

Reclaimed Water Rule  
Technical Advisory Panel  
December 3, 2008  
9:00 am – 12:00 pm

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**Welcome and Introductions**

Ecology welcomed everyone and introductions were made. Several attendees phoned in. All together there were six participants on the phone and five participants in the meeting room. One member of the TAP who was not able to attend emailed their comments to Ecology during the meeting.

**Review of Past Meeting Action Items**

The group discussed four Action Items from the October and November meetings:

1. Jay Swift will prepare UV guidance for field verification of alternatives to NWRI criteria and small systems. This will be reviewed at the January 14, 2009 TAP meeting.
2. Denise Lahmann was unable to attend this meeting. She will present information regarding travel time, retention time or other conditions for a reclaimed water discharge in close proximity to a surface water intake in January.
3. Craig Riley, Kathy, and Bill B. will revise the draft position paper for microconstituents for review at the January meeting.
4. Kathy will resume discussion with Jim Hagstrom regarding the integration of reclaimed water reliability standards with those for wastewater treatment found in the Orange Book guidance. Craig and John M. also volunteered to work on this issue.

**Task #1 Storage and Distribution**

The TAP reviewed a revised “white paper” of recommendations for storage standards.

**Place in the rule:** (similar to 173-240 WAC language)

1. Reclaimed Water Storage

- a. Whenever a permitted alternative is not available, a reclaimed water facility shall provide sufficient storage capacity, to retain the reclaimed water until it can be legally used or discharged.
  - b. Sufficient storage capacity shall be determined using methods provided in Ecology's Criteria for Sewage Works Design (Chapter E1 or in a Reclaimed Water Manual when developed).
  - c. At a minimum, the engineering report shall provide the basic design data and sizing calculations for sufficient storage of reclaimed water considering
    - i. Types of use.
    - ii. Supply, demand and operating requirements and agreements.
    - iii. Potential for impact to human health or the environment.
    - iv. Frequency and duration of adverse weather conditions such as precipitation or frozen ground that precludes use.
    - v. Downtime for system maintenance and repair.
    - vi. Other factors that could limit or prevent the planned reclaimed water use.
2. Insufficient treatment storage requirements<sup>1</sup>
- a. Whenever reclaimed water does not meet the standards required for a proposed use, the facility generating the reclaimed water shall provide required reliability features in WAC 173-219-XXX. A facility shall provide sufficient 'quarantine' storage capacity to retain the wastewater for additional treatment when a permitted alternative is not available.

**Place in guidance:**

1. The minimum storage volume shall be three times the average daily flow for the period of time and volume for which there is no alternative.
2. When weather or ground condition preclude the use of reclaimed water, storage shall **also** be sufficient to contain the volume from a 10-year storm, for the period of time when there is no alternative. 20 years of local climatic data will be used to calculate this.
3. On a case-by-case basis, the permitting agencies may approve an alternative design basis for storage volume provide it is supported by standard engineering practices and submitted with appropriate documentation to justify equivalent reliability.

**Storage Recommendations:**

- Place both reclaimed water and "wastewater retention" storage criteria under the reliability requirements in rule or guidance. Clearly separate the requirements for treatment reliability from the requirements for storage of reclaimed water that meets the water quality requirements in these standards.
- The technical standards and management requirements for storage ponds will be captured under specific use sections of the rule or guidance.

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<sup>1</sup> See white paper on reliability requirements.

- Point of compliance. Reclaimed water must meet requirements prior to distribution or use. Compliance requirements after storage is project specific. Factors to consider include, but are not limited to, the type and length of storage, type of uses following storage, and the extent of the distribution system following the storage.
- Reclaimed water requirements following storage should be compared to the requirements for other water supplies with similar uses. Requirements should not create additional barriers that would discourage use of reclaimed water after storage that would not be required following storage of other water sources for similar uses.

