INDIAN WELLS VALLEY WATER DISTRICT, KERN AND SAN
BERNARDINO COUNTIES, CALIFORNIA, FOR THE CONTROL
OF BACKFLOW AND CROSS-CONNECTIONS.**

BE IT ORDAINED, by the Board of Directors of the Indian Wells Valley Water District, as follows:

Section 1. CROSS-CONNECTION CONTROL - GENERAL POLICY

1.1 The purpose of this ordinance is:

- a. To protect the potable water supply of the Indian Wells Valley Water District against actual or potential Backflow and Cross-Connections.
- b. To eliminate existing, or the possibility of, connections between drinking water systems and other sources of water that are not approved as safe and potable for human consumption.
- c. To eliminate Cross-Connections between drinking water systems and sources of contamination.
- d. To prevent the making of Cross-Connections in the future.

1.2 Protective Regulation

These regulations are adopted pursuant to Title 17 of the California Code of Regulations. Except as otherwise provided and/or permitted herein, and based on federal and state laws and regulations, it is unlawful for any person, firm, or corporation at any time to make, maintain or cause any Cross-Connection between District supplied potable water and any other source of water. Furthermore, it is unlawful for any person, firm or corporation to maintain any fixture or other appurtenance which by reason of its design, function or construction may cause or allow backflow of water or other substances into the District's water supply system and/or the service of water pipes or fixtures of any consumer of the District.

Section 2. DEFINITIONS

- 2.1 Air-Gap Separation. 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 above the top rim of the vessel, in no case less than one inch.
- 2.2 Approved Backflow Prevention Device. The term "approved backflow prevention device" shall mean devices that have passed laboratory and field evaluation tests performed by a recognized testing organization that has demonstrated its competency to perform such tests to the California Department of Health Services and the District. These devices must, at a minimum, conform with the standards established by the American Water Works Association.
- 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 other than the water supply provided by the District.
- 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 the reversal of flow, caused by a differential in pressure, that permits 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. Examples of how backflow is created is back-siphonage and back-pressure .
- 2.7 Contamination. The term "contamination" means a degradation of the quality of the potable water by any foreign substance that creates a hazard to the public health or that 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 Direct Cross-Connection. The term "Direct Cross-Connection" shall mean a Cross-Connection which is subject to both backsiphonage and backpressure.

- 2.10 Double Check Valve Assembly. The term "double check valve assembly" means an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the water tightness of each check valve.
- 2.11 Health Agency. The term "health agency" means the California Department of Health Services, or the local health officer with respect to a small water system.
- 2.12 Indirect Cross-Connection. The term "Indirect Cross-Connection" shall mean a Cross-Connection which is subject to backsiphonage only.
- 2.13 Local Health Agency. The term "local health agency" means the county or city health authority.
- 2.14 Person. The term "person" means an individual, corporation, company, association, partnership, municipality, public utility, or other entity or public body or institution.
- 2.15 Premises. The term "premises" means any and all areas on a customer's property which are served or have the potential to be served by the public water system.
- 2.16 Pressure Vacuum Breaker. The term "pressure vacuum breaker" means a backflow device configured with a spring-loaded float and an independent spring loaded check valve. The check valve is designed to open by means of an air inlet valve and to close with the aid of a spring when flow stops. It may only be used to protect against backsiphonage. It is not acceptable protection against backpressure.
- 2.17 Public Water System. The term "public water system" means an Indian Wells Valley Water District (District) owned water supply system supplying an approved water supply to the public for human consumption.
- 2.18 Reclaimed Water. The term "reclaimed water" means wastewater, which as a result of treatment is suitable for uses other than potable use.
- 2.19 Reduced Pressure Principle Backflow Prevention Device. The term "reduced pressure principle backflow prevention device" means a device incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.
- 2.20 User Connection. The term "user connection" refers to the point of connection of a user's piping to the water supplier's facilities.
- 2.21 Water - Potable. The term "potable water" means any public water supply that has been investigated and approved by the health agency. The system must be operating under a valid

health permit and the District. In determining which constitutes an approved water supply, the health agency and the District have final judgment as to its safety and potability.

- 2.22 Water - Non-potable. The term "non-potable water" means a water supply that has not been approved for human consumption by the District and the health agency having jurisdiction.
- 2.23 Water Supplier. The term "water supplier" refers to the Indian Wells Valley Water District, or "District".
- 2.24 Water User. The term "water user" means any person obtaining water from an approved water supply system.

