

# Reclaimed Water Rule Making Committee Meeting

May 28, 2008

9:00 am – 2:00 pm

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## **Welcome and Introductions**

Angie Thomson, EnviroIssues, welcomed everyone and introductions were made. Angie reviewed the agenda and notified the group that at 1 p.m. the Rule Advisory Committee would hold a joint session with the Removing Barrier Subtask Force (RBSF) about agency staffing levels, resources and roles.

In other announcements, there were two staffing changes. Kathy Cupps, Washington State Department of Ecology (Ecology), announced that she is moving to Texas on Friday, May 30, but will continue to work for Ecology from Texas for the next six months. Kathy’s travel for the committee meetings will be limited, but she will be available via phone and expects to attend the June RAC meeting. Kathleen Emmett said Ecology does plan to fill Kathy’s position at some point. Friday, May 30 is also Nancy Winters last day with Ecology and her position will be filled by stormwater policy analyst Bill Moore.

### *Questions/Comments:*

- *Are any legislators focusing on reclaimed water?* Kathy said that the agency request legislation will be discussed during today’s meeting, with a placeholder in the agenda to discuss funding and staffing needs. Lynn Coleman noted that several legislators have expressed interest in reclaimed water. Craig Riley reported that some were interested in gray water.

## **Timeline and Progress Review**

Eugene Radcliff reviewed the timeline. He said the RAC has two more meetings and the RBSF has three more meetings before recommendations requiring legislative change are due to the legislature in mid-July.

Kathy said that the budget impact for agency request legislation must be finished by August or at the latest by the end of September. The budget impact can be an outline, but

Kathy wants to get comments and support from stakeholder groups to ensure successful legislation.

Kathy reminded the group that the deadline for the RAC's work is December 2010, with the goal of getting through the technical standard piece this year. By the middle of next year she wants to have the draft rule in place for the broader public process to ensure that the RAC has a good final product.

*Questions/Comments:*

- Walt Canter commented that this is a major election year and people are retiring, so there will be a need to educate another group of legislators about reclaimed water. Lynn said that on some issues such as water rights and coordinated planning, the governor's directive was to work with legislative leadership, but Ecology also recognizes that the leadership is changing and has been working with the committees.

**Task 1 Water Rights and Reclaimed Water Update**

Lynn provided an update from the Water Rights Impairment Subcommittee. The committee discussed having water rights impairment issues considered earlier in the planning process, perhaps at the comprehensive planning stage. Ecology needs basic information on water balance to make project decisions, and there is general frustration from project proponents about the level of Ecology staff training.

Lynn said that Ecology would like to look into the cumulative impact of a wastewater treatment plant on a particular stream and identify consumptive and non-consumptive impacts. She said that Ecology plans to put together data regarding the 27 basins in the state with in-stream flow rules and identify the impact of plants in these basins. Angie said the next Water Right Impairment meeting will be held on June 10.

*Questions/Comments:*

- *Is the guidance still being used?* Lynn said that the guidance is out there with the recognition that it will be updated. Heather Trim asked whether this means the guidance is not working. Lynn said Water Resources thought having the project proponent conduct the impairment analysis would streamline the process. Instead, the project proponent and Ecology staff have both been frustrated. In general, the Water Rights Impairment committee believes it would be better if Water Resources conducted the analysis unless the proponent chose to do so.
- Lynn said that reclaimed water projects create an unstable workload in the Water Resources program. If staff are working on other water rights processing tasks and a reclaimed water project comes in, it can create a pinch. The current system also has a cost reimbursement element which has advantages and disadvantages.
- *For utilities, when is an impairment decision made and are there tools for utilities to consider whether there is impairment?* Lynn said that based on the current guidance,

utilities should consider impairment during the planning stage. If this is not done early in the process, it can delay the project. James Hagstrom wondered about conducting the impairment analysis at the comprehensive plan level. Kathy said that it should be done as early as possible to make sure it is feasible, so it could be a part of the initial feasibility, water supply, or capital planning phases. James suggested having a checklist so that project proponents know about potential impairment issues.

