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MEMORANDUM | June 21, 2024

TO Wes Thomas and David Lacey, Oregon Department of Environmental Quality (DEQ)

FROM Peter Shanahan, HydroAnalysis LLC (HALLC); Jennifer Hart and Gail Fricano, Industrial Economics, Inc. (IEc)

SUBJECT Five Tribe review of "WR-510 and WR-306 Performance Monitoring Report for the ODOT Facilities in Portland Harbor – Water Years 2022 to 2024," dated May 2, 2024

This memorandum, submitted on behalf of the Five Tribes,[1] reviews the *WR-510 and WR-306 Performance Monitoring Report for the ODOT Facilities in Portland Harbor – Water Years 2022 to 2024* prepared by Herrera Environmental Consulting, Inc. (Herrera) on behalf of Oregon Department of Transportation (ODOT) (Herrera 2024).

General Comments

1. The ODOT 2021 Feasibility Study (FS) (page 67) states "Performance monitoring is being conducted for the WR-510 and WR-306 hydrodynamic separators and the need for additional [catch basin] cleaning will be evaluated during monitoring" (ODOT 2021). The current performance monitoring report does not include such an evaluation, and we recommend this report be revised to present an evaluation of the need for additional cleaning of catch basins.
2. We find this report is deficient in presenting and analyzing stormwater treatment performance by the proprietary hydrodynamic separator (PHS) at WR-306. The first set of graphs in Appendix B clearly illustrate that the PHS is providing negligible treatment of stormwater. Total suspended solids (TSS) concentrations in the effluent are only slightly reduced, and this pattern is mirrored by most other constituents. We believe this poor performance merits additional discussion and evaluation.
3. Other ODOT source control documents reviewed previously have provided various anecdotes regarding performance of source control measures at WR-306. For example, the ODOT US30 FS (page 28) notes poor PHS performance at WR-306, which is attributed to an increase in street sweeping (ODOT 2021). DEQ (2022, Comment 10) indicates that "the hydrodynamic separator associated with WR-306 was recently retrofitted to provide higher treatment capacity and efficacy." While the statements in these prior documents lack detail, they suggest there is historical information relevant for WR-306 and the findings presented in the current performance monitoring report. We strongly recommend that the current report include all relevant historical

[1] The five tribes are the Confederated Tribes of the Grand Ronde Community of Oregon, the Nez Perce Tribe, the Confederated Tribes of Siletz Indians, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation of Oregon.

information for context and describe the implications of the performance monitoring results with respect to the anticipated performance of the proposed source control measures. For example, does the performance monitoring entirely post-date the PHS retrofits cited by DEQ? Also relevant for context is that the FS (ODOT 2021, page 54) proposes biofiltration swales as a future source control measure (SCM) for WR-306; we recommend this future SCM be mentioned in the report.

Specific Comments

4. The report does not include a description of the sampling procedures. While some of the field forms provided in Attachment E indicate the samples are composites, we recommend the report include a full description of sample collection methods, for example, whether samples were collected using an automatic sampler or by grab sampling.
5. On page 6, the listed "criteria and goals" include "Minimum of 10 sample aliquots." Please clarify the nature of these aliquots. The context implies that these would be aliquots over time, but the prior text indicates a seemingly contradictory objective to collect a minimum of seven paired flow-weighted composite stormwater samples.
6. Page 11 states "large highway drainage areas, such as WR-306, typically have finer sediment than smaller basins like WR-510." We recommend a literature citation be added to support this statement.
7. Page 11 states "considerable amounts of floating trash and debris were captured by the WR-306 PHS unit, which may have led to premature fouling of the unit's screen and a decrease in pollutant reductions." We recommend more frequent maintenance and cleanout of the PHS unit. We also recommend that ODOT consider the implications of the large quantity of trash for the proposed future SCM.

Editorial Comments

8. Table 1 – we recommend the column heading "Sample coverage (%)" be modified to "Sample coverage (% of storm volume)."
9. We recommend the section on Stormwater Sampling Results include a cross-reference to the figures in Appendix B that compare influent and effluent concentrations for all storms. Those figures provide a succinct and clear illustration of treatment system effectiveness.
10. Appendix B would benefit from being divided into subsections, each with a title page that indicates the nature of the figures contained in the appendix. In particular, page 81 through 88 seem to show solids concentration results but are not labeled as such.

References

Herrera Environmental Consulting, Inc. (Herrera). 2024. Technical Memorandum: WR-510 and WR-306 Performance Monitoring Report for the ODOT Facility in Portland Harbor – Water Years 2022 to 2024. Seattle, Washington. May 2.

Oregon Department of Environmental Quality (DEQ). 2022. Letter Re. Portland Harbor Source Control Feasibility Study, Oregon Department of Transportation, ECSI #5437." Portland, Oregon. February 24. (Appended to ODOT 2022.)

Oregon Department of Transportation (ODOT). 2021. 2021 Portland Harbor Source Control Feasibility Study, ODOT Facility in Portland Harbor Project Area. Oregon Department of Transportation, Salem, Oregon and Herrera Environmental Consultants, Inc., Portland, Oregon. November 12.

Oregon Department of Transportation (ODOT). 2022 Portland Harbor Source Control Supplemental US30 Feasibility Study, ODOT Facility in Portland Harbor Project Area. Oregon Department of Transportation, Salem, Oregon. June 2.