

Background Information / Legislative Acts Relating to Backflow Prevention Retrofitting. Preparation material for upcoming TCPUD presentation.

Source: California State Code

Re: Water Backflow Prevention Retrofit

Application: TCPUD Implementation

Compiled by: John R. Falk, Governmental & P.R. Coord.

To: TSBOR & TSMLS Leadership

(1) Primary State Provision Cited for Local Implementation:

**CALIFORNIA CODES
HEALTH AND SAFETY CODE
SECTION 116800-116820**

116800. Local health officers may maintain programs for the control of cross-connections by water users, within the users' premises, where public exposure to drinking water contaminated by backflow may occur. The programs may include inspections within water users premises for the purpose of identifying cross-connection hazards and determining appropriate backflow protection. Water users shall comply with all orders, instructions, regulations, and notices from the local health officer with respect to the installation, testing, and maintenance of backflow prevention devices. The local health officer may collect fees from those water users subject to inspection to offset the costs of implementing cross-connection control programs.

116805. (a) Local health officers may maintain programs, in cooperation with water suppliers, to protect against backflow through service connections into the public water supply, and, with the consent of the water supplier, may collect fees from the water supplier to offset the costs of implementing these programs.

(b) The fees authorized under this section and under Section 116800 shall be limited to the costs of administering these programs. At the discretion of the water supplier, the fees collected from the water supplier by the local health officer may be passed through to water users.

(c) Programs authorized under this section and Section 116800 shall be conducted in accordance with backflow protection regulations adopted by the department.

(d) Nothing in this article shall prevent a water supplier from directly charging those water users required to install backflow prevention devices for the costs of the programs authorized in this section and Section 116800.

116810. To assure that testing and maintenance of backflow prevention devices are performed by persons qualified to do testing and maintenance, local health officers may maintain programs for certification of backflow prevention device testers. The local health officer may suspend, revoke, or refuse to renew the certificate of a tester, if, after a hearing before the local health officer or his or her designee, the local health officer or his or her designee finds that the tester has practiced fraud or deception or has displayed gross negligence or misconduct in the performance of his or her duties as a certified backflow prevention device tester. The local health officer may collect fees from certified testers to offset the cost of the certification program provided pursuant to this

section. The certification standards shall be consistent with the backflow protection regulations adopted by the department.

116815. (a) All pipes installed above or below the ground, on and after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape.

(b) Subdivision (a) shall apply only in areas served by a water supplier delivering water for municipal and industrial purposes, and in no event shall apply to any of the following:

(1) Municipal or industrial facilities that have established a labeling or marking system for recycled water on their premises, as otherwise required by a local agency, that clearly distinguishes recycled water from potable water.

(2) Water delivered for agricultural use.

(c) For purposes of this section, "recycled water" has the same meaning as defined in subdivision (n) of Section 13050 of the Water Code.

116820. Any person who violates any provision of this article, violates any order of the local health officer pursuant to this article, or knowingly files a false statement or report required by the local health officer pursuant to this article is guilty of a misdemeanor punishable by a fine not exceeding five hundred dollars (\$500) or by imprisonment not exceeding 30 days in the county jail or by both such fine and imprisonment. Each day of a violation of any provision of this article or of any order of the local health officer beyond the time stated for compliance of the order shall be a separate offense.

(2) Secondary Source of State-Level Authority to Establish Such Provisions, and to Empower Local Public Agencies to Implement.

**CALIFORNIA CODES
HEALTH AND SAFETY CODE
SECTION 116350-116415**

(3) Secondary Source of State-Level Authority & Implementation Guidance.

**CALIFORNIA CODES
PLUMBING CODE
SECTION 603.4**

(4) 1995 Legislation, signed into law, regarding backflow regulation authority.

BILL NUMBER: SB 1172 CHAPTERED 10/10/95

An act to amend Sections 4010.1, 4017, and 4019.10 of, and to add Section 4010.35 to, the Health and Safety Code, relating to drinking water.

SEC. 3. Section 4017 of the Health and Safety Code is amended to read:

4017. Any person who operates a public water system shall do all of the following:

(a) Comply with primary and secondary drinking water standards.

(b) Ensure that the system will not be subject to backflow under normal operating conditions.

**Title 17 – Safe Drinking Water Act of 1989
Cal. & U.S. E.P.A.**

Presentation Notes

Issue: TCPUD's implementation of a domestic water cross-connection control program involving testing and retrofitting.

