PLANNING & PUBLIC WORKS

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PierceCountyWa.gov/PPW

Josh Diekmann - Director

August 27,2025

Jeremy Reiman
Department of Ecology, Water Quality Program
PO Box 47600
Olympia, WA 98504-7600

Subject: **Draft Puget Sound Nutrient Reduction Plan – Request for Comments**

Dear Mr. Reiman:

Thank you for the opportunity to review the Draft Puget Sound Nutrient Reduction Plan. Pierce County is providing this letter in response to the request for public comment.

We fully understand the challenges faced when addressing the dissolved oxygen levels in the Puget Sound. Pierce County is supportive of efforts to overcome these challenges. We have significant concerns that Ecology's proposed solution to this complex and costly problem will be unfairly burdensome to wastewater utilities who have proactively invested to meet previously established nutrient reduction levels. It should be acknowledged that wastewater treatment plants, in general, discharge cleaner water to the Puget Sound than other anthropogenic sources.

Pierce County has made significant investments in our treatment plant to plan for future growth, which was designed with water quality protection at the forefront, following Ecology's direction over the past decade based on Total Inorganic Nitrogen (TIN) target values. We have conducted numerous pilots and invested millions of dollars to meet the requirements of TIN limits provided in all documentation and presentations from Ecology to date. Evaluations based on TIN limits will need to be redone to determine the treatment plant modification needed to meet Total Nitrogen (TN) limits. The shift from a focus on TIN removal to TN removal will likely result in reduced treatment capacity, impacting our ability to meet future growth and housing needs. Additional studies and significant infrastructure investments will be needed to restore treatment capacity and meet new TN requirements at a substantial cost to rate payers.

Detailed comments are included in the attached spreadsheet.

If you have any questions, need additional information, or would like to arrange a meeting to discuss these permit review items, please do not hesitate to contact Patrick Kongslie via email at patrick.kongslie@piercecountywa.gov or by telephone at (253) 798-3031.

Sincerely,

Steven L. Hartwig

Steven L. Hartwig, PE
Utilities Manager

Cc: Anita Gallagher – Government Relations Director
Josh Diekmann, PE, PTOE – PPW Director
Brandon Smith, PE – PPW Deputy Director
Patrick Kongslie – Utilities O&M Manager
Corina Hayes – Utilities Planning Manager
Laurie Pierce – Wastewater Operations Manager

Draft Puget Sound Nutrient Reduction Plan – Pierce County Sewer Division Comments August 2025			
Plan Section/Pg. #/Other	**Current Language**	**Revised Language**	**Comments/requested action**
Puget Sound Nutrient General Permit. Table 1. pg 21	Table 1 summarizes the requirements of the permit by facility size category. The 2022 General Permit conditions set action levels for total inorganic nitrogen (TIN) loading at existing discharge levels for large and moderate-sized facilities and required the facilities to take specific actions if the reported TIN level exceeds the action level.	**The 2022 General Permit conditions set action levels for total inorganic nitrogen (TIN) loading at existing discharge levels for large and moderate-sized facilities and required the facilities to take specific actions if the reported TIN level exceeds the action level. Publication 23-10-006 (Research & Recommendations for Water Quality Trading for Permittees Under the Puget Sound Nutrient General Permit) includes a summary of the requirements of the the permit by facility.**	Recommend removing the table from the document, as both the requirements and the permit were invalidated. The level of detail seems unnecessary and footnotes are inconsistent with the recent re-issuance of the general permit. A simple reference to the publication 23-10-006 should be included in place of the table.
Nitrogen Loading Targets. Pg 31	Total nitrogen was selected as the parameter of interest for targets as it is inclusive of all nitrogen species. Basin-wide TN targets provide flexibility in the implementation tools available to achieve reductions. While we have not assigned targets for carbon, this section describes the assumptions in organic carbon reductions associated with meeting TN targets. Organic carbon assumptions are based on previous evaluations of nutrient removal technologies at WWTPs (Tetra Tech, 2011).	**The use of Total Inorganic nitrogen was selected as the parameter of interest for targets as it is consistent with previous implementation stratigies**.	Recommend using TIN instead of using TN or DIN to be consistent with the General permit and previous studies and treatment plant designs to address BNR. Changing to different species causing challenges to understanding the full impact of the reduction plans on the facilities. Also not all nitrogen species can be treated by treatment plants or have the same impact on DO. Our plant is designed around TIN and if a different nitrogen species is used, our plant would need to be reevaluated to determine our capacity with TN or DIN.
Selected model scenario. Pg 31	As with all the refined Phase 2 scenarios, nutrient load reductions were applied by reducing nitrogen and carbon concentrations relative to their 2014 concentrations. Flows were kept constant at 2014 levels. This approach was applied to both marine point sources and watershed loads.		Request that you use data gathered under the Puget Sound Nutrient General permit and other more recent data that reflects changes in treatment, flows and concentration. Using more recent and representative data more accurately represents the current situation. This data should include any plant upgrades, growth, additional data sets.
Selected model scenario. Pg 32	Our modeling approach assumed that all facilities reducing DIN loads would also achieve an annual average carbonaceous biochemical oxygen (CBOD) concentration of 8 mg/L year-round (Tetra Tech, 2011), which is translated to a facility specific reduction in dissolved organic carbon (DOC) load in the model (McCarthy et al., 2018).		We would like to see the data related to the association between CBOD and TN and additional model runs that support the correlation between CBOD and TN. Please provide any outliers that don't support the correlation between CBOD and TN. Additionally if this assumption is accurate consider not establishing a CBOD level of 8. If CBOD limits remain provide additional information about when they would be applied.
Pg 41 PSNRP and Pg. 8 - Appendix H	Ecology may also set interim limits consistent with the AKART standard for facilities that already achieve this level of treatment. Likewise, any facility designed and constructed to achieve the AKART standard may have an interim AKART-based limit rather than a performance-based limit. Interim limits may also require phased incremental reductions in nutrient discharges where feasible.	**Remove language - this does not appear to comply with standard rulemaking.**	This language could be interperted to single out facilities who were able to meet limits included in the 2022 Nutrient General Permit and require additional reductions. This would only apply to very few facilities and could be applied inequatably.

