King County | Wastewater Treatment

Director's Office
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Seattle, WA 98104-3854

August 27, 2025

William Weaver, PSNGP Permit Writer
Washington State Department of Ecology
Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

King County Comments on Draft Voluntary Puget Sound Nutrient General Permit

Dear Mr. Weaver,

Thank you for the opportunity to offer comments on the Washington State Department of Ecology's (Ecology) above-referenced draft permit. The King County Wastewater Treatment Division's (WTD) mission is to protect public health and the environment, and we are committed to doing our part to address dissolved oxygen in Puget Sound. Areas with low dissolved oxygen are influenced by a variety of factors, human-caused and natural, and an effective strategy will be guided by science and include multiple measures, an adaptive strategy, and strong partnerships. We support an approach using a general permit and an advanced restoration plan as workable mechanisms to address human impacts on Puget Sound dissolved oxygen.

Upgrading the dozens of wastewater treatment plants that discharge to Puget Sound for nutrient treatment will be one of the largest investments in water quality in state history, affecting communities and agencies large and small. Based on our preliminary planning, upgrading King County's wastewater treatment system may cost on the order of $10 to 20 billion or more in today's dollars, will require even higher rates imposed on communities, households, and businesses, and could take decades to implement.

There are also numerous areas where continued science is needed to resolve uncertainties and gaps, and where more consensus is needed, to ensure public dollars will result in tangible benefits. Regulators, utilities, Tribes, and interested parties have been in costly litigation for years, and this pattern could continue without establishing a regulatory framework that we can be confident will result in clear outcomes and cost-effective mechanisms to address human impacts on dissolved oxygen in Puget Sound. **With such high stakes, we must get this right.**

Our comments on the draft voluntary Puget Sound Nutrient General Permit (PSNGP), along with our comments on Ecology's draft Puget Sound Nutrient Reduction Plan (NRP) and Salish Sea Model Report (sent under separate cover and attached as reference), identify questions, concerns, and recommendations for improving the nutrient management framework. We respectfully ask that Ecology:

- Work collaboratively with regulated agencies and interested parties to find more consensus and reduce the chance for additional costly litigation.
- Reevaluate the marine dissolved oxygen standards to determine what standards are needed to protect aquatic life in the Sound and whether and to what extent the standards needed to protect aquatic life are reasonably and feasibly attainable.
- Extend the draft PSNGP timeline to five years (i.e., to December 31, 2030) to align with the draft Nutrient Reduction Plan timeline and provide necessary regulatory stability and certainty while nutrient planning work proceeds.
- Continue to maintain the original PSNGP Nutrient Reduction Evaluation (NRE) planning assumptions, including PSNGP treatment targets, since many utilities have continued work in good faith during litigation and permit gaps.
- Reconcile any differences between the proposed NRP treatment requirements and NRE planning targets through thorough discussion, analysis, and collaboration with the proposed Technical Advisory Committee.
- Explicitly state in the PSNGP that Action Level exceedances are not permit violations.
- Recalculate WTD's Action Levels to accurately represent the 99-percentile values described in the Fact Sheet.
- Define corrective actions to require additional optimization and long-term planning to ensure early actions do not result in stranded assets and wasted ratepayer money.
- Clearly define Ecology's nutrient regulatory phasing and how the early optimization planning phase permitted under the draft PSNGP fits within the overall pathway.
- Remove or revise special condition S3 to ensure consistency with applicable case law.
- Take the time to ensure documents, materials, and regulations reflect areas of broad scientific consensus and support collaborative mechanisms to resolve areas where consensus is still needed.

Nutrient requirements add to the larger context of dramatic capital expansion

We appreciate that Ecology recognizes that wastewater treatment plants are essential public facilities that must continue to operate reliably to protect water quality and support planned growth. King County is facing significant increases in our capital program and sewer rate, driven by multiple concurrent state and federal regulatory requirements, pressing needs for asset renewal and replacement, and capacity improvement needs to support growth mandated by the state Growth Management Act and local comprehensive plans. WTD's capital program is forecasted to triple or more in size in the next five years, from $300 million per year to $1 billion per year or more.

The level of expenditure and rates will not just dramatically grow in the near term but will also remain high over the 20-year forecast period. The "stacking effect" of multiple drivers (regulatory, capacity, and asset management) on our capital program and resultant significant sewer rate increases means a doubling of King County's sewer rate in the next six years for households and businesses across our service area. This forecast does not yet include projects and costs for several additional regulatory needs, including nutrients and chemicals of emerging concern (CECs) such as PFAS. In sum, we are facing not just a single mountain to climb but an extensive mountain range.

Regulatory framework and timeline

We support a general permit as the permitting mechanism for nutrients since it offers a consistent approach across dischargers and includes flexibility like the bubbled action level for utilities (like WTD) that operate multiple wastewater facilities. The nutrient optimization framework supports reasonable early actions to reduce nutrients using the wastewater treatment processes in place today at the plants. That said, the objectives of the early nutrient regulations and the pacing of additional regulatory requirements need further clarification and refinement.

Like most Puget Sound wastewater plants, WTD's plants were not designed for nitrogen removal. While it is reasonable to explore minor operational enhancements within each plant's individual treatment process and footprint to reduce nitrogen, it is not reasonable to require utilities to design and implement extensive capital projects under the early action framework. The draft PSNGP should be revised to clarify that action level exceedances are not permit violations and to focus corrective actions to evaluating why the action level was exceeded and making adjustments to the existing treatment systems and processes that do not require significant capital or other substantial changes. Capital projects take years to design, obtain funding, and construct, and must be undertaken simultaneously with operating the system reliably and meeting existing regulatory obligations. As we previously noted, WTD's capital program is already growing dramatically to meet current regulatory obligations and asset management needs to ensure system reliability. It is not financially or technically feasible for WTD to develop and implement additional significant capital projects for nutrient corrective actions within the proposed corrective action timeline of approximately two years.

