

Tennessee Backflow
Prevention Association
PO Box 1393
Gatlinburg, TN 37738

TBPA



Your Association
working for safe
drinking water
in Tennessee



Tennessee Backflow News

Summer/Fall '99



**NEXT
MEETING**

**Friday
October 29
10:00 AM
Fleming
Training
Center
Murfreesboro,
TN**

Directions to
Meeting Inside On
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Repair Classes Are A Success!

Beginning our series of backflow repair seminars across the State of Tennessee, the TBPA has recently held class in Jackson and in Maryville. If these two classes are any indication, the series will be a great success. Class attendance has doubled from the first to the second class. Attendees have been a mixture of municipal and utility personnel, plumbing and fire contrac-

tors, and facility maintenance personnel.

All class attendees receive a new backflow repair manual that lists all the backflow assemblies and parts diagrams, along with specific repair information.

Backflow assemblies both small and large were disassembled and then re-assembled to show proper repair technique. Basic information about backflow preventers and proper installation is also covered in class.

Watch for and attend the next

class coming soon in your area!

A special thanks to the following for providing lunch for these first two classes: Ben O'Neal Company/Wilkins, Smith & Stevenson/Watts, Vales & Fittings/Conbraco, Sorrell & Poyer Marketing/Febco, and Mid-America Marketing/Watts.



The TBPA Repair Seminars are a big success!

**Repair Seminar
October 28
Murfreesboro
See Back Page**

President's Message

*David Kellogg,
TBPA President*

I would like to welcome our new chapter officers: Vice President - Larry Stinnett (Backflow Specialty Company) and Middle Tennessee Director - Angel Goike (City of Clarksville). I would also like to thank William Kent - ABPA Region 3 Director for his attendance at our last chapter meeting and his continued participation in the continued growth of TBPA.

At our last chapter meeting in Loudon the Board of Directors encouraged all chapter members to write

letters to the Commissioner of the Department of Environment and Conservation, outlining the need for new, standardized cross connection control regulations in the State of Tennessee (please see insert in this issue). As many of you are aware the TBPA membership voted for standardized test procedures at the last chapter conference, standardized cross connection control regulations are the next step in establishing modern, uniform backflow prevention requirements. Input from our membership is greatly needed during this process, so please, send any questions,

suggestions, ideas or comments to any of the Board of Director or bring them to a chapter meeting.

As our membership grows to over 100 members - volunteers are needed for chapter committees, i.e. newsletter, training & education, etc., in order to meet the chapter's commitment to bring benefits to our members. There are many beneficial changes that can be made with your involvement. Let's see what we all can do to improve backflow prevention in Tennessee.



Backflow Preventer Repair Seminar

Thursday, October 28

J.R. Fleming Training Center, Murfreesboro Tennessee

Provided By

The Tennessee Backflow Prevention Association

One-Day Seminar -Lunch Provided

Class Size Limited - Pre-Registration Required

\$50.00 TBPA/ABPA Members

\$95.00 Non-Members (includes 1yr. membership)

To Register Contact:

Becky Thompson

Madison Suburban Utility District

615-868-3201 ext. 218

Or e-mail Becky at fwhited@mindspring.com

(map inside)



