

SRRTTF
Tech Track Work Group Meeting
November 3, 2021; 11:00 AM to 1:30 PM Pacific Time
ZOOM

Meeting Summary

Meeting Materials–

1. Powerpoint Presentation – Canine PCB Detection – Summary of findings. Brandee Era-Miller, Ecology
2. Powerpoint Presentation – 2020 – 2021 Spokane River PCB Concentration Monitoring using SPMDs in Support of a Long-Term Monitoring Program. Dave Dilks, LimnoTech.
3. Powerpoint Presentation – Transition Zone water quality monitoring using piezometers – Feasibility Study and Object Detection Survey Summary of Results. Shawn Hinz, Gravity Consulting.
4. Powerpoint Presentation – EDR Corridor Study Options. Shauna Ritter, EDR.
5. Powerpoint Presentation – Sources and Pathways of PCB-11: Scoping of Phase II. Dave Dilks, LimnoTech.

Note – Action Items in Red

Attendees

Jeremy Schmidt, WA Department of Ecology
Karl Rains, WA Department of Ecology
Lisa Dally Wilson, Dally Environmental, SRSP
Dave Dilks, LimnoTech
Alyssa Gersdorff, City of Post Falls
Sandy Treccani, WA Dept of Ecology
Brent Downey, Kaiser
Brandee Era-Miller, WA Dept of Ecology
Cheryl Niemi, WA Dept of Ecology
Chris Moan, Avista
Holly Davies, Wa Dept of Health
Tom Agnew, Liberty Lake SWD
Vicki Barthells, Spokane Health District
Shawn Hinz, Gravity Consulting

Ben Brattebo, Spokane County
Jeff Donovan, City of Spokane
Logan Callen, City of Spokane
Rob Lindsay, Spokane County
Mike Hermanson, Spokane County
Bill Fees, WA Department of Ecology
Doug Krapas, IEP
Brian Nickel, US EPA
Gary Jones, United Printing Alliance
Kris Holm
Dave Darling, American Coatings Assoc.
Robert Mott
Shauna Ritter, EDR

Summary Notes

Canine PCB Detection Survey - Summary of Results (Brandee Era-Miller, Ecology)

Brandee Era-Miller provided some maps from the Canine PCB Detection Survey showing where Jasper (the dog) detected PCBs in a portion of the Mission Reach. See ppt presentation #1 and Canine Detection Report. The Report will be summarized in a Comprehensive LimnoTech report

on the Mission Reach due out in February in draft form. There was a request that the actual Canine PCB Detection Report be posted to the website. **LDW will request that White Bluffs post the report along with the meeting notes.**

The area surveyed was between North Columbia Street (western perimeter) and Iron Bridge Court (eastern perimeter), the Iron Bridge (northern perimeter) and Trent Avenue (southern perimeter). Due to canine interest, surveys were extended westward to East Hamilton Street and north to East Cataldo Avenue. As a result of the survey, a number of buildings positive for PCB in the survey zone indicate there may be higher levels of PCBs in four small stormwater basins that serve the area: Springfield, Trent Bridge, SW Gonzaga, and Spokane Falls. There was discussion about testing the drainage systems and MS4 stormwater outfalls in this vicinity. Outfalls include: Springfield Street Outfall, Trent Bridge Outfall, Spokane Falls Outfall and SW Gonzaga Outfall. Several TTWG members did follow up to determine whether any of the stormwater drains or outfalls had been sampled for PCBs in the past. None were able to find information confirming PCB sampling to date.

Overview of Results SPMD Water Column Baseline studies (Dave Dilks, LimnoTech)

Dave Dilks provided a summary of the three SPMD deployments at four locations during low, medium and high flow periods in 2020 and 2021. The first draft report summarizing this work has been prepared, posted on the TF website, and distributed to the TTWG for initial review. See ppt presentation #2. Elevated concentrations were observed in the Mission Reach during low flow. Challenges associated with the use of SPMDs for long-term assessment were presented and discussed by the TTWG. Challenges include comparability to grab sample results, the need to calculate total PCB concentration (SPMDs only measure dissolved) and the uncertainties associated with the calculation, and quality control issues associated with SPMDs. Further discussion of the sample methodology to be used for future baseline work will occur at the TTWG-focused data synthesis workshop to be held in early 2022. Questions to be answered at the workshop include:

- Should we do a trend assessment just using dissolved concentrations from the SPMDs?
- Should we do more grab sampling now, in parallel to sampling for dissolved concentrations from SPMDs?
- How can we address Quality Control issues such as vandalism?
- Can we coordinate synoptic flow sampling with baseline grab sampling?

