



To: Sheila Marcoe, Department of Ecology
From: Douglas C. Howie, P.E., Department of Ecology
Cc: Angela Vincent, Department of Ecology
Date: April 18, 2022
Subject: Clarks Creek TMDL, Review comments; Ecology comments

Here are Ecology's comments on my recently completed Clarks Creek TMDL review.

Documents Reviewed:

1. *Clarks Creek Restoration Plan*, by Pierce County, July 1, 2021
 - a. *Appendix B: Pollutant Reduction Crediting Technical Memorandum*
 - b. *Appendix D: Water Quality Improvement Projects: Engineering and Design Reports*
2. *Microsoft Teams Meeting*, Pierce County staff and consultants and Ecology Staff, March 24, 2022

General Comments:

1. This Memo documents my findings on the modeling and proposed sediment removal credits that Pierce County prepared for the Clarks Creek TMDL. My review did not include any other aspects of the Clarks Creek TMDL evaluation by Ecology.
2. I reviewed the Clarks Creek Restoration Plan (July 1, 2021) with a focus on Appendices B and D. I also participated in a Microsoft Teams meeting with Pierce County staff and their consultants on March 24, 2022. The Teams meeting was set up to provide me a channel to ask questions of the people completing the work.
3. Based on my review of the documents and the answers provided by the County and their consultants, I believe that the process they are following for modeling and the calculations they performed to generate the annual solids removal for each of the BMPs they considered is valid and is appropriate for the purposes of TMDL calculations.
4. I also believe that the work they did to evaluate the amount of runoff removed or treated for the October 20-21, 2003 storm is valid and appropriate for TMDL calculations.
5. They indicate in the written documentation that they may be using a Discount Factor for Maintenance. During the Teams call, we discussed this and Pierce County indicated that they would use an "all or none" factor. If the annual inspection indicated that the BMP was not treating the design runoff flow treatment rate, they would not calculate any sediment removal for the BMP, regardless of the level of impairment to the BMP. They

also stated that if they found a BMP to be operating at less than design rate, they would immediately begin the process to restore the BMP to a fully operational condition. There was no discussion of how they intend to determine if the BMP is passing the design runoff flow treatment rate.

If you have any further questions, please contact me by email at douglas.howie@ecy.wa.gov or by phone at (360) 870-0983.