**One In
A Series**



**Professional
Instruction**

Tennessee Backflow Prevention Association



| Name | Affiliation | Phone # | Fax # |
|--|---|---|-----------------------------------|
| David Kellogg, President | City of Gallatin | 615-451-5922 gpu@edge.net | 615-452-0568 |
| Larry Stinnett Vice President | Backflow Specialty Company, Inc. Powell, TN | 423-947-5722 backfosp@aol.com | 423-947-5722 |
| Becky Thompson, Treasurer | Madison Suburban Utility District Madison, TN | 615-868-3201 fwhited@mindspring.com | 615-868-5595 |
| Dale Phelps, Secretary | City of Gatlinburg | 423-436-4681 dpp9@aol.com | 423-430-3800 |
| Grady Gentry Director, West | Grady's Backflows Dyersburg, TN | 901-286-4271 gentry@ecsis.net | 901-286-1557 |
| Angel Golke Director, Middle | City of Clarksville | 931-553-2489 flowangel@aol.com | 931-553-2490 |
| Dave Birkholz Director, East | Loudon Utilities | 423-458-2091 treebirk@worldnet.att.net | 423-458-6781 |
| John Hall, Director At-Large | Tennessee Association of Utility Districts Murfreesboro, TN | 615-896-9022 jehall@edge.net | 615-896-8608 |
| Brent Ogles Director-At-Large | J. R. Fleming Training Center Murfreesboro, TN | 615-898-8090 | 615-898-8064 |
| William (Bill) Kent Columbus Water Works, GA | ABPA Region 3 Director | 706-649-3490 wkent@owwga.org | 706-649-3477 |
| Paul Causey | ABPA Administra- tive Director | 409-862-7606 pscausey@teexnet.tamu.edu | 409-862-7607 ABPA Headquarters |

The **Tennessee Backflow News** is published quarterly by the Tennessee Backflow Prevention Association, whose members have a common interest in protecting the drinking water from contamination through cross connections. Your ideas, experience and expertise are invited and needed by the TBPA to insure a balanced approach to backflow prevention in the State of Tennessee. Your participation and support will continue to help shape the future of this industry in Tennessee.

Opinions expressed in articles, letters or advertisements in this publication are not necessarily those endorsed or supported by the TBPA. The content of this newsletter is not to be considered as legal or professional advice. **Dues are \$45 annually**, and are payable to the TBPA Treasurer. Annual dues include \$15 for Tennessee and \$30 for National ABPA dues. National membership is required for Tennessee membership.

The TBPA Treasurer address is:

Tennessee Backflow Prevention Association
Becky Thompson, TBPA Treasurer
c/o MSUD, PO Box 175
Madison, TN 37116-0175

All other info requests and inquiries, including newsletter items and advertisements can be directed to:

Tennessee Backflow Prevention Association
Attn: Dale Phelps, Secretary
c/o City of Gatlinburg
PO Box 5, Gatlinburg, TN 37738-0005

TBPA/ABPA MEMBERSHIP FORM

Tennessee Backflow Prevention Association
American Backflow Prevention Association

NAME: _____

COMPANY: _____

ADDRESS: _____

CITY/ST/ZIP: _____

PHONE: _____

FAX: _____

CHECK ONE: RENEWAL: _____ MEMBER # _____

NEW: _____

TBN Oct-99



ABPA DUES: \$30.00
TBPA DUES: 15.00
ANNUAL DUES TOTAL: \$45.00

Please remit total to:
Tennessee Backflow Prevention Association
Becky Thompson, Treasurer
c/o Madison Suburban Utility District
PO Box 175
Madison, TN 37116-0175

*Includes bi-monthly ABPA News Magazine
and quarterly Tennessee Backflow News
Pre-payment of dues required to process application.
Membership is non-transferable. National ABPA membership
required for state TBPA membership*

Next Conference In Gatlinburg

Gatlinburg, Tennessee will be the location for the Tennessee Backflow Prevention Association's Conference 2000. This will be the fifth consecutive year that the Association has held a statewide conference in Tennessee.

The Conference will be held at the River Terrace Creekside on the Parkway in downtown Gatlinburg. This hotel is located directly across from the Ober Gatlinburg Tramway Mall at traffic light # 9 on the Parkway. The hotel sits adjacent to LeConte Creek, a pristine mountain brook that originates on the slopes of Mount LeConte in the Great Smoky Mountains National Park. The River Terrace Creekside has completely renovated the convention facility and will renovate and upgrade many rooms prior to our reserved dates for our Conference 2000.