Compliance schedules. Pg 41	For those WWTPs covered under the 2022 General Permit, nutrient reduction evaluations and AKART analyses we will receive will include essential information Ecology can use in establishing any compliance schedules and interim loading limits in the next and future phases of the General Permit.		This statement does not acknowledge that the General Permit was invalidated and there is currently no requirement to complete these evaluations. We agree that Ecology should consider this information, but acknowledge that it may not be available for a number of years due to the invalidation of the General Permit.
Water clean-up plans for watersheds. Pg 47	Every year Ecology's Northwest and Southwest regional offices have the opportunity to scope and propose new water cleanup plans to be initiated with available resources and staff capacity.		As resources and staffing are often limited, how will Ecology ensure that development of water clean-up plans does not continually get pushed off due to staffing or resource levels? Consider working with the Ecology's combined fund section to prioritize funding grant dollars towards implementation of these clean-up plans.
Financial Assistance. Wastewater. pg 53	For perspective, a 2011 economic evaluation of nutrient removal at WWTPs in Washington found that capital improvement, operating, and maintenance costs of implementing nutrient removal technology to treat WWTP effluent to 8 mg TIN/L during the dry season in WRIA 1 (greater Bellingham region) alone would cost $166.3 million, in 2010 dollars (Tetra Tech 2011).		There is inadequate federal and state funding to pay for regular treatment plant improvements. The additional funding needed to implement BNR will compound this issue. Funding priority should be given to treatment plant improvements that result in the highest reduction and most progress towards meeting the goals of this plan. Receiving federal/state funding should be a part of evaluating "reasonability" of interim limits and the schedule to develop and meet WQBELs.
Schedule and Milestones. Pg 58	We intend to finish all necessary water clean-up plans in Puget Sound's watersheds by 2048 and have all necessary implementation measures in place to achieve our watershed targets by 2050.		If the plans are not finished until 2048 it is unlikely they will achieve real reduction until well after 2050. Consider aligning watershed implementation with point souce implementation both will need time to complete projects that result in reduction.
Appendix H. Pg 4	Ecology is interested in feedback as to preferred options or alternative approaches to translating modeling results into WQBELs.		Recommend waiting to establish WQBELs to allow time to gather necessary additional data that will come from the re-issued Puget Sound Nutrient General permit or reports required by nutrient limits being added in NPDES permits.
Appendix H. Pg 4	Ecology seeks feedback on addressing the discrepancies between the draft Puget Sound Nutrient Reduction Plan point source load targets and the final Budd Inlet TMDL WLAs.		Clarification on which document PSNRP or TMDL will specific treatment plants be subject to.
Appendix H. Pg 5	Ecology believes the best approach is to use mass-based loading limits unless a permittee specifically requests concentration-based limits. Ecology seeks feedback on the appropriate flow statistic to use as a limit if a permittee requests a concentration-based effluent limit in lieu of a loading.		We would support a mass based approach to allow for flexibility. If someone chooses to be regulated using concentration rather than mass, their limit should be tied to their annual average daily flow.

Appendix H. Pg 5	Total nitrogen includes both organic and inorganic forms of nitrogen. From an ecological perspective, both organic and inorganic forms of nitrogen can cause oxygen depletion in the environment. The nitrogen removal processes at many domestic WWTPs start by converting organic forms of nitrogen to inorganic forms (e.g. nitrate and nitrite) before finally converting them into nitrogen gas (N2). Monitoring for TIN alone, especially in domestic WWTPs, can result in the false impression that their treatment process is generating nitrogen when in fact they are simply converting influent organic nitrogen to an inorganic form.		Recommend additional model runs are completed to demonstrate alignment with scientific methodology.
Appendix H. Pg 6	Ecology would like feedback on the preferred averaging period selected for final WQBELs.		Recommend establishing annual limits instead of monthly or seasonal limits.
Appendix H. Pg 9	Ecology's next step is to consider public feedback on the approaches described in this Appendix via the comment period for the draft Puget Sound Nutrient Reduction Plan.		Recommend not limiting feedback on the approaches to the comment period associated with the PSNGP and embrace the purpose and intent of establishing an Advisory committee.