

Infrastructure/Retrofit Working Group of the Blue Ribbon Panel on Water Sustainability

Meeting Minutes

March 24, 2010

Introductions

Per the sign-in sheet, 24 people attended the meeting.

Review of Working Group Scope

The Infrastructure/Retrofit Working Group (Working Group) is tasked with reviewing the “best in class” reclaimed water infrastructure technical standards in the United States and beyond for the purpose of making recommendations for an Arizona state standard.

Presentations on Existing Reclaimed Water Distribution System Standards

Three presentations were given to the Working Group that provided background information on existing reclaimed water distribution system standards developed by the City of Tucson, Maricopa County, and the states of Texas and Florida.

City of Tucson / Tucson Water – Presented by Scott Schladweiler

- A. New reclaimed water connections for both commercial and residential customers require the completion of a “Reclaimed Site Preparation Checklist” (handout distributed at meeting.) This checklist provides step-by-step guidance to the customer through the process of applying for reclaimed water service, obtaining a reclaimed water user agreement, completing the necessary site preparations, scheduling site inspections and initiating reclaimed water service.
- B. Tucson Water has staff assigned to inspect customers reclaimed water irrigation systems after installation and prior to initiation of reclaimed water service.
- C. Reclaimed water customers pay for the permit fees, installation of reclaimed water meters, and inspection fees.
- D. The City of Tucson, Water Department Design Standard No. 8-14 was distributed as a handout during the presentation. These standards contain requirements for :
 - a. Using reclaimed water for irrigation of public and private reclaimed water systems
 - b. Golf Courses/turf facilities of 10 acres or more are required to use reclaimed water for irrigation
 - c. Limited interior use of reclaimed water for non-residential buildings
 - d. Using an air gap when adding potable water to a non-potable system
- E. New reclaimed pipeline installations comply with current state and Tucson Water standards.

Maricopa County – Presented by Bill Kenning

- A. Maricopa Association of Governments (MAG) Specification 616 was distributed as a handout during the presentation. MAG Specification 616 provides requirements on reclaimed water line construction including materials, installation practices, and identification.
- B. MAG provides guidance on reclaimed water lines from the source (i.e., the water reclamation plant) to the meter (i.e., reclaimed water user).
- C. Maricopa County permits reclaimed water lines. Approval to construct (ATC) is granted upon approval of the reclaimed water line plans and approval of construction (AOC) is granted following construction after a registered engineer has verified that the project was constructed as designed.

Texas and Florida – Presented by Michael Barone

- A. Texas uses both state and local standards depending on the City.
- B. El Paso, TX has local standards that incorporate soil type as part of pre-planning analyses due to concerns with salinity.
- C. Austin, TX does not have city specific standard but instead relies on the State of TX standards found in Title 30 of the Texas Administrative Code.

Group Discussion

The Working Group has identified several “gaps” in the state of Arizona existing reclaimed water technical standards. These gaps are shown in Table 1 along with the date of the meeting where each gap was identified.

No.	Description	Date of Meeting	Potential Source of Guidance/Applicability for Arizona
1	There is no guidance provided on retrofitting systems (e.g., converting an existing potable water line to deliver reclaimed water)	2-24-2010	
2	Current standards do not address groundwater augmentation that occurs when reclaimed water is recharged to the aquifer	2-24-2010	
3	There is no guidance provided on distribution and use of reclaimed water inside buildings	2-24-2010	Tucson Water
4	There is no guidance provided on using raw water to augment reclaimed water to meet seasonal demand fluctuations	2-24-2010	
5	There is no guidance provided regarding using high quality reclaimed water to augment potable water supplies at water treatment plants during emergencies	2-24-2010	

6	There is no guidance provided related to the protection of reclaimed water from the point of delivery to end users in order to preserve the quality of the water	2-24-2010	
7	On-site issues are not addressed	2-24-2010	
8	There is no guidance provided related to operations and maintenance of reclaimed water conveyances	2-24-2010	
9	There is no guidance provided for abandoning a reclaimed water line.	3-24-2010	
10	Should a General Aquifer Protection Permit (APP) be required to operate a reclaimed water distribution system?	3-24-2010	
11	Should certification/training for reclaimed water users be required?	3-24-2010	

The Working Group has suggested several ways to fill in the gaps in the state of Arizona's existing reclaimed water technical standards. These suggestions are shown in Table 2 along with the date of the meeting where suggestion was made.

Table 2. Proposed Methods to fill in the Gaps in the State of Arizona Existing Reclaimed Water Technical Standards Identified by the Infrastructure/Retrofit Working Group		
No.	Description	Date of Meeting
1	Incorporating design standards in the regulatory rules	2-24-2010
2	Considering aquifers as "infrastructure" for storing reclaimed water for future use	2-24-2010
3	Reviewing existing standards from other states or countries to determine applicability to the State of Arizona	2-24-2010
4	Incorporating a visioning process that will help chart a course to achieve goals of the working group	2-24-2010
5	Developing Best Management Practices (BMPs) for operations related to reclaimed water distribution	3-24-2010

The Working Group has identified several issues that are related to reclaimed water infrastructure but that also might be more appropriately addressed by another working group or at the Blue Ribbon Panel level. These issues are shown in Table 3 along with the date of the meeting where each issue was identified.

Table 3. Proposed Reclaimed Water Issues to be Forwarded to Another Working Group or the Blue Ribbon Panel		
No.	Description	Date of Meeting
1	Impact of water softening on reclaimed water quality with primary concern for increased salinity and TDS concentrations	2-24-2010
2	De-centralized use of reclaimed water resources	2-24-2010
3	Permitting issues related to jurisdictional boundaries that might result	2-24-2010

	in potable water supplies being located too close to reclaimed water recharge projects	
4	Review the Type 2 Reuse (Agent) permit for a reclaimed water distribution utility in regards to risk to the utility versus the end user with respect to the use of reclaimed water “after the meter”	3-24-2010
5	Addressing the formation of Disinfection By-Products (DBPs) in reclaimed water	3-24-2010
6	Addressing reclaimed “water wheeling” whereby an intermediate party delivers water to another user (e.g., a golf course providing water from its lake to a HOA subdivision).	3-24-2010

Action Items

The following action items resulted from the meeting:

- The Working Group will review both the City of Tucson reclaimed water standards and come prepared to discuss items that may be applicable to incorporate in to the Arizona state Standards.
- Graham Symmonds will present reclaimed water technical standards from Australia at the next working group meeting.
- The next meeting will be held, Wednesday, April 7th from 9:30 – 11:30 at ADEQ.