

STAFF REPORT

To: Coastside County Water District Board of Directors

From: David R. Dickson, General Manager

Agenda: August 13, 2013

Date: August 8, 2013

Subject: Public Hearing and Consideration of Ordinance Modifying Section W of the District's General Regulations Regarding Water Service Pertaining to the Control of Backflow and Cross-Connections

Recommendation:

1. Conduct a public hearing to receive comments on the proposed Ordinance Modifying Section W of the District's General Regulations Regarding Water Service Pertaining to the Control of Backflow and Cross-Connections.
2. Approve the proposed Ordinance Modifying Section W of the District's General Regulations Regarding Water Service Pertaining to the Control of Backflow and Cross-Connections.

Background: Title 17 of the California Code of Regulations mandates that water suppliers must protect the public water supply from contamination by implementation of a cross-connection control program. Backflow incidents within the District's service area in the early 2000's and a strong suggestion by the Department of Public Health (DPH) compelled the District to take over the cross-connection control program that was being administered by the County of San Mateo.

The District assumed administration of the cross-connection control program in 2005 but lacked the resources to conduct proper surveys that are a requirement of Title 17. It was evident that there were still many services with potential cross connections that did not have the proper backflow prevention assemblies installed. In 2010 the District initiated a comprehensive cross connection survey to identify these services and have the owners install the proper backflow assemblies. These services were mainly commercial, agricultural and light industrial applications. As we increased our focus on implementation of the backflow program, it became apparent that some aspects of the District's backflow regulations needed to be simplified, clarified, and strengthened.

The proposed update presented here is the product of extensive effort by District staff, with the assistance of District Counsel Patrick Miyaki. The revised regulations require all non-single-family-residential services and residential services with alternate water sources to have a backflow assembly installed. It has been modeled after similar ordinances enacted by other municipalities and

water districts in California and Nevada and its simplicity makes backflow requirements easier to understand and less subject to challenge.

On July 9, 2013, the Board discussed the proposed ordinance and set a public hearing on the ordinance for August 13, 2013, at 7:00 p.m., in order to allow interested customers and members of the public to provide comments. At the Board's direction, staff sent a letter to all owners of non-single-family-residential properties in the District describing backflow prevention requirements that would apply to their services under the proposed ordinance and notifying them of the public hearing. In addition, we published the text of the proposed ordinance and a notice of the public hearing in the Half Moon Bay Review on July 17, 2013.

As of August 8, the District has received no written comments on the proposed ordinance. Staff has, however, fielded a number of calls from customers who received the letter and who are moving forward with plans to install backflow devices.

The attached redline version of the ordinance indicates staff-suggested changes to the language of the ordinance presented to the board on July 9.

Staff will make a presentation regarding backflow protection, the District's program, and the proposed ordinance and will answer any questions that Board may have.

Fiscal Impact: None.

ORDINANCE NO. 2013-01

**AN ORDINANCE OF THE COASTSIDE COUNTY WATER
DISTRICT**

**MODIFYING SECTION W OF THE DISTRICT'S GENERAL
REGULATIONS REGARDING WATER SERVICE
PERTAINING TO THE CONTROL OF BACKFLOW AND
CROSS-CONNECTIONS**

RECITALS

WHEREAS, on August 10, 2004, the District adopted Resolution No. 2004-15 adding Section W to the District's General Regulations Regarding Water Service Pertaining to the Control of Backflow and Cross-Connections;

WHEREAS, the District adopted this Resolution pursuant to Title 17, Chapter V, Sections 7583-7605 of the California Code of Regulations, which requires that water suppliers protect the public water supply from contamination by implementation of a cross-connection control program;

WHEREAS, the District assumed the administration of the backflow and cross-connection control program from the County of San Mateo as suggested by the California Department of Health Services (now the Department of Public Health) due to backflow or cross-connection incidents in the early 2000s;

WHEREAS, since the District has implemented its backflow and cross-connection control program, staff has determined that its regulations pertaining to the control of backflow and cross-connections should be amended; and

WHEREAS, in establishing its procedures, the Board of Directors has given notice of the public hearing to be held in connection with this Ordinance, and the District has complied with all notice and public hearing requirements of the law; and has received, reviewed and given due consideration to the evidence presented in connection with the procedures established by this Ordinance.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of the Coastside County Water District that Section W "BACKFLOW AND CROSS-CONNECTION CONTROL" is hereby modified in the General Regulations of the Coastside County Water District to delete the entire Section W and replace it with the following:

W. Backflow And Cross-Connection Control

1. ***Cross-Connection Control – General Policy***

a. Purpose. The purpose of this regulation is:

- i. To protect the public potable water supply of the Coastside County Water District (District) from the possibility of contamination or pollution from backflow; and,
- ii. To promote the elimination or control of existing cross connections, actual or potential, between the customer's potable water system(s) and nonpotable water systems, plumbing fixtures, appliances, and industrial piping systems

b. Authority. These regulations are adopted pursuant to the State of California Code of Regulations, Title 17 Sections 7583 – 7605, inclusive (State Regulations). The State Regulations, as they may be amended or revised, are incorporated into these regulations by this reference, except to the extent the State Regulations conflict with these regulations, in which case these regulations will govern.

c. Policy: No Non Residential Single Family water service connection or Single Family Residential service connection that have an auxiliary water supply, cross connection, or a risk of backflow or contamination to any premises shall be installed or maintained by the District unless the water supply is protected as required by State Regulations and this regulation. Service of water to any premises shall be discontinued by the District under the following circumstances: (1) if a backflow prevention assembly required by this regulation is not installed, tested, and maintained; (2) if it is found that a backflow prevention assembly has been removed or bypassed, or (3) if an unprotected cross connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

2. ***Definitions***

Words used in this regulation, unless the context requires otherwise, shall be as defined below.

- a. **Approved Tester** means a person who holds a current and valid AWWA (American Water Works Association) Backflow Prevention Assembly Testers Certification and is in good standing with the District to perform backflow prevention device testing within the District's distribution system in accordance with established procedures as found in the latest edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.
- b. **Auxiliary Water Supply** Any water supply on or available to the premises other than the approved water supply as delivered by the District to the service connection. This

includes storage tanks where water quality may degrade, private wells, natural or ornamental ponds, streams, storm water, rain barrels, gray water, and the ocean.

- c. **Backflow** means the reverse flow of water or any other fluid or substance or any combination or any mixture thereof from the customer's system into District's water distribution system.
- d. **Backflow Prevention Assembly** means an assembly of a type and manufacture approved by the District which will prevent backflow into District's distribution system. The District will approve all backflow prevention assemblies that meet the American Water Works Association standards at the time the backflow prevention assembly is installed.
 - i. 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 1 inch.
 - ii. 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.
 - iii. Reduced Pressure Principle Backflow Prevention Device (RP). The term "reduced pressure principle backflow prevention device" or "RP 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.
- e. **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.
- f. **Cross-Connection** means any connection, link or channel between District's water distribution system and an auxiliary water supply, a pipe or piping system, plumbing fixtures, appliance, container, receptacle, vessel or other devices that may allow for contaminated or used water or fluid, or any other substance of whatsoever nature other than the water supplied by District, to enter any part of District's water distribution system.
- g. **Customer** means any person or organization who receives water from the Coastside County Water District.
- h. **Customer's System** means the water piping system located immediately downstream from a meter or service connection.

- i. **Detector Check** means a by-pass metering device that detects any leakage or unauthorized use of water from fire or automatic sprinkler systems.
- j. **District** means Coastside County Water District.
- k. **District's Water Distribution System** means the water distribution system owned and operated by the District including the service connections to water mains, up to and including the water meter.
- l. **General Manager** means the General Manager of the District or his authorized representative is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this regulation.
- m. **Master Meter** means a metered service connection that services more than one residential, commercial, industrial, institutional, agricultural, or governmental unit.
- n. **Multifamily Residential Service** means a service that supplies water through a master meter to a residential premises, 4-plex, apartment complex or trailer village.
- o. **Non Single Family Residential Service** means all services that are not a Single Family Residential Service. This includes all mixed use, fire, commercial, agricultural, institutional, governmental, multifamily or industrial water services.
- p. **Premises** means a parcel of land including all buildings and appurtenances located thereon.
- q. **Service Connection** means the meter and water piping system connecting the customer's system with the District's water distribution system.
- r. **Single Family Residential Service** means a service connection to a single family home or premises.
- s. **Temporary Water Use** means water used from a fire hydrant or other source on a temporary basis and metered through a portable water meter.

3. ***Requirements for Backflow Prevention Assemblies***

- a. **Existing Service Connections.** Unless otherwise specified by the District, a backflow prevention assembly must be installed on all existing Non Single Family Residence service connections and on Single Family Residential service connections that have an auxiliary water supply, a cross connection, a storage tank or other risk of backflow or contamination. ~~by January 2015.~~ Single family residential service fewer than three stories tall with no health threats, auxiliary water supply, or a second District water

service and are not under a master meter typically are exempt or qualify for a single check, non testable device to be installed as part of the meter change out program.

- b. New Service Connections:** A backflow prevention assembly must be installed on all new Non Single Family Residential Services and all new Single Family Residential water service connections that have an auxiliary water supply, a cross connection, or a risk of backflow or contamination. At the time an application for a new water service is made by a potential customer in accordance with procedures established by the District, the General Manager will review the application to determine the need for an approved, backflow prevention assembly on the customer's service. If a backflow prevention assembly is not required, a single check must be installed on the downstream end of the water meter.

- c. Upgrading of Existing Backflow Prevention Assemblies:** An existing backflow prevention assembly that does not provide adequate protection for the degree of potential hazard from backflow or contamination shall be upgraded at customer's expense.

