

Reclaimed Water Rule
 Technical Advisory Panel
 November 12, 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. Two members of the TAP who were not able to attend emailed their comments to Ecology prior to the meeting.

Task #1 Disinfection

A summary of rule criteria for disinfection using chlorine, UV, ozone and other disinfectants was presented to the group. Primary issues were:

1. Chlorine - How to establish a protective CT. Whether to measure free chlorine, assuming a fully nitrified tertiary flow, or to measure total chlorine residual with some ammonia present.
2. Applicability of the NWRI UV standards.
3. How to address ozone and other types of disinfection.
4. What criteria goes into rule versus guidance.

Chlorine: It was agreed that for unrestricted human contact (Class A) the disinfection process should achieve 1 mg/L free chlorine residual with 30 minutes of contact measured as T_{10} ; or provide an equivalent disinfection acceptable to the departments. Guidance would outline other methods such as modal CT as found in current Orange Book Chap. E1. For lower classes, restricted or limited human contact (Class C & D), a minimum CT or a contact time based on wastewater effluent criteria may be set in rule, with a similar equivalency found in guidance.

Other recommendations:

1. Be careful with regulation wording that references other standards or guidance documents such as CA, since these requirements may automatically change if those documents change.

2. The requirement for chlorine residual in distribution systems should be addressed under distribution requirements rather than disinfection requirements.

UV - A couple of the TAP members thought that referencing the NWRI guidance for UV disinfection in the rule may be too conservative. Members expressed concerns about the sensor requirements, calibration, long term O & M, and the applicability of a 5 year old guidance document. Updated guidance is in progress. The TAP agreed that the rule should rely on certain aspects of the NWRI guidance (minimum UV dose, transmittance, etc.) with a provision that the departments may accept an equivalent design based on other professional guidance. TAP members expressed concern with wholesale application of the requirements for validation studies.

Ozone - The group agreed that ozone technology was not far enough along to set dosage and contact time criteria in rule, but it could be considered along with "Other Alternative Disinfection Systems" as outlined in the handout. A placeholder should be reserved for future ozone criteria.

Action Item:

- **Jay Swift will prepare UV guidance for review by the TAP at the Dec. 3 meeting.**

Task #2 Streamflow Augmentation

The TAP confirmed that 3 items should be left unaltered at this time:

1. Federal NPDES permit requirements,
2. RCW 90.46.100 requirements,
3. Water right issues addressed by a separate stakeholder group.

The TAP agreed to 4 operating assumptions as stated in the handout document, with a comment that recreational uses (ponds) need to be considered.

There was considerable discussion regarding whether (or when) the disinfection standards for reclaimed water should be more stringent than those of WAC 173-221-040 for wastewater discharges (NPDES permits) or ambient water quality standards in CH 173-201A WAC. TAP members discussed nutrient issues, ambient water quality standards, mixing zones and liability concerns.. The TAP concluded that streamflow augmentation should be regulated on a case-by-case basis. If reclaimed water is being discharged to a reservoir with potable water purposes, then higher water quality standards are necessary and/or some minimum detention time to prevent short-circuiting should be prescribed.

Action Item: Denise Lahmann will check with the Office of Drinking Water regarding requirements for travel time, retention time or other conditions for a wastewater effluent discharge in close proximity to a drinking water intake.

Task #3 Storage and Distribution

There was insufficient time to discuss the white paper on this subject.

Action Item: Jim asked for TAP members to send their email comments to him prior to the December meeting.

Wrap-Up and Action Items

Several in the group again expressed their opinion that the teleconference type of meeting worked well. Three topics identified for the next meeting included:

1. Storage and Distribution
2. Wetlands
3. Use area restrictions

Staff will need input from the Office of Drinking Water at Health before they can complete a summary of recommendations for potable water reuse and residence time for groundwater or surface water. The next meeting will convene on Dec. 3, 2008 from 9:00 a.m. to 12:00 p.m.

Carryover Action Items from Oct. TAP meeting

1. **Kathy, Craig, and Bill B. will revise the draft position paper for microconstituents for distribution to TAP members via e-mail for comment.**
2. **Kathy, Craig, John M. and Jim Hagstrom will review design guidance in CSWD (Orange Book) on reliability and establish basis for differences in the standards – integrating them where possible.**

Meeting Attendees***Department of Ecology***

Katharine Cupps, Agency Lead (by phone)

Committee Members and Alternates	Ecology and Health Staff
Bill Backous, CH2M Hill	Jim McCauley, Ecology
Ken Butti, LOTT	Denise Lahmann, DOH
John Malady, Kennedy-Jenks (by phone)	Craig Riley, DOH (by phone)
Bill Persich, Brown & Caldwell (by phone)	Tim Gaffney, Ecology
Paul Schuler, PNCWA (by phone)	
Jay Swift, Gray and Osborne (by phone)	