

Draft response

Hello Tim,

The following are our questions and comments on the County's May 16, 2022 *Response to Ecology's Comments – Pierce County Edits*.

Questions and comments from Doug Howie, PE:

1. In one location (page 10) they state "*Road Operations sweeps (on average) multilane roads every two weeks, arterial roads once a month, and residential streets three times a year.*" On page 12 (Section 4.1.1) they state "50 percent of the arterials are swept once (1) per month." Which is it?
2. The calculations for the original sediment load to Clarks Creek used existing sediment concentrations without reductions in loads from sweeping. The calculations for sediment reduction also did not include any reductions in sediment load from sweeping. Once the County starts to count the sweeping activities toward the TSS reduction goal, the sediment load on the streets will reduce from that used in the original modeling and the concentration of TSS will decrease so the calculated amount of TSS removed by the structural BMPs will decrease below that used in your current removal calculation as well. This is an issue that the County should be aware of as you move forward.

Other questions and comments:

1. Will the County address Doug's second comment in your 2023 *Clarks Creek Restoration Plan*? The concern is the potential for double counting credit from street sweeping and stormwater treatment facilities, if the loading to these stormwater BMPs/facilities is not reduced by the amount of material captured in the sweepers.
2. The County misquoted Ecology on page 1 of your May 16 memo. This is comment #1 on page 2 of the document, *Ecology comments on Pierce County's July 1, 2021 Clarks Creek Restoration Plan*, which Angela Vincent emailed to Tim Hagan on March 22, 2022.
3. The County shortened a few of Ecology's original comments in your May 16 memo. Our original comments are found in the document, *Ecology comments on Pierce County's July 1, 2021 Clarks Creek Restoration Plan*.
4. On page 5, the County says:
The County's Street Sweeping QAPP is in the process of redevelopment, with staff dedicated to its preparation for resubmittal in 2023.
Our response: When in 2023 will the County submit this *Street Sweeping QAPP* to Ecology?
5. *County Response (Plan Pg. 50)* says:
"...Once the QAPP and its attendant Data Acceptability Report are accepted by Ecology, the County will use the data to estimate the TSS load reductions (<500 microns) it may claim based on how many curb miles were swept per year using GPS data...Once the QAPP is approved by Ecology it will guide the County's street sweeper sampling program to develop an accurate TSS pick-up rate unique to the Clarks Creek watershed. Once the TSS pick-up rate is established it will be

used to calculate future street sweeping credits in the County's annual compliance reporting ledger."

County Response (Plan Pg. 98) says:

"In the future, after the County's street sweeping QAPP has been approved by Ecology, SWM and Road Operations will coordinate to collect the necessary data to develop a localized road deposited sediment (TSS) build-up, wash-off and technology-based pick up rate. Once the data collection has been completed, the County will submit the data and the analysis to Ecology for their review and acceptance. Once the Data Acceptability Report has been accepted, the County will tabulate the annual curb-miles swept and the sweeping frequency of each regenerative-air sweeper for each Urban Stormwater Catchment they operate-in. Average annual TSS load reductions will be estimated based on curb-miles swept, frequency, and the unique road deposited sediment build-up, wash-off and technology-based pick-up rate developed for the Clarks Creek and Clover Creek watersheds."

Our response to *County Responses (Plan Pgs. 50 and 98)*:

- a. The above text presumes Ecology's acceptance of the County's QAPP and Data Acceptability Report. Please edit this text to remove this presumption. Ecology is optimistic that we will be able to accept the County's QAPP through collaborative communication with the County that follows our technical and QA review process for QAPPs. Ecology anticipates acceptance of the County's Data Acceptability Report, if the County successfully completes this pilot study in accordance with their QAPP. The County will need to secure Ecology's approval of their QAPP to later credit sweeping, as stated in Appendix 2 of the Permit.
 - b. Ecology will not be reviewing sweeping study data for the Clover Creek watershed.
6. The County did not respond to our comment #6. This is comment #6 on page 4 of the document, *Ecology comments on Pierce County's July 1, 2021 Clarks Creek Restoration Plan*. Please respond to this comment.

Additional typos:

1. This *Response to Ecology's Comments – Pierce County Edits* is dated May 16, 2002 [sic].
2. Table 6 on page 8 refers to the *104th Street E Wetland* as a "pond".
3. From page 4 (Section 3.1.7): "Any rating by the inspector indicating the facility was less than fully functional (operational) receives no credit if the required maintenance was not performed with in [sic] the same year."
4. From page 12 (Section 4.4): "In the future, the sweeping program will target hot spot locations focusing on those roads and streets where the highest amounts of sediment are found (e.g., multi-lanes and arterials). road [sic] deposited sediment (RDS) and other pulverized particulate material retrieved by the street sweepers will be systematically sampled and analyzed to validate the annual sediment reduction credit."
5. Did you intend to italicize all text in Section 4.4?

6. From page 13 (Section 4.4.2): "...the regenerative-air sweepers in the County' [*sic*] fleet."