

# Spokane River Regional Toxics Task Force

## 2016 Technical Workshop

### Key Takeaways and Proposed Next Steps and Action Items

#### I. Session 1: SRRTTF Understanding of the Spokane River

This session presented the understanding of PCBs in the Spokane River gained by the Task Force, focused on a detailed analysis of the August, 2014 and August, 2015 data collection efforts. The session also explored key information gaps.

##### Session 1 Takeaways:

- There is a need to explore the potential contribution of PCBs from soil to groundwater and the Spokane River from both open and closed contaminated sites ((MTCA, CERCLA, RCRA, other).
  - Consider groundwater investigations as a way to pinpoint sites with ongoing source contribution from soil to groundwater - See Martha Maggi/Pam Marti report on prioritized well and cleanup site locations based on groundwater (Posted at <http://srrttf.org/?p=5757>)
  - Consider location of cleanup sites compared to location where higher levels of PCBs are found in fish and the river water column
  - Where does the “mass” of remediated soil go? Landfill? Is this another pathway?
- Homolog or Aroclor Analysis: Use to assist in Source identification (for example: runoff versus specific site contribution)
- Atmospheric Deposition: Look into Waste-Energy plant model, but given EAP’s atmospheric deposition desk study (complete) and Atmospheric Deposition field study (QAPP to be completed soon) we may already have adequate information
- Consider direct sampling of seeps.

#### II. Lunch TSCA Takeaways:

- Solutions:
  - Technical
    - Develop alternatives (non chlorinated)
    - Develop products w/reduced levels of PCBs
    - Develop new end of pipe treatment for PCB abatement
    - Perform risk assessment of all 209 congeners (are all bad?)
  - Regulatory/Policy/legal
    - Eliminate allowance for inadvertent
    - General phase out of allowance
    - Regulate only the 12 dioxin like PCBs
    - Do not regulate lower congener PCBs
    - Provide NPDES permit offsets for inadvertent PCBs.
    - Streamline approval/cost for new chemical products
  - Stakeholder group to vet and offer solutions – Doug Krapas, EPA, other

**Comment [LDW1]:** Not necessarily an action item for the full SRRTTF, but a TSCA stakeholder group that will be comprised of non-SRRTTF members as well as some SRRTTF members

### **III. Session 2: Fish**

This session provided an understanding of how concentrations of PCBs in fish from the Spokane River relate to the 303(d) list of Impaired Waterbodies, State water quality criteria for the protection of human health, and the Department of Health's fish consumption advisory process.

#### **Session 2: Takeaways:**

- Consider focusing on specific PCBs vs. total PCBs. Higher weight congeners only, dioxin-like, or other?
- Are fish getting exposed to water column, sediment, or both? Fingerprinting can help to determine this. Modeling would also help (water quality + food web model).
- Homolog distribution in fish. Look for the patterns, focus on sources that have similar distribution, compare to areas of sediment deposition and water column concentrations.
- Homolog/Congener/Aroclor distribution in river (water column): Does the distribution change at different points in the river? How does this compare to known discharge?
- Consider Hangman Creek sediment deposition in Spokane River as a hot spot.
- What do we know about sediment?
- Are fish a source of PCBs in the Spokane River Water Column?

### **IV. Session 3: Comprehensive Plan**

This session described the inputs that will be considered as part of the comprehensive plan, how these inputs will be estimated, and how they will be used to develop the plan. Case studies from other sites that have conducted similar activities were also provided.

#### **Session 3: Takeaways**

- Key Uncertainties
  - Stormwater inputs in areas lacking standard MS4 type infrastructure (e.g. drywells, swales, etc)
  - Soil contamination sources (ambient soil and hot spots). Need information from Ecology and Idaho Department of Environmental Quality (IDEQ)
  - Sediment sources that contribute to fish have not been identified or quantified.
- Consider gaining and losing reaches when evaluating inputs in the Comprehensive Plan (septic, drywell, other).

### **V. Session 4: Best Management Practices – Exploring Possibilities**

#### **Session 4: Takeaways**

- LimnoTech to assess the relevance and application of BMPs identified in the workshop and make recommendations to the full SRRTTF
- Look at all options and determine appropriate practices for the Spokane River
- Assess 'appropriateness' of each BMP? How much does it remove? How much does it cost? Who will take responsibility for implementing it?
- Spokane has a lot of dry wells, would like to learn more, investigate. Are septic systems relevant?
- For contaminated sites, identify source: easier to implement BMPs at the source (eg., soil) than once PCBs enter groundwater/river/water column.