Forum: TSBOR Board of Directors meeting.

Date: 17 February 2004.

Presenter: Ms. Debi Black, Technical Services Supervisor / Cross-Connection Specialist with Tahoe City Public Utility District (TCPUD).

Content: Notes taken by TSBOR/TSMLS contract advocate during an oral presentation on TCPUD's effort to prevent contamination of the domestic water supply via backflow.

Number of pages: Four.

In 1986 both the State of California (Safe Drinking Water Act) and Federal Government (E.P.A.) imposed a requirement that backflow prevention assemblies (cross-connection protection devices) be installed on domestic water lines if the property in question had one or more potential cross-connection uses on site. These include (but are not limited to): Fire suppression sprinkler systems, landscape watering systems, hot tubs, and hydronic heating (in home or walkway/driveway) among others.

The issue relates to the principle in physics of water always seeking a lower location, such as can be demonstrated in the act of siphoning. As applied to domestic water supplies, the goal is to have drinking water travel only one direction in the system, namely toward the end user. Any backflow from the user to the system contaminates the water for the downstream users. This backflow potential could introduce chemical (e.g., Glycol) or biologic (e.g., E. Coli) contaminants. Illness and even death can result from such occurrences, and thus backflow prevention is a public health and safety issue of interest/importance to both the State and Federal government.

The protective measures are generally engineered to shut down the flow of water if the pressure gradient drops (the condition in which water would seek out the lowest space and thus flow back into the water mains). This usually involves placing the cross-connection prevention assembly above grade. The assemblies are also to be placed as close as is feasible to the connection on the service line to the main, along side the roadway is common. These requirements can be problematic in High

Sierra winter conditions where freezing is a concern. Nevertheless, many homes have successfully complied with this legal requirement to-date within the TCPUD service area.

In response to the state & federal mandates, TCPUD created a local ordinance, Ordinance # 185, which passed in 1989. Thus, as of 1989 TCPUD “required” the installation of these backflow prevention assemblies when and where indicated. Yet, by their own admission, after the provision was put into place it was not actively enforced. This came to the State’s attention in 1999, and TCPUD was cited for not actively complying with State Code, and were asked to distribute a survey to all their customers to determine how many potential cross-connections were unmitigated. The water survey was distributed with a billing cycle in the year 2000. The response rate was considered good, and identified close to one-thousand connections with uses that would require cross-connection prevention assemblies to be installed. They began with a “worst first” approach, and have placed 270 assemblies in service to-date; leaving some 700 connections yet-to-be-addressed.

With the 1989 local ordinance providing only haphazard coverage due to prioritization, one cannot assume that a home built from 1989 forward would be in compliance. Thus, to capture these estimated 700 structures in need of remediation the PUD is using transfer of title as one avenue to inform the property owner (really, all involved in the transaction) that the property in question has been identified as needing this backflow prevention assembly installed to protect the domestic water supply. Anything done on a property within the TCPUD service area that requires a permit, such as a remodel, new construction... will trigger the PUD’s submission of a letter to the property owner as a reminder. Ms. Black said repeatedly that “this is NOT a point-of-sale provision, and is NOT required to be completed prior to the close of escrow.” The escrow process just afforded the PUD an opportunity to make contact with the property owner.

Of course, from our RE professional prospective it can become a de-facto point-of-sale provision due to the information outreach effort on the PUD’s part, and because remediation money is being held back in some property transactions so as to address this issue when conditions permit. It obviously has material fact disclosure implications for the seller.

There are a number of “sticky” issues to consider. First, the actual type of assembly required to meet the requirement varies by location and type of backflow potential. Thus, the use of a double check or reduced pressure assembly will be dictated by site-specific variables. By extension, cost will also vary significantly from site to site, with the expense ranging from \$350.00 up to \$5,000.00+ depending upon the

property. Thereby making escrow holdbacks something of an unknown. In addition to the 'hard costs' associated with assembly installation, there are recurrent 'soft costs' to be borne by the property owner on a yearly basis. According to Ms. Black, once the cross-connection prevention assembly is in place it must be tested yearly. At present, such testing costs approximately \$50.00.

