

# Spokane River Regional Toxics Task Force Tech Track Work Group Meeting

Department of Ecology, 2<sup>nd</sup> Floor Conference Room  
4601 N. Monroe Street, Spokane

September 25, 2019

10:00 AM to 3:00 PM (with working lunch provided)

## Attendees:

Ben and Lara Floyd – White Bluffs Consulting  
Karl Rains – WA Department of Ecology  
Jeremy Schmidt, Sandy Treccani - ECY TCP  
Joel Breems - Avista  
Vikki Barthels – Spokane Regional Health District  
Mike Hermanson, Rob Lindsay – Spokane County  
Alyssa Gersdorf – City of Post Falls  
Lisa Dally Wilson – Dally Environmental and SRSP  
Bud Leber – Kaiser Aluminum  
Jeff Donovan, Cadie Olsen – City of Spokane

## Phone:

Brandee Era-Miller – WA Department of Ecology  
Dave Dilks - LimnoTech  
Kris Holm

**Welcome and Introductions:** Bud provided an overview. Where should the TF head with technical and other projects for the future? We have the legislative funding for two years of \$500,000. What can we execute in short term that makes sense and what should we work on first? How can we convert Data Synthesis Workshop (DSW) findings into Task Force work plan priorities?

## May 2019 Data Synthesis Workshop Findings Summary and Task ID

**General Findings:** Lisa provided a recap of the findings from the DSW. Dave Dilks went over the slides from the final morning of the workshop of potential next steps and what we know and don't know – see ppt presentation.

## Questions/Comments:

- Given Coeur d'Alene (CDA) is a single jurisdiction, could there be a way to estimate overall atmospheric deposition by mass entering Washington by measuring what is coming from stormwater discharges in CDA, compared to overall loading coming from Lake CDA?
  - Yes, it could be estimated but uncertainty could be pretty big. It would be a lot of work to come up with a number with certainty.
  - You may see atmospheric deposition in urban areas, but you would have elevated levels.
  - A mass balance on lake CDA would be a low number. The PCBs hit the lake and volatilize off the lake and have other inputs such as stormwater and you have an output of the river.
  - The values are so small and uncertain and isn't it enough just looking at city of Spokane stormwater loads?
  - How relative is this to other things? We should look at the bigger things first and get some initial estimates to see if it is worth looking at further.

- But what are we going to do about atmospheric deposition? Still an open question.

### **Categories of Work Tasks:**

#### **A. Long-term effectiveness monitoring**

- The TF should coordinate with Ecology in this work so as not to duplicate efforts.
- The measurable progress report mentions this, and Ecology is already doing fish tissue monitoring. The TF should continue looking at stormwater, sediment sampling, etc. With a well thought out fish tissue sampling plan from the TF (Fish work group) Ecology could support it.
- A question was asked about the central tendency study and Brandee said that from EPA's response it is appropriate to use synoptic water column data to look at central tendency. The study is due in 2020 and based on concentrations in the river in 2019. It is a separate process and project in her mind.
- What about the goal of reducing PCBs in the river and other sources that would not be captured here? Does it capture things that Kaiser has done in reduction of discharges to the river?
- One media that can be tracked are point sourced discharges and you could look at water column and fish being other media. What media should we be looking at and how do we track it?
- It would be lost if you just look at the water column.
- Some associated metrics should be included as part of effectiveness monitoring. What media do we look at first to help us assess trends?
- We need to look at both media and methodology.
- Groundwater could be a media where we measure long term effectiveness.

#### **B. Focused investigations/data collection**

- Is it important to determine linkage between PCB loads and fish? These are big questions like Lisa R. said it may be beyond our scope of what we can do.
- It is Spokane-specific though and it will be there forever if it is not answered.
- What media do we use to look at hot spots and how do we look for it?
- Someone asked Dave if he has an idea of how to look at PCB loading and fish, and he suggested waiting until the next round of fish collection to have another data set to look at. Brandee said the Spokane River is more complex and species are changing in the river also, which would suggest a more complicated study and a lot of work to try to make connections. The TF should wait until 2022 to conduct additional fish sampling.
- We can continue to make improvements with biofilm, etc. and would hate to see too much focus on fish tissue when can still make progress with the water column.
- The hot spots may or may not be contributing to the water column.
- The goal of the 2022 sampling is human health and it may be good to have another option of sampling focused more on PCB accumulations in fish.
- What would we do with the fish tissue data?
- The fish tissue does have a role as far as the TF is concerned. The Ecology regulatory role is with human health.
- Can input be provided to the 2022 study so they are not looking at nine-year old fish?
- Chris and others from the Fish work group are working to identify a methodology and study plan for tracking fish tissue concentrations over time. Brandee said there is interest in input from the TF and working together with Ecology.
- Are there other work groups that have projects going on that are not captured here?
- Someone suggested Lisa Rhodenburg's suggestion of ELISA testing could be looked at more closely to see if it worth doing?

