

**Texas Commission on Environmental Quality
Cross-Connection Control Subcommittee
December 6, 2007
Building B, Room 201A
10:00a m - 2:00 pm**

Welcome and Introductions

Discussion of Purpose and Goals of the Work Group

Joel Klumpp, TCEQ Cross-Connection Control Coordinator

- Goal: Allow TCEQ staff to tap into available expertise
- Purpose: Forum for discussion of “hot topics” in the field of backflow prevention
- Goal: Opportunity to learn from each other

Byron Hardin, Brown and Caldwell

- Goal: Identify roles of diverse group of authorities in backflow prevention field
- Goal: Determine how group can provide input/recommendations to other groups in the area of backflow prevention

Fred Baird, Bac-Flo Unlimited

- Goal: Getting everyone on the same page

Steve Fain, TEEX

- Goal: Bring Chapter 290 regulations up to date with latest edition of the AWWA M14 Manual

Mark Redlitz, Texas Department of Insurance, State Fire Marshall’s Office

- Goal: make recommendations for change

Announcements

1. Future meetings of the subcommittee in 2008 to be held on: 3/5/08, 6/4/08, 9/3/08, 12/3/08
2. TCEQ Distribution System Management Seminar to be held 2/19/08. For additional information contact Joel Klumpp at (512) 239-4453.

TCEQ Regulatory Guidance Document: RG-206 A Public Water System Guide to Customer Service Inspections

Group discussion of jurisdiction of utility departments and plumbing inspection departments- may be possible to address in revision to RG. Information regarding this topic could be presented to Plumbing Inspectors at the annual State Plumbing Inspectors Conference.

Group discussion of hazard classification of irrigation systems- discussion tabled for next meeting.

Group discussion regarding lead tests. Recommendation to address number of lead tests required and additional information regarding what to do if swab test found to be positive in revision of RG.

The following members of the subcommittee agreed to work on revisions to RG-206 before the next meeting: Larry Bell, Danny Lytle (City of Austin), Byron Hardin, John Jordan (American Society of Sanitary Engineering (ASSE)/Houston Area Plumbing Joint Apprenticeship Committee (HAPJAC)). Lisa Hill (Texas State Board of Plumbing Examiners) will proof any changes.

TCEQ Regulatory Guidance Document: RG-345 Backflow Protection of Water-Based Fire Protection Systems

Fred Baird

- Information regarding/reference to the AWWA Research Foundation (AWWARF) report "Impact of Wet-Pipe Fire Sprinkler Systems on Drinking Water Quality" should be included in the RG

John Jordan

- In the additional information section, need to include reference to the ASSE Series 5000 Manual. ASSE also has a guidance document for residential fire sprinkler systems.

The following members of the subcommittee agreed to work on revisions to RG-345 before the next meeting: Mark Redlitz, Fred Baird.

New RG: Establishing and Managing an Effective Cross-Connection Control Program

Joel Klumpp

- Please read the draft version of this proposed RG before the next meeting.

Revision of the Chapter 344 Rules

Candy Garrett, TCEQ Landscape Irrigation Program

- The Chapter 344 Rules are in the process of being revised, partly to help address common questions. There are many opportunities for comment on these revisions. For additional information, contact Candy Garrett at (512) 239-1451.

Jerry Lewis, Sundance Irrigation

- The three main revisions to the Chapter 344 Rules that impact backflow prevention are as follows:

- The rules now provide direction on where an isolation valve be placed on an irrigation system, so repairs can be made to the backflow device without reducing pressure to the customer.
- The rules now recommend master valves be installed on the discharge side of the backflow device to help BPATs. BPATs aren't necessarily irrigator technicians, and often go to the master valve on the upstream side, not knowing how it works.
- The rules now recommend standards for installation of irrigation backflow devices.