- *When grants for reclaimed water were made to various entities this spring, was there a requirement regarding impairment work?* Kathy said most of the grants were for marine dischargers, so impairment did not apply. Jim McCauley said that projects were selected to address ecological damage or shoreline areas and, in nearly every case, the entities were already dischargers to Puget Sound. The projects selected are moving forward because there were no impairment issues, though in one case the entity had septic systems and there was no specific discharge.
- Walt commented that if water is removed from the system, it affects a financial entity that normally receives the water. Kathy said that the feasibility study looks at the technical aspects, such as flows and water quantity in the system, and economic aspects such as if there are stranded costs. She said there is a lot of planning involved and it is a local process.
- Craig thought that without a clear regulation, there is no requirement for an impairment analysis. He said that on a fiduciary level entities should conduct the analysis, but the RAC has to find something utilities can accept. He noted that approaches to impairment analyses differ from region to region. Craig gave an example of a utility changing its stream flow and causing potential downstream impairment. He said that the impairment analysis is an economic decision. Craig thought there should be assistance for utilities in conducting an impairment analysis so they know what they are doing and understand the potential costs. He said utilities are hesitant to conduct the analysis because of the costs.
- Lynn said that in Craig's example, Ecology's current guidance suggests going downstream until some point where the water body is large enough to not be effluent dominated. She thought that this is something that should be reexamined.
- Walt said that given the effects of climate change on flows and society's willingness to sue, there will always be an impairment risk. James said that it was important to communicate the risk so that project proponents can consider it early, rather than going through the city approval and facility planning processes and then finding impairment. He said that with the city of Carnation's project, policy makers were not happy that they had to do an impairment analysis.
- Lynn summarized that the impairment analysis should be done early in the process and that there needs to be an explanation of the next steps and types of rights that would or would not be impaired. She said that agricultural and tribal water rights are different.
- Lynn said that the Water Rights Impairment group is discussing in-stream flow related to water quality and water quantity. She said that the Impairment group is talking about a two-step process because the language in RCW 90.46 says that you

cannot impair water rights unless compensation is agreed to, while the language in RCW 90.54 says that the agency cannot allow a withdrawal of water if it conflicts with in-stream flow. Neither of the statutes addresses in-stream flow or water quality and water quantity issues. The group suggests convening stakeholders to discuss the issues and trying to reach consensus. If that is not possible, then Ecology will make a decision under RCW 90.54 as to whether mitigation is based on public interest.

- *Did the group discuss effluent-dominated water regulated streams?* Craig said that California defines effluent-dominated as more than 50 percent. Craig wondered whether the RAC should be addressing effluent-dominated and effluent-driven streams either by definition or consensus. Lynn questioned how far downstream Ecology should consider and said that the issue has not been discussed. Heather asked whether there are any effluent-dominated streams in the Puget Sound. Craig responded that there are not, most are in eastern Washington. Kathy commented that there may be effluent dependent streams which is different from effluent dominated and still needs to be defined.
- Lynn asked the group about how to address reclaimed water facilities that remove only one percent of stream flow. While a facility may only remove a small percentage of the flow for reuse, the Impairment group is concerned about the cumulative effects of climate change and multiple reuse facilities on a given stream, which will slowly nibble away from the flow. She said no one is against the concept of reclaimed water relative to treatment and everyone is excited about improved quality, but the concern is about the negative effects.
- Craig said that in Carnation, the reuse flow was a tenth of a percent of the river flow and the water eventually went back into the river. There is now a public-private partnership for the water going back into the river. The message from Carnation is that the impairment analysis and subsequent complications are a barrier, so we want to avoid this step. He questioned why project proponents should have to go through this step if there really is no impairment and sound judgment assures us it is not a problem. Lynn said that the Water Resources program would like to be able to determine a water balance for proposed projects.
- Hal Schломann said that Ecology uses a one molecule rule when taking water out of a stream. But you should consider what the water is used for and what types of soil it will be used on, as well as the time of delay for the water to return to the stream, before determining if there will be a net loss of flow. He cited an example of an eastern Washington golf course with gravel where the water would eventually go back into the river; however Ecology would not let the reclaimed water project move forward.
- Lynn said that there needs to be better guidance on water balance concepts and that Ecology Water Resources staff may need to have additional training to decide whether a project is good or bad. Hal agreed and recommended having staff selected from regional offices and headquarters to be cross-trained on reclaimed water so that Ecology has an adequate team.
- *For reclaimed water do we want to get away from the single molecule rule? How do we make this decision in the face of Western water law?* Lynn said that she does not

