



PUBLIC WORKS

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Cleo Neculae
Washington State Department of Ecology
Water Quality Program
P.O. Box 330316
Shoreline, WA 98133-9716

Subject: Comments on the Soos Creek Total Maximum Daily Load (TMDL) for Fine Sediments

Dear Ms. Neculae,

Thank you for the opportunity to provide comments on the Soos Creek TMDL for fine sediments and for the public meeting on October 7, 2025. The City of Kent values the health of our waterways and the environment and communities that depend on them. The City remains deeply committed to protecting water quality—not only to support aquatic ecosystems, including vital salmonid habitat—but also to safeguard public health and enhance the quality of life for our residents. Concomitantly, the City has significant concerns regarding the analysis, feasibility, resource impacts, and financial implications of the proposed TMDL.

Justification for the selection of Soos Creek for the Fine Sediment TMDL

There are many watersheds in the state with minor to major issues with Benthic Index of Biotic Integrity (B-IBI) scores which do not have TMDLs in progress for fine sediment. The ramifications for National Pollutant Discharge Elimination System (NPDES) permittees in the Soos Creek watershed are enormous with the requirement to retrofit the entire watershed to mimic a 100% forested area related to Total Suspended Solids (TSS) and hydrology. The proposed burden on the local agencies and other permittees for the arbitrary selection of the Soos Creek Watershed cannot be overstated.

The City of Kent, along with other NPDES Permittees, was required to complete a Stormwater Management Action Plan that prioritizes water bodies based on existing conditions, pollutant loads, and potential for restoration. Kent identified Mill Creek as the top priority due to its degraded biological condition, higher pollutant loads, and greater potential for measurable improvement through targeted retrofit projects. The same type of process should be done for the best selection of watersheds to prioritize TMDLs.

The selection of Soos Creek for a fine sediment TMDL does not appear to be based on environmental priority, and will require the reallocation of limited resources from Mill

Creek to Soos Creek. This reallocation will reduce overall environmental benefit and undermine local planning priorities, which were completed as required by the City's NPDES permit.

The City requests that Ecology provide a rationale demonstrating that prioritization of Soos Creek maximizes overall environmental benefit.

Data Used

The Soos Creek watershed is over sixty-six square miles, which is larger than the entire City of Kent, with significant amounts of urban development. Conversely, the actual on-the-ground sampling data used to calibrate the fine sediment model for the TMDL was very sparse; only four sediment sampling sites were used in the entire watershed, and all of those were located towards the downstream portion of the watershed, and none of which are in Kent. Two of the four sites have no TSS data from 2009-2012. Although there is a significant amount of urban development on the west side of Big Soos, and under the TMDL the west side would have extremely challenging waste load allocations, the TMDL model calibration did not include a single TSS sampling point in the subwatersheds west of Big Soos.

The four TSS sampling points appeared to have been monitored generally only once per month, but very few of the data points are during storm events, which is when the heaviest waste load allocations are proposed. This lack of storm data points would make the accurate calibration of the model, and extrapolation across tens of square miles where no samples were collected, essentially impossible.

The data used to calibrate the model was based on samples from at least ten years ago. Significant changes have occurred in the watershed from stormwater projects and best management practices, rendering the data old and obsolete. Rather than updating the data to more current conditions, the onus of proving stormwater retrofits and best management practices from the last decade have improved stormwater quality is proposed to be on the NPDES Permittees. Putting this unfunded burden of proof on agencies and other permittees in only one area of the state is patently unfair. The foundational data for the TMDL should be up to date and not require significant immediate Day-1 costs and documentation by the upstream permittees showing they've made progress for over a decade while data was not included in the TMDL analysis.

B-IBI measurements

The B-IBI measurements in the watershed that are referenced in the TMDL are generally better the closer the measurements are to the downstream end of the watershed. This is also the part of the watershed that is modeled to be most heavily impacted by fine sediment. This correlation contradicts the premise that the main cause of lower B-IBI scores in the watershed is fine sediment. The City recommends other parameters be analyzed further, before finalizing the TMDL, to determine if minimization of fine sediment is truly the highest need in the effort to improve this watershed. It would be tragic to spend enormous amounts of money and effort over decades and not be dealing with the main stressors in the creek and not solve the actual impairment.

