TECHNICAL ADVISORY COMMITTEE MEETING #13 - OCTOBER 8, 2019

Wednesday, August 21, 2019, 10:00 a.m. – 12:00 p.m.

Ecology Bellevue Office
Meeting Room 1AB
3190 - 160th Ave. SE
Bellevue, WA

TAC MEETING PARTICIPANTS

- Bo Li, Ecology Water Quality Program
- Jeff Burkey, King County
- Blair Scott, King County
- Laurie Mann, EPA Office of Water
- Kevin Schock, King County
- James Rasmussen, Duwamish River Cleanup Coalition
- Elsa Pond, Washington State Department Of Transportation
- Elly Hale, EPA
- Justin Twinter, Seattle Public Utilities
- Kevin Buckley, Seattle Public Utilities
- Jeff Stern, King County
- Kristen Kerns, US Army Corps of Engineers
- Rachel McCrea, Ecology Water Quality Program
- Ralph Svrjcek, Ecology Water Quality Program
- Anna Marburn, Seattle Public Utilities
- Lisa Tobin, City of Auburn
- Yi Xiong, Ecology Water Quality Program
- Cleo Neculae, Ecology Water Quality Program
- On Phone:
    - Greg Pelletier, EAP in Ecology
    - Shana Wallace: Toxics

WELCOME AND INTRODUCTIONS

Bo Li, Ecology Water Quality Program engineer, welcomed everyone and led the group in a round of introductions. She provided a brief reminder of Technical Advisory Committee (TAC) Pollutant Loading Assessment (PLA) goals and roles, and an overview of the agenda for the day. The meeting's objectives included discussion on management questions, recommendation for receiving water model and discussion on watershed model updates and groundwater data analysis. She also emphasized this meeting would include a group discussion on the management questions and welcomed everyone to participate.

PROJECT UPDATE OVERVIEW

Bo Li presented the project status updates. USGS already drafted the groundwater database report and the report is currently under review. Bo presented the summary of the result from this report. Jeff Burkey from King County presented the update for the watershed model (HSPF). He clarified some concerns about the calibration approach from previous TAC meetings. He also explained the model configuration. The four modeling domains for the watershed were further divided into nine domains to allow more hydrologic response unit (HRUs) setting. He presented the model status table developed by modelers to keep track the modeling progress.

Question: There is much more data available for the Lower Duwamish, you don't have much data for the rest of the watershed?

Bo Li: There is not a lot of data for the rest of the LDW, we have to estimate the baseline for groundwater in the upper Green region.

Rachel McCrea: Are we trying to define additional groundwater sources?

Bo Li: We potentially will have more data from individual sites, unfortunately those are only in paper format so we have to ask around and we haven't found any.

Ralph Svrjcek: There are no studies on groundwater in upper Green area. Do they compare list of contaminated sites to existing sites? For groundwater? Could maybe ID the areas that need additional study?

Bo Li: That's the best we have so far.

Lisa: Where are you looking for groundwater data? None in upper Green? Green has thousands of drinking water wells, we haven't sampled those yet? We should work with Department of Health. They have tested for metals and others in drinking water wells. In Covington and Renton, there are dozens or thousands of group B wells.

Bo Li: That is a good idea, we will definitely look into drinking water wells for more data.

James Rasmussen: King County and SPU are not the only outfalls into LDW. Port of Seattle has outfalls from facilities, many smaller ones, it used to be hard to see where those drain because they weren't on maps?

Jeff Burkey: Outfalls like CSO outfalls were not differentiated from MS4. There are many basins influencing the framework, some MS4 can make water shift across the watershed.

Ralph Svrjcek: CSOs can only be represented as a number in model, MS4 is represented on a landscape scale, that's why you only see the points. Scenario: Rachel will come back to determine opportunity if we need to calibrate difference in MS4 and CSO.

James Rasmussen: In decision making, I live on Beacon Hill. We had a process where we took people on tours, showed them where water goes, where it gets complicated in some areas, how can we show what's being done in the model?

Jeff Burkey: We'll have catchments delineated, once people correct we can change, it's straightforward, it's easy now rather than later, but I'd like to think, we have it accurate with MS4 because we've used the mapping from Phase 1 and 2 from cities and counties, we take topographic boundaries as they are, they should be accurate, CSO is different and we need to reconcile that.

Bo Li: Another thing our modeler team has been working on is meeting with agencies/stakeholders for an internal modeling conversation, with inspectors and source control staff. We want to open the invitation to any other cities and counties, other agencies. Anyone who would want to know what we do. So we can make sure the right people are in the room to have a discussion about how the model is representing their city/county/agency's work, so we can develop the watershed model together.

Jeff Burkey: For example, with SPU, they expressed concern that the loadings are based on older data, and they let us know the new parameters based on changes.

