

Due to special circumstances immediately following this meeting, these notes were never made final. They are provided here in their draft form. Lydia C. Wagner, Ecology

Deschutes River, Capitol Lake, and Budd Inlet TMDL Advisory Group Meeting

Thursday, June 27, 2013, 9:10 a.m. to 11:20 a.m.
DNR/CI Conference Room, 801 88th Ave. SE, Tumwater

Attendees

Capitol Lake Improvement and Protection Association (CLIPA)

- Bob Holman

Citizen

- Steven Morrison

Deschutes Estuary Restoration Team (DERT)

- Dave Peeler

Ecology, WA State Dept. of

- Chuck Hoffman
- Andrew Kolosseus
- Kim McKee
- Greg Pelletier
- Brett Raunig
- Mindy Roberts
- Lydia Wagner

Enterprise Services (DES), WA Dept. of

- Carrie Martin

Environmental Protection Agency, U.S. (EPA)

- Dave Ragsdale

Health (DOH), WA State Dept. of

- Mark Toy

LOTT Clean Water Alliance

- Karla Fowler

Olympia, City of

- Kris Bryan
- Eric Christensen
- Laura Keehan
- Patricia Pyle
- Joe Roush

Olympia Yacht Club

- Jim Lengenfelder

Pacific Shellfish Institute

- Dan Cheney

Squaxin Island Tribe

- Scott Steltzner

Thurston Conservation District

- Amy Hatch-Winecka

Thurston County Environmental Health

- Sue Davis
- Lawrence Sullivan

Thurston Public Utility District

- Russ Olsen

Transportation (WSDOT), WA State Dept. of

- Emily Miller
- Jana Ratcliff

Tumwater, City of

- Dan Smith

General Updates

Water Quality Program Staff Changes:

- **Southwest Region Section Manager:** Bob Bergquist accepted a different position within Ecology. Greg Zentner is Acting Section Manager. You can contact him at 360-407-6368 or Greg.Zentner@ecy.wa.gov.
- **Water Cleanup/Technical Assistance Unit Supervisor:** Kim McKee is retiring at the end of June and this is his last meeting as an Ecology employee. Andrew Kolosseus is taking over as the Acting Unit Supervisor on July 1. You can contact him at 360-407-7543 or Andrew.Kolosseus@ecy.wa.gov.

- **Water Cleanup Plan (TMDL) Coordinator:** Lydia Wagner will be on extended leave. During her absence you can contact Andrew Kolosseus.

Meeting: Ecology is cancelling the July Advisory Group meeting. Andrew will contact the group in early August to inform them about the status of the August meeting. When we do meet again it will be at the same location, 801 88th Ave., Tumwater.

Grant Opportunity: Andrew stated there is currently \$560,000 available in a competitive National Estuary Program (NEP) grant to implement nutrient pollution projects in Puget Sound. This grant is open to local government, non-profit organizations, and generally the same entities who qualify for Section 319 grants. The timeframe for spending this grant money is 2-3 years. There are new rules regarding agriculture buffer widths and you can contact Andrew if you need more information. More information and the application are available at <https://fortress.wa.gov/ecy/publications/SummaryPages/ECY070497.html>.

Budd Inlet Model Results

Mindy Roberts, Ecology, Environmental Assessment Program

A copy of the PowerPoint presentation slides are available online at:

<http://www.ecy.wa.gov/programs/wq/tmdl/deschutes/advisorycomm/062713DeschutesAdvMtgUpdatedBIModelResults.pdf>.

This is the first time Ecology has run a nested model. It was unexpected but has been a good project. These are three-dimensional models and look at the worse case layer for each grid cell.

Why is the East Bay grid cell so critical? This site is more problematic due to the shape and combination of natural circulation. It's important to remember all the colored cells indicate the water quality in those locations is violating water quality standards (WQS). The worst cases occur where circulation is more limited, such as the East Bay grid cell. White cells simply indicate the violation is not more than 0.2 mg/L.

Acronyms used in slides

- CPS: Central Puget Sound
- DAG: Deschutes TMDL Advisory Group
- DO: Dissolved Oxygen
- kg/d: kilograms per day
- mg/L: milligrams per liter
- LOTT: LOTT Clean Water Alliance
- NPS: Nonpoint Sources
- OBC: Open boundary concentration
- PS: Point Sources
- PSGB: Puget Sound Georgia Basin
- SPS: South Puget Sound
- TN: Total nitrogen
- TP: Total phosphorus
- WQ: Water Quality
- WWTP: Wastewater Treatment Plant

Open Comment

- Congratulations to Kim McKee on his retirement. We wish him well and appreciate all the work he has done on this TMDL.
- Kim applauded everyone for the work they've already done and encouraged them to not lose sight of work still needed.