**Key recommendations for distribution system standards are:**

- Adopt existing May 2006 joint Health/Ecology guidance for pipeline separation by reference within the rule. Allow for updates of the guidance document.
- Do not prohibit indoor non-potable uses of reclaimed water for individual homes. Require compliance with local or state plumbing codes for indoor residential use of reclaimed water.
- Define adequate pressure in guidance realizing that some uses of reclaimed water (such as fire suppression and urban irrigation) may require levels of pressure as high as those currently specified for potable services. Recommend that potable water service is 10 psi greater than reclaimed water and that reclaimed water service is 10 psi greater than wastewater pressure lines to protect the quality of the water services.
- Distribution system installation and operation is the responsibility of the permittee, either through direct control or contracted control via ~~an End-User~~ a legally binding agreement. Ecology and Health will review these agreements for compliance with permit requirements. Consider establishing a method to delegate these authorities to a local utility with conditions similar to review of sewerage extensions<sup>2</sup> or pretreatment<sup>3</sup> program authority.
- Pipe material, valves, covers, hydrants, etc. must follow most recent AWWA Manual M24 standards. Rule should specify certain materials such as triangular valve boxes for consistency.<sup>4</sup>
- For pipeline maintenance, a detectable chlorine residual must be measured as either free, combined, or total chlorine or chlorine dioxide. The permitting agency may waive this requirement provided the engineering report provides an equivalent method of pipeline maintenance.

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<sup>2</sup> WAC 173-240-030 (5) If the local government entity has received department approval of a general sewer plan and standard design criteria, engineering reports and plans and specifications for sewer line extensions, including pump stations, are not required to be submitted for approval. In this case the entity need only provide a description of the project and written assurance that the extension is in conformance with the general sewer plan. However, in the following situations specific department approval is necessary for sewer line extensions before construction: (a) The proposed sewers, or pump stations involve installation of overflows or bypasses; or (b) The proposed sewers, pump or lift stations discharge to an overloaded treatment, collection, or disposal facility.

<sup>3</sup> Ch 173-208 WAC

<sup>4</sup> Dual Water Systems (M24 (Awwa Manual Library, 24)

**Task #2 Wetlands**

Kathy gave a very brief description of the three wetland “white papers” that she had prepared. She clarified the definitions that distinguish between natural, constructed beneficial use, and constructed treatment wetlands.

There was a question regarding the degree of control that should be applied to a wetland discharge to surface water; example – Carnation project in King Co. Is utility responsible for water quality only at entry to wetland or entry to surface water? Where is the point of compliance?

Another TAP member asked for clarification of the handout section titled “Demonstration of Net Environmental Benefits” from the 1997 Standards. This section provides rationale for exceptions from the wetland standards.

**Task #3 Use Area Restrictions**

There was insufficient time to discuss the white paper on this subject. It will be placed on the January 2009 meeting agenda.

**Wrap-Up and Action Items**

A discussion of alternate meeting dates and times established a schedule for 2009:

- January 14 – 9:00 a.m. to 12:00 p.m. and 1:00 p.m. to 4:00 p.m.
- February 11 – 9:00 a.m. to 12:00 p.m.
- March 11 – 9:00 a.m. to 12:00 p.m.

The TAP members requested January be a full day meeting in order to finish several pending topics and still have time to consider pathogen and groundwater recharge topics.

**Action Item:**

**Jim will send a copy of this summary to TAP members, along with a work plan progress checklist.**

**Meeting Attendees**

<b>Committee Members and Alternates</b>	<b>Ecology and Health Staff</b>
Bill Backous, CH2M Hill	Jim McCauley, Ecology – TAP Chair
Ken Butti, LOTT	Tim Gaffney, Ecology
John Malady, Kennedy-Jenks (by phone)	Craig Riley, DOH (by phone)
Dale Richwine, MWH (by phone)	Katharine Cupps, Agency Lead (by phone)
Paul Schuler, PNCWA (by phone)	<b>Guest</b>
Jay Swift, Gray and Osborne (by phone)	Barnaby Hoit, KPG