Spokane River Regional Toxics Task Force Technical Track Work Group Meeting

August 2, 2017 | 9:30 a.m. – 12:30 p.m.
Department of Ecology | N. 4601 Monroe St. | Spokane, WA 99205
Meeting Materials: http://srrttf.org/?p=8223

Attendees:

BiJay Adams –Liberty Lake Sewer & Water District
Karin Baldwin –WA Dept. of Ecology (Ecology)
Vicki Barthels –Spokane Regional Health District
Ben Brattebo –Spokane County
Dave Dilks (phone) –LimnoTech,
Ryan Ekre –Inland Empire Paper Co.
Mike Hermanson –Spokane County
Sarah Hubbard Gray (phone) –Spokane River Stewardship Partnership
Doug Krapas –Inland Empire Paper Co.
Bud Leber –Kaiser Aluminum
Dave McBride (phone) –WA Dept. of Health
Dave Moss –Spokane County
Cadie Olsen –City of Spokane
Monica Ott –City of Post Falls
Adrianne Pearson–City of Spokane
Jim Ross –Ecology
Kara Whitman –Ruckelshaus Center

Introductions and Agenda Review

After a round of introductions, Kara Whitman went over the agenda. No changes were made.

CDM Smith / database work update – follow up from Task Force meeting

At the July 2017 Task Force meeting, Mike Hermanson will connect with Rao Sankarmanchi (CDM Smith, or CDM) to obtain a dataset template for the entities owning data to use in structuring the data they provide CDM. This includes items such as the lab batch and sample location. They also need more information from the Ecology datasets in the Environmental Information Management System (EIM); Karen Baldwin said Ecology can get these to Rao, which will fill in some missing information.

Bud Leber explained to AXYS Labs what the Task Force is doing with the data management system. AXYS is happy to work with the Task Force as they sort out what they would like the data fields to look like. Going back and reformatting the past three years is easy, but reformatting older data would require some financial support.

Difference between 1668A versus 1668C

The July Task Force meeting also touched on this topic. Bud Leber followed up with AXYS to get the lab perspective on the two methods. AXYS will send Bud a document explaining the differences, which are not substantial. The main differences lie in how each method distinguishes and handles three individual congeners, and in quality assessment and control (QA/QC) and data-flagging. Some questions on the methods include:

- Are there tighter tolerances on A vs C?
- Is one costlier than the other?
- Is one more efficient and/or better than the other?

The Delaware River Basin Commission (DRBC) requires method 1668A, which asks for 1-liter samples; however, the DRBC uses 20 liters samples to parse out liquid and solid phase.

ACTION ITEM: Kara Whitman to send the comparison document to the Technical Track Work Group (TTWG). That Document is proprietary to the lab, so not to be posted on the Task Force website. (COMPLETE)

Spokane River Stewardship Partnership (SRSP) Outline for SRRTTF Long-term PCB Monitoring

Sarah Hubbard-Gray reviewed the outline developed by the SRSP to begin discussion of long-term monitoring. The monitoring goal would be to demonstrate measurable progress. The Task Force also could do monitoring

activities not meant to measure progress, but to fill in data gaps, and further identify sources. The SRSP also brainstormed monitoring objectives for the short and long term, they include:

- Satisfying the Task Force Comp Plan requirements;
- Demonstrating in-river trends/central tendency over time;
- Understanding changes from point sources and stormwater/CSOs (Note - Modify this objective, add non-point/stormwater/groundwater/CSOs. - further understanding – identify where groundwater sources are coming from);
- Understanding the relationship between the water column, sediment, and fish tissue levels; and
- Ensuring the monitoring plan is cost effective and achievable with anticipated resources and budget.

The Task Force Comprehensive (Comp) Plan states (Section 6.1) the SRRTTF will complete an Implementation Effectiveness Assessment, five years after the issuance of the Comp Plan. What monitoring will be needed in the short and long term to complete this assessment? The group discussed (short- and long-term) in-river monitoring, fish tissue sampling, source tracing, and other special study elements such as groundwater, sediment, and positive matrix factorization (PMF). **Q:** How much data will the Task Force need? What should the Task Force focus on: the water quality standard, and/or fish tissue?