In addition, the B-IBI scores summarized in Table 5 demonstrate a general improvement between the older data (2001-2015) and the more recent data (2015-2023). The median of the more recent B-IBI scores improved to the point where it is approaching the Puget Lowlands threshold score of 65. Scores across all percentiles included in the table improved between the older and more recent data. In addition, Figure 6 shows several subwatersheds with many B-IBI scores above the threshold. B-IBI scores in Table 5 and Figure 6 emphasize the points that the TSS data included in the TMDL model is out of date, and the approach to raising B-IBI scores in the Soos Creek watershed should be targeted, rather than a single watershed wide goal. This would allow for a more appropriate use of limited resources.

Targets

The TMDL includes a target of requiring all land uses within the Soos Creek watershed to mimic TSS loadings and the hydrology of pre-developed, natural forested condition. There is no mention of whether any mid-range targets (e.g. mimicking partially forested conditions) were considered to meet the goals for the watershed. The City recommends analyzing more moderate, targeted alternatives using more recent, on-the-ground data to be able to finalize a TMDL that might be feasibly accomplished and may more confidently improve the portions of the watershed that have lower B-IBI scores. Requiring retrofits watershed wide, including areas that are already showing higher B-IBI scores, will require limited funding and resources to be diverted from the subwatersheds, as well as other watersheds, where it is needed more.

Infeasibility of Compliance

As proposed, the Fine Sediment Waste Load Allocations are applied for each permittee in each sub-watershed with certain loads at differing flow levels. The actual flow and sediment measurements in the watershed are virtually non-existent, however. For Kent, where there is no current flow data, it is impossible to be able to demonstrate compliance with the numerical allocations as currently written in the draft TMDL. Kent has well over 100 public outfalls from its Municipal Separate Stormwater System (MS4) and years of flow monitoring would be needed to be able to discern which flow interval is occurring as they are broken out in the TMDL, and additional accompanying sampling of sediment during various storm events at many of the outfalls would be required to demonstrate where the priorities should actually be and how to meet the targets at each outfall. The decision to invest vast amounts of time and resources on projects and BMPs in Kent based entirely on model results and literature is not supportable and the establishment of large networks of flow and sediment monitoring points is not a feasible requirement to impose on the City or the various permittees.

The patchwork of treated and untreated development across the watershed, along with the virtual lack of on-the-ground flow and sediment data in the vast majority of the watershed, renders the ability to document improvements in the control of fine sediment, an impossibility.

Financial and Resource Burden

Kent has already made substantial investments in stormwater infrastructure and habitat enhancement projects in the Soos Creek watershed as well as other watersheds. However, the implementation of the BMPs, retrofits, and restoration actions outlined in the draft TMDL demand financial commitments well beyond the

City's capacity. As drafted, the costs over time would be well in the billions of dollars. The cost examples in the draft TMDL do not include financial impacts of acquisition of homes or businesses to place large water quality or flow control facilities, or the associated high costs of restoration of utilities and streets.

In most of the portion of Kent within the Soos Creek Watershed, there is extremely little available land to construct the additional flow control and water quality facilities that would be needed to mimic forested hydrology. Where land is available, it is prohibitively expensive and often constrained by existing infrastructure, private ownership, or competing public uses. Attempting to retrofit developed areas to pre-development conditions would require massive capital investment and reallocation of limited stormwater funds, with little demonstrated environmental benefit compared to addressing more pressing impairments elsewhere.