Larry Bell, Texas Rural Water Authority

- Increase the CSI initial licensing course requirement to a minimum 20 hour “CSI & Cross-Connection Control” course. Maintain the current 16 hour requirement for renewals.
- Revise the current CSI exam to 50 questions. Once the expanded exam is developed, then the TCEQ should conduct a review of the various CSI manuals used to teach the course to ensure that all examination material is referenced in the manuals.
- Completion of the 40 hour BPAT course should provide at least 16 hours of CEUs towards a CSI license, in lieu of the present 12 hours.

Biochemical Treatment of Firelines

Mark Redlitz

- Sprinkler systems have been found to have biological entities that accelerate corrosion in the pipes. Seven or eight different chemicals can be used (in combination) to protect fire systems from microbiological (MIC) contamination. More work needs to be done to determine whether these chemicals pose a health risk, and whether they are NSF-approved. The main concern is that a fire system can be retrofitted with chemical feed equipment (with no backflow preventer included) and the water purveyor may be unaware of this change. Sprinkler inspectors can be trained to look for these systems. The inspectors can notify the water purveyor if they find one of these systems during an annual inspection.

Group discussion about whether it is possible for the Cross-Connection Control Subcommittee to prepare a written recommendation regarding action to be taken for these systems. To be discussed at the next meeting. Joel Klumpp will find out if this subcommittee has the authority to offer recommendations to other state agencies.

Group discussion of making sure that there is an immediate way to address this issue. Perhaps the most effective way to educate people in the fire system/backflow prevention industry is to include information in RG-345 about this issue.

Color Coding of Water Lines

Fred Baird

- Basic color coding charts from the plumbing code don't provide enough detail for alternative water systems, such as recycled water. As water conservation measures become more and more common, there will be more confusion about color coding. Purple pipes are related to "black water;" you cannot connect potable waterlines to purple pipes, even through a backflow prevention assembly. However, the recycled water line in a carwash can be labeled non-potable, but may not use purple piping. Plumbing codes talk about connecting to a grey water system through an RP. It's going to become too easy for potable lines and non-potable lines to be interconnected in the future unless there is clear color-coding criteria established now.

Byron Hardin

- To clarify: purple pipe = lethal hazard, air gap required. Grey water pipe can be connected through a backflow device.

Bruce Pearson, San Antonio Water System

- In San Antonio, we are seeing more and more rainwater systems installed. Piping for rainharvest systems should be labeled purple. Color coding is big issue; there are also issues about private wells. The state must have a rainwater rule in place by next September. We'd like to address color coding for all the various sources of non-potable water. If recycled water gets degraded by interconnecting it with some unknown source, then who is responsible?

Danny Lytle

- The LCRA building in Austin has potable water, a rainwater harvesting system, an air conditioning condensate catchment system, etc. The City of Austin is requiring piping for all non-potable lines to be purple. We've asked CSIs to register with the City before we let them do the CSIs to prove they know how to test for auxiliary water systems per Appendix J of the Plumbing Code.

John Jordan

- The City of Houston has customers who use rainwater for their drinking water source, not just for irrigation. It may matter more to separate rainwater labeling from reclaimed labeling. It causes confusion when the two are interconnected.

Steve Fain

- It is common to see mislabeling of water lines during CSIs.

The following members of the subcommittee agreed to work on preparing recommendations regarding this issue before the next meeting: Fred Baird and Bruce Pearson. Bruce Rathburn (SAWS) will be asked to work with them.

3rd Edition of the AWWA M14 Manual and the Chapter 290 Rules and Regulations

Steve Fain

- Many of the regulations for backflow prevention in Chapter 290 are based on the 2nd Edition of the AWWA M14 Manual. Now that there is a new edition of the M14 Manual, the Chapter 290 regulations may need to be revised. One of the biggest issues is the hazard classification of lawn irrigation systems. The 3rd Edition of the M14 Manual classifies all irrigation systems as a health hazard and requires an AG, RPZ, or PVB. For irrigation systems connected internally to the private plumbing system, The M14 Manual defers to the locally-adopted plumbing code.
- The second main issue is the required testing frequency of backflow prevention assemblies. The Chapter 290 regulations require testing only upon installation for backflow prevention assemblies installed to provide protection from non-health hazards. The International and Uniform Plumbing Codes require annual testing of all backflow prevention assemblies. The TCEQ should require annual testing of all backflow prevention assemblies when public water systems have adopted the plumbing code, unless the plumbing code has specifically been amended in this area.