Section 3. REQUIREMENTS

3.1 Cross-Connection Protection Requirements

a. General Provisions.

- 1. Cross-Connections with the public water supply that are not authorized by the District are prohibited.
- 2. Whenever backflow protection has been found necessary by the District, the District will require the responsible owner or the water user to install an approved backflow prevention device by and at his/her expense for continued services or before a new service will be granted.
- 3. Wherever backflow protection has been found necessary by the District on a water supply line entering a water user's premises, then any and all water supply lines from the District's mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention device. The type of device to be installed will be in accordance with the requirements of this Ordinance.
- 4. Failure by the responsible owner or water user to install an approved backflow prevention device, or to maintain the operational effectiveness of said device, or to comply with annual testing in accordance with the provisions of this Ordinance, shall subject said owner or user to the administrative procedures detailed in this Ordinance.

b. Where Protection is Required.

- 1. Each user connection from the District water system to premises having an auxiliary water supply shall be protected against backflow of water from the

premises into the public water system.

2. Each user connection from the District water system to any premises on which any substance is handled in such fashion as may allow its entry into the District's water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of water originating from the District water system which have been subjected to deterioration in sanitary quality.
3. Backflow prevention devices shall be installed on the user connection to any premises having:
 - (a) internal Cross-Connections that cannot be permanently corrected and/or controlled to the satisfaction of the District, or
 - (b) 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 Cross-Connections exist.
4. Any system designed to serve multiple commercial or industrial tenants shall be protected against backflow of water from the premises to the public water system by a backflow prevention assembly of the type required by the District.
5. All portable pressure spray or cleaning units (including water trucks, street sweepers, etc.) That have the capability of connecting to any water supplier's system shall have an air-gap separation or a reduced pressure principle assembly.
6. Any water user who incorporates a booster into his/her home's water distribution system shall have a backflow prevention assembly of the type required by the District.
7. Any other circumstances where, in the reasonable discretion of the District, protection from Backflow or Cross Connections is deemed necessary or desirable.

c. Type of Protection Required

1. The type of protection that shall be provided to prevent backflow into the approved water supply shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of protective device that may be required (listed in an increasing level of protection) includes: Double Check Valve Assembly (DC), Reduced Pressure Principle Backflow Prevention

Device (RP), Pressure Vacuum Breaker (PVB), and an Air-Gap separation (AG). The water user may choose a higher level of protection than required by the District. The minimum types of backflow protection required to protect the approved water supply, at the user's water connection to premises with varying degrees of hazard are given in Table 1. Situations which are not covered in Table 1 shall be evaluated on a case by case basis and the appropriate backflow protection shall be determined by the District.

Table 1
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
(a.) Sewage and Hazardous Substances	
1) Premises where the public water system is used to supplement a reclaimed water supply.	AG
2) Premises where there are waste-water pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single family residence that has a sewage lift pump. An RP may be provided in lieu of an AG if approved by the District.	AG
3) Premises where reclaimed water is used and there is no interconnection with the potable water system. An RP may be provided in lieu of an AG if approved by the District.	AG
4) Premises where hazardous substances are handled in any manner in which the substances may enter a potable water system. This does not include a single family residence that has a sewage lift pump. An RP may be provided in lieu of an AG if approved by the District.	AG

Table 1 - continued
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
5) Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be injected.	RP
6) For landscape only meters into which fertilizers, herbicides, or pesticides are not or cannot be injected the District may allow a PVB to be used provided it is installed a minimum of 12" above the highest point of the piping or usage.	PVB
(b.) Auxiliary Water Supplies	
1) Premises where there is an unapproved auxiliary water supply which is inter-connected with the public water system. An RP or DC may be provided in lieu of an AG if approved by the Health Agency and the District.	AG
2) Premises where there is an unapproved auxiliary water supply and there are no interconnections with the public water system. A DC may be provided in lieu of an RP if approved by the Health Agency and the District.	RP

Table 1 - continued
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
<p>3) No back flow prevention device will be required for premises where there is an abandoned unapproved auxiliary water supply. An unapproved auxiliary water supply will be deemed abandoned by the District when done in accordance with all state and local laws and regulations. The source must be rendered permanently idled and permanently disconnected from the customer's water distribution system to the District's satisfaction.</p>	

