

SRRTTF Technical Track Work Group (TWWG)

DRAFT Meeting Notes

April 1, 2015 | 10:00am – 12:00pm

Department of Ecology | 4601 North Monroe Street | Spokane, WA 99205-1295

Tom Agnew – Liberty Lake Sewer & Water District

John Beacham – City of Post Falls

Galen Buterbaugh – Lake Spokane Association

Lisa Dally Wilson (*on phone*) – Dally Environmental

Dave Dilks (*on phone*) – LimnoTech

Jeff Donovan – City of Spokane

Brandee Era-Miller (*on phone*) – Department of Ecology (Ecology)

Ted Hamlin – Ecology

Shawn Hinz (*phone*) – Gravity

Brandon Iwasaki – Washington Department of Transportation (WSDOT)

Greg Lahti – WSDOT

Bud Leber – Kaiser Aluminum

Rob Lindsay – Spokane County

Dale Norton (*on phone*) – Ecology

Chris Page (*video*) – Ruckelshaus Center

Sandy Phillips – Spokane Regional Health District

Bryce Robbert – Avista

Jeff Schut (*phone*) – Gravity

Kara Whitman – Ruckelshaus Center

Introductions and Agenda Review

After a round of introductions, Chris Page went over the meeting agenda. The discussion of Gravity's High Volume Sampler was moved up on the agenda.

High Volume Sampling (HVS)

The group discussed the questions: What is the best HVS approach to meet the needs of the wet weather sampling in the fall (Given the variability in wet weather loading, what method will work best for this situation)? What questions need to be answered before picking a sampling method?

Q&A/Discussion

Bud proposed that LimnoTech sort out what the sampling system needs to accomplish to capture the impact of a storm event moving through the Spokane River system: how long to sample, how large a sample size should be collected, and other sampling specifics. Once these are known, the sampling method/sampler can be chosen based on these needs. The sampler will need to be tested, and contamination issues addressed. This could be integrated with the Environmental Assessment Program (EAP) project on HVS methodology and contamination issues with the CLAM sampler components. This could be an opportunity to integrate the Gravity HVS with EAP's project. Protocols need to be determined so we are not picking up contamination from samplers at the front end of the sample event.

Brandee Era-Miller explained that the EAP project 1st sampling event in May will probably be too soon to incorporate HVS proofing. The EAP project team will do in-river sampling in August (low flow) and January 2016 (winter mid flow). The project will be proofing 20-liter samples, compositing jars, pre-filters from CLAMS, C-18 media, and CLAM components, including many of QA/QC samples. They want to develop a standard operating procedure.

Dave Dilks explained that LimnoTech will need approximately a month to determine what the sampler needs to accomplish. They will complete data mining to determine what type of information is needed to characterize a credible wet weather sampling event.

The group agreed that if there is an opportunity to include Gravity's HVS system in the EAP study, then it should be included. If HVS is determined to be the most appropriate sampling technology to use on the wet weather sampling, it would be beneficial to analyze the components of Gravity's HVS system on the front end to ensure contamination will not come from the sampler if selected (and protocols followed). Shawn Hinz said that Gravity would be willing to donate equipment and labor to conduct a HVS pilot study concurrently with the EAP study. Shawn also explained that they are concerned with possible contamination in blank water from AXYS labs and contamination from the tubing. They would like to check the components of blank water and have AXYS clean the silicon tubing.

Shawn Hinz explained that the Gravity HVS results from the August 2014 synoptic sampling were generally/relatively consistent with the grab-sample results in that there was a consistent rise in concentration between the upstream and downstream samples. HVS had 50% more congener detections and the concentrations were higher. The only thing that was unusual was that the solid phase was lower than the dissolved phase. Gravity was responsible for the field implementation and sampling report (sent to LimnoTech and Bud for review).

ACTION ITEM: LimoTech/Gravity to provide the Task Force and Brandee Era-Miller all the data electronically from the August 2014 synoptic survey including field implantation and sampling reports, lab analysis and LimnoTech data and analysis in their final report.

