

## Appendix B – Public Comments

The following public comments were received during the public comment period by the WRIA 59 Planning Board, regarding Draft 1.0 of this report. All comments were taken into consideration and changes were made where possible to address the comments while still maintaining a scientifically sound report.

**Public Comment 1 (Owen Pullen, Quartzite Nursery, Chewelah, WA):** *No recommended changes.*

**Public Comment 2 (Jim Lapinski, City of Colville Planning Director):** *No recommended changes.*

**Public Comment 3 (Wes McCart, Stevens County Farm Bureau):**

*1) Please provide all field data and observations in an appendix.*

*2) Page 8, Table 3: On Deer Creek, the average should be 12.42. In calculating the average, the actual value is 12.425. Mathematically and scientifically, when the number preceding a 5 is an even number, you do not round up, and conversely, if the number preceding a 5 is an odd number you round up. Therefore, in this case, the number two precedes a five and it is not round up or down, and conversely if it were a 3 you would round up to a four. Please correct this.*

*3) Page 9, Table 4: Statistically the accuracy of the data should be out two decimal points, which is what is reported. To carry this degree of accuracy forward, this reported number is the number that should be used to calculate the preferred discharge numbers. It seems that Swift's equation was run on the average out to any number of decimals and placed in the regression equation. For example, on the Little Pend Oreille River, the average calculated toe width was reported as 24.43, which is correct, but the average is 24.4275 and this is what was placed into the equation. Placing the average toe width of 24.4275 into the equation results in 15.333 which is rounded to 15.33 cfs as the preferred discharge reportable with the statistical degree of accuracy. But, placing 24.43 into the equation the results are 15.335, which rounds to 15.34 cfs. In staying with the above comments in #2 for rounding and the discussion here on statistical accuracy (two decimal points), there are several discharge numbers that need to be revised.*

*The following is a list of preferred discharge numbers that I believe should be revised:*

- A) Little Pend Oreille River should be 15.34 cfs (result in 15.335 which round to 15.34).*
- B) Stranger Creek should be 1.52 cfs (results in 1.525 which rounds to 1.52).*
- C) Upper Colville River should be 21.70 cfs (results in 21.704 which rounds to 21.70).*
- D) Bulldog Creek should be 2.88 cfs (results in 2.883 which rounds to 2.88).*
- E) Waitts Creek should be 1.40 cfs (results in 1.405 which rounds to 1.40).*

*While these numbers may not seem significant, 0.01 cfs will result in supply of over 21 homes with the water they need based on our area usage.*

*The preceding comment can be referenced and based on the discussion of Section 1.2 Statistical Accuracy and Significant Figures pages 4-5 in “Biostatistical Analysis” by Jerrold H. Zar. Please make the corresponding corrections throughout the report.*

*4) Page ii-iii, Glossary: Please add the word “thalweg” and “toe of bank” to your definition list.*

*5) Page ii, Glossary, Instream Flow: Please add end quotations (“”) after the word recreation on line 3.*

*6) Page ii, Glossary, Life stage/history: At the end of “Adult” in the parenthesis, please add and delete commas.*

*7) Page iii, Glossary: Please separate the definition of “Pool” and “Pool Tailout”.*

*8) Page 5, Section 4.1: Add a period to the end of the last sentence in this section.*

**Response to Public comment 3: (Wes McCart, Stevens County Farm Bureau):**

1) Accurate graphs of the cross section surveys and pictures of all transects are provided in Appendix A.

2) Pete Rittmueller spoke with Wes McCart and explained the accepted convention for rounding is to round up to 12.43 from 12.425 – 12.429 and to round down to 12.42 from 12.421 to 12.4249. This practice was followed throughout the report.

3) On streams where the discharge had been computed with an average Toe-Width of more than 2 decimal places, the discharge is now computed from the rounding to 2 decimal places and rounded per response to comment 2, above.

4) Changes made. Thalweg and Toe of Bank added to Glossary.

5) Change made, added (“) after the word ‘recreation’.

6) Change made commas added and deleted as necessary.

7) Change made, definitions separated.

8) Change made, added period and clarified wording in sentence.