Inspection of a property to determine if such backflow prevention assemblies are indicated are offered at no charge by the PUD. But the actual testing has a fee associated with it. Currently TCPUD has two certified cross-connection prevention assembly testers in-house, namely Debi Black and Barbara Smith. They anticipate adding a third person to this pool sometime this year. Annual testing is outsourced, so one cannot be sure of the testing cost from year-to-year.

TCPUD has a database that the public can access to determine if a property (by APN number) has been identified as in need of this retrofit. Unfortunately, not everyone who received a survey back in 2000 completed and returned it. Therefore, even this reference database is far from optimal in regard to definitively stating that a given property is or is not in need of remediation. Liability exposure is a real and potentially complex issue, in that the law originated in 1986 but was not actively pursued by the PUD until relatively recently. RE professionals, and indeed many sellers, acting in "good faith" had no knowledge of this water backflow prevention requirement. A number of homes may have transferred title two, three, four or more times without any notification or intervention by the PUD in this regard. Yet, joint & several liability provisions place all involved in these transactions at risk. The question then becomes one of risk management and how best to shield the RE professional from such exposure. This retrofit requirement is made all the more complex by the fact that it applies to all water serving entities, public and private. Ms. Black, who worked at Truckee-Donner PUD for well over a decade prior to her current position with Tahoe City PUD, told the assembled group that to the best of her knowledge the major domestic water provider for greater Truckee (i.e., T-D PUD) had no ordinance or rule in place that reflected this universal mandate. During her tenure with the Truckee entity she said they focused their backflow prevention efforts on the commercial sector, not residential. It is not known if or how the North Tahoe PUD is addressing this mandate. When combined with the innumerable small private domestic water serving companies in the region (e.g., Agate Bay Water, Fulton Water...) the task of ferreting out who needs these assemblies installed becomes all the more cumbersome. Add to this the fact that the local PUDs throughout the region have been buying up these small private water suppliers in the 1980's, 1990's, the continuing to this day, the complexity of authority and notification is increased logarithmically. By way of example, TCPUD

has acquired a number of private water providers after the PUD “water survey” was sent out in 2000. With TCPUD ramping up enforcement of this mandate, it seems reasonable to anticipate that it is only a matter of time before other water serving agencies in the region increase their compliance efforts.

The TSBOR Directors were more than a bit surprised to find that this mandate was long standing, and that it applied outside the TCPUD service area. The advocate was tasked with making contact with C.A.R. Sacramento’s legislative staff to determine how best to proceed (e.g., does the TDS form address this matter, is there a safe harbor provision for those participants in real property transactions in areas where this mandate was not well known nor actively enforced...?).

~End of Oral Presentation Notes~

Prepared by: John Falk
Governmental & Public Relations Coordinator
TSBOR/TSMLS

Documents distributed by Ms. Black at the February 17, 2004, TSBOR Board of Directors meeting:

- a) Two 2-page “Residential/Condominium Cross-Connection Survey” documents, dated January 24, 2003, and January 01, 2004, respectively. Both were sent out under the signature of Barbara M. Smith, Ordinance Inspector, TCPUD.
- b) The 2001 Calif. Plumbing Code, highlighting sections 603.3.3 (“The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation and at least on an annual schedule thereafter or more often when required by administrative authority”), 603.4.6 (“Protection from Lawn Sprinklers and Irrigation Systems”), and 603.4.7 (“Potable Water Outlets with Hose Attachments”).
- c) A recently dated single-page letter (Feb. 10, 2004) directed to PUD water customers giving 30 days notice to install the required connection control device, with a two-page cross-connection control FAQ sheet attached.
- d) Section 7 of the TCPUD Code, Ordinance No. 185, entitled “CROSS-CONNECTION CONTROL”, adopted April 21, 1989. This local ordinance is five pages in length: 7.0-7.7.8 inclusive.

“Mock-up” of the notification TCPUD is disseminating during escrow.

Based upon an actual letter received by a Realtor® member.

Advocate had requested that copies of this correspondence be made available to him, along with the original “water survey” that was distributed across the District, as well as a copy of the local ordinance that put this plan into effect, and any additional background info that might be of assistance in understanding that nature and impetus for this action. To-date some ‘hard copy’ materials have been provided, not the complete record. *J.R.F.*

BOARD OF DIRECTORS

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Tahoe City Public Utility District

Date: February 15, 2004

To: Mr. D. Closer, All Mountain Real Estate, Inc.

