

Spokane River Regional Toxics Task Force

Technical Track Work Group (TTWG) Meeting

DRAFT Meeting Summary for Wednesday September 6, 2017 |9:30am –12:30pm

Department of Ecology | N. 4601 Monroe St. | Spokane WA 99205

Meeting Documents: <http://srrttf.org/?p=8280>

Attendees:

Tom Agnew –Liberty Lake Sewer & Water District
Bijay Adams –Liberty Lake Sewer & Water District
Mike Anderson –City of Coeur d’Alene
Vicki Barthels –Spokane Regional Health District
Ben Brattebo –Spokane County
Dave Dilks (phone) –LimnoTech
Jeff Donovan –City of Spokane
Brandee Era-Miller –WA Dept. of Ecology
Mike Hermanson –Spokane County
Sarah Hubbard-Gray (video) –Spokane River
Stewardship Partnership
Mike LaScuola –Spokane Regional Health District
Bud Leber –Kaiser Aluminum
Rob Lindsay –Spokane County

Laurie Mann (phone) –Environmental
Protection Agency (EPA)
Dave McBride (phone)–WA Dept. of Health
Cadie Olsen –City of Spokane
Monica Ott –City of Post Falls
Chris Page (video) –Ruckelshaus Center
Adrienne Pearson –City of Spokane
Bryce Robbert –Avista
Jim Ross –WA Dept. of Ecology
Rao Sangarmanchi (phone)–CDM Smith
Jerry White (phone) –Riverkeeper
Kara Whitman –Ruckelshaus Center
Ken Windram (phone) –Hayden Area Regional
Sewer Board

CDM Smith Database Presentation:

Rao Sangarmanchi showed features of the Task Force database he had built, including qualifiers and data grouping options: users can set up location groups or parameter groups to assist in data analysis and report generation. The database will allow inclusion of multiple qualifiers, and they can be set as a combination. When the electronic data deliverables (EDDs) are loaded, the database will make sure the included data qualifiers are on its preexisting list before it loads the data. Rao will keep adding features as the data gets loaded, to match the qualifiers coming from the lab.

Q&A/COMMENTS

- **Q.** How does the blank correction tool work: besides censoring, can it do the subtraction method? And how will it address the existence of three different method blanks? **A.** When the lab sends three method blanks, they go by batch. The Task Force might need to designate which blank to use or average them, as it will be hard to correct with multiple blanks.
- **Q.** Blank correction tool: some samples have an equipment blank, a trip blank, and a method blank. Typically, the Task Force has done blank corrections with rinsate and method blanks. Can the database provide a choice on which blanks are used for the correction? **A.** Yes.
- **Q.** How will the database address coelutions and multiple data qualifiers? **A.** There might be an issue when transferring data into Ecology’s Environmental Information Management system (EIM) template. EIM only accepts one qualifier. Generally, use the qualifier that is most important (J, U etc). Rao can add another qualifier (EIM qualifier) for export to EIM (Brandee Era-Miller can work with Rao when he is ready to add this).
- **Q.** What is the timeline for database development? **A.** Rao will have more to show including options, by the 10/4/17 TTWG meeting. 2-3 datasets will suffice for that presentation; Rao will also plan to present at October Task Force meeting.
- **Q.** Will the database allow comparison of in-river PCB data to fish tissue data to give us some indication of where fish are coming from? **A.** Rao can add a button to compare fish tissue to water.

- **Q.** Will there be a visual way to review data, like the Delaware River Basin Commission (DRBC) histograms of concentrations by location (homologs and congener patterns)? **A.** Yes, trying to figure out the best way to do this (without ArcGIS).
- **Q.** How do we get the necessary information from SRRTTF samples and to Rao? LimnoTech? **A.** Dischargers submitting data (with location and chain of custody) ASAP.

ACTION ITEM: Rao to present updated database at 10/4/17 TTWG and 10/25/17 Task Force meetings.

“Strawman” Long-term Monitoring Framework for Consideration:

Sarah Hubbard-Gray explained that the Spokane River Stewardship Partnership (SRSP) group prepared this document to help the Task Force consider short and long-term monitoring and filling data gaps to meet Comprehensive Plan (Comp Plan) goals. Different monitoring categories include:

Category 1: Monitoring

- Comp Plan Section 6.1 (implementation effectiveness) requires the Task Force to track changes in PCB concentrations in the river over a five-year evaluation period. This requires new data.
- Long Term Monitoring (at Lake Coeur d’Alene (CDA) and Nine Mile Dam—new data needed).
- Fish Tissue Monitoring
- Annual Central Tendency monitoring (at Barker, Mirabeau, Trent, and Nine Mile Dam)

Category 2: Data Gap Filling Studies

- Comp Plan Section 5.14 (groundwater source identification projects)
- Study the relationship between fish tissue/water column/and sediment

Bud Leber noted a few areas where options exist. LimnoTech is also doing work that may affect the approach to some monitoring projects (they may need other data to figure out how and where to sample groundwater). The strawman document does not include a lot one-off projects. It may help to think of this on a five-year basis. Rob Lindsay said the County provided project suggestions to complement the strawman (not as an alternate to it).

