Texas Commission on Environmental Quality
Cross-Connection Control Subcommittee
September 3, 2008
Building A, Room 328
9:00a m - 3:00 pm

Welcome and Introductions

Announcements
Next meeting of the subcommittee will be held on December 3, 2008.

Adoption of minutes from meeting held June 3, 2008.
Minutes were adopted without discussion.

Source Water Protection Presentation
Sean Ables, TCEQ Drinking Water Protection Team

Presentation outlining the purpose and methodology behind source water assessments and the voluntary source water protection program. Source water assessments examine the sources of contamination to a water system, delineate the boundaries of each contaminant's influence on the water system, and document this information in a database. The source water protection program aims to protect water systems from potential contaminants through research of possible contamination sources and then suggestion of best management practices for the water system.

Group discussion of the need to protect water wells from backflow in facilities with health hazards present, such as industrial and agricultural facilities. Private wells are not regulated by TCEQ. Danny Lytle, City of Austin, proposed to e-mail the state legislators with an outline of the potential threat to the water sources that these unregulated wells pose in order to seek legislation that would give TCEQ the authority to regulate these wells. Joel Klumpp, TCEQ, will research the possibility of the e-mail coming from the Cross-Connection Control Subcommittee.

New Landscape Irrigation Regulations
Jerry Lewis, Sundance Irrigation, and Candy Garrett, TCEQ Landscape Irrigation Program

Presentation of the revisions to 30 TAC Chapter 344 that will take effect January 1, 2009. Among the changes to the regulations are:

- Creation of two new regulated groups: Irrigation Inspector and Irrigation Technician, both of which must be licensed;
- Regulation of the design, installation, and operation of irrigation systems;
- Revisions to the requirements for cross-connection control and backflow prevention of irrigation systems.

One of the main goals of the revisions to this chapter is to promote water conservation.

Staff Guidance Document: Backflow Incident Protocol
Tom Nguyen, City of Houston

Presentation of a rough backflow incident protocol aimed at guiding a water system through a backflow incident. It was suggested that two protocols be drafted:

- One protocol to address development of a long-term plan to prepare for a backflow incident. This plan would include:
    - Education of the water system officials about backflow (40-hour course recommended);
    - Education: how to recognize when a backflow incident has occurred;
    - Technology: modeling systems for tracking spread of contamination and chemical field test systems;
    - Recruitment of multi-departmental emergency response team (e.g. health department, water department, environmental department, media); and
    - EPA's *Water Security Handbook* may be a useful reference for the development of this protocol.

- The second protocol would be a checklist of how to respond to an emergency backflow situation. This protocol would amend the currently proposed backflow incident protocol, adding the following:
    - Contact TCEQ;
    - Have maps of the water distribution system on hand which include the direction of flow in the system;
    - Make sure that critical facilities such as hospitals are unaffected;
    - List of contacts;
    - List of chemical markers to test for immediately; and
    - Restore water and reassure customers.

Suggested Changes to the TCEQ Regulations regarding Cross-Connection Control
Danny Lytle, City of Austin

Danny Lytle, Byron Hardin (Brown and Caldwell), Bruce Rathburn (San Antonio Water System) and Bruce Pearson (San Antonio Water System) met before the meeting and prepared a list of ten suggested changes to TCEQ regulations regarding cross-connection control. Their suggestions and related discussion follows:

1. Issue: Enforcement language needs to be added to strengthen existing requirements of the backflow prevention program. What can happen to water systems that do not have a program needs to be clearly stated.

   Recommendation: Consider adding language to 30 TAC Chapter 70 Enforcement: Suggest adding specific penalties and fines for Public Water Systems (PWS) that do not meet the requirements under 30 TAC Chapter 290 to implement a cross-connection control program.

   Discussion of this suggestion included a recommendation that the term "Cross-Connection Control Program" be clearly defined in Chapter 290, a recommendation that information on enforcement actions that may be taken against public water systems

without adequate cross-connection control programs be included in a regulatory guidance document, and a recommendation that the enforcement criteria found in the Health and Safety Code be referenced more clearly in TCEQ regulations.