PCBs and Fish

The group discussed the questions: Is the ultimate goal to target PCBs in water or PCBs in fish? If in fish, is PCB exposure through the water column or some other pathway? What is it that the Task Force wants to know about PCBs in fish? What are the next steps on hatcheries, fish meal, fish stocking, etc.? What are the best management practices to address PCBs in fish?

Q&A/Discussion

The group agreed they may need guidance on where to focus efforts (water, fish or both) from Ecology, EPA and/or Department of Health. Discussion at the 2014 workshop leaned toward a water column focus, with Department of Health looking into risk factors, ingestion rate, and other factors related to eating fish from the river.

- Dave Dilks said he has been involved in Total Maximum Daily Loads (TMDLs) in Michigan and in Illinois. In both cases, the TMDL had to comply with both endpoints (water and fish tissue).
- Ted Hamlin expressed that fish tissue is going to drive the ultimate goals of the Task Force. Ted is doing research on legacy PCBs sites (both confirmed and suspected). He has identified 12 sites in watershed, and suspects five other sites. Ted has received anonymous complaints; however, he does not have the option of going onto private property to sample these locations. Ted would like to know if the Task Force has resources to investigate these areas. Abandoned sites fall under the Water Quality Program or the Hazardous Waste Program. Some reports have no follow up, so Ted is looking into how to address these sites.
- John Beacham suggested it would be useful to have a map of these sites as a reference to connect suspected sites with in-river PCB data. Low-flow seep sampling during EAP HVS field work may provide information on sources from groundwater PCB contribution to the river; a number of monitoring wells could provide information about where water is coming in. General Electric, City Parcel etc. have done a lot of cleanup work to bring sites to Toxic Substances Control Act (TSCA) levels, but the sites could still be contaminating the river. Bud explained that those potential sources would need to be in a gaining reach to connect to observed concentrations in the river.

- Ted Hamlin would like to sample the North Shoreline near the gravel mine. He would also like to test Department of Health monitoring/drinking water well.

ACTION ITEM: Sandy Phillips to look into the potential for sampling drinking water well and connect with Ted Hamlin.

ACTION ITEM: Ask Ted Hamlin for map of known and suspected legacy PCB sites. [COMPLETE]

- Bud Leber suggested the Task Force look at existing fish data at the congener level to calculate bioaccumulation factors. If anything does not make sense, it may indicate exposure pathway other than the water column. Need to look at available Ecology data and compare to water column data.
- The Department of Health advisory uses a different system of advisory based on the benefits of eating fish, meal reductions, etc.
 - Water quality program: uses a fish tissue equivalent concentration. They use a water quality standard and apply a bioaccumulation standard to evaluate the listing.
 - Permits and load allocation are based on a water quality number. For the Spokane River a bio-concentration only looks at the pathway from water, and varies on a site-to-site basis (prey items, sediments, etc.).
- Evaluation of water target: need to look at food web modeling relating target in water to fish tissue concentrations and characterize concentrations in water for compliance. This could be done down the road. Could model fish tissue concentrations and go back to what that equates to in a water number (total PCBs); you end up with a number lower than the standard.

What can be done now with current data?

- Fingerprinting (comparing congener and homolog patterns). Brandee asked how much this has been done in the past, given that fish tissue will tend to uptake particular congeners over others.
- Bud suggested looking at water and fish at each sample location to answer the questions of: Is there a consistent bioaccumulation factor? Dale Norton is happy to provide these data; however, the bio-concentration factor is off, and a significant connection is not evident because some pathways are not being looked at. The fish are picking up PCBs from other sources (prey items, sediment). Further, there is weathering and metabolism in the fish, making it hard to match up with the distributions.
- Tom Agnew said there is strong evidence that a potential source in the system is fish stocking. That, combined with water column and fish tissue, makes it a valuable consideration in addition to a reach-by-reach analysis of connection to water column data and fish tissue.