The Comp Plan specifies that the Task Force assess:

- PCB loading to the Spokane River from the primary delivery mechanisms, and
- Changes in loading and PCB concentrations over the 5-year evaluation period.

In-river concentrations will be assessed via review of long-term river monitoring data collected by the Task Force and/or Ecology. Requirements: Demonstrate in-river trends/central tendency over time. Task Force members pointed out that there will be some significant point source changes over the next four years, that will demonstrate change; at which time, the Task Force can measure the reductions. It may not be possible to see the change in the river overall, as it may be in the noise. There is also still the potential to explore other sources.

Some Task Force members see value in doing more in-river sampling to better understanding of the current baseline, as there is still a pretty big error line on this information. It is more cost effective to do synoptic events, but this does not take into account wet weather. The more datasets there are this will reduce the error bars – get a better idea of the central tendency.

Ecology/Central Tendency Study

Karin Baldwin said Ecology will conduct a study to measure the in-river PCB central tendency to meet the timeline specified in document EPA submitted to the court (that document, which would require measuring the central tendency, is “in a stay,” though Ecology plans to work to meet the timelines specified in the document since they feel it is their responsibility). Ecology would like Task Force feedback on how to determine the central tendency, e.g. how often to sample, where to sample, and when and under what conditions to sample. Jim Ross and Brandee Era-Miller are pulling a proposal together to monitor annual central tendency. Jim is leaning towards sampling fewer locations, but higher frequency, downstream of all point sources. EPA did not specify how to determine the central tendency, but will need to know if the annual central tendency meets 200 pg/l. Karin and Jim will propose the study to the Environmental Assessment Program (EAP). If it cannot be done in the EAP budget, they can propose using funds from the water quality program. Task Force members expressed the need to understand how the central tendency sampling/calculation is being designed.

Some TTWG members expressed concern that EAP projects have been one-off type of projects, which don’t help to characterize the whole system. Other concerns and questions included: Will EAP have the wherewithal to

demonstrate how the water body is performing in comparison to the water quality standard? Who will do the work? Who determines the EAP priorities as opposed to those of the water quality program?

This is an interim step to provide assurance from the agency that the Task Force efforts are working towards the water quality standard, while allowing the Task Force to shift resources to other things like fish tissue. They may also need to look at Policy 1-11.