(c.) Fire Protection Systems

<p>1) Premises where the fire system is directly supplied from the public water system and there is an unapproved auxiliary water supply on or to the premises (not inter-connected.)</p>	DC
<p>2) Premises where the fire system is supplied from the public water system and inter-connected with an unapproved auxiliary water supply. A RP may be provided in lieu of an AG if approved by the District.</p>	AG
<p>3) Premises where the fire system is supplied from the public water system and where either elevated storage tanks or fire pumps which take suction from the private reservoirs or tanks are used.</p>	DC

Table 1 - continued
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
4) Premises where the fire system is supplied from the public water system and chemicals or fire retardants are utilized or chemicals are used to prevent freezing.	RP
Premises where the fire system is supplied from the public water system and where recycled water is used in a separate piping system.	DC
(d.) Recycled Water	
1) Premises where the public water system is used to supplement the recycled water supply.	AG
2) Premises where recycled water is used, other than as allowed in paragraph(3) and there is no inter-connection with the potable water system.	RP
3) Residences using recycled water for landscape irrigation as part of an approved dual plumbed use area established pursuant to sections 22CCR 60313 through 60316 unless the recycled water supplier obtains approval of the District, or the Department if the water supplier is also the supplier of the recycled water, to utilize an alternative backflow protection plan that includes an annual inspection and annual shutdown test of the recycled water and potable water systems pursuant to subsection 22CCR 60316 (a).	DC

Table 1 - continued
TYPE OF BACKFLOW PROTECTION REQUIRED

<u>Degree of Hazard</u>	<u>Minimum Type of Backflow Prevention</u>
(e.) Premises where entry is restricted so that inspections for Cross-Connections cannot be made with sufficient frequency or at sufficiently short notice to assure that Cross-Connections do not exist.	RP
(f.) Premises where there is a repeated history of Cross-Connections being established or re-established.	RP
(g.) Two or more services supplying water from different street mains to the same building, structure, or premises through which an inter-street main flow may occur.	RP

Section 4. BACKFLOW PREVENTION DEVICES

4.1 Approved Backflow Prevention Devices

All backflow prevention devices or assemblies required herein shall be a make, model and size approved by the District.

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|-------------------|---|
| AWWA/ANSI C510-92 | Standard for Double Check Valve Backflow Prevention Assemblies; |
| AWWA/ANSI C511-92 | Standard for Reduced Pressure Principle Backflow Prevention Assemblies; |

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 (USC FCCCHR) established in:

Specifications of Backflow Prevention Assemblies - Section 10 of the most current edition of the *Manual of Cross-Connection Control*.

Said AWWA and USC FCCCHR standards and specifications have been adopted by the District. Final approval shall be evidenced by a "Certificate of Compliance" for the said

AWWA standards; or "Certificate of Approval" for the said USC FCCCHR Specifications; issued by an approved testing laboratory.

The following testing laboratory has been qualified by the District to test and approve backflow prevention assemblies:

Foundation for Cross-Connection Control and
Hydraulic Research
University of Southern California
KAP-200 University Park MC-2531
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 the 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 test or qualification.

The District will provide, upon request, to any affected customer, a list of approved backflow prevention devices.

4.2 **Backflow Prevention Device Installation**

- a. Backflow prevention devices shall be installed in a manner prescribed in Section 7603, Title 17 of the California Administrative Code, and as such regulations may from time to time be modified. Location of the devices should be as close as practical to the user's connection. The District shall have the final authority in determining the required location of a backflow prevention device.
 1. Air-gap separation (AG). The air-gap separation shall be located on the user's side of and as close to the user connection as is practical. All piping from the user connection to the receiving tank shall be above grade and be entirely visible. No water use shall be provided from any point between the user connection and the air-gap separation. The water inlet piping shall terminate a distance of at least two (2) pipe diameters from the supply inlet, but in no case less than one (1) inch above the overflow rim of the receiving tank.
 2. Reduced pressure principal backflow prevention device (RP). The approved reduced pressure principal backflow prevention device shall be installed on the user's side of and as close to the user connection as is practical. The device shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade measured from the bottom of the

device and with a minimum of twelve inches (12") side clearance. The device shall be installed so that it is readily accessible for maintenance and testing. Water supplied from any point between the user connection and the RP device shall be protected in a manner approved by the District.