The hotel is within easy walking distance from many of Gatlinburg's major attractions. Many quaint shops and quality restaurants are just a stones throw away from the River Terrace Creekside. Calhoun's Restaurant and the Smoky Mountain Brewery are both located immediately adjacent to the Conference location. New attractions in Gatlinburg this year include the Hard Rock Café and the Ripley's Haunted Adventure. The Ripley's Gatlinburg Aquarium is still under construction at this

time and is not expected to be completed by March 2000.

The reduced room rate of \$54 per night will be extended through the weekend for anyone who may wish to stay in Gatlinburg after the conclusion of the Conference. Rooms are limited at the River Terrace Creekside so you may wish to reserve your room choice early. Other rooms will be available close by the meeting facility.

A golf event to coincide with the Conference may be in the

works. If you are interested in playing golf while in Gatlinburg for the Conference please contact East Tennessee Director Dave Birkholz. You may reach Dave at 423-458-2091 or e-mail him at: treebirk@worldnet.att.net

The Conference Committee is hard at work putting together a great event for the backflow prevention industry in the southeast. We will have the best speakers and topics of interest for you, and the best backflow trade show in Tennessee. Make your reservations soon and we will see you in Gatlinburg!



Conference 2000

Tennessee Backflow Prevention Association

**Thursday
March 23, 2000**

**River Terrace
Creekside Resort
Gatlinburg, Tennessee**

**Room Rate: \$54 +tax
1-800-251-2040**

**Great Speakers
Big Trade Show**

Registration Fee:

**\$50 ABPA/TBPA Members
\$100 Non-Members*
*(includes 1-yr.
membership)**

**Contact:
Dale Phelps
423-430-1372
Dave Birkholz
423-458-2091**

*The Great Smoky
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the most visited
National Park in
the United States,
with almost 10
million visitors
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Don Stephens



Plumbers & Pipefitters
Joint Apprenticeship Training Program
Nashville, TN L.U. 572



MIKE TRIGG
Training Coordinator

P.O. Box 78572
225 Ben Allen Road
Nashville, Tennessee 37207

Home: 360-8426
Office: 254-1104

Tennessee Training Calendar



Tennessee Department of Environment and Conservation Cross Connection Control Training Classes

Fleming Training Center
2022 Blanton Drive
Murfreesboro, TN 37129
615-898-8090

The classes offered by the Fleming Training Center are free of charge to any person who wishes to attend. Written registration is required, however, a minimum of thirty days in advance of the class. Confirmation letters for all classes/seminars will be sent out to registrants approximately three weeks prior to class and will contain pertinent details regarding exact location, class content, and materials. For information on class content for Cross Connection Control Workshops call Mr. Robert Lashlee at 615-532-0164

Cross Connection Control Workshop (BASIC) (4 days) (Textbook: None) Classes are at the Fleming Training Center in Murfreesboro unless otherwise indicated.

- October 12 - 15, 1999
- November 16 - 19, 1999
- January 11 - 14, 2000
- March 14 - 17, 2000
- April 11 - 14, 2000 - Knoxville
- May 9 - 12, 2000 - Kingsport
- June 6 - 9, 2000
- June 27 - 30, 2000 - Jackson
- July 25 - 28, 2000
- August 15 - 18, 2000 - Kingsport
- September 12 - 15, 2000 - Knoxville
- October 10 - 13, 2000
- November 14 - 17, 2000

Cross Connection Control Workshop (RENEWAL) (2 days) (Textbook: None) Classes are at the Fleming Training Center in Murfreesboro unless otherwise indicated.