The average design and construction examples included in the stormwater implementation costs, when extrapolated across the watershed, result in costs far in excess of available funding. The average cost for design and construction of a fully treated equivalent acre is \$89,000 per acre (based on the averages provided in the costs section of the Implementation Plan). Adding a typical 30% for planning, design and project management would result in \$116,000 per acre. With average home costs in Kent's East Hill exceeding \$700,000, needed real estate acquisitions could easily double the costs of each facility or more. Applying \$232,000 per acre to the 26,700 acres needing treatment across the watershed (Table 35) results in a cost of \$6.2 billion in today's dollars, or \$155 million per year, inflating over time, entirely required of the NPDES permittees for work on this TMDL alone. This is likely an understatement of the cost, but serves to display the financial infeasibility of the requirement.

The City of Kent faces considerable financial pressures from ongoing infrastructure obligations, service demands, legislative mandates, and economic uncertainty, which would be further exacerbated by the extreme costs tied to this TMDL.

In particular, Kent would like to highlight several specific resource challenges:

- **Staff Time and Capacity:** The proposed implementation of new stormwater facilities and BMPs, as well as the ongoing maintenance and monitoring, will place a significant demand on city staff time. This includes additional hours needed for planning, permitting, design, construction, inspections, and long-term maintenance. The city's limited staff capacity means that these new requirements would divert resources away from other projects and essential services and programs, straining staff across multiple departments.
- **Land Acquisition and Installation of BMPs:** The land acquisition required for BMP installation—whether through easements or outright land purchases—presents a significant challenge. In urbanized areas like Kent, where land costs are high and availability is limited, obtaining the land necessary to install required BMPs will not be feasible without substantial financial investment.

- **Grant Management and Reporting:** While the TMDL references potential grant funding, the process of securing and managing grants is time-consuming and competitive. Moreover, grant applications often require local matching funds, and successful applications are not guaranteed. The staff time required to prepare applications, manage grants, and track expenditures and performance will be a significant burden, particularly given the complexity of many funding opportunities. Grant funding can't be depended on as a financial certainty for local municipalities to be able to meet the targets in the TMDL. And most significantly, there is no guarantee that the city will be able to secure sufficient grant funding to cover even a meaningful portion of the full costs of compliance with the proposed requirements.
- **Ongoing Monitoring and Reporting:** The TMDL requires the tracking and reporting of progress toward water quality goals. This includes ongoing monitoring of effectiveness of BMPs, and meeting reporting deadlines. The associated costs in terms of both staff time and financial resources will be substantial, as Kent does not have existing systems in place to manage such reporting on this scale.

From an environmental standpoint, requiring limited public funds to be spent achieving modeled "forested condition" hydrology in a moderately impaired basin does not represent the best use of resources for water quality improvement at the watershed scale. The requirement to achieve pre-development forested conditions is financially infeasible for the Soos Creek watershed.

Lack of Cost-Benefit Analysis

The TMDL does not estimate the total costs on local permittees or the environmental benefits relative to those costs. The cost estimated above were derived from the costs provided in the TMDL, but the analysis of the total and the requirements of each permittee, were not included. The City requests that Ecology conduct a formal cost-benefit analysis to ensure the TMDL is requiring the use of resources in the way that provides the most benefit.

Adaptive Management

Adaptive management is necessary in long term projects and programs to allow the managers of those projects and programs to deal with unknown or changing conditions. The TMDL states that "if the wasteload and load allocations are met but water quality standards are not attained, data collected to inform the adaptive management will be used to assess if the wasteload and load allocations need to be updated..." However, the scarcity of data that has been used to model the watershed and determine the initial wasteload and load allocations will not allow Ecology or the permittees to determine whether the allocations are the reason the water quality standards might not be attained. The specific allocations in many of the permittees responsible for meeting the allocations are based entirely on modeled numbers that have not been calibrated by actual data within their jurisdictions.

Conclusion

The City of Kent remains committed to water quality improvement and the health of our watersheds. However, we strongly urge Ecology to revise the Soos Creek TMDL to better address the questions about the analysis and prioritization of fine sediment in this watershed as well as the resource and financial implications for local permittees.

Kent welcomes continued dialogue and partnership to ensure that the TMDL is both effective and feasible for all permittees involved. Thank you for considering these important concerns.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Mactutis", with a stylized flourish at the end.

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Environmental Engineering Manager