3. Double check valve assembly (DC). The approved double check valve assembly shall be installed on the user's side of and as close to the user connection as is practical. The device shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade measured from the bottom of the device and with a minimum of twelve inches (12") side clearance. The device shall be installed so that it is readily accessible for maintenance and testing.

4.3 Backflow Prevention Device Testing and Maintenance

- a. The owners or water users (both of whom shall be responsible for compliance) of any premises on which, or on account of which backflow prevention devices are installed, shall have the devices tested by a person who has demonstrated to the District or Health Agency his/her competency in testing of these devices. Backflow prevention devices must be tested immediately after installation, relocation, or repair and at least annually. The District may require a more frequent testing schedule if it is determined to be necessary. No device shall be placed back in service unless it is functioning as required. A report in a form acceptable to the District shall be filed with the District each time a device is tested, relocated, or repaired. These devices shall be serviced, overhauled, or replaced whenever they are found to be defective and all costs of testing, repair, and maintenance shall be borne by the water user.
- b. The District may supply a list of approved backflow prevention assembly testers to the responsible owner or water user.
- c. The District will notify responsible owners or water users by mail when annual testing of an assembly is required. Any necessary report forms, to be completed and returned to the District, will be provided by the District.

4.4 Backflow Prevention Device Removal

- a. Approval must be obtained from the District before a backflow prevention device is removed, relocated or replaced.
 1. Removal: The use of a device may be discontinued and the device removed from service upon presentation of sufficient evidence to the District to verify that a Cross-Connection no longer exists or is not likely to be created in the future.
 2. Relocation: A device may be relocated following confirmation by the 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 device.

3. Repair: A device may be removed for repair, provided the water use is either discontinued until repair is completed and the device is returned to service, or the user connection is equipped with other backflow protection approved by the District. A retest will be required following the repair of the device.

Section 5. ADMINISTRATIVE PROCEDURES

5.1 Water System Survey

- a. The District shall review all requests for new services to determine if backflow protection is needed. As a condition of service for new user connections, plans and specifications must be submitted to the District, upon request, for review of possible Cross-Connection hazards. If it is determined that a backflow prevention device is necessary to protect the public water system, the required device must be installed before service will be activated.
- b. The District may require an on-premise inspection to evaluate Cross-Connection hazards. The District will transmit a written notice requesting an inspection appointment to each affected water user. Any customer which cannot or will not allow an on-premise inspection of their piping system shall be required to install the backflow prevention device the District considers necessary or the premises shall not be entitled to receive District water.
- c. The District may, at its discretion, require a reinspection for Cross-Connection hazards of any premise to which it serves water. The District will transmit a written notice requesting an inspection appointment to each affected water user. Any customer which cannot or will not allow an on-premise inspection of their piping system shall be required to install the backflow prevention device the District considers necessary or the premises shall not be entitled to receive District water.

5.2 Customer Notification - Device Installation

- a. The District will notify the water user of the inspection findings, listing corrective action to be taken if required. A period of 60 days will be given to complete all corrective action required including installation of backflow prevention devices. Under circumstances which the District perceives as high risk, immediate installation of an appropriate device or other corrective action shall be required, or water service may be immediately terminated.

- b. A second notice will be sent to each water user which does not take the required corrective action prescribed in the first notice within the 60 day period allowed. The second notice will give the water user a two week period to take the required corrective action. If no action is taken within the two week period the District will terminate water service to the affected water user until the required corrective actions are taken.

5.3 Customer Notification - Testing and Maintenance

- a. The District will notify each affected water user annually that the backflow prevention device installed on his/her user connection must be tested. This written notice shall give the water user 90 days to have the device tested and supply the water user with the necessary form to be completed and submitted to the District.
- b. A second notice shall be sent to each water user which does not have his/her backflow prevention device tested as prescribed in the first notice within the 90 day period allowed. The second notice will give the water user a two week period to have his/her backflow prevention device tested. If no action is taken within the two week period the District will terminate water service to the affected water user until the subject device is tested and shown to be operating properly.
- c. Extension of time may be granted by the General Manager on a case-by-case basis. Any extension of time, as may be granted pursuant hereto, shall not release the owner from the requirement of annual testing, nor shall such extension of time delay or in any manner result in any device failing to be tested annually, as set forth in Section 4.