- We already know what the low flow sources are and what is accounted for by groundwater.
- Is there something being taken in by the fish that we do not know about?
- Dave thought ELISA testing was more for sediment screening.
- Suggestions of additional methodologies by Brandee - The PCB sniffing dog for hot spots could be a good idea and could be a good outreach tool also. The semi-permeable membrane devices (SPMDs) also could be used and can be used year-round in any flow conditions. For long term monitoring, the sediment traps are put out seasonally and could be helpful.

#### **C. Education and Outreach**

- Look at regional science fairs to introduce information about PCBs instead of more difficult task of developing school curriculum?
- Vikki mentioned with biofilm sampling and hot spots, Ecology may have them go out and do visits to businesses using the Pollution Prevention program to try and reduce toxins in areas where hot spots are identified.

#### **D. Administrative Technical Support and Facilitation Support**

- Includes LimnoTech participation in Task Force meetings and providing technical support to the Task Force, and WBC facilitation and program management support

#### **E. Identify specific Tasks/Projects by category**

- Could it include Research and Development work at specific treatment facilities?
- Will the Tech Track bring in all of the other work group activities?
- Have Tech Track go to the TF with priorities identified along with work group activities listed separately?

### **Scope Development**

#### **Long-term effectiveness monitoring**

##### **Preliminary work to evaluate methodologies and media that could be used:**

- Through what media and by what methods can we affect change in the river?
- Have LimnoTech take lead in coordination with Ecology/EAP, and the Fish work group and looking at other studies/methodologies.
- LimnoTech could develop a screening matrix with pros and cons for different long-term sampling methods, and also provide recommendations
- Brandee mentioned the PMF analysis may play an important role in determining best methods also.
- Mike mentioned Dr. Rodenburg has been working as an expert witness in the Monsanto lawsuit. She could take what she has done to support the lawsuit, make the findings more general, and make it publicly available. It will take a month to get a publicly available version of the work she has done.

##### **Metrics:**

- Is identifying the number of contaminated sites realistic? What is within the capability of the TF? Groundwater upgradient of Kaiser? River hotspots? Focus should be on how we identify progress or success and bring it back to measurable progress.
- Why aren't we just listing projects here?

#### **Focused investigations/data collection**

##### **Evaluate Ecology's Biofilm Assessment Program:**

- Brandee will check on lab results from the sampling in early August and share when these lab results should be available.
- Sandy mentioned how projects should be listed: sentence of project, cost, schedule and who will take lead, and how it fits into the Comprehensive Plan.

- Are we evaluating current data or are we expanding this to doing additional monitoring?
- All of these things are following up on the identified hot spots. They are things we've done before but not correlated to the identified the hot spots. Are we doing biofilm also?
- Brandee said they do not have plans to do additional biofilm sampling currently but there is the potential to do more.
- Someone asked about sediment traps. Is the first step to have LimnoTech look at biofilm results, identify the hot spots that could be investigated further, and then recommend the methodologies to apply?
- Dave sees the new data evaluation occurring collaboratively with Brandee and others at Ecology, along with the Tech Track work group.

#### **Known contaminated sites:**

- What can the TF realistically do with this? Would a better approach be including all known entities that have shown sources of PCBs? The TF could suggest follow up actions for Ecology at clean-up sites based on findings?
- Brandee asked, in reference to GE site, would it be useful, and would it align with the Comprehensive Plan to do a study where piezometers are used? They can be put in shallow parts of the riverbank to more clearly identify hydraulic continuity with the river and the site. That information could show impact and what the load is. Would this be valuable? We should probably wait to see 2019 data. She agreed with the suggestion of listing all known entities that have shown sources of PCBs.
- Is this implementable by the Task Force? Brandee felt LimnoTech could do it. They could go in the stream bed as it is public property.
- Dave did not remember a massive load coming in from GE from the synoptic survey data, but the biofilm indicated higher levels in this reach.
- This could be scoped while waiting for 2019 findings and then refined as necessary once the review is completed. Below Upriver Dam to Greene Street is the GE area (SR5A to SR4). Put a placeholder in for this area. Are there other reaches to add? Spokane Gage? (SR3A).
- These hot spots do not always correlate with highest concentrations, but they are unexplained.
- We should be looking at mass flux.
- Dave said it needs a preliminary scoping phase to see if it is worthwhile.
- We need to identify areas (hot spots) and if it is having an impact on the water column.
- Do not forget about groundwater also that is elevated.

