### Foundation for Cross-Connection Control and Hydraulic Research

a Division of the University of Southern California



Winter 2014

#### inside: 2014 usc list | one day seminars | practice time | wtfsw brochure... and more

Four years ago, the states of California and Vermont were the first in the nation to redefine the term "lead-free" for plumbing components intended to convey water for human consumption. This year, the federal government followed those states lead and amended the Safe Drinking Water

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dered what the revised laws mean for backflow prevention assemblies and their replacement parts. And, whether replacing any part of the assembly with "lead-free" parts, which were not originally approved with the assembly, invalidates its USC Foundation Approval.

Talk

Safe Drinking Water Act (SDWA) to put into effect a redefined "leadfree" requirement for the country. With the revised federal law and existing state laws in effect many have won-

# Lead-free parts and Foundation Approval



On January 1, 2010, the California Health and Safety Code, Section 116875 redefined the definition of "lead-free" from ≤8.0% to ≤0.25% maximum weighted average lead content and prohibited any person from introducing into commerce any pipe, plumbing fitting or fixture intended to convey or dispense water for human consumption through drinking or cooking that is not lead-free. Backflow preventers for non-potable purposes such as irrigation, fire sprinkler and industrial purposes were excluded.

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### Foundation Membership

#### What's included with a USC Foundation Membership

#### Membership Discounts

- 25% off Manual Orders
- 20% off Training Courses
- Training Tools are also discounted

#### **Other Benefits**

- E-mail notification every time the electronic copy of the *List of Approved Backflow Prevention Assemblies* is updated
- Updates to the List of Approved Backflow Prevention Assemblies mailed quarterly
- Special Notice mailed when needed
- New Cross Talk mailed quarterly

Members are encouraged to call the USC Foundation with technical questions. The USC Foundation's Engineering Staff is available to assist Members with the various aspects of field testing backflow preventers, installing backflow preventers and administering their cross-connection control program.

Below is a list of those who have become members of the USC Foundation since the last Cross Talk.

Ahmed Alashqar	KJM Industries
Carl Otteson Certified Backflow Testing	Michael Cole
Coco Beach Utility Company	North Beach Water District
Donald Davenport	Paul Casey
Dwayne Davis	Ruben Tomlinson
Fire Ace	Serdas Plumbing, Inc.
Integrity Backflow Company	Texas State Technical College Bookstore
Jason Reed	Tweedy Plumbing, Inc.
Jonathan Guevara	Village Backflow Prevention Service
Kern County, Environmental Health	

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### 2014 USC List

In an effort to help administrative authorities that require USC Approved assemblies to be installed in their jurisdiction, the USC Foundation made the *List of Approved Backflow Prevention Assemblies* available to the general public last year. Today, the List is available electronically to anyone with an Internet connection via the Foundation's website in an Excel, PDF and mobile web app format. Now, for the first time the Foundation has made a printed copy of the USC List available for purchase as a standalone product.

The 8.5" x 11" printed copy of the 2014 List includes every assembly currently approved by the Foundation through January 23, 2014. The printed List is available to anyone and is a great tool to have when access to the electronic copy of the List is not available. Foundation members may purchase additional copies of the List at a discounted price of \$20.00.



Foundation members will continue to receive one complimentary printed copy of the List at the beginning of every year. Please note, the electronic List is meant to compliment the printed copy since the electronic list found on the Foundation's website is updated with new assemblies regularly throughout the year. ■

## Practice at the Lab

Occasionally, USC Foundation members who attend a Foundation training course do not successfully pass the exam on their first attempt. So, the Foundation offers retest dates throughout the year for attendees to attempt to pass the exam. And, to help attendees the Foundation has made available a number of testing stations to practice on or before the retest dates.



The testing stations are located at the USC Foundation laboratory. Foundation staff has setup several testing stations that may be used for practicing the field test procedures. It is important to note that Foundation staff is not available for extensive one-on-one training since the testing stations are available for use during laboratory operating hours.

Please note that all attendees of a Foundation training course are eligible to retake the exam for up to 12 months after initially taking a training course.

Members who are interested in practicing before retaking the hands-on exam or taking a certification exam are welcome to contact the Foundation laboratory at 323-662-3536 to set up a date to practice on the assemblies

Attendees eligible for the retest are required to call the Foundation office 866-545-6340 to sign up. Retest dates may be found on the Foundation's website (fccchr.usc.edu). ■

#### lead-free parts and foundation approval: continued

In response to this new legislation, the Foundation began publishing the "lead-free" status of backflow preventers shown on the *List of Approved Backflow Prevention Assemblies*. Those assemblies that meet the lead-free requirement are indicated with a "Y" in the column labeled " $\leq 0.25\%$  Pb."

