

Reclaimed Water Rule  
 Technical Advisory Panel  
 January 14, 2009  
 9:00 am – 4:00 pm

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### **Welcome and Introductions**

Ecology welcomed everyone and introductions were made. There were five participants on the phone and six participants in the meeting room for part or all of the meeting.

### **Review of Past Meeting Action Items**

The group discussed four Action Items from the October, November, and December meetings and groundwater recharge:

1. UV guidance for field verification of alternatives to NWRI criteria and small systems. Jay Swift is preparing this and it should be ready for February.
2. Separation between reclaimed water discharge & surface water intake. Denise Lahmann will work with Ginny Stern and have the DOH position ready for the February meeting.
3. Microconstituents position paper. Craig Riley will work with Kathy Cupps, and Bill Backous to revise the draft position paper for microconstituents. Craig has been on leave and unable to work on this project. He anticipates having something to review at the February meeting. The TAP reviewed a preliminary paper which Craig wanted to comment on further. (Ken Butti noted that they had received results for water quality testing from LOTT's Martin Way satellite plant showing high removal efficiencies of hormonal and steroid compounds most in the upper 90 % range. Later on they will also compare Budd Inlet Plant with others.)
4. Reliability crosswalk. Kathy presented the information she discussed with Jim Hagstrom, Craig Riley and John Malady regarding the integration of reclaimed water reliability standards with those for wastewater treatment found in the Orange Book guidance. She drafted an issue paper suggesting Class 1 Reliability plus the reclaimed water reliability requirements. Jim H. suggested that Class 1 reliability from the Orange Book guidance for wastewater facilities was appropriate except when the treatment plant was interruptible such as a satellite plant. John and Craig concurred with this idea. Kathy

will complete the issue paper incorporating these ideas for presentation to the TAP in Feb.

5. Groundwater Recharge. (see Task #5)

### **Task #2 Wetlands Recommendations**

Kathy Cupps reported that Ecology met with their wetlands biologists to look at the three white papers she wrote on constructed treatment wetlands, constructed beneficial use wetlands, and natural wetlands uses of reclaimed water.

Larry Esvelt submitted written comments that a constructed treatment wetland is part of wastewater treatment and should be permitted under Ch 90.48 RCW not Ch 90.46 RCW. Kathy noted that constructed treatment wetlands are currently referenced within Ch. 90.46 RCW and could be refined, but not deleted. There are existing projects with constructed treatment wetlands. Beneficial uses include the retention of reclaimed water and aesthetic park features or educational components.

There was a great deal of discussion regarding the differences between constructed treatment wetlands and constructed beneficial use wetlands. Also confusion exists about what is meant by the term 'waters of the state' and when there is an obligation to continue wetland functions. New definitions are proposed for *constructed treatment and constructed beneficial use wetlands* in the draft legislation for 2009. Ecology proposed removing the statements about 'waters of the state' from the constructed wetland definitions to accommodate the diversity of projects that may be proposed. Some uses, such as wetland mitigation or restoration, may require that wetlands be maintained in perpetuity while other projects may not have that requirement.

Currently, reclaimed water proposed for wetlands mitigation must meet Class A standards. TAP members suggested that a lesser quality of reclaimed water may be accepted by the departments provided it complies with an approved "wetland mitigation plan". Ecology's SEA program determines the content and approves wetland mitigation plans. Ecology needs to explore this further.

Kathy will take the wetlands white paper back to the internal review team that includes wetland's specialists. TAP members recommended that many of the details on hydroperiod, loadings, nutrient removal, etc. remain in guidance.

### **Task #3 Use Area Restrictions (Requirements)**

The TAP reviewed a nine page document on use restrictions. They recommended:

1. Delete the statement about notification for (golf) score cards as unnecessary.
2. Storage distribution and labeling requirements should be cited in rule so as to compel attention. The rule should require specifics such as labeling, purple color coding, special valves or connections for turning on faucets to reduce the risk of accidental exposure. However, specific details should remain in guidance to allow for needed flexibility in application. For example, the rule should not require triangular valve boxes, or that pipelines be labeled every

three feet, or prohibit hose bibs. There are recommendations from AWWA for dual systems that potable water lines be labeled if located in areas also supplied with reclaimed water. (p.6)

3. Site restrictions for irrigation may require a water balance analysis. One person indicated that water balance analyses were onerous (a barrier). TAP members agreed that hydraulic and nutrient levels are important and there should be a requirement. However guidance needs to address how to build a generic application rate showing an appropriate agronomic rate. This could be based on County Extension Agent information. The TAP recommends placing this requirement in guidance and referring to it in rule.