### **VI. Session 5: Next Steps**

This session focused on obtaining perspectives and input from invited guests and other workshop participants on the body of work performed (sampling, data analysis, approach for

comprehensive plan and application of relevant BMPs) and any insights they had about additional data collection and analysis that would assist with future source identification and reduction efforts. The session also addressed potential next steps for the SRRRTF to take regarding the analysis of data generated from 2014 and 2015 sampling events, collection of new data, preparation of a comprehensive plan, and source identification and reduction actions.

#### **NEXT STEPS**

##### **Reoccurring themes:**

- Need intensive, congener level data mining of water, fish, and sediment data collected to date to assist in source identification and to direct BMP efforts.
- Include assessment of contaminated sites, dry wells and in-river sediment as sources of PCB in the Spokane River as part of the Comprehensive Plan.

##### **Analysis of Existing Data/Comprehensive Plan Recommendations**

- Data Management -database recommendation to Task Force – need all data in one place (see Dr. Rodenburg comment<sup>1</sup>).
- Use homologs and congeners in fish to identify sources (even if the final endpoint is not fish). Use aroclors to tie the fish PCBs to Toxic Control Program (TCP) sites (TCP data- In Ecology's Environmental Information Management system (EIM)).
- LimnoTech – consider re-applying Serdar Food Web model to 2014, 2015 water column data. (Segment by segment).
- Sediment: include current data and discussion in Comprehensive Plan
  - Sediment: available data: 2003-2004 sediment samples (EAP); 2013 Urban Waters sampling- Trent to Green Street.
  - Assess suspended sediment (using data from TF 2016 sampling) vs. dissolved PCB concentrations
- Theoretical evaluation of drywell inputs: Drywells are inventoried in both Spokane and Kootenai Counties – include in comprehensive plan.
- Consider Ecology's sampling of city stormwater - 2012 report.
- Focus on Barker to Trent groundwater input and source identification

##### **General**

- All activities to lead to finding and removing sources of PCBs.
- BMPs: business inspection, on site sampling.
- Reduce sources and implement pilot projects on source cleanup.
- Database and Care and maintenance of the database.
- Outreach: PCB education and/or Task Force branding. Cross state effort for PCB education (not branding).
- Measurable Progress.
- Request for quantifiable BMPs as part of comprehensive plan.
- Cross pollination: TSCA reform, BMPs, Duwamish to Spokane (coordinate efforts).

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<sup>1</sup> The first thing I want to say, and I say this first to emphasize its importance, is that you need to develop some way of sharing your data, preferably via a common data format such as an Access database. I've seen the data from the SCRWRF and the synoptic data, and they are in two completely different formats. I asked a couple of times to see if I could get data from the Spokane city WWTP, or the stormwater or fish data, but so far I haven't seen any of it. It is hard for me or anyone else to get a handle on the big picture when we only get to see snippets of data.

## **Session 6: Data Management**

This session focused on identifying data management system(s) that will, through the use of reliably-collected scientific data, help SRRTTF identify, evaluate, reduce toxics loading (specifically PCB), and trend the environmental impacts of reduction activities in the Spokane River.

### **Session 6: Takeaways**

- EIM: zero cost, can take a long time for data to be loaded. Cannot house the AQ data, no auto reporting, cannot graph homolog patterns or positive matrix identification. Other databases can feed into EIM to meet Ecology requirements for permittees. EIM is used by the Toxics Cleanup Program.
- LimoTech originally created a database for the Task Force data has not been updated since 2013. Have the capability of developing the tools that the Task Force would need including data visualization, model simulation, decisions tools, GIS, calculations on blank correction. There would be cost associated with developing the database + care and maintenance. Separate from EIM and is not dynamic (would require periodic release of new database).
- Greg Cavallo: **without standardizing data and data collection and reporting, it will be very challenging moving forward.** In the long term, the data will tell you if the efforts are successful.
- DBRC will give their database to the Task Force. (No charge). Would require care and maintenance.
- EQuIS : can be adapted to suit the needs of the Task Force. Versatile and can talk to GIS for visualization/mapping. Significant upfront cost + care and maintenance.
- EQuIS: Contact Earthsoft and have a demo on their capabilities. Could answer a lot of the questions. (Task Force meeting?)
- **Standardization and Consistency.** Tool comes second. The Task Force needs to develop the data quality objectives and work to standardize the data to be more consistent.
- Data Management work group can recommend next steps→future Task Force meeting agenda.
- Consider Lester McKee's comments on blank correction