- December 6 - 7, 1999
- February 9 - 10, 2000
- April 10 - 11, 2000 - Knoxville
- May 8 - 9, 2000 - Kingsport
- June 26 - 27, 2000 - Jackson
- July 19 - 20, 2000
- August 14 - 15, 2000 - Kingsport
- September 11 - 12, 2000 - Knoxville
- December 6 - 7, 2000

- **The Tennessee Association of Utility Districts (TAUD):** Plumbers Class in Clarksville Oct. 6-7. Plumbers Class Nov. 17 at The Training Station in Murfreesboro. Cross Connection Renewal for Municipalities November 18 at The Training Station in Murfreesboro. Other classes may be available. Call TAUD at 615-896-9022 for further information.
- **Memphis Light, Gas & Water (MLGW):** Classes are held in the greater Memphis Tennessee area on an annual basis. Call 901-528-4720 for further information.
- **Plumbers and Pipefitters Local Union 572,** Nashville, Tennessee: Backflow Classes for Apprentices and Journeyman, contact Mike Trigg at 615-254-7235 for further information.
- *To list or update your training class here please contact Dale Phelps at 423-436-4681*

Upcoming Events

- October 1-3, 1999 ABPA Board of Directors Meeting, Las Vegas, Nevada
- October 4-6, 1999 – Western Regional Backflow Conference – Las Vegas, Nevada
- October 28, 1999 – TBPA Backflow Repair Seminar – Murfreesboro, TN
- October 29, 1999 – TBPA Meeting – Fleming Training Center – Murfreesboro, TN
- March 23, 2000 – TBPA Conference 2000 – Gatlinburg, TN
- April 29 – May 3, 2000 – 16th Annual ABPA International Conference – Vancouver, WA/Portland, OR



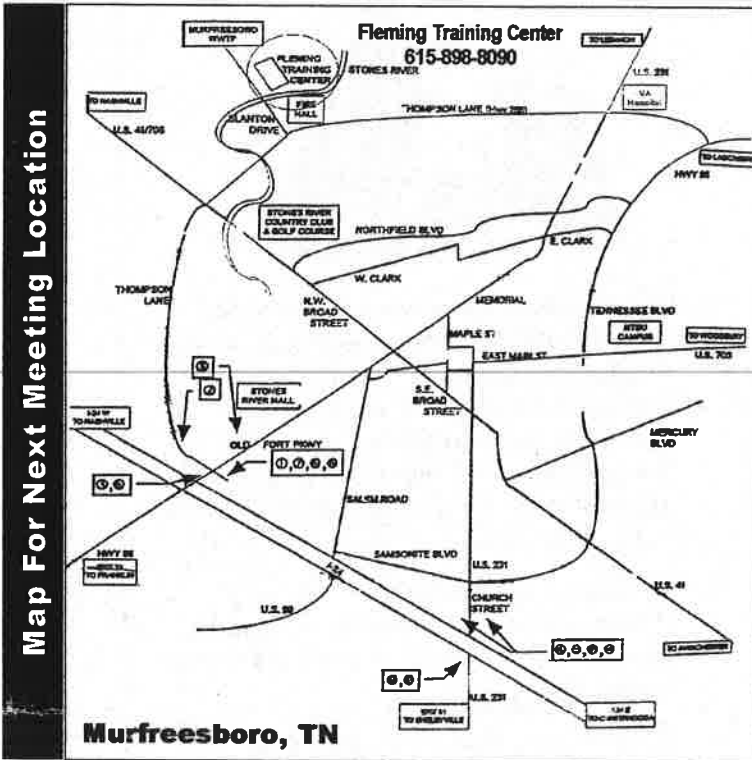
Next Meeting In Murfreesboro, TN

The next meeting of the Tennessee Backflow Prevention Association will be held at the Fleming Training Center in Murfreesboro, TN on Friday, October 29th at 10:00 AM.

The previous meeting of the TBPA was on July 22. Meeting highlights included nominating and approving Mr. Brent Ogles as a Director-At-Large. Mr. Ogles is currently the Director of the Fleming Training Center and is active in the training classes in cross connection control. Also approved was a motion to send TBPA President David Kellogg to the mid-year ABPA Board Meeting and Chapter Presidents meeting. A motion was approved to register a web address for the Tennessee Chapter. An update was given on the backflow brochure and the test procedure booklet. Repair classes were scheduled, and details of the 2000 Conference were discussed.