4. The term “vectors” should be defined.

5. TAP members discussed the term “impoundment” and “storage pond” and remained unclear in the difference between the two (173.216). This should be researched and clarified in the definitions section. Text should be consistent in rule and guidance.

6. Setback Distance. TAP members thought that the rule should state that adequate separation for suitable protection is required and then refer to guidance. Agencies should make certain that existing requirements are consistent with DOH drinking water guidance. A 100’ sanitary control area surrounding potable wells for drinking water requires a 50 to 100 foot setback from both reclaimed water pipelines and application areas depending on the class of reclaimed water.

#### **Task #4 Pathogen Reduction**

1. Class D Land Application vs. Land Treatment. The TAP had past discussions whether to use total coliform or fecal coliform as standards for non-potable water with limited human contact (Class D). The internal reuse workgroup and DOH/ECY coordination committee suggests removing Class D systems and letting those land treatment systems be permitted under Ch 90.48 RCW. WA only has two systems that might qualify as “Class D systems” statewide at this time, one is permitted under Ch 90.48 RCW and the other plans to upgrade to Class A. TAP supported the concept to keep land treatment facilities and Class D permitted under Ch. 90.48 RCW. This would remove the conflict between two standards for the same type of projects. If it came up, the agencies could still permit a reclaimed water project with less than Class C disinfection requirements on a case-by-case exception basis.

2. A direct potable reuse white paper was introduced to the TAP with the recommendation that a place holder be put in the rule for direct potable use but not with specific water quality standards at this time. The DOH/ECY coordination team agrees with this. Although current drinking water regulations don’t prohibit potable reuse, the existing drinking water rules don’t address it and would require revision that is not a top priority given the fact that there is currently no need or demand for direct potable use. Also, the statute does not require addressing direct potable use. DOH recommends moving forward with non-potable uses, and learn from that. This leaves the rule open to address potable uses later if and when supply and demand calls for it.

#### **Task #5 Groundwater Recharge**

All agreed that it is possible to supplement a potable source with reclaimed water. Jim Hagstrom suggested that the TAP review the proposed California standards for groundwater recharge and

determine if any of their methods are applicable to Washington. What WA is proposing is different than California so it is important to understand and state the basis for those differences. The TAP noted that California has a fairly complex set of criteria for dealing with ground water recharge including diluents, and TOC requirements. Craig Riley agreed to contact Dr. Crook and others for clarification of the CA criteria. Jim H. will forward the name of a contact person in CA to Craig and Kathy. Kathy noted that the draft CA standards are available online. The TAP will revisit this issue in Feb.

The discussion touched on the following issues:

- Is the plume effect a concern for reclaimed water? Ginny says, I don't think so.
- Class A has some built in protections, with nutrient standards.
- Different types of treatment will be more effective for certain pathogens.
- Direct recharge will need a higher level of treatment than other methods. RO is being used to remove other unmeasured contaminants. RO isn't the goal; removal of the pathogens is the goal. Equivalent treatment success may be attainable through alternative methods.
- DOH requires a professional hydrologist to provide appropriate documentation. The rule should consider this.

The TAP needs to decide what water quality standard they recommend because the legislature gave Ecology flexibility to modify the current ground water recharge standards in the rule.

- OCPI for water quantity and an OCPI for water quality need to mesh whenever and wherever possible in relation to net environmental benefit. (Possible new topic for internal work group first?)

### **Task #6 Wrap Up**

We plan to finish five pending topics during the February meeting, with white paper updates. The stormwater blending issue and discussion of what goes into rule versus guidance will be the other February topics. The next meeting will be a three hour 9-12 meeting on February 11, 2009.

### **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 (notes)
John Malady, (by phone)	Craig Riley, DOH (by phone)
Jim Hagstrom (phone)	Katharine Cupps, Agency Lead (by phone)
	Denise Lahmann DOH
	Ginny Stern DOH (phone)
	Lynn Coleman, Ecology