We ask that Ecology further clarify the nutrient regulatory timelines and the objectives for each phase and to do so in collaboration with utilities. The proposed short duration of the draft PSNGP (about two years, late 2025-2027) should be better aligned with the draft NRP, which indicates that facility-specific effluent limits would be established by 2031. We request a five-year duration for the PSNGP so that we can focus on optimizing nitrogen removal using the existing wastewater treatment processes and planning for larger wastewater upgrades. Significant capital upgrades should not occur until the water quality-based effluent limits are established and compliance schedules can be developed. Accordingly, this approach requires a compliance framework that emphasizes planning and meaningful investment in nitrogen removal. The current compliance framework of implementing costly, short-term corrective actions could result in stranded assets and wasted ratepayer money. We need to ensure that investments are implemented thoughtfully and can support larger nutrient upgrade planning. King County continues to investigate opportunities to complement optimization as we replace equipment and add capacity upgrades, so the PSNGP should include flexibility to support this approach.

Action Level recalculation

Ecology has stated in both the 2021 PSNGP Fact Sheet and the revised draft PSNGP Fact Sheet that the intent of the Action Level calculation methodology is to create a 1% chance that a treatment plant would exceed the Action Level in any given year when operated in a manner similar to its historical record. King County's Brightwater, South Plant, and West Point plants have each

exceeded Ecology's Action Level for at least one year within the timeframe (South Plant twice). King County requests that Ecology recalculate our Action Levels to align with the stated goal of 99-percentile values. The impact of a potentially underestimated Action Level could be amplified if the Action Levels are extended to 2031 without considering a decade's worth of population growth.

Treatment planning targets in the original NRE

The PSNGP requires utilities to submit a NRE that identifies the All Known, Available, and Reasonable Treatment (AKART) alternative and the 3 mg/L Total Inorganic Nitrogen (TIN) seasonal treatment alternative. The NRE is intended to support treatment optimization, assess feasibility of additional treatment upgrades at each facility, and estimate impacts on rates and affordability to build the next phase of nutrient reduction. King County has proceeded in good faith with NRE planning under the requirements of the original PSNGP and recommends that NREs be submitted based on the original PSNGP treatment planning targets. Additional planning requirements should be developed only after receiving and reviewing NRE results and discussing with the proposed Technical Advisory Committee.

We are concerned that the draft NRP seems to 'move the goal post' for wastewater treatment, proposing wastewater nitrogen loading targets beyond those we are evaluating in the NRE. Most significantly, the marine point source nitrogen load targets are based on flows and loads from 2014 and therefore ignore the growth over the past eleven years and the impact on a utility's ability to meet future growth. This means that as flows increase, the concentration limit continually ratchets down to achieve the load reduction. King County estimates that as soon as 2030, the concentration limit will go beyond Ecology's definition of the limit of technology.

Additionally, the NRP's change of effluent load targets based on Total Nitrogen (inclusive of organic nitrogen) instead of TIN also could result in a treatment plant needing to achieve *negative* effluent TIN concentrations if an allowance for organic nitrogen is not afforded, especially as growth occurs. Consistent with the original PSNGP, WTD has continued work on the NRE analysis. Early findings show that meeting the original NRE targets will be highly costly and difficult. With the NRP's more aggressive treatment targets, it is unknown if these can be technically achieved at all.

Special Condition S3

King County appreciates that Ecology has removed Special Condition S3.A to be consistent with the U.S. Supreme Court's recent decision in *City and County of San Francisco v. EPA*, which prohibits "end-result" permit conditions, such as those that generically require compliance with water quality standards instead of identifying the numeric discharge limits or specific management practices needed to comply. Special Condition S3 in the draft PSNGP, however, retains a statement that "Ecology presumes compliance with water quality standards when a Permittee complies with all the terms and conditions of this General Permit, unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to an exceedance of water quality standards." This condition is ambiguous and should be removed as well. If it is intended to prohibit causing or contributing to a violation of water quality standards under the circumstances described, then it is inconsistent with *San Francisco*. If it is merely intended as a

statement that Ecology may modify the PSNGP or require the Permittee to obtain coverage under a different permit under the described circumstances, then it more appropriately belongs in the Fact Sheet and should be moved there for clarity.

King County and Ecology both have an on-going responsibility to protect the health of Puget Sound, and we are committed to taking effective actions to manage nutrients. We hope our comments can support collaborative dialogue with Ecology to refine the voluntary PSNGP. Please find the attached detailed comments on the draft voluntary PSNGP and associated Fact Sheet. If you have any questions, please contact Jacque Klug, WTD Nutrient Management Coordinator, at jacque.klug@kingcounty.org or 206-477-4474.

Sincerely,

Signed by:
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Kamuron Gurol, Director
King County Wastewater Treatment Division

Attachments:

- Appendix A: King County's Detailed Comments on the Draft Puget Sound Nutrient General Permit
- Appendix B: King County's Comments on the Draft Puget Sound Nutrient General Permit Fact Sheet

cc: Rachel McCrea, Water Quality Section Manager, Washington State Department of Ecology (Ecology)
Jon Kenning, Water Quality Program Manager, Ecology
Jeremy Reiman, Senior Environmental Planner, Ecology
Jeff Killelea, Permit and Technical Services Section Manager, Ecology
Chad Brown, Watershed Unit Supervisor, Ecology
Sean McKone, Municipal Wastewater Permits Unit Supervisor, Ecology
Sean Wilson, Senior Facility Management Engineer, Ecology