think the one molecule rule is right. Because Ecology staff believe there is hydraulic continuity, there may not be impairment. If there is a problem, such as in Carnation, Ecology will do a simple water balance and will not go down to one molecule. She noted that tribes and environmental groups are concerned about cumulative impacts. Hal said that it sounds like they are back to first in time, first in right. He cautioned that if that is the case, then there is limited potential for reclaimed water. Craig said that Idaho has water rights and return flow cases where utilities have the water right for consumptive use. He thought that this is a temporal and geographic issue, and he questions the impacts of eastern Washington plants.

- Kathy commented that reclaimed water is not just about water rights and that the RAC has to take a look at the system as a whole. The framework is different than what has traditionally been considered.

## **Task 2 – Permit and Regulatory Authority**

Kathy read an e-mail from Assistant Attorney General (AAG) Sonia Wolfman. For reclaimed water, the AG's office has three attorneys consulting on permit and regulatory authority, representing water quality, water resources, and health. The statements read reflect comments from Ecology AGs Sonia Wolfman and Barbara Markham. Dori Jaffe, AAG at the Department of Health, was not yet able to provide comments. In the e-mail, Sonia said that the comments are a starting point for revisions and once the framework for permitting is approved by all groups, then they will do line by line edits.

The main comments were:

- The AAGs were not sure whether having the statement as written for proposed statutory change regarding definitions is lawful. Different language or changing definitions within the statute may be required. Kathy said that it is easier for the RAC to work on definition within the rule as they come up. Kathy said that there will still be definitions in statute such as defining the term departments to mean Ecology and DOH.
- The AGs agreed with the RAC that having a comprehensive discussion of permitting authority would be useful, especially with regard to permitting requirements under RCW 90.48 and RCW 90.46. Kathy said efforts toward coordinated planning will also be discussed this afternoon with the RBSF. Based on Lynn's presentation, Kathy suggested clarity on requirements for water rights impairment analysis under RCW 90.46.130.
- The AGs suggested that the RAC propose language for Ch. 90.46.RCW by using Ch. 90.48 RCW existing language as a model.

Then modify it appropriately to apply specifically to reclaimed water.

- The AAGs suggested modifying the suggested permit language for municipalities, private utilities or other parties that have a waste discharge permit, to clarify that it applies to all reclaimed water uses.
- The AG workgroup is working on options for provisions under RCW 90.48 to enter properties to inspect or investigate conditions and will get back to Ecology with proposed language.
- The AAGs thought it was not necessary to add all of the provisions in Ch 90.48 to Ch 90.46 RCW. Kathy said that Ecology intends to omit provisions from RCW 90.48 RCW that the AAGs believe unnecessary for effective implementation of Ch 90.46 RCW.
- Kathy said that Ecology proposes adding the language specific to the notice of determination that a violation has or will occur, the same penalty provisions as RCW 90.48, and language that Ecology will not penalize for damage of fish, animals, and vegetation when the permittee is in compliance with an issued permit.
- There was a question about the appeal process. Appeals to Ecology go through the Pollution Control Hearings Board (PCHB), and the RAC questioned if a DOH issue can be appealed through PCHB. Kathy said that the agencies are aware of this issue and that Ecology is waiting to hear back from DOH on suggested language.

#### *Questions/Comments*

- Craig commented that if DOH appeals go through PCHB then there is the potential to open up DOH's statutes and the State Board of Health's statutes. Modification of these could be difficult.
- *Since there is so much overlap between RCW 90.46 and RCW 90.48, why not merge the two?* Kathy said the statutes serve two different purposes. RCW 90.46 is about reclaimed water use as a water resource, while RCW 90.48 concerns pollution control from waste water discharge.
- Lynn questioned whether the underlying issues were the "yuck factor" and marketing. Kathy said that was only one factor. Ch 90.48 RCW only governs water pollution control.
- *What is the timeline for the AAGs?* Kathy said the timeline is to finish by the end of July. Craig said that he's not heard that the AAGs have a timeline. Kathy said the timeline was for agency request legislation.