COMMENTS/DISCUSSION:

- **C.** Mike Hermanson – The graphs of monthly sampling show a smear of data. We need to figure out how much (and what kind of) sampling is needed to show anything useful; can LimnoTech advise on this? Dave Dilks said there is one way to get around this using basic scientific principles. Toward identifying the annual central tendency, Dave would recommend more samples at the same location (fewer stations), which would narrow the spread down.
- **C.** Jim Ross recommends sampling a single site each month (10 to 12 samples) for a year. Ecology’s Environmental Assessment Program (EAP) or Water Quality Program staff will do this. They will need to also communicate with EPA to make sure EPA also envisions determining the central tendency in this manner. Laurie Mann said Brian Nickel thinks 10-12 samples at a single location is a solid idea, if the location is downstream of Trent Avenue Bridge. Jim Ross: they are eyeing the Nine Mile site.
- **C.** Jerry White noted the need to demonstrate “Measurable Progress,” and suggested changing the goal statement in the strawman, opining that the purpose “demonstrate progress” in the strawman feels biased. The Task Force goal should be about understanding the in-river PCB levels. How about change to “assess progress toward meeting water quality standards”, is this more neutral?
- **C.** Brandee Era-Miller added that before deciding how many samples and locations, the Task Force should conduct statistical testing on existing data to make sure the group is doing enough sampling.
Q. How many samples are needed? If EAP takes on the central tendency project they will study to make sure they get enough samples. Dave noted that the number of samples will be determined by

how narrow the Task Force wants the error bars to be. With enough data points, you can narrow down the mean concentration.

- **C.** The Task Force has identified different river zones, and may want to consider other sampling areas to assess those zones.
- **C.** Adriane Borgias discussed the identification of sources in groundwater. Jeremy Schmidt of the Toxics Cleanup Program (TCP) expected monitoring strawman to include investigation upgradient of Kaiser. TCP can get involved if there is a “smoking gun.” He suggests the Task Force use some funding to sample existing wells in strategic locations, and/or put in a well or two to pinpoint some sources. There are some other wells existing that could be sampled to help pinpoint contamination. If this is done, and concentration is high enough, then TCP could potentially get involved.

Can the group agree on these general categories? The group feels the general categories are good.

Fish Sampling Discussion:

- **C.** Dave Dilks: for fish tissue monitoring, the Task Force will not learn anything from only three samples. Brandee proposed seven composite samples of each species. Adriane stated that if the Task Force is to sample fish tissue, it needs to make the expectations and purpose clear, and do a good literature search. She recommends prioritizing source identification and reduction.
- **C.** EAP will conduct a comprehensive fish tissue study in 2022 to look at long-term trends.
- **Q.** Will Ecology develop a new Quality Assessment Project Plan (QAPP) for the 2022 sampling? **A.** Yes, and they will develop an addendum to that QAPP every season.
- **C.** Sarah Hubbard-Gray: Should we eliminate fish tissue monitoring, and retain the data gap filling study? Doug Krapas noted confusion between past fish tissue studies and SRRTTF water quality data, showing the need for a dual study (X # of fish of a certain age, and PCB levels in water). **Q.** If the idea is to determine a bioaccumulation factor for the river, how does this lead to source reductions?
- **C.** There is a long timeframe between getting fish tissue information and putting out fish advisories. The Spokane Regional Health District (SRHD) will have no data on how to determine this. From a public perspective, they want to see progress in fish, not in the water.
- **C.** Dave McBride noted that if the intent is to look at the fish advisory, then yes, they would need more data. If the idea is to get a good baseline before source reductions happen, then more data is better. They need to study fish of legal catch size. In terms of bioaccumulation factors, there is so much variability.
- **Q.** What about the proposal for LimnoTech to study existing data? **A.** The study would look at data to see if a connection exists between PCB loads in fish and the water column, to try to shed light on how PCBs are getting into the fish. It would be a screening-level study before potentially doing more extensive fish tissue and water and sediment analysis to determine: are water column and fish tissue PCB levels in balance, or is something else driving PCB levels in fish? **C.** Fish tissue is the basis of the water quality listing and the numeric standard. If there is no causality, then we don’t know how our actions are improving upon the designated use.
- **C.** Brandee: Will Hobbs is doing food web modeling in the Wenatchee River system, and could discuss connections with the Spokane system. They are also studying periphyton in the Spokane River.

Moving Forward - Process

The group discussed how to prioritize funding and prioritize actions from three different lists of suggested projects. For each option: could LimnoTech put more specifics to get a better idea of costs? Currently LimnoTech is only funded to provide five hours per month to participate in Task Force meetings; they are not scoped to do this other work (i.e. putting together monitoring advice).