From: Debi Black, Technical Services Supervisor / Cross-Connection Specialist

SUBJECT: CROSS-CONNECTION CONTROL REQUIREMENTS

APN 000-000-000, 1234 Anywhere Road

PENDING ESCROW

Dear Escrow Agent:

The property owner of the parcel identified above responded to a water survey conducted by the Tahoe City Public Utility District. Based upon this response, one or more backflow prevention assemblies must be installed on the water service in order to protect the domestic water supply. The type and location of this assembly must be approved by the District. Further, the assembly must be tested by a certified tester.

The purpose of this letter is to ensure that all parties to this escrow are aware that the protection of the domestic water supply by the installation and testing of backflow prevention assemblies is the responsibility of the property owner, as are all associated costs. The State of California Department of Health Services as well as District Ordinance requires compliance.

It is not mandatory that the assembly be installed and tested prior to close of escrow.

The sellers may have it installed and tested; money may be withheld in escrow for the installation and testing; or the buyers may assume the responsibility for installation and testing. Because the District is aware of the need for the assembly, we want to ensure that all parties to the escrow are also aware.

Please contact me if you have any questions about the information contained in this letter at (530) 583-3796, extension 31.

PLEASE PROVIDE A COPY OF THIS LETTER TO BUYER, SELLER AND THEIR AGENTS.

P.O. Box 5249, 221 Fairway Drive, Tahoe City, California 96145 • Fax (530) 583-1475

“Mock-up” of the 30 day notification TCPUD is disseminating
when escrow inquiries are made.

February 10, 2004

Customer's Name
Business Name if applicable
Address

SUBJECT: Cross Connection Control
Address/street, APN #

Dear Customer:

The Tahoe City Public Utility District and State law requires the installation of backflow prevention assemblies on potentially hazardous water services. An escrow inquiry has been made to this District on the above-mentioned property. Our records indicate that you have installed “x – insert irrigation, hydronic heating...” equipment on this property that is hazardous to the public water supply.

Because you have this equipment, it will be required to install a backflow prevention assembly on your water service. The District will assist you in planning for the proper installation and testing of the assembly, which must be installed **within 30 days of this letter.** In order to help you through this process, we have prepared a sheet entitled “Frequently Asked Questions About Cross-Connection Control”. A copy of this sheet as well as a brochure entitled “Working Together For Safe Water” is included with this mailing.

Please contact me at **(530) 583-3796 ext 28,** to answer any questions that you may have about our cross-connection control requirements.

Sincerely,

Barbara M. Smith
Engineering Assistant II
Ordinance Inspector

“Mock-up” of the survey TCPUD has submitted to water customers.

**Tahoe City Public Utility District
Residential/Condominium Cross-Connection Survey**

Please indicate below whether you have any of the following equipment in your home. Please be sure to mark either yes or no to all items. Thank you.

YES	NO	TYPE OF EQUIPMENT
<input type="checkbox"/>	<input type="checkbox"/>	Hydronic Heat
<input type="checkbox"/>	<input type="checkbox"/>	Solar Heat
<input type="checkbox"/>	<input type="checkbox"/>	Heated driveway and / or walkway
<input type="checkbox"/>	<input type="checkbox"/>	Fire Sprinkler System
<input type="checkbox"/>	<input type="checkbox"/>	Hot Water Boiler System (not a regular hot water tank)
<input type="checkbox"/>	<input type="checkbox"/>	Hot Tub
<input type="checkbox"/>	<input type="checkbox"/>	Sauna
<input type="checkbox"/>	<input type="checkbox"/>	Swimming / Lap Pool
<input type="checkbox"/>	<input type="checkbox"/>	Household Sewage Pump
<input type="checkbox"/>	<input type="checkbox"/>	Livestock on Property (Horses, cattle, llamas, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	Alternative Water Supply. If “yes”, then what kind. <ul style="list-style-type: none"> <input type="checkbox"/> Well <input type="checkbox"/> Lake, stream, or river intake <input type="checkbox"/> Spring
<input type="checkbox"/>	<input type="checkbox"/>	Lawn or drip irrigation system <ul style="list-style-type: none"> <input type="checkbox"/> Irrigation with injected fertilizer or chemicals
<input type="checkbox"/>	<input type="checkbox"/>	Do you plan a remodel which may include any of the above items of equipment?

Completed by _____
 Name _____ Date _____
 Phone Number _____