Angie suggested holding up cards to show support of the comments, and the majority were green, but a few were yellow. Heather asked Kathy to send out a one-page summary for People for Puget Sound's liaison. Kathy said that she would like to have comments from the AAG representing the Department of Health before sending it out, but she will try to amend the meeting notes and make a summary for Heather.

### **Task 3 – Technical Advisory Panel (TAP)**

Angie explained that the TAP met last Wednesday and the group was divided into two small groups: pathogens standards and irrigation standards. The two groups worked independently, took comments and developed preliminary recommendations.

Jim presented the TAP's pathogen standards. The RAC discussed potential criteria for log removal of pathogens, total coliform, turbidity and particle count size. The TAP divided standards into three categories (potable, human contact, and no contact) and suggested colors as a way to identify the categories.

The RAC agreed to direct the TAP to recommend standards but not to spend additional time on nomenclature until the standards were completed.

#### *Questions/Comments:*

- The RAC group thought the colors proposed by the TAP did not work well and might be confusing to people. There was further discussion regarding the Class A, B, C, D system and the nomenclature that should be used to address the different types of reclaimed water.
- *Where is Aquifer Storage and Recharge (ASR) addressed?* Jim said it is addressed as an indirect human contact. The TAP suggested combining indirect and direct human contact into the same category. The RAC was not sure how well this would work.
- Hal commented that the St. Louis Metropolitan Sewer District uses the Missouri River for their water and that reclaimed water is a novel concept to them. He said that if you can directly consume Missouri River water then you can drink reclaimed water. Heather questioned whether the sewer district tested the Missouri River for pharmaceuticals. Kathy said that the group was only talking about pathogens for now and requested deferring the discussion on pharmaceuticals to a later meeting.
- *For no human contact, does agricultural use include crops?* Jim said that the TAP did not discuss this in detail.
- Jim commented that the Class system does not connect with the public and that there are too many classes. Kathy suggested that the rule focus on water quality-based criteria appropriate for the use.
- *Is Class A equivalent to human contact?* James was not sure of the value of changing from Class A to purple water.
- Heather thought that people are responsive to purple pipes, but purple water would not resonate with the public.
- James said that in California there is little difference between treatment technologies for direct and indirect potable water supplies. Craig said that Texas is considering changing their types to human-contact and non-human contact. Karla Fowler

questioned how you classify an “indirect potential to consume”, and Jim clarified that this includes water recharge systems.

- *Where does Class A water recharge fit?* James said that in California they are currently debating these definitions. If the intent of a project is to recharge an aquifer then the reclaimed water is classified as potable. If not, it is classified as human contact. Kathy explained that all of Washington’s groundwater is potential potable water supply based on the groundwater standards. John questioned whether the type of technology used for treating water for aquifer recharge is all that different than that used by a water reclamation facility. James said the technologies are different because for recharge you have to consider pathogens and pharmaceuticals.
- *For human contact, is turbidity or MNP a presumption?* Jim said that yes, turbidity and MNP are presumed and the TAP was considering particle size for the five log requirement.
- *For the potential alternative criteria, why did the TAP decide on a one time confirmation?* Jim explained the confirmation is intended to show that the design is appropriate. Post-design tests will show that the treatment is achieving five log removal. Nancy questioned whether it would depend on how the plant is operated, but Jim said that it should be independent of the operator. The facility will also test other parameters, and could include a “challenge” test across viruses and protozoa.
- *Did the TAP discuss that current Class A requirements can achieve a 10 micron particle size standard?* James said that the majority of plants that lead to Title 22 do not use five log removal. The RAC needs to make sure that plants can meet this standard before making it a rule. James thought that meeting standards for the number of particles 10 microns or less is dependent on secondary processes. It may be easier to meet five log removal standards depending on secondary processes. A more robust solution would be to have a finished water particle size less than 10 microns independent of influent. He said that log removal is dependent on what you have coming in. Craig said that the 10 micron particle size is based on research that Frank Loge and others have done identifying organisms based on particle size. He said that below 10 microns there are very few organisms. James added that cryptosporidium and giardia are three to five microns.
- Nancy said that with corrective action levels in the general permit, it is difficult to ensure that corrective actions have brought facilities back in compliance. She recommended having an absolute value for non-compliance. Kathy thought a two-step process might work, with a lower level trigger that the facility has to address and a higher value for non-compliance. Craig said this is what is being used now.
- Jim commented that some current facilities would not be able to meet the BOD and TSS standards proposed by the TAP’s secondary and tertiary treatment requirements. Heather said that those plants need to upgrade. James said the TAP’s proposal assumes the TSS standards designate safe water and he is not sure whether the science supports that assumption. Heather recommended a value be set and facilities be required to meet it.