ACTION ITEM: Bud Leber to look into what is needed to do an analysis comparing water column data with fish tissue data (via Delaware River Basin Commission) and report back to the TTWG.

ACTION ITEM: Task Force to incorporate concerns over the difficulty in connecting in-river PCBs with bio-accumulation in fish tissue into the July deliverable to the judge.

Hatcheries and Fish stocking

Chris Page went over the potential vectors from hatcheries and PCBs in the Spokane River. What are reasonable Task Force projects? Develop EAP project requests for the other components?

- Fish meal companies (listed on WDFW handout for 3/25/15 SRRTTF meeting): fish oil, fish meal
- Trout Lodge (source for Avista stocking and LSR hatchery): eggs and rainbow trout

- Hatcheries (WDFW one on LSR or the two Tribal ones): caulk, paint, or operational components (in addition to eggs/fish/feed) as evidenced in effluent
- Fish (and water dumped with them) from other WDFW hatcheries, planted by WDFW

Q&A/Discussion

- Galen Buterbaugh explained that the standard that fish hatcheries have to meet is in the contract and that is what fish feed makers comply with: 2ppm is the limit under FDA, under federal adulterated feed stock rate (eggs are 2ppm, red meat can be as high as 3ppm).
- Dale Norton discussed an EAP project request from Adriane Borgias and the Task Force on the Little Spokane Fish Hatchery. This has been listed as a “will do” project and will look at fish feed, discharge, smolts, and plants. Vectors to Spokane River from the Hatchery may include discharge from the hatchery and the planted fish. Need to look at discharge, influent, and effluent. Feed testing could come later (Griffith Springs).
- Brandee explained that the next step, after they determine what is coming in from the fish plants, would be to look at catch data and how many fish stay in system and how many leave the system.
 - EAP is doing this work on the Little Spokane Hatchery.
 - The Task Force could buy fish from Trout lodge and test them. Brandee suggested five samples and three fish composites for a total of 15 fish; EAP could acquire fish. Ted Hamlin also said that the Urban Waters program could purchase the fish and pay for the analysis or provide them to EAP for analysis. It would be easy to write an addendum to the Quality Assurance Project Plan (QAPP) THAT EAP is working on now. Urban waters has funds to use on any projects related to PCBs (up to \$30,000), could pay for the analysis of the fish.
 - Question: Will the Tribe cooperate in this endeavor with their hatcheries? Could this be rolled into the EAP project, or perhaps scoped for a following year?

ACTION ITEM: TTWG to fine-tune information needed (i.e. additional samples, engagement with the Spokane Tribe etc) from the EAP Fish Hatchery study and provide this information to Brandee Era-Miller.

ACTION ITEM: Ted Hamlin to work with Adriane Borgias (need to know what batch of fish to buy from) to allocate the funds to procure fish and sample fish from Trout Lodge (from same batch that Avista will purchase from) prior to Avista stocking of fish in May or June.

ACTION ITEM: Ted Hamlin to connect with Brandee Era-Miller on field work for the long term monitoring.

ACTION ITEM: Ruckelshaus Center to connect Brandee Era-Miller to Brian Lamb at Washington State University. [COMPLETE]

Current EAP projects and Task Force SWAT team updates

- The Vactor Waste project QAPP will be posted for comment by Friday. Dale Norton is hoping to have this cleared at the next ACE meeting.
- Flow gauging: meeting on April 8th at the Spokane County Water Resource Center at 1:30 pm.
- Hydroseed: The Department of Transportation has sent out email contacts to four more hydroseed contractors, have not heard back yet.

The next SRRTTF Task Force meeting April 22nd, 2015 at the Liberty Lake Sewer and Water District Office from 9am –12:30pm

The next Technical Track Work Group Meeting is May 6th, 2015 from 10am-12pm at the Department of Ecology.