ABPA Region 3 Director William Kent was present and addressed the meeting about Region 3 and ABPA activities. Kent com-

mended the TBPA on being awarded the ABPA PACE Award again this year.



Bleeding Test Cocks . . . continued

(Continued from page 3)
sembly upstream of the number one check valve. Opening this test cock may reduce the pressure upstream of the No. 1 check valve. If this is done suddenly the pressure differential across the No. 1 check valve can drop, discharging the relief valve. This is especially critical when the No. 2 test cock is located in a restricted region on the high side of the relief valve diaphragm as shown in the illustration. If, however, water is flowing through the assembly when the No. 2 test cock is opened, the overall differential across the No. 1 check valve is much higher and, therefore, requires a greater loss of pressure in order to activate the relief valve. This is why it is so important to have water flowing through the No. 4 test cock when the No. 2 test cock is opened.

Bleeding the test cocks is not the only way the relief valve can be activated accidentally. Bleeding the air from the gage can cause the same effect. When the gage is attached to the assembly, the high side hose is attached to the No. 2 test cock. Therefore, bleeding water from the high side hose, could cause the same effect as bleeding the No. 2 test cock. In order to avoid premature activation of the relief valve in this manner, the Manual of Cross-Connection Control states that the tester should open the No. 3 test cock and bleed water from the low side of the gage while opening the No. 2 test cock very slowly.

Section 9.2.2 Test f. Maintain the low side bleed needle valve in the open position while test cock No. 2 is opened slowly.

This, again, allows water to flow

through the assembly keeping the differential across the No. 1 check valve high. The water continues to flow through the low side bleed needle valve until the No. 2 test cock is opened and the high side bleed needle valve is bled. The low side bleed needle valve is only turned off after the high side is turned off. This ensures that water will continually be flowing through the unit when pressure is dropped from the chamber upstream of the No. 1 check valve.

This is an example of how important it is to follow proper field test procedures, even though the details of the procedures-on the surface-may not seem to have an impact on the final outcome of the test. In this case, even the order in which the test cocks are bled is crucial to obtaining proper field data.

The Importance of Bleeding the Test Cocks

Reprinted by permission of the University of Southern California Foundation for Cross Connection Control and Hydraulic Research - CrossTalk Spring '99

Bleeding The Test Cocks

In testing the reduced pressure backflow prevention assembly it is critical that the relief valve opening point be determined before exercising the relief valve. In the preliminary steps of the field test procedure it is possible to accidentally activate the relief valve. When this happens the relief valve is exercised. If the relief valve had been sticking, exercising it may have loosened it up so that the reading recorded at the time of testing the relief valve is quite different that it would have been had the relief valve not been exercised. When backflow occurs, it never exercises the relief valve first. It just occurs. When it does occur it is important to know how the assembly will react. This is why it is essential that the tester not activate the relief valve before recording the relief valve opening point.

The relief valve is activated when the differential pressure across the first check valve drops to some level. (In a

successful test the differential must be greater than 2.0 psid.) This can occur by either dropping the pressure upstream of the first check valve or increasing the pressure downstream of the first check valve. One way to help ensure that the relief valve is not activated prematurely is to have water flow through the assembly. When water flows through a backflow preventer, the pressure drop across the assembly increases (especially at low flows. When the pressure drop across the whole assembly increases, this is also an indication that the pressure drop across the first check valve increases. This is an indication of the force being used to open the check valve. At a no-flow condition, the pressure drop across the assembly is steady. As water starts to flow through the assembly more pressure is lost due to friction loss and the opening of the check valves. Once the check valves are opened a fair amount there is less force required to keep them open. This is why the flow curves of the various backflow preventers tend to have similar characteristics. One thing consistent in all flow curves is the increase in pressure loss as the flow increases from a no-flow condition.