- Kathy said the TAP is interested in post-tertiary results, which should be less than 30/30 BOD/TSS. She said she's not sure that 30/30 is correct, but we need to land on the right number.
- *If there is safe water, why write that BOD needs to be reduced in a tertiary process?* Kathy said this standard addresses parameters beyond pathogens.
- Jim commented that the laboratory process for measuring viruses is expensive and complex, so measurement cannot be done every day.
- *Have particle size counts been used for designating human contact use?* James said it has been done on the water side, but he did not know of any for reclaimed water. Craig said particle counters are not used much due to the difficulty of use and operational expense.
- *Will facilities apply for a single permit or a permit for each type of use?* Kathy said that there will be one single permit defined by uses described in facility plan. Jim commented that the city of Chehalis is discharging their reclaimed water to a poplar plantation, and the Port wants to expand the use to wetland mitigation. The city can modify the existing permit to show quantities and how the water will be used.
- *What was the basis for deviating from California standards with an indirect potable category that requires advanced oxidation for pharmaceutical?* Jim explained that the California standards did not come up in the TAP's discussion, but the Safe Drinking Water Act (SDWA) requirements only apply if the source water has specific concentrations of cryptosporidium. James said that California DOH is developing a rule for indirect potable use and they use potable replenishment. Craig said there is a secondary debate about pathogens, because reverse osmosis (RO) and separate disinfection provide evidence that advanced oxidation processes (AOP) are more efficient. James said AOP doesn't provide effective disinfection. Instead, the standards should include log removals which are scientifically based on the constituents of the source water.
- *With direct injection, what happens during the 12 months residence time?* Jim said some pathogens die off naturally. Karla asked about the lifespan of viruses, and Jim said the science indicates they will not live long. Craig agreed and said the science is based on slow oxidation rates and deep groundwater. Heather noted that in Los Angeles, pharmaceuticals were found after three to five years of residence time.
- The group discussed the no human contact standard, comparing this to existing Class A and commercial/industrial use. Jim said the TAP did not discuss this, but will cover it when addressing urban uses.

Jim said that the work presented is a starting point and that Walt Jakubowski, a microbial expert and epidemiologist, will help the TAP develop some clarity and measurement levels for pathogens.

The TAP also developed draft recommendations for irrigation uses, and those will be presented at the next RAC meeting.

#### **Task 4 – Removing Barriers – Joint Session with Subtask Force**

Angie explained that the RAC and the RBSF are meeting jointly for this portion of the meeting. Together the two groups would discuss agency staffing levels, resources and roles. A quick round of introductions was conducted and Angie briefly went over the RBSF agenda.

Melodie Selby, Washington State Department of Ecology (Ecology), discussed the agency staffing levels and resources. She said that Ecology was given two accounts of money for reclaimed water efforts by the legislature. One account goes through the end of fiscal year (FY) 2010 and the other goes through the end of FY 2011. Some of these funds are permanent and others are temporary. The reclaimed water program currently has two full time equivalent positions (FTEs) and they are funded through the foreseeable future. Ecology regional office staff from the wastewater program can work on reclaimed water projects on a project-by-project basis.

Melodie said that Ecology is working on the agency's budget proposal for the next biennium which goes into effect July 2009. She explained that despite Ecology's shortfall in the permit fee account, she has put in a placeholder for additional reclaimed water staffing because there is a need for more resources. Ecology has a Fee Workshop discussing the shortfall itself, and Melodie is unsure whether the RAC/RBSF wanted to discuss the fee as well.