Daniel Dick, CPI

- Lots of people with irrigation systems are upgrading their system to include chemical fertilizer injection. Cities amend their plumbing codes to match TCEQ requirements for irrigation systems (lessening the stringency of the requirements).

Fred Baird

- TCEQ should prohibit DCVAs being used on irrigation systems and require annual testing of all backflow prevention assemblies.

Rick McNair, Benbrook Water

- Most political entities won't change their requirements until TCEQ does.

Update on the ASSE Cross-Connection Control Program

John Jordan

- The ASSE Series 5000 Manual is available we would like TCEQ to look at and recommend this document.
- We'd like the ASSE BPAT test procedures to be allowed to be used throughout the state. Currently TCEQ recommends only the USC BPAT test procedures be used.

General discussion of whether one BPAT test procedure is better than another, and whether it is better to use one BPAT test procedure through the state for ease of enforcement and understanding. This topic was tabled for further discussion.

Update on the Customer Service Inspection (CSI) Training Program

Linda Saladino, TCEQ Operator Licensing Program

- The number of hours of continuing education required for renewal of the CSI license has been reduced to 16 over a 3-year period.
- I would like this subcommittee to review a draft curriculum guidance document for the CSI license. I will present that document at the subcommittee meeting in June.

Bruce Pearson

- Is it possible to make the CSI course a required course for Class C or Class B Water Operators?

Linda Saladino

- Cross-Connection Control is covered in the curriculum for these licenses. However, questions related to this topic are frequently missed on the examinations. I will address the issue of requiring the CSI class to the Operator Licensing Advisory Committee.

Backflow Prevention at RV Parks

Art Smith, City of Rockport Utilities

- The population of the City of Rockport (and other coastal towns) doubles during the winter. The majority of this increase is due to increases in the occupancy at RV parks. Black-water tank flushers are being installed on new RVs by manufacturers. It is also possible to buy these flushing devices and install them yourself. The devices allow for a direct connection between the potable water supply and a sewage system. What is the appropriate method of cross-connection control?

General discussion on the hazards of black-water tank flushers. If RV Parks are designated as separate public water systems they would be subject to increased regulatory scrutiny by TCEQ. Is it feasible to require an air gap at the service connection to an RV Park? Is it feasible to require air gaps at every potable connection within an RV Park? Is it feasible for RV Parks to provide a separate, non-potable water line for use with the tank flushers? This topic was tabled for further discussion at the next meeting.

Mosquito Abatement Systems

Daniel Dick

- These systems connect to the potable water system and use chemical injection. The manufacturer claims that there is an internal air gap in the assembly, but it is difficult to confirm that the air gap exists. What should be done during a CSI when these systems are present?

John Jordan

- I have seen these systems before and it is possible to contact the manufacturer and ask them to confirm the existence of an air gap.

Remaining Agenda Items

Joel Klumpp

- We are out of time. Please look at the following draft staff guidance documents before the next meeting:
 - Backflow Incident Protocol
 - Compliance with CSI Requirements
 - Requirements for Placement of Assemblies
- At the next meeting, let's include the following items on the agenda:
 - Discussion of Potential Revisions to RG-206
 - Discussion of Potential Revisions to RG-345/Biochemical Treatment of Fire Systems
 - Recommendations on Color Coding of Water Lines
 - Backflow Prevention at RV Parks
 - Reporting Backflow Incidents to the EPA