

**Texas Commission on Environmental Quality**  
**Cross-Connection Control Subcommittee**  
**June 3, 2009**  
**Building F, Room 2210**  
**9:00a m - 3:00 pm**

Welcome and Introductions

Announcements

1. The flowchart created by Steve Fain, Hardin and Associates, titled “Can I Install a Backflow Prevention Assembly?” has been revised to include additional information regarding the irrigator licenses and the homestead exemption.
2. Update on progress of guidance documents: The draft guidance documents on preparation for and response to a backflow incident have been sent to TCEQ Agency Communications and will hopefully be published before the next subcommittee meeting.
3. Follow-up on issue raised by Charles Ansley, Metroplex Training, at last meeting regarding public water systems that are requiring a test of rain and freeze sensors installed on irrigation systems at the same time that the backflow prevention assembly installed on the system is tested. Byron Hardin, Hardin and Associates, has contacted the public water system that has adopted this requirement and will report on this at the next meeting. Jerry Lewis, Sundance Irrigation, is familiar with this issue and offered to coordinate with Mr. Hardin.
4. Congratulations to Bruce Rathburn, San Antonio Water System, who has been elected as President of the American Backflow Prevention Association.
5. The next meeting of the subcommittee is scheduled for Wednesday, September 2, 2009, and will be facilitated by Amy Rivera, TCEQ Public Drinking Water Section.

Adoption of minutes from meeting held March 10, 2009

Minutes were adopted without discussion.

Update on Legislation Impacting Rainwater Harvesting

Cindy Haynie, TCEQ Public Drinking Water Section, gave an update on House Bill 4299, a proposed bill that would revise Section 341.042(b), Health and Safety Code, to read as follows: “The commission by rule shall provide that if a structure is connected to a public water supply system and has a rainwater harvesting system [~~for indoor use:~~

[(4)] the structure must have appropriate cross-connection safeguards[; and  
and  
[(2) the rainwater harvesting system may be used only for nonpotable indoor purposes].”

The change to the Health and Safety Code would require the amendment of Chapter 290 of the Texas Administrative code §290.44(j) to allow the indoor potable use of rainwater by customers of public water systems: “If a structure is connected to a public water

supply system and has a rainwater harvesting system for indoor use, the structure must have appropriate cross-connection safeguards in accordance with subsection (h)(1) of this section [~~and the rainwater harvesting system may be used only for nonpotable indoor purposes~~].”

However, although HB 4299 made it through the House and was reported on favorably by the Senate, the bill was not voted on in the Senate before the session ended on June 1, 2009. §290.44(j) will thus remain in place prohibiting customers of public water systems from harvesting rainwater for potable indoor use.

Bruce Rathburn led a general discussion of the issue of rainwater harvesting systems and cross-connection control. Questions and comments identified during this discussion include:

- What is adequate backflow prevention for residences/facilities which have a rainwater harvesting system and are connected to a public water system? Should a reduced-pressure principle backflow prevention assembly (RP) be required at the customer connection?
- If there is a potable water make-up line to the rainwater storage tank, and the line is air-gapped, is additional protection required? Should a periodic inspection of the air gap be required?
- If a rainwater harvesting system is connected to an irrigation system that is also connected to the potable water supply, per 30 TAC Chapter 344, an RP is required to be installed on the potable water supply to the irrigation system.
- Since water conservation is an important component in maximizing the State’s water resources, rainwater harvesting will likely be utilized more extensively in the future. It is important for the Cross-Connection Control Subcommittee to work closely with the rainwater harvesting movement in order to ensure progress is made while maintaining protection of public health.
- Customer education of proper cross-connection control measures for rainwater harvesting systems may be the most effective way to protect public health.
- Standards for pipe color and pipe coding of rainwater harvesting systems are needed in order to prevent cross-connections between potable water systems and rainwater harvesting systems.
- Cross-connection control for residential rainwater harvesting systems should be addressed separately from cross-connection control for commercial rainwater harvesting systems.
- A subgroup composed of the following members agreed to meet separately to discuss this issue and report back to the subcommittee at the next meeting:
  - Byron Hardin,
  - Bruce Rathburn,
  - Steve Fain, and
  - John Kight, TRCA.

**A meeting to discuss rainwater harvesting issues has been scheduled** for Monday, June 15, 2009, and will be held at the TCEQ campus in Austin. Anyone interested in rainwater harvesting issues is invited to attend. For additional information, please contact Cindy Haynie at (512) 239-3465.