After the workshop, a sampling recommendation for future baseline water column monitoring will be formulated by the TTWG to present to the full Task Force. Brandee mentioned she still thinks SPMDs are best for trends. She suggested secure areas for SPMD deployment, and doing a trend assessment using dissolved concentrations only. **Review comments on the draft SPMD report are due to Lara Floyd on November 17.**

Object Detection Survey and Feasibility Assessment of Temporary Drive-point Piezometers for Mission Reach (Shawn Hinz, Gravity)

Shawn Hinz (Gravity) presented initial results and thoughts from the Object Detection Survey and the Assessment of the use of temporary drive point piezometers to sample transition zone water for PCBs. See ppt presentation #3.

- Piezometers were driven into soils several feet from the shoreline in three locations in the Mission Reach and used to test for unique conductivity and temperature (eg., to determine if transition zone water represented groundwater and was different from Spokane River water quality). Sampling indicated they did measure groundwater where they were able to install. They did have difficulty finding places to install the piezometers due to rock. They were unable to get flow from the North Bank, but did get flow at Trent Street Bridge west bank and NoLi Brewery bank. Essentially Shawn thought this is a feasible methodology for getting PCB information, but not during a rain event, and only when they can confirm that they are actually measuring groundwater and not river water. In response to a question asking whether an additional survey was needed before sampling to define specific areas where they would be able to install a piezometer and get a sample, Shawn suggested combining the target location task with sampling. Rules would be developed to indicate whether sampling was appropriate and if they meet the rules while determining target locations, they would go ahead and sample at the target location.
- Object Detection
The object detection survey was conducted by boat, but they were unable to go all the way downstream to Trent due to construction of an earthen dam associated with Trent Bridge construction. The Survey area was between Mission Avenue Bridge and Trent Street Bridge. First Sidescan Sonar surveys were conducted to look for surface objects of interest, and then Magnetometer surveys were conducted to look for surface and subsurface sources of ferrous material. They did find side scan targets that correspond with magnetic anomalies in the northwestern-most portion of the survey area. Ideas for next steps include sediment sampling and/or coring in areas with higher magnetic anomalies. These will be addressed in Gravity's report.

EDR Corridor Study/Historical Assessment - Mission Reach (EDR and Karl Rains, Ecology)

Shauna Ritter from EDR provided a presentation on the work products EDR could generate for a corridor study in the Mission Reach. The TTWG will discuss the use of EDR products to supplement the historical assessment being conducted by LimnoTech at the TTWG workshop in January. The relevance of these products to PCB indicators will be discussed and the TTWG will make a recommendation to the TF re. contracting with EDR. Some of EDRs data are proprietary in nature, and there was a question of whether their products can be made available to the public (eg., in the data base hosted by the County). EDR has proprietary copies of all the Sanborn maps, however, Brandee Era-Miller mentioned that Ecology used the Sanborn maps in their biofilm work so they may already have them.

Update on GW/SW Interaction Study - Hamilton Bridge (Mike Hermanson, Spokane County)

Mike provided an update on this project. Data loggers were ordered and will be installed in five locations at the lower end of Mission Reach. The locations include:

- Basalt Interface: MW-8 @ 20' and MW-8 @ 90'
- 2 Additional wells
- a staff gage on Hamilton Bridge to monitor surface water elevation as an indicator for groundwater flow direction.

Although this part of the river has been mapped as a losing reach (surface water discharges to groundwater) it is known that at times it is actually gaining. This project will increase the understanding of seasonal transition in groundwater flow direction to and from the river. This is a two-year monitoring project.

TTWG Focused Mini-Synthesis workshop (scope, schedule, goals)

The TTWG discussed the scope and breadth of the workshop and felt it is best if it remained TTWG focused due to the number of projects, need for a deeper dive and discussion on those projects, and the number of recommendations that the TTWG will be needing to make to focus future Task Force work. Brandee mentioned that the new Biofilm Report will be out for publication at that time. After discussion it was determined that this workshop will provide a focused look at TTWG generated data with an expected outcome of recommendations to the TF in moving forward with additional or follow-on projects. **Final plans for a TTWG focused January 2020 data workshop will be addressed at the next TTWG meeting in early December.** Concepts provided include:

- January date
- 1 Session on Mission Reach projects and data
- 1 Session on projects outside of Mission Reach
- (Suggestion made to also consider addressing locations downstream of Nine Mile Dam and other toxics)

PCB -11 Sources and Pathways -Phase 2 – Scoping Discussion (Dave Dilks and Doug Krapas)

See ppt presentation #5. After discussion at the last TTWG meeting, the October TSCA workgroup meeting and the last Task Force meeting, the TTWG made an effort to finalize possible Phase 2 Scoping concepts (source categories) so that Dave Dilks could develop detailed scopes and budgets for presentation at the next TTWG meeting. Source categories that could explain the increase in PCB-11 concentrations as the river passes through Spokane include: stormwater loads via groundwater, atmospheric loading, PCBs in fertilizer, breakdown of higher level congeners and leaching from in-situ sources. **Dave will provide more detailed scope to assess these source categories and a budget at the next TTWG meeting** with the intention to put forward a project recommendation to the Task Force in December.

