

Comments on:			
SRRTTF Phase 2 Technical Activities Report, DRAFT, May 20, 2015			
Prepared by:		Ben Brattebo, Spokane County Utilities	
28-May-15			
Page	Location	Comment	
9	Table 3	The tPCB values in the table are different from the tPCB data in the appendix. Please describe why they are different (likely blank correction)	
		What are the results from the high volume sampling?	
5	Figure 2	At each sample location, one of the points appears to have a "shadow" behind the marker. What does that represent? Please provide a legend	
7	Final paragraph	Use of the CE-QUAL-W2 model to represent the Spokane River seems unhelpful	
7	Final paragraph	Where are the results for the suspended sediment analysis that shows that losses between monitoring locations are small?	
8	Table 1	The flow values for Nine Mile Dam are not valid and should be excluded. A note should be provided of "data not collected"	
8	Table 1	Outlet of Lake Coeur d'Alene flow should be listed with note to say "data not collected"	
8	Table 1	Greene Street flow should be listed with note to say "data not collected"	
9	Table 3	Concentration data excluded from later analysis should be highlighted and noted "potential anomalies, excluded from later analysis"	
10	First paragraph	Is it appropriate to call the high values "anomalies"? They appear to be correlated to increased stream flow which may have resulted in differing flow paths and source loadings. They don't seem to fit with the "steady state" values, but are they really unexpected?	
10	Table 4	Concentration data excluded from later analysis should be highlighted and noted "potential anomalies, excluded from later analysis"	
10	Composite sample data	How were composite samples included in the loading analysis?	
10	Composite sample data	Were composite samples collected for a specific purpose? Did they meet that purpose?	
11	Table 5	Without flow data at Lake Coeur d'Alene outlet, it is not appropriate to present incremental load information for that reach. A note should say "unable to calculate load"	
11	Table 5	Without flow data at Nine Mile, it is not appropriate to present incremental load information for that reach. A note should say "unable to calculate load"	
11	Table 5	Please include negative values for incremental loads where they exist. They are very informative	
11	Table 5	What is the basis of these load calculations? Are they average flow x average concentration? Please clarify	



12	second paragraph, final sentence	If the steady state model is insensitive to the groundwater loading assumption, which method did you use? The original approach seems inappropriate because it introduces an assumption that groundwater concentration is known (equal to the upstream reach). That second approach avoids the assumption		
12	Table 6	Thank you for adding the stormwater (MS4 + CSO) loading analysis		
12	Table 6	The relative magnitude of the MS4 and CSO values are large compared to other measured sources (e.g. the smaller WWTP). On Aug 22 the Greene to Spokane MS4+CSO load (199 mg/d) would make it the largest "known" load to the river. Table 6 might indicate that 4 of the 7 river sampling days were "impacted" by storm events, yet the conclusion is that "results changed minimally, indicating that stormwater and CSO loading did not bias the original mass balance conclusions." Could part of that conclusion result from the exclusion of potential anomalies that might have been caused by stormwater? An alternate conclusion could be that the results were impacted by stormwater, but that the study wasn't temporarily refined to identify this.		
		Maybe this was a planned steady state event that ended up as a storm sampling event. During the sampling:		
		Barker flow more than doubled		
		Hangman Creek flow nearly doubled		
		Post Falls flow increased by more than 40%		
		Spokane Gage flow increased by 20%		
		Trent Bridge flow increased by 14%		
		Could these wet weather sampling results be used to fill a data gap?		
New figure		Add a figure to show the river flow variability during the sampling period (for example percent of maximum at each site for each day)		
New figure		Suggest adding a bar chart to show the relative magnitude of estimated MS4+CSO loads compared with the other measured loads (i.e. repeat bar chart above and add stormwater)		
12	Evaluation of Flows below Nine Mile Dam	What are the flow data presented in Table 1? They are not the sum of Spokane + Hangman as noted in final paragraph on page 12. If the conclusion is that Nine Flow are not known, then why present analysis with those data?		
13	First paragraph	What does the statement "...flows varied by several fold..." mean?		
13	Add Greene St segment	Thank you for considering estimated flows at Greene St		

13	Add Greene St segment	Load estimates resulting from adding a flow at Greene St will still be bound by the original Trent-to-Spokane load. Table 5 of this report represents Trent-to-Spokane as "-" though it is likely a small negative value. In figure 6 by adding flow at Greene the new cumulative gain from Trent-to-Spokane is approximately 65 mg/d (~5+58). This is not a possible outcome as it violates the Trent-to-Spokane value		
13	Add Greene St segment	By adding 255 cfs to Spokane to estimate Greene, the Spokane-to-Greene reach may actually have a negative unknown PCB gain. The report indicates it is positive 58 mg/d. Please recheck your calculation.		
13	Add Greene St segment	Estimated flow at Greene St could vary along a continuum of values. An alternate presentation to picking one value, could be to show how a range of Greene Street flows impact the PCB gain-vs-loss from Greene-to-Spokane (and similarly from Trent-to-Greene)		
13	Figure 6	Please show negative values on the chart for incremental loads where they exist. They are very informative		
13	Figure 6	Without flow data at Nine Mile, it is not appropriate to present incremental load information for that reach. A note should say "unable to calculate load"		
13	Figure 6	Without flow data at Lake Coeur d'Alene outlet, it is not appropriate to present incremental load information for that reach. A note should say "unable to calculate load"		
15	Final paragraph	The report states that during the spring confidence sampling "concentrations at the Lake Coeur d'Alene outlet were very low..." But the average August sampling results were lower than the spring results for both outlet of Coeur d'Alene and Mirabeau (vs Barker Rd). While the QA data for the spring sampling were problematic, it seems premature to dismiss the higher flow concentrations as lower than low flow.		
New section	Summary or conclusions	With the variety of scenarios presented, what is the final answer or conclusions from the work?		
A-1	Appendix	Are there any helpful findings from the other measured parameters? TOC, DOC, TSS, TDS		
A-1	Appendix	Table 9 of the SAP lists the required detection limit for TSS as 1 mg/L. Why are most of the TSS sample results listed as <5 mg/L?		