Section 6. WATER SERVICE TERMINATION

6.1 General

When the District encounters water user conditions that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, the District shall institute the following procedure for discontinuing the District water service.

6.2 Basis for Termination

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

- a. Refusal to install a required backflow prevention device.
- b. Refusal to test a backflow prevention device.
- c. Refusal to repair a faulty backflow prevention device.

- d. Refusal to replace a faulty backflow prevention device.
- e. The District has not received a test certificate during the calendar year as required in Sections 4.3 and 5.3.
- f. Unprotected direct or indirect connection between the District water system and an auxiliary water system.
- g. Unprotected direct or indirect connection between the District water system and a system or equipment containing contaminants.
- h. A situation which presents an immediate health hazard to the public water system.
- i. Direct or indirect connection between the District water system and a sewer line.

6.3 Water Service Termination Procedures

For conditions a., b., c., d., e., or f., the District will terminate service to a customer's premises after a 48-hour written notice has 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 will be terminated.

For conditions g., h., or i., the District will terminate water service and lock the service valve and, if necessary, remove the meter immediately. The District will make a reasonable effort to first advise the water user. The water service will remain inactive until correction of violations, as approved by the District.

Notwithstanding the foregoing, the District may terminate any water service at any time deemed necessary or appropriate to protect its water supply and/or distribution system.

Section 7. REQUIREMENTS FOR RECOGNITION AS A DISTRICT APPROVED BACKFLOW PREVENTION DEVICE TESTER

Each applicant for district approval as a tester of backflow prevention devices shall register with the District. The District, at its discretion, may rely on the Kern County approved list of testers.

District approval as a backflow prevention device tester may be revoked or not renewed for improper testing, repairs and/or reporting, or for other reasons deemed appropriate by the District.

The following are minimum requirements:

- a. Applicants must provide evidence of a valid certification from the American Water Works Association (A.W.W.A.) California-Nevada Section, the American Backflow Association (A.B.A.) or from a District approved certification program.
- b. S/He shall be responsible for the competency and accuracy of all tests and reports prepared by her/him.

Section 8. CONTINUITY

Adoption of this ordinance shall not be construed as a waiver of any right or obligation under any prior agreement, contract or commitment.

Section 9. SPECIAL CONDITIONS

In the event that conditions arise which are not specifically covered by this ordinance, the Board may take whatever action that, in its discretion, is warranted.

Section 10. SEVERABILITY

If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this chapter, 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 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 be declared invalid.

STATE OF CALIFORNIA)

COUNTIES OF KERN)
AND SAN BERNARDINO)

I, THOMAS F. MULVIHILL, Secretary of the Board of Directors of the Indian Wells Valley Water District, DO HEREBY CERTIFY, as follows:

The foregoing Ordinance is a full, true and correct copy of Ordinance No. 87, duly adopted at a Public Hearing of the Board of Directors of said District, duly and held at the regular meeting place of the Board on the 14th day of March, 2005, for which all of the members of said Board of Directors had due notice and at which a majority of the Board of Directors were present. All the foregoing being on the motion of Director Corlett, seconded by Director Cortichiato, and authorized by the following vote, namely:

AYES: President Saint-Amand
 Director Manning
 Director Cortichiato
 Director Corlett

NOES: None.

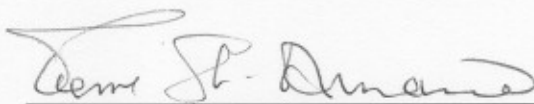
ABSENT: None.

ABSTAIN: Vice-President Brown

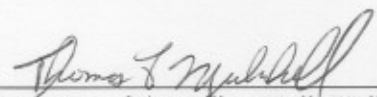
I have carefully compared the foregoing with the original Minutes of said meeting on file and of record in my office, and the foregoing is a full, true and correct copy of the original ordinance adopted at said Hearing and entered into said Minutes.

Ordinance No. 87 has not been amended, modified or rescinded since the date of its adoption on March 14, 2005, and the same is now in full force and effect.

WITNESS my hand and the official seal of said Board of Directors this 14th day of March, 2005.



President of the Indian Wells Valley Water District
and of the Board of Directors thereof.



Secretary of the Indian Wells Valley District
and of the Board of the Directors thereof.



(SEAL)