#### **Targeted assessment of high flow loading:**

- Dave said there is a big unexplained load coming in at higher flows. Started seeing it at Trent Avenue and at other downstream stations.
- Brandee mentioned there was one storm event in 2016.
- Is there a benefit in sampling the riverbanks also? Dave said it could be a follow up activity.
- From the DSW there was talk of doing a specific study (one reach) at higher flows to see test methods and evaluate findings, and then decide follow-up activities from the lessons learned and findings from the initial reach study.
- Would this be a single event? Yes, a single synoptic event for a short period of days.
- Jeremy recommended matching to the hydrograph timing.
- We did one cycle in 2016 and maybe we could look at that to determine what reach to do this time?
- Do we repeat it more than once? It would add value, but it triples the cost.

- What is the value at the end of this? What could we do with the results? It may raise more questions than it answers.

#### **PMF Phase 2:**

- Waiting on the report for the TF and will assess whether additional work needs done. \$20,000-\$30,000 of additional budget needed for additional work but this would be scoped after Dr. Rodenburg completes her current work.
- What would new work provide us? It would give us more information about sources and spatial factors in certain areas of the river. Certain aroclors, inadvertent portions, etc. and dynamic changes in sources.
- The Phase one report had looked at some factors in river data and we should be getting it in a month. Which aroclors are predominant in river information we will get later. Dr. Rodenburg is also looking at different matrices.

#### **Improve assessment of dry weather groundwater loads:**

- Look at Kaiser upgradient load groundwater data every couple of years? Kaiser does this every six months.
- Magnitude and mass flux are two different things according to Jeremy. Mass flux should be the focus.
- Look at data one more time to see if it is holding or changing? Dave said there were multiple wells seeing spikes at different times.

#### **Investigate the apparent loss of PCBs near Upriver Dam:**

- Theories are that volatilization is occurring. Dave does not see a huge management significance and thinks it is a low priority. It was agreed to take it off the list for now.

#### **Develop linkage between PCB loads and resulting fish tissue:**

- Wait to see studies? The benefit of having this model is that it may tell us not to worry about localized hot spots or vice versa.
- Ecology needs to ensure fish tissue sampling is being done appropriately.
- The cost would be expensive according to Dave.
- Maybe we could do a part of the Spokane River? What would that provide us?
- How much is coming from water column vs how much is coming from sediment
- We already know some of this information
- If we do more biofilm and sediment sampling this would be a step towards bioaccumulation and could add included study of macroinvertebrates also.

#### **Education and Outreach:**

- State of the River Forum will probably be at the end of 2020 but still need to talk to the River Forum about being involved.
- Collecting work and summarizing it would take some work and may need some help outside of the Education and Outreach work group. LimnoTech could help.
- What about industry and downstream supplier outreach? Retool campaign to include industries also? Input for the Education and Outreach Work Group to consider.

#### **Administrative Technical Support and Facilitation Support:**

- During certain periods of time do we need more Task Force meetings than every other month?

- We need to match meetings to what work is in front of us. Could mean some monthly meetings at times and then every other month at other times. Develop a meeting schedule to go with the work plan, once it is farther along in development.

**Next Steps:**

- How do we want to talk about scope and dollar amounts?
- A lot of potential work activities include an initial scoping phase, where we define the options and benefits and recommendations before we start doing studies.
- It makes sense to take larger topic areas and prioritize first.
- Come up with criteria to prioritize.
- Develop a general scope for each area and a range of costs.
- Have Dave help come up with a scope for Targeted Assessments along with Ben and Lisa's help. Could it be done two weeks from now so we can get Bud's input and have a conference call with everyone? Yes
- Have a phone call on October 15 from 10 am to 11:30 am and WBC will send out appointment. Purpose of the call is to discuss scope options and budget ranges, and other supporting information.