

Comments on the Spokane River PCB TMDL Stormwater Loading Analysis Report.

Comments made by City of Spokane: Wastewater Management

Comment 1: We are concerned that first flush data may have been used directly with annual runoff in determining loading, which would overestimate PCB loading vs. composite or flow-weighted data and any seasonal variations.

Comment 2: The tables indicate parking lots and driveways were included in calculations of impervious area tributary to the storm system. Generally, only surfaces within the right-of-way are collected by the storm system. Including driveways and parking lots overestimates PCB loading.

Comment 3: Combined Sewer systems (CSO basins) function quite differently than do separated storm systems in terms of discharge to the river. Most (but not all) CSO basins will overflow to the river for large storm events, and the first flush is generally captured before the onset of overflow. Consequently, most runoff in CSO basins is treated at the City's Riverside Park Water Reclamation Facility. PCB loading from CSO's must consider the CSO overflow thresholds. (Note: the City has begun installing storage tanks to reduce CSO volume and frequency. These tanks are expected to also reduce any current PCB loading to the river via CSOs.)

Comment 4: We expected a stronger correlation between PCB concentrations and TSS concentrations than is reported in the tables; can these differences be explained?

Comment 5: It was unclear what the green cell highlights mean in the tables.

Comment 6: Because PCBs are often from discrete sources and concentrations at end-of-pipe are particularly affected by "hot spots," extrapolating data from sampled basins to unsampled basins may introduce significant errors. Similarly, regarding the reference early in the report to a prioritized list of basins for cleanup, (which we did not find), we have reservations about the validity of such a list being developed from limited data. We would also like to see more detail supporting the premise that the sampled basins are representative of land uses City-wide or in other basins.

Comment 7: We would also like more information re: detection limits, etc. relating to the sampling analysis.

Comments made by City of Spokane: Environmental Programs

Comment 8: I'm not sure I understand how PCB detections were used in the Table 8. It appears that the Total PCBs are calculated as the sum of the fractions. But the use of non-detects and "J" designations (estimates) confuses me.

For the following line of data, all the analytes are non-detects, but the Total PCB is given as a whole number and not flagged. In the preceding narrative, it states that non-detects were not assigned a value, so I don't understand this Total PCB value.

07184215 STMWTR_CLARKE 05/02/07 4 < 0.139 < 0.277 < 0.392 < 0.518 < 0.543 < 0.518 < 0.392 < 0.277 < 0.139 < 0.080 0.062

For the following data, all the analytes are either non-detects or estimates, but the Total PCB is not flagged as an estimate.

07214215 STMWTR_CLARKE 05/21/07 2 < 0.070 0.101 < 0.200 0.124 0.022 < 0.260 < 0.200 < 0.140 < 0.070 < 0.040 0.247

I did not check all the lines of data, but found these two by randomly checking just a few.

Comment 9: There were 16 samples taken on 06/05/07. For two of the 5-Cl analytes, the detection limit appears to be < 0.270 ng/L. But for 5 of the 16 samples the result was flagged as estimated when the result was greater than 10 times the detection limit. There needs to be greater discussion than a footnote for the table, about the need and method for estimations.

Comment 10:

In Table 13 the Annual Total PCB Load/Acre (mg/acre) is totaled at the bottom as 16.1. This number appears to be the total load of PCB per day divided by the drainage area time 365. But this number is not the average of the calculated result for each of the basins. If I round each number to the next whole number, I still only get approx. 14.6. It should be closer than this or it needs to be explained.

Comment 11: I would have anticipated another table after Table 13. The first page clearly stated that there would be an extrapolation of detected results to the non-sampled basins. I would have expected the results from Table 13 to be used for this purpose. I do not agree that PCB loading can be assigned to non-sampled basins when the results clearly indicate that loading originates from discrete sources. But if this concept were part of the report, it should have been included in this section if the introduction specifically discusses it.

Comment 12: Looks like Erie and Union have the same point source(s) of PCB. Would recommend that Cochran be re-sampled more discreetly to determine if point source(s) is (are) involved. Should match basins with potential contaminant source data to determine candidate sources.