Presentation on Rainwater Harvesting Policy and Practice in Australia

Amy Rivera gave a presentation on information available online regarding rainwater harvesting policy and practice in Australia. Her presentation covered:

- Australia’s national and state policies regarding the promotion of rainwater harvesting as a water conserving practice;
- Regulations on rainwater harvesting and reclaimed water from the state plumbing code of New South Wales;
- Several case studies demonstrating the diverse range of ways rainwater harvesting has been adopted by communities and developments in New South Wales; and
- A case study detailing one residential development’s problems and successes with non-potable indoor use of reclaimed water.

A general discussion followed the presentation. A comment was made that Texas has been on the forefront of rainwater harvesting and reclaimed water use.

Follow-Up on Previous Discussions of Chapter 290 Regulations:

Byron Hardin summarized previous discussions of the Cross-Connection Control Subcommittee regarding potential modifications to the Chapter 290 regulations. A general discussion followed with the result that the subcommittee will focus on the following three proposed modifications:

1. Develop wording in Chapter 290 that requires Public Water Systems to report all cross-connection incidents to the potable water supplies.
2. Change the Water Utility “Superior” rating criteria to include specific language relating to having an approved backflow prevention program in place in order to qualify as a Superior Water System.
3. Revise 30 TAC 290.47(b) Appendix B (Sample Service Agreement) to include language that whether or not you sign it, as long as you use the PWS water you are a customer and subject to compliance or termination. Require all Public Water Systems to adopt a Customer Service Agreement.

Byron Hardin, Steve Fain, and Bruce Rathburn will coordinate with Fred Baird, Bac-Flo Unlimited, and Danny Lytle, City of Austin, to move forward with the proposal to make changes to the Chapter 290 regulations.

## Reports on American Backflow Prevention Association (ABPA) Annual Education Conference and Tradeshow

The ABPA annual conference was held in Colorado Springs in April. Mike Aldrup, Affordable Lawn Services, spoke about some of the presentations that he found most interesting, which included several presentations regarding backflow protection on firelines, theft of backflow prevention assemblies, and the difficulty of conducting cross-connection control inspections in hospitals.

William Hamrick, ATB Services, also attended the conference and commented on the presentations regarding backflow protection on firelines.

### Discussion Item: Architectural/Engineering Symbol for Cross-Connections

Jerry Lewis posed the question whether there is a standardized symbol to denote a cross-connection on plans prepared by architects and/or engineers. A general discussion followed. Joel Klumpp will check with TCEQ engineers involved in plan review and report back to the subcommittee.

### Discussion Item: Testing of RPs on Construction Meters

The subcommittee discussed the frequency of testing for backflow prevention assemblies installed on fire hydrants along with construction meters. A variety of approaches is currently employed. One option, consistent with 30 TAC 290.44(h)(4), is to define “installation” as occurring when the public water system attaches a backflow prevention assembly to a construction meter and issues the meter. The assembly must be tested at this time and at least annually thereafter.

### Presentation on Use of Reclaimed Water: Definitions and Language from the AWWA and USC Manuals

Joel Klumpp gave a presentation on how the American Water Works Association’s (AWWA) M14 Manual and the University of Southern California’s Cross-Connection Manual address reclaimed water. His presentation covered:

- Definitions of “Reclaimed Water”;
- Recommendations from the manuals regarding necessary cross-connection control measures for residences/facilities which have a source of reclaimed water; and
- The current language regarding reclaimed water found in Chapter 290.

### Presentation on Chapter 210 Regulations for Reclaimed Water and Graywater

Louis C. Herrin, III, TCEQ Water Quality Division, gave a presentation on TCEQ’s regulations for the use of reclaimed water and graywater. These regulations are found in 30 TAC Chapter 210. His presentation covered:

- The definition and authorized uses of reclaimed water;
- Applicability of the Chapter 210 regulations;
- General requirements for use of reclaimed water;
- The “210 Notification” procedure;
- Transfer and conveyance of reclaimed water;
- Required pipe color (purple) for reclaimed water systems;
- Type I, Type II, and Pond System reclaimed water;
- Separation distance requirements for Type I reclaimed water;
- The definition and authorized uses of graywater; and
- Regulatory requirements versus recommended practices for cross-connection control for reclaimed water and graywater systems.