2. Issue: Evaluate the need for a possible fees section for water purveyors to help offset cross-connection control program implementation costs. Suggested wording would include TCEQ guidelines for assessing fees to water system customers.

   Recommendation: Allow public water systems (PWS) the ability to assess fees in order to install and maintain a cross-connection control device. The process could utilize the procedures established in 30 TAC Chapter 291 Utility Regulations, Subchapter E Customer Service And Protection Rule, §291.86 Service Connections.

   Discussion of this suggestion pointed out that this would be the "carrot" approach, while the first suggestion would be the "stick" approach.

3. Issue: Wholesale interconnection language needs to be included to clear up requirements for points of entry for customer connections.

   Recommendation: Consider revising 30 TAC 290.47(b) Appendix B (Sample Service Agreement). If every PWS customized their own service agreement and included 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, and then insert a copy in the water bill and ask all customers to sign it and return it, you would place all your customers on notice they play by the rules or buy water from someone else.

   Discussion of this suggestion included concern that a PWS has the legal authority to word their service agreement in this way, although the City of Austin's service agreement was cited as an example. A recommendation was made to consult with TCEQ Legal staff to determine whether the sample customer service agreement found in the appendix of Chapter 290, Subchapter D could be modified to include the suggested language.

4. Issue: Need to develop a stand alone Service Agreement section out of 30 TAC 290.46(i) Plumbing Ordinance that supports the Service Agreement sample found in 290.47(b). Currently the language provides for either or option.

   Recommendation: Simply change the language of 30 TAC 290.46(i) from "or" to "and."

   Discussion of this suggestion included an explanation that the existing language is worded this way to allow public water systems without the authority to adopt a plumbing ordinance or regulation to be in compliance with TCEQ regulations through the use of a customer service agreement. Additional discussion focused on whether plumbing work done in an area where no plumbing code has been adopted must meet the requirements of either the International Plumbing Code or the Uniform Plumbing Code. A concern was raised about whether risks due to thermal expansion as a result of the installation of a backflow prevention assembly at the service connection would be addressed if the water provider has not adopted a plumbing code. A comment was made that the new inspection process required by the Texas Residential Construction Commission, effective September 1, 2008, should help ensure that unacceptable plumbing practices are not permitted in unincorporated areas or in cities that do not offer municipal inspections. A recommendation was made that additional information be added to Chapter 290 which

includes each backflow prevention device/assembly/method, type of hazard that the device/assembly/method may protect against, information regarding whether the device/assembly/method may be subjected to back-pressure, and installation criteria.

5. Issue: Need to develop language to provide clarification for auxiliary water connections and how these will be protected and handled.

   Recommendation: Use the matrix found on the City of Austin's website as an example.

   Discussion of this suggestion focused on how common the use of auxiliary water sources is becoming and the need for TCEQ regulations to adequately address this issue.

6. Issue: Backflow protection at the service connection (30 TAC 290.44(h)(5)) needs to be reworded to clearly give the water purveyor the authority to conduct inspections past the service connection by TCEQ, not the TSBPE via a plumbing code. The current wording allows for interpretation on who has jurisdiction when an internal inspection is required.

   Recommendation: Revise 30 TAC 290.44(h)(5) to read: "The use of a backflow prevention assembly at the service connection (site containment) shall be considered as additional backflow protection and shall not negate the use of backflow protection on internal hazards (hazard isolation) as outlined and enforced by local plumbing codes and cross connection ordinances. Both containment and isolation are tools to be used where required in the judgment of the cross connection control inspector to protect the public and the private drinking water supply systems."

   Discussion of this suggestion addressed the existing language in 290.44(h)(1)(b) that designates the water provider as the entity which determines whether an internal cross-connection control program is "adequate." However, comments were made suggesting that this language be made clearer to allow the water provider the discretion to require premises isolation (site containment).