Elsa Pond: WSDOT wasn't fully tracking CSO vs MS4, curious if you have our outfall information? We are collecting conveyance data in that area.

Jeff Burkey: That wasn't incorporated into current delineation, we will use it later, it is more specific than current model, but we do want it.

James Rasmussen: If it's not to look at those issues, source control, how do we measure that? How do we know where we are, what we need to do, and what does sufficiency mean?

Jeff Burke: It's more than the source control?

James Rasmussen: How do we know where we are? What is sufficiency?

Rachel McCrea: That conversation should happen in another forum. TCP is not here today, they are in process of hiring, and they might be able to answer sufficiency, stay tuned! We don't have the right answer to that today.

Elsa Pond: Source control stuff in Lower Duwamish is a separate effort which is related to Superfund cleanup.

PLA OBJECTIVES

Bo presented the PLA objectives and how the results from the PLA will be used in the future. Cleo and Bo then discussed the temporal and spatial scale considerations for model development based on Water/Sediment/Fish Tissue quality criteria. Cleo listed all the temporal requirements for each criteria. Bo discussed the options verification points for water quality criteria in regards to the segmentation based on the water quality assessment program. Bo also presented the management questions and the feedback Ecology received. She presented the potential management scenarios for linked models.

Kristen Kerns: There are a lot of segments for a small area? Why so many segments in LDW?

Bo Li: This is based on the Water Quality Assessment map (WQ Policy 1-11). I believe it is based on the hydrology, like the confluence location. It is a mixture of HUC and township range approach, it's a blend of different segments for fresh water/marine.

Jeff Burkey: When we determine compliance, we have to determine if it's helping the conversation of management.

Kevin Buckley: For the options, we should figure out if it is based on 303d list and Water Quality Policy 1-11. They look at a segment, how many data points, list the whole segment as impaired.

Bo Li: We are having a conversation with HQ about segmentation. For other regions, they have the same question, they have to make their own decisions. There are people making very different decisions on segmentation. It's complicated and we need to think broader.

DISCUSSION ON MANAGEMENT QUESTIONS

Rachel McCrea led the discussion on current planned management actions and TAC participated in supplement the additional source actions.

She listed planned Actions for Sediments, CSOs, Groundwater, and stormwater.

Lisa: Where do we find this information?

Rachel McCrea: On the Ecology website: LWD source control. You can google Ecology webpage for studies and publications and preliminary cleanup levels.

Jeff Burkey: There are also studies for air deposition of PCBs.

Scott Blair: We have to ask questions, what are the planned actions, can you give an overview of developing planned actions?

Bo Li & Rachel McCrea: We summarized a version of questions from Ecology managers into the handout, included the design of the project, we need to understand how media will affect planned actions. We need to know the questions in order to develop the model.

Kristen Kerns: I'm having a hard time tracking these questions: Thinking back to an earlier question about CSOs, I'm struggling with the level of detail, how does that translate into a model that is very broad?

Jeff Burkey: When you start to talk about scenarios, the way that you integrate, you start plugging in these specific facilities into the model. There is a scale that you can start seeing the difference.

Scott Blair: Are there areas where you can start seeing those hotspot details? When will the calibration be noticeable? When can we see the loading from that hotspot?

Rachel McCrea: If we can get to a point where the model can tell you when your inputs need more data, we can then develop a sample collection study to fill in the blanks.

Jeff Burkey: When you enter your knowns you can start working on your unknowns by what the model fills in.

James Rasmussen: How consistent are we in collecting data? Fish tissue, water column, sediment?

Jeff Burkey: There's protocols, there's CSOs, consistency across the landscape. How often do we do fish tissue? Are we actually changing fish tissue? Are we seeing improvements? Have we seen an improvement?

Rachel McCrea: We're using data that's available because there's an ongoing effort to collect, when we can answer questions, we don't have the data to properly assess the questions. How can we obtain the data?

Kevin Buckley: Something that is missing, cleanup of TSCA and MTCA sites in the uplands? Add to list.

Lisa: King County has retrofit projects. What impact will that have on this modeling? Will that cast doubt on the modeling?

Rachel McCrea: These planned actions, what we can count on, and regulations at this point. If I were to say a Phase 2 communication that is planning on doing a retrofit, that is a site specific, could be reflected here. If there were a different requirement, based on permit, if we must change that, we can make those assumptions in model, reflected in the management scenarios.

Rachel McCrea: Do we expect to have to ask this outfall by outfall? Can we ask this across basins, watersheds? These are the questions we need to ask and the model is not answering right now.

