

EAP Projects

Little Spokane River Fish Hatchery

Concerns have been raised about the potential of PCB in fish food impacting PCB levels in fish tissue and hatchery water discharge quality. A case study of the hatchery is proposed. The scope of the study would be to track the following parameters over the life cycle of a “batch” of hatchery fish:

- Routinely collect and measure PCB levels in fish food used in the hatchery at congener levels
- Collect fish tissue samples at the end of the life cycle of a “batch” of fish and determine PCB levels at the congener level
- Routinely collect water discharge samples and analyze them for PCB at the congener level and track hatchery discharge rates for determining loading to the Little Spokane River
- Occasionally collect incoming water samples at the congener level to determine background loading

This case study would provide information on impacts to the Little Spokane River from the Hatchery discharge, but would provide insight into the relationship between PCB uptake by fish from food and the Water column and the PCB levels and congener pattern seen in fish tissue. This information may assist in helping to determine sources Based on fish tissue PCB patterns.

Stocked Fish Impacts

Concerns have been raised about the potential for stocked fish impacting the fish tissue levels found in the Spokane River. It is proposed that a study be conducted to determine the following:

- Where on the Spokane River are stocked fish introduced to the river
- What is the source of stocked fish introduced into the river
- What is the PCB level in fish tissue in the stocked fish

Atmospheric Deposition

The August 2014 Synoptic Sampling event collected samples from Hangman Creek at the gaging station. Samples near the end of the sampling event show what appears to be a small storm surge (spike in flow and PCB concentration) during which PCB level increased from the ~100 pg/L levels to ~ 2,400 pg/L level and then returned in a decaying fashion to ~100 pg/l levels. This suggests that either direct wet weather deposition or dry deposition followed by storm flushing could be a significant contributor of PCB during storm events. It is proposed that a wet/dry deposition monitoring network be operated to assess atmospheric levels of PCB. An active and passive monitoring system was operated in the Camden, NJ area by Dr. Rodenberg and may serve as a model for consideration in the design of a system in the Spokane Watershed.