7. Issue: Temporary connection language needs to be developed to remove any doubt that a temporary service connection still needs to be inspected and requires appropriate backflow protection.

   Recommendation: Add new wording under 30 TAC 290.44, e.g. "Temporary connections shall require the use of a backflow prevention assemblies if the connection is to an unapproved potable water source."

   There was general consensus with this suggestion.

8. Issue: Fire Hydrant construction meter language needs to be developed providing guidelines on minimum standards for the appropriate level of protection.

   Recommendation: Add new wording, e.g. "Fire Hydrant construction meters shall be equipped with an approved backflow prevention assembly and meet the requirements of existing testing and selection criteria to protect the potable water supply."

   There was general consensus with this suggestion.

9. Issue: The Water Utility Superior Rating should include specific language relating to having an approved backflow prevention program in place in order to qualify as a Superior Water System. The current language is too vague. We need to include language that helps support the water utility managers and directors to implement a backflow prevention program.

   Recommendation: Development of a TCEQ cross-connection control program approval process designed to establish a standard for all PWSs. This standard would utilize best management practices and include key program components that must be met in order to meet compliance. This program could follow similar approval guidelines as established for other existing PWS programs (e.g. Water Quality Monitoring, Bac"T" Sampling, Lead/Copper, and others).

   Discussion of this suggestion included an acknowledgement that criteria to evaluate a public water system's Cross-Connection Control Program must be developed before this recommendation can be put into effect.

10. Issue: Need to develop wording in Chapter 290 that requires PWSs to report all cross-connection incidents to the potable water supplies. This should include specific language relating to having an established TCEQ-approved reporting document and guidelines on how and when to report incidents along with an investigation to the cause and public health effect of the incident.

    Recommendation: Development of a TCEQ Cross-Connection Control incident reporting program designed to track incidents and determine if existing boil water notice procedures will need to be implemented. This requirement would help develop a state tracking system for use in tracking frequency and causes of backflow prevention occurrences.

    There was general consensus with this suggestion.

An additional suggestion was made that TCEQ consider adopting a requirement that all licensed backflow prevention assembly testers use a standardized backflow prevention assembly test method, specifically, the test procedures found in the University of Southern California's Cross-Connection Manual. There was general consensus with this suggestion, but the topic was tabled until the next meeting.

<u>TCEQ Staff Guidance Document: Locating Backflow Prevention Assemblies</u>
Joel Klumpp, TCEQ Public Drinking Water Section

A draft guidance document is being prepared to address where backflow prevention assemblies are required to be installed. The document will clarify the following issues:

- TCEQ does not endorse nor recommend the installation of backflow prevention assemblies at all service connections, unless required due to specific hazards at each connection;
- Inclusion of a facility in "Appendix I" does not automatically mean that a backflow prevention assembly must be installed at the service connection at that facility;
- There are facilities not listed in "Appendix I" which *do* require a backflow prevention assembly must be installed at the service connection.

Comments were solicited from the group about other topics that the guidance document should address. A suggestion was made to clarify that dual check valves are not approved for use to provide protection from health hazards. A suggestion was made to include information regarding proper backflow prevention on firelines where chemical injection for control of microbiological (MIC) contamination occurs.

Other Issues Stakeholders Want to Discuss

Water Softeners: A question was posed to the group regarding whether the International Plumbing Code or Uniform Plumbing Code require backflow prevention assemblies to be installed on residential water softening systems. The response of the subcommittee is that no requirement for backflow prevention assemblies to be installed on residential water softening systems can be found in either of the above-mentioned plumbing codes.

Irrigation Systems: Mike Aldrup, a member of the San Antonio chapter of the American Backflow Prevention Association (ABPA), told the group that he is preparing a paper on the hazards associated with irrigation systems to be presented at the ABPA conference in Colorado Springs in April, 2009. Mr. Aldrup requested that any subcommittee members with information on the hazards of irrigation systems contact him at: michaelaldrup@yahoo.com.