On January 4, 2011 the Reduction of Lead in Drinking Water Act was passed. It went into effect on January 4, 2014. This Act amended Section 1417 of the Safe Drinking Water Act (SDWA) making it unlawful to introduce into commerce certain items that are not lead-free. "Lead-free" was re-defined as not more than a weighted average of 0.25 % lead when used with respect to the wetted surface of pipes, pipe fittings, plumbing fittings and fixtures conveying potable water for human consumption.



The SDWA Section 1417(a)(4)(A) states: One exemption is for pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non-potable services, such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption.

With revised requirements at the federal and state level addressing the use of lead-free products, the Foundation has received enquiries regarding the commercially leaded versus lead-free replacement/repair parts for existing Foundation approved assemblies.

For example, what is the tester to do when a component of an approved assembly must be replaced? If the component is replaced with a new part meeting the lead-free requirement, but not the same part that was originally approved with the assembly, will the use of these components invalidate the Foundation's Approval?

If a tester replaces components in a Foundation approved assembly with the original spare parts, will they then be in violation of the Safe Drinking Water Act, or the California Health and Safety Code or a variety of other state and local requirements regarding lead components in drinking water?

To help with the revised requirements the Environmental Protection Agency (EPA) published a document entitled, "Summary of the Reduction of Lead in Drinking Water Act and Frequently Asked Questions." One of the questions posed on the FAQ was, "How does the EPA interpret the new statutory provisions to apply to repairs, reinstallations, and replacement parts?"

#### Repairs of Previously Installed Pipes, Fitting or Fixtures

A pipe, fitting or fixture that was installed in a public water system or a facility providing water for human consumption prior to the effective date of the 2011 Act does not need to meet the new definition of lead-free regardless of whether it is repaired. The repaired pipe, fitting or fixture is not being "used" in the repair or installation, or "introduced into commerce" and therefore, the requirements of Section 1417 are not triggered as a result of the repair. Parts used in repairs may need to meet the requirements of Section 1417 (see "Replacement Parts" below and FAQ #24, 26, 27 and 28). The temporary removal of pipes, fittings, or fixtures for repairs and reinstallation to their original location would not trigger the requirements of Section 1417 because the pipes, fittings or fixtures are not being installed or "used in" repair. (See FAQ #29). Similarly, the temporary removal of pipes, fittings or fixtures for storage or calibration and reinstallation to their original location would not trigger the requirements of Section 1417. (See FAQ #30.)

#### **Replacement Parts**

After the effective date of the 2011 Act, any replacement parts that are pipes, fittings, or fixtures either installed or used in repairs of a public water system or a facility providing water for human consumption, or introduced into commerce, must meet the definition of lead-free. (See FAQ #25)

However, where the replacement of pipes, fittings, or fixtures is part of a device (such as a water heater) made up of several component parts and the device meets the definition of lead-free in the 2011 Act, the replacement parts themselves need not meet the new definition of lead-free. As long as the overall device would meet it with the replacement part installed, then the requirements of Section 1417 would be met. Such replacement parts should be labeled as specifically for use in the device that meets the new definition of lead-free. (See FAQ # 24.)

Also, the use or introduction into commerce of replacement parts that are not pipes, fittings, or fixtures does not trigger the requirements of Section 1417. EPA recommends that any replacement parts that are not pipes, fittings, or fixtures that come into contact with potable water meet the definition of lead-free in the 2011 Act because of their potential to cause elevated levels of lead in drinking water, but they are not required to do so. The document may be found in its entirety at: http://water.epa.gov/drink/info/lead/upload/ epa815s13003.pdf.

Even though the EPA's document does not mention specifically that replacement/repair parts (i.e. not a pipe, fitting or fixture) need to be lead-free it is important to check with the local administrative authorities since their requirements may be more restrictive.

The Foundation, in order to assist field personnel in meeting lead-free requirements, has



been working with the backflow prevention assembly manufacturers for the last six years to ease any transition between lead to leadfree parts. In that time frame the Foundation has evaluated existing approved assemblies with new lead-free parts to ensure the assembly continues to meet Foundation standards as well as these lead-free requirements discussed here.