Next meeting (Tentative)

Date: Thursday, August 22, 2013
Time: 9:00 a.m. – 12:00 noon
Place: Dept. of Natural Resources and Correctional Industries building
801 88th Ave. SE, Tumwater, WA

The following are the draft notes taken during the meeting. All questions are in italics and initials are used to indicate who made the statement or asked the question.

Slide 12: No human nutrient sources accounted for in this slide. This shows the effect of the dam only.

Slide 13: We'll be focusing on the 0.64 number throughout other slides. Some effects are resulting from circulation. Water exchanges back/forth in part of the area. Estuary alternative they would predict the concentrations of DO and then factor in human sources. Water is flushed through parts of this area very quickly. SD: Not because of plant growth. MR: Check May 2012 presentation for more info. It's the combination of physics and biology. DR: Maybe more nitrogen tied up with lake in than if it is removed. MR: We kept the lake issue separate. We either put in nutrients or did not. Yes there is a differential impact but we're not going into more details. This is the combined effect of all of them. Reminder that it is multiple cells violating WQS.

Slide 14: Left pic, right table. *What if the external sources were eliminated?* Our local PS and NPS are causing violations of the .2 mg/L by themselves. The dam is as well.

Slide 21: JL: *Does this model show a net drop in violations?* MR: Yes, but we need to use the South Sound model to further refine the data.

Slide 22: More population outside BI boundary. DP: *Is the 750 kg reduction at the boundary?* MR: Reductions mean in the impact of the border of BI and not the individual cells. DR: No model runs yet to see the 50% reduction. MR: True.

Slide 23: Time to look at combining scenarios to see what kinds of reductions could result. The West Bay area is more forgiving because of the input coming in from the Deschutes River. PP: The cell on the lower west side is impacted by the isthmus. DP: Shutting off LOTT also shuts off water flow and decrease in nutrients. *What about the Deschutes River summer flows? How does this impact LOTT discharge?* He speculates some of the changes/improvements could be from flow and not circulation. DP: *Did you factor in reducing both flow and loading?* GP: Yes. KF: Possible expanding reclaimed water program, summer season. SD: This just moves the water farther up in the watershed. The plan is ultimately to have infiltration. LOTT wouldn't have a direct pipe into the inlet; it will still reach the river via groundwater. The reclaimed water is never really gone, it moves around in different ways. MR: Issues to consider for natural conditions are natural background concentrations of river water, ambient marine water, others. Concentration issue could never be resolved without full groundwater modeling. We know very little about this issue. JL: Difference is circulation and set of assumptions built into the original model. MR: Those assumptions are based on physics. They calculate

there is no circulation. It isn't just an assumption of the model. It's more complicated than that. DP: *Are the LOTT satellite treatment plants reducing nutrients? Is it significant?* KF: Yes. DP: Treatment happens so nutrients are still getting reduced if not completely eliminated. MR: Remember these scenarios are exploratory and are meant to look at different combinations of scenarios. We can start adding in different criteria. KF: They will be doing modeling as part of their groundwater study.

Slide 28: More model runs are needed to further define the reductions to verify sources and reduction. PP: *This is just an example? Why would we model this since we can't "not flush"?* MR: From a technical perspective we're trying to provide context. AK: We're running multiple scenarios to see which combinations will reach the .2 mg/L. We have to run all of these to determine which combination/computations are most realistic or reliable.

Slide 29: Good news. Reflux of nutrients. Flow out then flow back in with tides.

Slide 30: Not much different with the 10% and 20% reductions. There are slight impacts but reflux is not a dominant source.

Slide 34: The same Ecology staff is working on both the South Sound and Budd Inlet models. External review draft for calibration of South Sound model is in October. They use the same approach for the Budd Inlet model.

Slide 37: More model work will help further define impacts and benefits using various criteria.

DP: *Since you'll release the draft report in the fall, will there be another meeting to talk about the status?* MR: We will make it available before the public review draft is released. This will also happen with the South Sound Advisory Group (Andrew is key contact). We're also looking at climate impacts and other factors.