Because of the pressure loss characteristics of backflow preventers, the possibility of activating a relief valve can be reduced substantially if flow is established through the assembly during certain preliminary steps in field testing. This is why there is a very specific order for bleeding the test cocks on the reduced pressure principle assembly. Step a of Test No. 1 in Section 9.2.2 of the Manual of Cross-Connection Control, Ninth Edition states:

Open No. 4 test cock to establish flow through the unit, then flush water through test cocks No. 1, No. 2, (open no. 2 test cock slowly), and No. 3, by opening and closing each test cock one at a time, to eliminate foreign material. Be careful not to activate the relief valve during this process. Close test cock No. 4.

As water flows out of the No. 4 test cock it is flowing through the assembly, thus increasing the pressure loss across the No. 1 check valve. This reduces the possibility of activating the relief valve dramatically. This is especially important while opening the No. 2 test cock. The No. 2 test cock is located at a place, on the as-

(Continued on page 6)

In testing the reduced pressure principle backflow prevention assembly it is critical that the relief valve opening point be determined before exercising the relief valve.

In order to avoid premature activation of the relief valve in this manner, the Manual of Cross Connection Control states that the tester should open the #3 test cock and bleed water from the low side of the gage while opening #2 test cock very slowly.

HydowCowl Announces Name of Safe-T-Cover

HydroCowl, Inc. of Nashville, TN announces a new trade name and logo, SAFE-T-COVER™ for their insulated enclosure and heater products. HydroCowl has provided enclosures designed for back-flow prevention assemblies through manufacturer reps and wholesale distributors for 10 plus years.

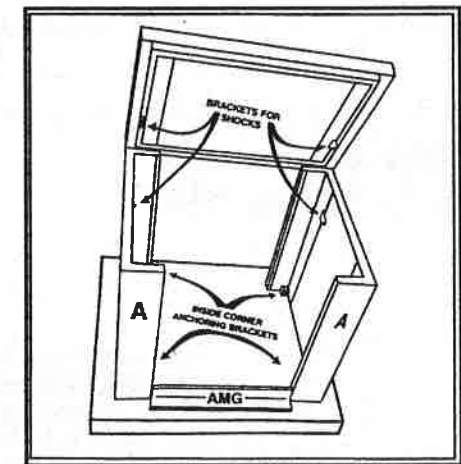
New literature, catalogs, product labels and a new web site were created to support the Safe-T-Cover trade name. The new web site at www.safe-t-cover.com. A new exciting feature of the web site is Cad draw-

ings available to be downloaded for engineering design support.

info@safe-t-cover.com.

The new trade name and logo received very positive comments at the recent AWWA trade show in Chicago. HydroCowl's enclosures are certified to ASSE Standard #1060, Performance Requirements for Outdoor Enclosures for Backflow Prevention Assemblies under the Safe-T-Cover name.

The company is headquartered at 213 Crutchfield Avenue, Nashville Tennessee, 37210. You may reach the company by phone at 800-245-6333 or by email at:



Side view "N" pattern enclosure

Your Help Is Needed!

We have an opportunity to influence the future cross connection regulations in the State of Tennessee.

The Tennessee Department of Environment and Conservation may consider new regulatory language in upcoming rule revisions.

The current "certification" for backflow device testers is a demonstration certificate only, and is not a true certification as in other areas of special training.

Many feel the State should move forward with the backflow tester program and make improvements to further insure credibility and standardization of the program.

There has been no input to the Commissioner regarding this issue until just recently.

We ask you to write the Commissioner regarding the need for a better backflow tester certification program in the State of Tennessee. Be specific about what you feel could be improved upon, and feel free to suggest possible changes.

Please write to:

**Commissioner Milton Hamilton
21st Floor L&C Tower
401 Church Street
Nashville, TN 37243-0435**