The result is a set of documents for various backflow prevention assembly manufacturers detailing the lead-free repair/replacement parts available for commercially leaded assemblies which maintain the assemblies' Foundation Approval. Foundation members may find the documents by following the link below

http://fccchr.usc.edu/list/leadfree.html

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# Upcoming: May 29th Seminar

This May the USC Foundation will be holding a one-day seminar covering **Los Angeles and California Codes and Regulations**. The seminar is ideal for cross-connection control specialists who work in California and specifically those who are from the Los Angeles area.

Specifics will include requirements in the State of California according to Titles 17 and 22 of the California Code of Regulations. For example, responsibilities, evaluation of hazards and the type of protection are all discussed in accordance with Titles 17 and 22.

The Foundation has scheduled several oneday seminars for 2014. All of these one-day seminars include six contact hours (0.6 CEUs). Lunch and parking are also included in the price of the seminar.

Please note that all Foundation members may sign up for seminars at the Foundation member discount rate of \$60. Those interested in signing up may contact the Foundation office to register.



Other seminars coming later this year:

#### Recycled Water/Shut Down Tests August 14, 2014

California Code of Regulations requires dual plumbed systems (those plumbed with po-

table drinking water along with recycled water) be tested every four years to ensure that there are no cross-connections between the two systems. This update seminar will discuss methods used to test the systems for crossconnections. Various testing methods including the pressure test, shutdown test and dye test will be discussed.

#### Field Test Procedure Review November 13, 2014

Ideal for attendees who are familiar with fieldtesting backflow preventers, but may need some review and/or to become familiar with changes in the *Manual of Cross-Connection Control, Tenth Edition.* This is also perfect for those coming up for recertification. Discussions will include the differences between the Ninth and Tenth Edition field test procedures and diagnostic scenarios that may be causing a backflow preventer to fail during the field test procedure.

#### lead parts/approval: continued

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In all instances, check with the local administrative authorities first before beginning a repair. Local authorities' requirements of leadfree replacement/repair parts may vary. But, depending upon local requirements, field personnel may be allowed to maintain backflow prevention assemblies with either Foundation approved commercially leaded and/or leadfree replacement/repair parts. ■

#### Special Notice: Announcement

All members were mailed **Special Notice 14-001** in February. Any member who has not received the notice please contact the Foundation office to verify the mailing address on file.

# Spotlight: WTFSW Brochure

The majority of the public does not have the slightest idea what terms like cross-connection, backflow, or backsiphonage mean but these terms are part of maintaining the public water system safe to drink. Educating the public about cross-connection control has been an important aspect of the work of the USC Foundation since it was established in 1944. And, the *Working Together for Safe Water* informational brochure, one of several training tools available from the Foundation, is an excellent way to educate the public about the elements of keeping the public water system safe to drink. The informational brochure is an ideal compliment to the *Working Together for Safe Water* video, also available from the Foundation, as it allows those viewing the video to take a written explanation away with them for later review. The *Working Together for Safe Water* video uses a combination of live footage and animation to explain the concepts of backflow and cross-connection control. The video explains how backflow can occur and how cross-connections can be controlled with various types of backflow prevention assemblies.



The informational brochure explains the concepts of cross-connection control in a simple written format. Terms like backflow, backsiphonage and backpressure are explained for the average person to understand. The brochure briefly introduces backflow prevention assemblies and how they are used in cross-connection control. A brief introduction to the Foundation and its work is explained along with the roles of the water supplier, health department and plumbing authority. The brochure stresses that it is everyone's responsibility to protect the potable water system. The Foundation imprints the name and address of the ordering agency or company on the informational brochures so that the reader can contact the agency or company directly for more information on the cross-connection control program. Thus, the ordering agency or company enjoys the use of a full color informational brochure without investing the time and effort to develop their own. Plus, all Foundation members receive a member discount on all training tools. ■

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# **Training**

### Courses 2014

all courses in Los Angeles, CA unless noted

#### **Tester Course**

#### **Specialist Course**

5-9 May 14-18 July 20-24 October

#### 17-21 March 28 July-1 August

#### **One Day Update Seminar**

29 May L.A./CA Codes & Regulations 14 August Recycled Water Shutdown Test 13 November Field Test Procedures

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#### Foundation for Cross-Connection Control and Hydraulic Research

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# Upcoming

### Events

CA/NV AWWA Spring Conference Anaheim, CA 24-27 March 2014

ABPA Silver State Chapter Seminar Las Vegas, NV 10 April 2014

ABPA Annual Education Conference & Trade Show Pittsburgh, PA 19-21 May 2014

#### Contact Information

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