Q&A/COMMENTS

- **C.** Many in the group discussed the need to stay focused on Task Force goals specified in the Comp Plan. Are Ecology and EPA goals, and the EPA document and its timeline, of import to Task Force monitoring choices?
- **C.** One SRRTTF objective is to identify sources (also part of the state funding proviso.) There is a large reach of the river that has not been studied closely.
- **Q.** What other data would it help to collect? **A.** Dave Dilks explained that more data would help refine back calculations, as the Task Force is pushing the edge of whether they will get anything definitive. **Q.** Could PMF analysis shine light on sources**? A.** Not a big gain in total PCBs, but gains or losses of specific homolog groups. So yes, at the General Electric site specifically, PMF could help.
- **Q.** Does the Task Force care about water quality, fish tissue, or both? Standards for both need to be met.
- **Q.** What does Ecology need for assessing progress towards the water quality standard?
- **Q.** The Task Force is interested in how the River is performing, but can we focus on specific reaches to get an overall picture? How does the SRRTTF consistently track over time, to know how progress is coming?
- **Q.** What about assessing waters coming out of Lake Coeur d'Alene (CDA), and out of Hangman Creek? Are there other key places, say 3-4, to monitor?
- **C.** Nine Mile may be a good location to sample, as all inputs to the system will appear there. Could do once a month for the next four years to get the status of the river.
- **C.** Causality from water to fish tissue is not understood: is there a correlation? Can the Task Force coordinate sampling/study of the water column, sediment, and fish tissue? Coordinate with the fish tissue sampling by Ecology (may not work with Ecology schedules)? SRRTTF could do a standalone monitoring program in coordination with Washington Department of Fish and Wildlife (WDFW) and Avista, when they stock fish.
- Synoptic sampling could incorporate the expected load reduction (from improved known sources) see if other sources go down. Would this be significant reductions?
- **Q.** In-river PCB measurements: what do these tell us in the short-term? **A.** A baseline could tell what is happening over the long term.
- **C**. Dave Dilks said some monitoring is required, while some would help define baseline PCB levels.
- **C.** In-river samples will need to be collected over the five-year period; how often is up for debate. Annually, to help build the database for water column concentrations? There's a big error band around only one sample. A second day of sampling would narrow that error band. Jim Ross said they could do four times a year at three locations. They could also use the data already being collected for CDA Lake, Nine Mile, Trent.
- **Q.** Who thinks we need fish tissue data and analysis? Dave Dilks does not think fish data is that inconsistent with the river, and suggests data mining before spending funds on fish tissue monitoring to gauge this.
- **Q**. With existing data, can we draw conclusions on what is in the water column, or would a refined study (with spatial correlation considered) be useful? Dave suggests first mining the existing data, applying bioaccumulation models. LimnoTech could do this. Cost depends on the level of review, perhaps $1000 to look at existing water column, sediment, and fish data to ask, "Are PCB levels in current water column data sufficient to account for PCBs in sediment and fish, using our best understanding of food bioaccumulation?" Do this analysis, then potentially proceed to a further study. An industry standard model (toward the simple end, quick ballparking) will reveal if PCB levels in fish tissue and/or sediment are out of whack with in-river levels. This screening-level analysis would be quantitative for PCBs, and qualitative for homolog distribution.

- **C.** Task Force must address long-term monitoring question, including whether to sample fish tissue and sediment (toward source identification). Water column sampling meets Comp Plan requirements, but should the Task Force combine water column study with fish tissue?

ACTION ITEM: Dave Dilks to think about a scope and budget for a fish tissue study using existing data and bioaccumulation models, potentially connecting with Chris Donley. Bud Leber to share information on what has been done at Plantes Ferry with Dave Dilks. (COMPLETE, also discussed at the August 2017 Task Force meeting)

Groundwater Analysis:
Limnotech is currently scoped to look at the link between Kaiser and groundwater homologs. After they finish this, the Task Force should consider what is needed to meet Comp Plan requirements. LimnoTech will compare the fingerprint of back-calculated loads to the fingerprint of groundwater samples. Comp Plan Section 6.1 specifies, "Groundwater loading near Kaiser will be assessed…". Kaiser is not looking at loading; its site monitoring plan tracks groundwater concentrations. Limnotech is trying to answer the question of "is there a significant source" coming in from upgradient of Kaiser? Where do fingerprints in the groundwater match the fingerprint of the river? They can then look at how things have changed five years out. Could this tie in with Comp Plan section 5.4.1 (mining existing data- pg 64)?

The group discussed a potential path forward:

a. Agree on a scope for the contract with Ecology, defining "buckets" for general task areas. The budget and scope had clear goals in previous years, but now things are fuzzier. Can the scope be less specific than in the past? Yes, it can be broader in defining tasks. Monitoring is a different task than actions in the Comp Plan.
b. Limnotech analyze existing fish and water column data.
c. Groundwater analysis to trace and identify loading sources (complete Dave's first?) Add another two sites to groundwater monitoring: Upriver to Greene Street, Spokane Gage to Nine Mile
d. Ecology central tendency study—Ecology needs SRRTTF feedback. It would make sense for Jim Ross to draft a proposal for a central tendency study that the Task Force could review and respond to.

ACTION ITEM: Continue discussing short- and long-term monitoring at August SRRTTF meeting (COMPLETE).

The next full Task Force meeting is August 23, 2017 from 9:00 am to 12:30 pm at Liberty Lake Sewer and Water District.

The next Technical Track Work Group meeting is September 6th, 2017 from 9:30 am to 12:30 pm at WA Department of Ecology in Spokane WA.