DISCUSSION:

- Comp Plan has a set of criteria (p. 43) that could assist in ranking and funding projects. The chart shows the magnitude of pathway, reduction efficiency, cost, implementing entity, pollution prevention, ancillary benefit, overlap with existing efforts, timeframe for implementation, and timeline for implementation and response.
- **Q.** Task 1 from County list (Positive Matrix Factorization, or PMF, Analysis): have any actions come from the County's PMF leading to source reductions? **A.** The County is learning more about the sources of PCBs coming into their system, and what they look like coming out. Older neighborhoods appear to have more aroclors, and some PCB 11. They want to look at ways to reduce PCBs coming into the system, and are seeing some patterns, e.g. that a majority of PCBs come from legacy sources in residential neighborhoods.
 - **C.** It is important for the regulators to know the Task Force is still in source identification mode.
 - **Q.** Could some legacy sources come from sewer construction materials? They think it is more of a function of building materials in older homes versus newer homes, though other factors are involved. Hypothesis: more PCBs coming from older homes (sewer system is new, last 10 years).
 - BiJay noted that Liberty Lake did source sampling. Geographically they found the highest concentration of PCBs coming from older neighborhoods, as the County found, but they have not done a PMF analysis.
 - **C.** Mike Hermanson explained that it is too early in their study, and only have preliminary results from the County. They would not base actions off this yet.

PROCESS DISCUSSION:

Chris Page asked TTWG members to express their interest in different actions. When the group was unsure how to prioritize three separate lists, it quickly determined that Integrating the three separate lists into one document would assist that process.

- **Q.** How can the TTWG prioritize actions when they don't know that they will have an impact on source reductions?
- **C.** Bryce Robbert noted there is a good opportunity to identify and incentivize the public to identify and remove sources (light ballasts, etc.).
- Green Chemistry: would active integration with university researchers provide value? It could provide additional neutral scientific input on the work of the Task Force.
- Jerry White perceives several assumptions about which way Task Force members feel the group should go; Riverkeeper would like to see a focus on source reductions.
- Investigating groundwater source upgradient of Kaiser: **Q.** If new sampling wells are needed, who would drill the wells? **Q.** Would wells on Barker help (industrial park, private wells)? Jeremy Schmidt thinks this might, and they may not have to drill new wells.
 - Jeremy recommended making sure the screen interval is at the top of the aquifer and sampling monitoring wells (not drinking water wells). Could evaluate existing wells and Kaiser data, to pinpoint if an additional well is needed and where it would need to be. Need to narrow down the source to a smaller area at a higher concentration, then hit a discrete source, to get TCP involved. Kaiser has a high concentration in a narrow band. There is also a source at medium concentration but a large band – so they cannot identify where it is coming from. If the goal is to reduce PCBs to the river, then Jeremy thinks the Task Force should highly consider sampling existing wells.
 - The concentrations are on the margin, and there are no appreciable concentrations above background. Bud had data along the river, higher than 300 pg/l (river area wells).
- **C.** Brandee suggests that the Task Force and EAP could combine resources on some of the studies, i.e. Annual Central Tendency study: Ecology will complete a study on this, Task Force funding could pay

for additional sites/samples. Brandee also feels that getting a more accurate mass balance of the Nine Mile lower reach is important.

ACTION ITEM: Bud Leber and Sarah Hubbard-Gray to consolidate the three sheets (SRSP strawman, Ecology's list of project ideas, and the County's list. (COMPLETE)

The TTWG agreed to provide input on this compiled list via online survey, ranking each proposed project High, Medium, or Low. There is a rough guideline that 1/3 of the funding should go to PCB reductions/control actions, and 2/3 for pure monitoring. Funding could be augmented with additional funds from discharger contributions. The 2/3 could include monitoring, if it is part of source reduction in the Comp Plan (i.e. looking at groundwater upgradient of Kaiser). Adriane explained that the Measurable Progress principle will focus more on achieving reductions in the future. If the Task Force shows tangible things done to reduce sources, it will assist the Task Force in acquiring more funding.

ACTION ITEM: Kara Whitman to put a survey together from the compiled list to send to the TTWG group to determine prioritization recommendations prior to the September Task Force meeting. (COMPLETE)

ACTION ITEM: Dave Dilks to calculate the Error bars and recommended number of samples for a central tendency study and send results to Chris Page. (COMPLETE)

ACTION ITEM: Laurie Mann said Brian Nickel did a quick analysis (geometric mean of existing samples, then comparing that value to the central tendency goal, to meet benchmark of 200pg/l – 90% confidence level). Laurie Mann to send this information to Dave Dilks, Chris Page and Kara Whitman. (COMPLETE)

Next full Task Force meeting: 9/27/17 at Spokane County Water Resource Center, 9:00 am to 12:30 pm
The next TTWG meeting is October 4, 2017 at WA Department of Ecology