Angie noted that the RAC agrees with the proposal already approved for minimum staff needs and that RAC/RBSF will wait to hear back from the Fee Workgroup regarding fees. Melodie said she would take the input from the discussion back to the appropriate groups.

#### *Questions/Comments:*

- *Do we have feedback from the Fee Workgroup on fees?* Melodie said the Fee Workgroup is identifying short and long-term fixes. The short-term proposals will be reviewed by the Fee Workgroup at the June 13 meeting, and the fee itself has not been determined. Craig Riley, Department of Health (DOH), asked whether the Fee Workgroup is a committee like the RAC and Melodie confirmed that it was. Melodie said that the reclaimed water permit fee may be raised by the fiscal growth factor each year if the legislature votes to do so, but it has not been decided whether Ecology will request to do so.
- *Does the RAC know what its needs and staffing minimums are for the departments?* At the last meeting, the RAC approved the minimum staffing recommendations from the RBSF. Kathy Cupps noted there was some concern where the staffing request would fit with other budgets, such as core response and other permit fee work. Nancy Winters asked whether there was an estimated number of FTEs, and Kathleen Emmett said that the minimum is to keep it at the current level: Water Quality has seven FTEs, Water Resources has two FTEs, and DOH has two FTEs. Bill Peacock said that if there are two people now and you need six, then that might be a barrier.

Melodie commented that the legislature gave money and staff for the rule development process, but that lack of resources at Ecology is a barrier and the RAC/RBSF needs to define their long-time work.

- Kathy said that there are still discussions internally between DOH and Ecology regarding fees and whether there should be one consistent type of fee program. She thought that DOH, Reclaimed Water, and Water Resources staff should provide input to the Fee Workgroup.
- Kathy said that most reclaimed water facilities are already paying wastewater permit discharge fees, so an additional reclaimed water fee may be a barrier since they would be paying more fees. She wants to make sure the groups look at that holistically and encourage utilities to develop reclaimed water facilities. She recommended higher permit fees for wastewater-only permits.
- *Are the reclaimed water fees reasonable today?* Karla Fowler said that the fees are the same as National Pollution Discharge Elimination System (NPDES) permit – no additional fee for reclaimed water use. She questioned what to do about a satellite plant. She recommended one fee for both the main plant and satellite plant. Melodie said the fees are based on the residential equivalent unit, which has been capped at \$1.88 and that the Fee Workgroup is looking at changing or removing the cap. She said that the Ecology's total fees are \$35 million.

The discussion concluded and served as the end of the Reclaimed Water Rule Advisory Committee meeting.

### **Wrap-Up and Action Items**

- *At the next meeting, the RAC will consider in-stream flow data and WWTP locations for the 27 basins.*
- *Ecology will take the RAC's feedback regarding pathogen standards to the TAP for more discussion.*
- *The RAC will discuss TAP's proposed irrigation standards at the next meeting.*
- *Melodie will take the staffing, budget, and fee decisions from the joint session to the appropriate committees.*

*The RAC/RBSF will wait for feedback from the Fees Workgroup before making a decision regarding fees.*

Angie invited RAC members invited to stay for Removing Barriers Group discussion. The next RAC meeting will be held on Wednesday, June 25.

### **Meeting Attendees**

*Department of Ecology*

*Department of Health*

Katharine Cupps, Agency Lead

Craig Riley

Angie Thomson, Facilitator

Diane Strom, Note Taker

<b>Committee Members and Alternates</b>	<b>Guests</b>
Ann Wick, Department of Agriculture	
David Moss, Spokane County	
James Hagstrom, Carrollo Engineers	
Bill Peacock, City of Spokane	
Doug Raines, DOC	
Clint Perry, Evergreen Valley Utilities	
Hal Schlomann, WASWD	
Walter Canter, WASWD	
John Kounts, WPUA	
Karla Fowler, LOTT Alliance	
Ginger Desy, Sno-King Coalition	
Heather Trim, People for Puget Sound	
Walt Canter, WASWD	
<b>Ecology Staff</b>	
Lynn Coleman, Department of Ecology	
Kathleen Emmett, Department of Ecology	
Jim McCauley, Department of Ecology	
Eugene Radcliff, Department of Ecology	
Nancy Winters, Department of Ecology	
Melodie Selby, Department of Ecology	