The next meeting of the TTWG will be held in very late November or early December. A doodle poll will be distributed tomorrow.

ZOOM Chat Notes

Sandy Treccani to Me (Direct Message) (11:00 AM)

Bill and I are on the same line, so his name won't show up on the list.

Karl Rains to Everyone (11:23 AM)

Jeff - hasn't the City done some sampling of the City's stormwater outfalls?

Jeff Donovan to Everyone (11:24 AM)

yes, I don't believe from any of the 4 Brandee had circled though
Karl Rains to Everyone (11:24 AM)
OK; thanks!
Robert Mott; Mott Consulting, LLC to Everyone (11:30 AM)
I'd say it was common. Use of flexible coatings was widespread prior to 1970.
Jeremy Schmidt to Everyone (11:34 AM)
The Task Force paid for this investigation, correct? The work product belongs to the task force?
DAVID DILKS to Everyone (11:34 AM)
Correct, Jeremy
Jeremy Schmidt to Everyone (11:34 AM)
thank you
BNICKEL to Everyone (11:35 AM)
There are some historical stormwater data available nearby.
Me to Everyone (11:37 AM)
Brian, can you forward your information source
Robert Mott; Mott Consulting, LLC to Everyone (11:38 AM)
SPMDs are hung from a float? Or do they sit on the bottom of the river?
whole fish or fillets
Brandee Era-Miller - Presenter to Everyone (11:39 AM)
whole fish
Jeff Donovan to Me (Direct Message) (11:40 AM)
Lisa, this report has some of the older stormwater data:
<https://apps.ecology.wa.gov/publications/documents/0703055.pdf>. City did some followup
sampling at Union basin and CSO 34 is all for this area of Mission Reach.
Robert Mott; Mott Consulting, LLC to Everyone (11:42 AM)
Are there major inflows below Trent Ave, the concentration drops markedly especially at low
flow.
Sandy Treccani to Me (Direct Message) (11:47 AM)
Were these samples run with 1668?
BNICKEL to Everyone (11:47 AM)
<https://apps.ecology.wa.gov/eim/search/Detail/Detail.aspx?DetailType=Location&SystemStationId=62954897>
<https://apps.ecology.wa.gov/eim/search/Detail/Detail.aspx?DetailType=Location&SystemStationId=13216277>
BNICKEL to Everyone (11:48 AM)
https://apps.ecology.wa.gov/eim/search/Detail/Detail.aspx?DetailType=Location&SystemStationId=66197435&LocationUserIdSearchType=Equals&LocationUserId=STMWTR_UNION
BNICKEL to Everyone (11:48 AM)
https://apps.ecology.wa.gov/eim/search/Detail/Detail.aspx?DetailType=Location&SystemStationId=48081650&LocationUserIdSearchType=Equals&LocationUserId=STMWTR_ERIECSO
Robert Mott; Mott Consulting, LLC to Everyone (11:56 AM)
most bioavailable across species
measured values are always more accurate than calculated values
Me to DAVID DILKS (Direct Message) (12:57 PM)
Didn't Brandee and Siana use sanborn maps in the Mission Reach?

DAVID DILKS to Me (Direct Message) (12:58 PM)

Sorry, don't remember.

Brandee Era-Miller - Presenter to Everyone (12:58 PM)

The 4 small stormwater systems referred to in the PCB detection dog survey are separate from the larger sampled stormwater systems that Brian Nickel sent links to above. I'm not sure if the 4 small SW systems near No Li have ever been sampled.

BNICKEL to Everyone (1:05 PM)

Thanks Brandee.

BNICKEL to Everyone (1:12 PM)

Travel is still very limited for EPA employees.

Robert Mott; Mott Consulting, LLC to Everyone (1:15 PM)

My EU colleagues like afternoon morning for 8 hour meetings rather than straight through.

Robert Mott; Mott Consulting, LLC to Everyone (1:21 PM)

Repainting bridges are a very likely source for {CBs

BNICKEL to Everyone (1:22 PM)

My intern had looked at PCB-11 and other non-Aroclor PCBs in historical congener-level stormwater data. IIRC it was not a large percentage but I will find that analysis and re-send.

Jeremy Schmidt to Everyone (1:27 PM)

Is it possible that PCB-11 characteristically remains in dissolved form rather than sorb to soil than other congeners?

*more than other congeners

BNICKEL to Everyone (1:30 PM)

Re: Atmospheric I'm not sure why this would be concentrated in certain areas, unless there are pathways of atmospheric deposition that are located in the areas where we are seeing increases.

DAVID DILKS to Everyone (1:31 PM)

At a broad scale, there is a good correlation between population density and atmospheric PCB concentration.