

Comments on: Evaluation of Fish Hatcheries as Sources of PCBs to the Spokane River
for review February 2018

From: Spokane County Environmental Services
Date: February 28, 2018

Comment 1

Overall comment: In several places in the report, the PCB load from the Hatchery is described as:
...representing <1% of the total PCB loads previously estimated in the Spokane River

These general statements could be put into better context by comparing the estimated loads from other PCB discharges. For example, by examination of Table 7 of the Comprehensive Plan to Reduce Polychlorinated Biphenyls (PCBs) in the Spokane River (2016), it could be noted that PCB loads from the Hatchery operations is larger than several of the municipal wastewater treatment plant effluents to the Spokane River.

Suggestions-

- Provide context about the relative magnitude of PCB loading from the Hatchery.
- Include a summary of and comparison with estimated PCB loads from other discharges to the Spokane River.

Comment 2

Page 8, final paragraph: Add text:
Spokane Valley-Rathdrum Prairie Aquifer...

Suggestions-

- Add text: Spokane Valley-Rathdrum Prairie Aquifer...

Comment 3

Page 9, first paragraph states:

Although fish from both hatchery facilities are used to stock the Spokane River, the Spokane Hatchery is the only permitted hatchery that discharges wastewater to the Spokane River watershed.

This statement is not accurate because there are additional hatcheries in the Spokane River watershed downstream in the watershed near Ford, WA.

Suggestions-

- Note that there are additional hatcheries in the watershed, or alternatively refine the description of the study area.

Comment 4

Page 10, fourth paragraph: The description of the sampling collection methods is not clear. Please revise to clarify, for example,

- Water was collected at each location in separate, certified clean 1.5 L glass containers and transferred into sample jars filled approximately one-quarter full per composite aliquot.
- What size sample jars were used?
- Were sample bottles certified clean?

Suggestions-

- Revise text to clarify sampling methods.

Comment 5

Page 18, fifth paragraph: The following sentences are not clear:

TOC concentrations in water samples were less than the reporting limit of 1.0 mg/L except in one sample (1.1 mg/L). TSS concentrations were also less than the reporting limit of 1.0 mg/L except in two samples (1.0 and 2.0 mg/L). The exception was the sample collected during flushing, which had a TSS value of 220 mg/L. TOC was not detected in this sample, but at a higher reporting limit of 8.7 mg/L.

Please clarify which samples were exceptions, and for what parameters.

Please explain why a higher reporting limit was used for one sample for TOC.

Suggestions-

- Please revise text to clarify.

Comment 6

Page 26, third paragraph – The 2017 Spokane County SVRP Aquifer PCB Characterization Sampling Results report did not include estimates of flow from Griffith Springs. Please revise the text

Suggestion-

- Delete statement that 2017 Spokane County report included Griffith Springs flow estimates.

Comment 7

Page 27, conclusions final sentence – The estimated PCB load from the Hatchery is of similar magnitude to several of the NPDES permitted discharges to the Spokane River. While the Hatchery discharge may seem “relatively small,” it is not the smallest. A comparison of estimated magnitude would be helpful in this report.

Suggestions-

- Add text to provide comparison for the magnitude of the Hatchery PCB discharge.

Comment 8

Appendix B – Please add the PCB blank data.

Suggestions-

- Please add the PCB blank data.

Comment 9

Appendix C – It is possible to estimate the PCB sequestered by the hatchery fish after they are released. If all hatchery fish are caught and removed (at the body mass and PCB concentration found here), then the PCB export from the system is approximately 4 mg/d. This is a similar magnitude of the PCB load from the Hatchery. A simple model of this calculation would be informative to provide additional context on PCB loading/export from hatchery fish once they are released.

Suggestions-

- Develop a range of simple calculations to explore how hatchery fish growth, capture, and removal (by recreational fishing) could represent a net loss of PCBs to the Lake Spokane system.