DR: *Since external sources northbound of the Budd Inlet study area have a significant effect, what does this mean to the Deschutes TMDL?* MR: From a technical point of view – the sandbox is more crowded. AK: Yes, the South Sound Study is not a TMDL at this point. For the Deschutes TMDL we may have to include some of the CPS or SPS sources. Additional modeling will help us figure this out. DR: You stress you don't know anything about the sources. He has concerns about the sources of nitrogen inputs and stated we should already know who the dominant sources are. AK: We don't know the individual WWTP by WWTP impacts to Budd Inlet. MR: We're trying to figure out relative impacts in the South Sound report and it could help inform this group. Future modeling will give us more info. DP: There could be a significant difference due to the circulation patterns of the Tacoma narrows. MR: There isn't a single b-line. Mark Toy: *Since Chambers and JBLM are making upgrades, will these enhanced scenarios be run?* MR: Not for the October document release. We anticipate finalizing the report in December 2013 or January 2014. At that point we'll switch back to the Budd Inlet centric models. In 2014 we'll develop an update, probably through a technical memo. BH: The model has been updated several times. *Has data also been updated and new data included?* MR: The model predicts results using data collected at various times and locations. The Budd Inlet model has the richest information from the mid-1990s. This includes older LOTT discharges. What has changed? We need

to incorporate some of this data in the new model runs. Perhaps update to data from 1997 to 2006. There is a statistically significant reduction of DO levels in the South Sound. JR: *Was all of the data validated?* MR: Yes in 2009 for the final Deschutes Technical Report. DR: Regarding bigger issue of adding new players to this effort, *how does this affect the TMDL submittal schedule?* KM: We have to acknowledge the staff resources which are duplicative for both projects. The timeline will most likely have to be extended. We're finding out there is more involved and more pieces which need incorporating. We know there are some difficult decisions to make such as best return for money spent. If we're looking for entities outside our original boundaries to participate, this will require some additional time. AK: It is problematic having the fresh/marine waters together while the Puget Sound work is ongoing. DP: *What about having combined meetings with both advisory groups?* AK: Discussions on how to combine these wouldn't come until 2014. The South Sound Advisory Group meets when they have a document to review; this averages once a year.

JL: It seems like we've only focused on the South Puget Sound for the last 18 months. This shouldn't prevent us from looking upriver to deal with shade and other issues, regardless of what is going on in the South Sound. AK: Yes, we agree.

BH: Today we're talking only about DO. *What about other issues that would affect upriver to the Deschutes River that is independent from lower sound issues?* MR: Reminder that some of these issues have already been addressed.

DR to AK: Regarding the new scenarios to get a presumed load reduction at the proposed boundary - *This is a couple more years of work?* AK: South/Central Puget Sound issues regarding sediments could take more time. MR: We're going to build a model that will show source of release to water column. We may use it to explore options with the larger Salish Sea model. This effort isn't fundamental to get to the answers we need for the Deschutes TMDL. In late fall of this year we transition back to the Budd Inlet model refining and we'll know which focus, the CPS or SPS, we will concentrate on. This work can likely begin in December 2013.

JR: *Have there been any discussions of breaking the TMDL from one to two?* LCW: Yes, numerous discussions over the past couple years but no firm decision on the ultimate format.

DR: Discussion of making a reasonable presumption of reductions. He's provided us presumptions before that Ecology could use to stage the TMDL instead of continuing to delay. He believes there are shortcuts that are reasonable and defensible. DP: *If Ecology did this, would EPA approve it?* DR: This would need to be addressed in the Reasonable Assurances section of the TMDL. DP: He likes the idea of moving ahead using some range of scenarios. But you'd also have to look at the commitments to those in the watershed and what about if there is more impact coming in from outside the current boundary condition. DR: There are benefits to advanced treatment beyond nitrogen removal. Wastewater removed today is not the same as it was years ago. For example, PPDEs and PPCPs, as well as other chemicals, have an impact to water treatment.

JL: *Why do the LOTT rate holders have to pay more when some of the impacts are coming from outside the boundary?* MR: Changes already made have shown improvements.

DP: *How do we get from talking to the DAG to talking to the public?*

KM: A key part of our TMDL program is getting input from the public. We've taken your input and you represent part of our process to complete the TMDL and have EPA approve it. We will have a public review and comment process and some of those may come from people/organizations who have not previously been engaged in this process. We want to ensure we have honored the public involvement process. We can still move forward on discussions on the areas where we have enough information to get things going. For example, NEP funding could help pay for implementation actions. This fall there is also the Centennial/319 funding opportunities. He doesn't see the next two years of waiting as being catastrophic if we keep the TMDL total for a complete submittal. We have looked and solicited input and consensus from this group and other affected parties.

DP: *Do you think you'll see DO violations from other external sources? Will northern influences take some impact off our watershed?* MR: We are seeing violations in Budd Inlet with the South Sound model. We're seeing other violations as well. In the South Sound and Budd Inlet models, we're not seeing multiple mg/L impact except from the dam. We had no way of knowing the magnitude of the problem before undertaking this project. The Pacific Ocean is a dominant source. We have tools to show the human sources. The PS model is also looking at how climate affects the process. The WQS show climate cycles as natural background. These tools will help tease out the differential amounts.

DR: Carr Inlet and Henderson Inlet have some problems. *Are there any other problem areas or some on the edge?* MR: We can show these in October with the draft report. We want to get the report out so people can see everything in context.