Elsa Pond: I'm not a modeler. We got Bill 5135, for testing different products. I'm part of a group in Spokane, about whether WSDOT will prohibit chemicals. Will this effort have any effects? Can the bill be on the planned actions plan? Will a change in using these products equate to changes in the landscape? Could we model product prohibition in the watershed? It's hard to quantify how much we use, it's difficult to tell, and there are some estimates by determining how much we use.

Rachel McCrea: As a follow up, WSDOT agrees to prohibit product, we can get to data question. There's a process where there could there be a basin study, we use regular BMPs and do some data collection, what's the delta there, use that delta in the model.

James Rasmussen: Management Questions: Our Green Duwamish meetings need coordination between PLA, WRIA 9, and all these separate groups that aren't talking to each other. We need to have more coordination and these questions need to be asked. Is data really important that we need to have the same kind of data across watershed? When we discuss BMPs we need to make sure it's accessible, it's understandable, that we're asking the same questions here. How do we start integrating our efforts?

Bo Li: I would like to get more involved in other groups and efforts, I'm trying my best to collaborate and communicate with everyone, but there are some different objectives.

Rachel McCrea: There are so many membership organizations, we can't be everywhere at once. We're working with other people who are at other forums and we try to represent other team members.

Jeff Burkey: King County: Great observation and comment, we're not working in total silos, we're very aware of each other's programs, there's more efforts out there that are more model specific, and we need to coordinate better. It is an effort and we need to work together on more.

Cleo Neculae: The intention is there, we need to be mindful about integrating groups and ideas. There are people here in the room who participate in these other groups and under the coordination subgroup Our Green Duwamish we are starting to plan this effort to reach out to other groups.

Jeff Burkey: There should be a workshop at some point to stay on track.

Scott Blair: if we have questions can we email you?

Bo: Yes.

James Rasmussen: Reason why its impact in WRIA9 is habitat restoration. How do we get information? Kent and Auburn, how do we get input from them? PLA affects other efforts like salmon restoration, we have great information about whether we have this problem.

Rachel McCrea: EPA is funding this project with WDFW to construct Toxics module of Salish Sea Model for Elliot Bay to understand Puget Sound food web. Looking at Duwamish's impact on the rest of Puget Sound. In the future, they will be happy to come talk to TAC and we are aware of that effort. We can use that information to plug into the Salish Sea Model if we need it.

Jeff Burkey: The watershed model and climate consortium are really overlapped efforts in Seattle.

James Rasmussen: With so many multiple efforts, does that improve the chance for more funding?

Bo: It could, this is why we will need to stay updated with what others are doing.

DISCUSSION ON RECEIVING WATER MODELING APPROACH

Bo presented the summary of Salish Sea Model (SSM) and EFDC comparisons. The PLA project team recommended that the modeler team should continue the receiving water model setup using Dynamic Solution EFDC. Bo explained the main reasons for the recommendation. First of all, based on the current management questions, both EFDC and SSM should be capable to address those scenarios. But SSM will require significant amount of work and funding to support the code development and model calibration compared to EFDC. Bo also pointed out there will still be at least a year or so before the receiving model development begins, so there will still be opportunity to change to SSM if needed. Also, based on the conversation with PNNL, the developer of the SSM, even if we move on developing EFDC, we still have chance to transfer to SSM when needed. All the work being done by EFDC will benefit the future SSM in Green/Duwamish River area. The project team welcome any comments from the TAC regarding to the recommendation.

NEXT STEPS

Bo presented the next steps. The project team will send out the final groundwater database analysis report and will update QAPP and send for review. Next TAC meeting will be early next year to present the updates on watershed modeling and receiving water model setup.

ON THE LARGE PAPER POST-ITS:

"Planned Actions" – Rachel
LDW Sediments:

- Remedial Action Levels
- Cleanup Levels
- Use of activated carbon
- EWW

Upland Site Cleanups

- TSCA
- MTCA
- RCRA

CSOs

- Treatment limits
- 1/yr untreated

Groundwater

- Site clean-up levels

StormH2O

- Sediment cleanup effects on air deposition
- Industrial treatment
- MS4 landscape efforts
    - New/Redevelopment
    - *Retrofit treatment
- Product substitution

Phase 2 Permits and retrofits

- Can those changes be reflected in the model?
    - Scale? Outfall by outfall?

Will changes in products (e.g. hydromulch) impact model results? How to determine if product substitution benefits water quality? How much benefit?

Improve coordination with WRIA 9 representatives. Organize a joint workshop? E.g., habitat restoration projects; input?

Audience Notes:

- What sensitivity does the model have to specific actions (e.g. bio retention? Flow control?)
- What size of actions becomes "significant"?
- Are there sources we aren't aware of that emerge during calibration?
- Is our sampling ad hoc or strategic? How to measure fish tissue improvement coordination with WRIA 9 group/strategies?