**Public Comment 4 (Sandy Dotts WDFW, Jamie Short WDOE):**

*1) Glossary: A number of terms defined in the glossary are not used anywhere else in the text of the document. To ensure clarity, we recommend removing the following terms: closure, fluvial fish, hydrograph, macroinvertebrate, perennial stream, staff gauge, and subbasin. There also needs to be an end quote in the definition for instream flow and a space between the definitions*

*of pool and pool tailout. We recommend adding a definition for the word thalweg. Defining the terms used in Table 6 in place of the terms listed under life stage/history would be helpful as they are used in the narrative of the report.*

2) *Page 1, Section 3.0: The analysis was performed on 18 streams, not 19, since Thomason Creek was eliminated from the study.*

3) *Page 2, Field Methods #4 and Page 3, Figure 1: The directions under #4 state that whether you identify one toe of bank or two, you draw a horizontal line from the lowest toe to the point of the same elevation on the opposite bank. This is contrary to the figure on page 12 of the QAPP and to the procedures that the state agencies have used for the past 30 years.*

4) *Our understanding based on the approved QAPP and discussion in the field was that the toe on either bank would be identified and the distance between them would be the width measurement. This approach was not applied uniformly in this report and has led to an apparent misinterpretation of the field data resulting in inaccurate flow recommendations on a few of the streams. For example, on transect T1 for the Lower Colville River the left bank toe is located at approximately 20 feet which would result in a total toe-width of 50 feet instead of the 36.91 as stated in the draft report. We strongly suggest that EES staff reevaluate the application of the method and utilize the toe on both sides of the stream to determine the total width.*

5) *Pages 9-12: We recommend adding the GPS coordinates from Table 4 to Table 5, identifying the datum, then deleting section 5.0 due to its repetitive nature. Any stream specific narrative could be moved to the appropriate page in the appendix where it would add to the readers understanding of the method and the measurements.*

6) *Page 12, Table 5: We recommend rounding all of the preferred discharge values to one decimal place.*

**Response to Public Comment 4 (Sandy Dotts WDFW, Jamie Short WDOE):**

1) Changes made, terms not used in the text were eliminated and requested words included in the Glossary.

2) Without Thomason Creek, there were 19 creeks where transects were measured.

3) The methods pertaining to this comment are explained on page 39 of Swift (1976). The authors believe this specific methodology is consistent with Figure 12 of the QAPP and Figure 1 of the report. The method described by Swift may be slightly different than “*the procedures that the state agencies have used for 30 years.*”

4) The authors believe that both Swift (1976) and the QAPP are consistent with the methodology used in the data analysis for this report. Page 39 of Swift (1976) states “*The width is determined at each cross section by measuring horizontally from the point where the streambed and one bank join (point TB in Figure 2), to the ground surface on the other bank.*”

*The width of gravel bars, if present, is included, and the lower toe of the two banks is used if a toe is found on both sides of the channel.”*

After reviewing comments from the WDOE and WDFW, Pete Rittmueller, senior biologist for EES Consulting, contacted Brad Caldwell and Hal Beecher. Mr. Caldwell and Mr. Beecher are Washington State instream flow leads for WDOE and WDFW respectively. Mr. Caldwell was present on the Stevens County Toe-Width study during the first day of field work. After discussing the outstanding issues, Mr. Caldwell felt that the correct Toe-width methodology required identification of the toe-of-bank on each side of the stream followed by measuring the distance between the two toe-of-bank points. Mr. Beecher agreed that Mr. Caldwell’s view was the way state biologists were taught to carry out the toe-width method. After reviewing Swift (1976), Mr. Beecher pointed out that the Swift method called for measuring the distance horizontally from the lowest toe of bank and called for including gravel bars.

EES staff reviewed the toe-width methods and conducted additional peer review of the methods and how they were applied. Pete Rittmueller spoke with Charles Swift III, author of Swift (1976), in order to clarify the appropriate method to measure the toe-width. After the additional review, EES staff felt that **if the gravel bars were included**, the method followed in the WRIA 59 report was consistent with Swift (1976). Mr. Swift said that the gravel bars should be included, but the width should be measured from the lower toe of bank to the same elevation on the opposite bank.

Mr. Beecher and Mr. Caldwell reviewed all of the WRIA 59 toe-widths from the draft report and agreed that the majority of Toe-Widths were agreeable when measured following either methodology. Mr. Beecher and Mr. Caldwell sent a list of 8 streams (later clarified to 7) where concerns existed regarding gravel bar inclusion and the resulting toe-width measurement were not representative of conditions present in the stream. EES staff reviewed the individual transects at all sites in question. The original toe-widths were revised as necessary to include gravel bars within the toe width measurement. Revisions of the toe-width measurements and subsequent calculated changes in preferred discharge were incorporated into the text and tables of the report.

5) Section 5 contains the main body of the results. The authors believe the narrative is appropriate in this section. Section 6 is a summary and by design repetitive but shorter.

6) Due to averaging toe-widths and given previous comments on this subject, preferred discharges have been left with two decimal points.