SRRTTF QAPP and SAP Policy Questions

For Discussion at TTWG 3/12/2014

1. What is the problem to be resolved?
    - *Address data gaps*
        - *Collect data that is of adequate precision, reliability, and accuracy and do so within budgetary constraints*
        - *Groundwater PCB contribution (low flow sampling)*
        - *Any other data gaps to addressed by the QAPP?*
    - *Collect Baseline information*
    - *Perform a PCB Mass Balance for the system*
2. What are the decisions to be made?
    - *Identify and characterize the true sources*
        - *Define true sources*
3. What is the outcome to be achieved?
    - *Reduce inputs of PCB to the river*
        - *Identify and develop Best Management Practices*
        - *Develop a Comprehensive Management Plan*
    - *Measure progress*
4. What are the limitations on the use of the data?
    - *Purpose of data collection is not for*
        - *Permit Compliance (does not used approved compliance methodology)*
        - *Comparing criteria and Section 303 water quality assessment (does not use state methodologies for assessments)*
        - *Calculating Load and Wasteload Allocations (current methods are not statistically rigorous to measure concentrations at the water quality standard)*

Sampling Matrix

Sampling Method	*Useful for*	*Not useful for*	*Level of Confidence*	*Comments*
Water, 1-2 liter sample size	"Higher" concentrations of PCB in water	"Ultra low" concentrations of PCB in water	Known methodology in Spokane River. Questions about impact of lab and field blank contamination.	1. Statistical rigor of concern. 2. Could be used to identify sources, but not calculate loading. 3. Could be used to prioritize reductions, BMPs and planning. 4. Low levels, non-detects, and contamination may not yield valid data.
Water, 4-8 liter sample size	"Lower" concentrations of PCB in water	"Ultra low" concentrations of PCB in water	Known methodology in other watersheds. Questions about impact of lab and field blank contamination. Lab blank contamination possibly mitigated by larger sample.	1. Statistical rigor of concern. 2. Could be used to identify sources, may be able to calculate loading. 3. Could be used to prioritize reductions, BMPs and planning. 4. Low levels, non-detects, and contamination may not yield valid data.
CLAM	"Ultra Low" concentrations of PCB in water	Clogs in some sampling systems (Kaiser wastewater, Pine Creek).	Tested in the Spokane River 2013-2013. Good reproducibility in Spokane River Sampling. Better controls on flow rates needed to determine mass balance (which may be available).	1. Spokane River study had good statistical results. 2. Could be used to identify sources, may be able to quantify contributions. 3. Could be used to prioritize reductions, BMPs and planning. 4. Likely to yield statistically valid data.
XAD Sampling	"Ultra Low" concentrations of PCB in water		Not tested in Spokane River, limited experience at Ecology with this method.	1. Statistical rigor unknown, but has been used elsewhere. 2. Could be used to identify sources, may be able to quantify contributions. 3. Could be used to prioritize reductions, BMPs and planning. 4. Possibly likely to yield valid data.
Sediment Trap Sampling	PCBs in sediments; measuring sediment flux over several months	PCBs in water	Studies show the Spokane River has relatively high percentage of dissolved PCB (vs. PCB associated with sediments).	1. Would not address data gaps or mass balance. 2. Could be used to identify sources, may be able to quantify relative contribution. 5. Possibly useful for prioritize reductions, BMPs and planning. 3. Likely to yield statistically valid data.
SPMD	PCB in water	"Ultra low" concentrations of PCB in water.	Not useful for "Ultra Low" Concentrations of PCBs in water due to numerous problems with the "noise" of the sampling system; Studies in Spokane River have had limited success.	1. Statistical rigor of concern. 2. Could be used to identify sources, but not quantify contributions. 3. Could be used to prioritize reductions, BMPs and planning. 4. Low levels, non-detects, and contamination may not yield valid data.