- d. Commercial Fire Sprinkler Systems.** All services to commercial fire sprinkler systems require backflow protection at the point of connection to the District's supply. The type of backflow protection required is based on the sprinkler system construction. For the purposes of this determination:
 - i. Systems utilizing only the District's water supply will require at least a double check valve assembly.
 - ii. Systems utilizing the District's water supply and that also contain chemical additives, on site water storage, auxiliary water supplies, or fire booster pumps, shall require an RP device.
 - iii. Existing systems with a single detector check will not require retrofit provided the check valves are tested in accordance with NFPA 13 requirements and do not require replacement.
 - iv. Retrofitting existing fire sprinkler systems will require the customer to provide the Coastside Fire Protection District with an updated hydraulic analysis to certify proper system operation with the additional pressure loss.
 - v. The District, in addition to the Coastside Fire Protection District, shall review and approve all applications for construction or retrofit of commercial fire sprinkler systems.

- e. Residential Fire Sprinkler Systems.** All services to residential fire sprinkler systems require backflow protection at the point of connection to the District's supply. The type of backflow protection required is based on the sprinkler system construction. For the purposes of this determination:

- i. Systems utilizing only the District's water supply will require at least a single detector check assembly.
- ii. Systems utilizing the District's water supply and that also contain chemical additives, on site water storage, auxiliary water supplies, or fire booster pumps, shall require at least an RP device.
- iii. Existing systems with a single detector check will not require retrofit.

f. Construction and Temporary Water Use.

- i. Construction and temporary water use shall be metered and equipped with either an air gap separation or an RP device.
- ii. Inspection of air gap separation and testing of reduced pressure principle backflow prevention assemblies shall be a condition of temporary service and at the expense of the customer.

4. *Ownership of Backflow Prevention Assemblies*

Backflow prevention assemblies installed or upgraded by the customer shall remain the property of the customer. Customer shall be responsible for maintenance, inspection, and testing of backflow prevention assemblies as required herein.

5. *Maintenance, Inspection and Testing of Backflow Prevention Assemblies*

- a. Customer shall at all times maintain backflow prevention assemblies serving customer's premises in proper working order and provide for unobstructed access by District to the backflow prevention assemblies as a condition of continued water service.
- b. The customer's system must be open for inspection at all reasonable times to authorized representatives of the District to determine whether cross connections or other structural or sanitary hazards, including violations of these regulations, exist.
- c. If the customer allows the backflow certification to lapse, the water will be turned off 48 hours after the expiration of the backflow certification.
- d. Backflow prevention assemblies must be inspected and tested before a service is connected.

- e. District will send a courtesy notice to the customer of the annual backflow prevention assembly testing requirement. The Customer is responsible for the inspection and testing of backflow prevention assemblies. If the Customer does not provide the District with the backflow testing Certificate documenting that the backflow prevention assembly is working properly within 30 days of notification by the District of the need for testing, the District may contract for the testing and charge the Customer for the expense, or discontinue water service.
- f. Backflow prevention assemblies must pass an annual inspection or more frequently if the risk of contamination warrants it, by being inspected, tested, and certified by an Approved Tester.
- g. All expenses for installation, inspection, testing, repair and maintenance of backflow prevention assemblies shall be borne by the customer.

6. ***Enforcement***

- a. Water service to any premises may be discontinued by the District if the backflow prevention assemblies have not met the conditions set forth in this regulation or if the General Manager has determined that a situation exists which could cause contamination of the District's water distribution system. All backflow prevention assemblies that do not pass a backflow prevention assembly test must be repaired and in proper working order within thirty (30) days, or such shorter time period as the District determines to be necessary to minimize the risk of contamination. Service will not be restored until the General Manager has determined that the risk of contamination to the District's water distribution system has been corrected.
- b. Any person or persons, company, corporation or association, who willfully fails to properly install, or permit to be installed, backflow prevention assemblies as required by this regulation or who willfully by-passes, alters, removes or refuses to maintain a backflow prevention assembly, shall be guilty of a misdemeanor and upon conviction thereof shall be subject to a fine not exceeding \$500 or imprisonment in the county jail for a period not exceeding six months or both fine and imprisonment.

7. **Severability**

If any provision or part of this Ordinance is held to be invalid, or unenforceable in particular circumstances, such invalidity shall not affect the remainder of the Ordinance which shall continue to be of full force and effect and the Board declares this Ordinance to be severable for that purpose.

8. Publication

The General Manager is hereby directed to arrange for this Ordinance to be published in a newspaper of general circulation in the District within ten (10) days of its adoption.

PASSED AND ADOPTED this ___ day of _____ 2013 by the following votes of the Board of Directors:

AYES:

NOES;

ABSTAIN:

ABSENT:

Ken Coverdell, President
Board of Directors

ATTEST:

David R. Dickson
Secretary of the District