



CITY OF TACOMA

COMMENTS ON THE PRELIMINARY DRAFT PUGET SOUND NUTRIENTS GENERAL PERMIT

EXECUTIVE SUMMARY

MARCH 15, 2021

The City of Tacoma (City) thanks the Department of Ecology and its staff for providing the preliminary draft Puget Sound Nutrients General Permit for stakeholder review. The City is aware that Ecology has undertaken a substantial effort to develop this preliminary draft to allow meaningful feedback, and appreciates the opportunity to do so. The City understands the impact of nutrients on the aquatic environment and, like Ecology, wants to determine what role and impact wastewater operators have in depletion of dissolved oxygen. Accordingly, the City has a significant interest in the development of the Puget Sound Nutrients General Permit (PSNGP).

Tacoma operates two wastewater treatment plants that discharge into Puget Sound at Commencement Bay. The Tacoma plants provide an essential public service and do so with the highest goals of providing cost effective wastewater treatment while maintaining and enhancing water quality standards. The proposed regulations would greatly impact facility operations and costs to our ratepayers. The City recognizes the importance of the PSNGP and has been actively involved in the Advisory Committee, collaborating with other stakeholders, and participating in other meetings Ecology has held in regards to nutrients in Puget Sound (e.g. Nutrients Forum). In addition, Tacoma is a primary funder of the Salish Sea Modeling Center and is responsible for making this important tool more accessible and useful in determining strategies for protecting Puget Sound. Tacoma is also a founding member of the Puget Sound Clean Water Alliance, an organization dedicated to furthering the understanding of forces effecting the health of Puget Sound through the gathering of sound scientific, environmental, and economic data.

After reviewing the Preliminary Draft Permit released by Ecology on January 26, and revised on February 10, the City provides the following executive summary highlighting its key concerns. The City's detailed comments are attached to this executive summary.

1. Individual Permit and PSNGP Concurrent Compliance Legality: The City has concerns regarding Ecology's authority to require dischargers to be covered by both a general and individual permit. The proposed general permit expressly applies only to dischargers that are already covered by individual permits. Federal regulations state that general permits shall be written to cover one or more categories or subcategories of discharges or facilities not covered by individual permits (40 CFR 122.28). Further, the permit shield contained in the Clean Water Act (CWA), 33 U.S.C. § 1342(k), also provides that compliance with the terms and condition of a permit is deemed in compliance with the CWA. Accordingly, as a matter of law compliance with the terms of an individual permit is deemed to be compliance with the CWA. Ecology simply does not have the legal



authority to issue mandatory general NPDES permit coverage for dischargers already regulated under individual NPDES permits. Further, even if it had such authority, issuance of the general permit would result in termination of the City's individual permits pursuant to WAC 173-226-200(5) and for some jurisdictions, would result in immediate termination of the general permit pursuant to WAC 173-226-080(3) and WAC 173-226-200(7).

2. Ecology's Issuance of Three New Rules related to Nutrient Removal: The City is concerned that the following actions by Ecology constitute rules that were not adopted in compliance with the Administrative Procedure Act: Ecology's action on or about January 15, 2019, establishing a new Dissolved Oxygen ("DO") standard that applies at any time and at any location within Puget Sound; Ecology's determination on January 15, 2019, of the extent of DO "impairment" in Puget Sound and that all wastewater treatment plants discharging to Puget Sound are causing or contributing to the alleged impairment; and, Ecology's determination on January 11, 2019, that it would require and impose annual loading limits for total inorganic nitrogen ("TIN") based on the amount of TIN a municipal wastewater treatment plant currently discharges to Puget Sound, also referred to as "current performance."
3. Modeling concerns for a Better Scientific Foundation: Ecology's decision to move forward with the PSNGP and its 3 decisions described in section 2 above, are based on Ecology's application and interpretation of the Salish Sea Model to evaluate compliance with the State's Dissolved Oxygen (DO) Standard. Better and more transparent explanations are needed around input data assumptions and the basis for Ecology's conclusions about DO impairment in Puget Sound including, but not limited to: using non-representative data from the wastewater treatment plants (monthly, quarterly, and annual data), addressing scientific uncertainties, identifying the dominant species or beneficial use to evaluate impairment and identifying where the standard should apply to protect that species or beneficial use. While the model has been peer reviewed, it is the City's understanding that Ecology's application (e.g. input assumptions and post processing) of the model has not been peer reviewed. Ecology's modeling effort should be transparent and available for other users to replicate and study the issue further.
4. Concerns about the DO standard: The City shares the concerns of other wastewater treatment plant operators that the current water quality standard was adopted in 1967 with no demonstrated scientific basis supporting the standard and that a new water quality standard has not been developed in compliance with statutory and regulatory requirements adopted over the years.
5. Cost Benefit Analysis: Ecology has not demonstrated how the proposed permit requirements will produce benefit to Puget Sound's ecosystem. The proposed permit requirements will significant investment of ratepayer funds. The sole basis for these requirements is a showing a modest water quality improvement (0.2 mg/L DO). It has



not been demonstrated by Ecology that this will have any impact on dissolved oxygen levels that will measurably benefit aquatic life. It is unreasonable for Ecology to proceed on this basis without first considering the cost to the ratepayers as compared to the commensurate benefit that may be achieved.

6. Need for Investigation of other TIN Sources: Ecology needs to evaluate and provide a better explanation about how TIN sources other than Washington WWTPs are affecting DO in Puget Sound waters, specifically the role of ocean inputs, freshwater inputs, and discharges originating in British Columbia. This evaluation is needed to ensure potential significant investments made by Puget Sound WWTPs have a reasonable nexus to the actual level of impact to Puget Sound.
7. Need for a Targeted Reasonable Potential Analysis: Based on the Bounding Scenarios Report, it does not appear that Ecology did an analysis to look at each WWTP discharge separately or even at a watershed basin level to confirm every wastewater treatment plant has a reasonable potential to cause or contribute to DO impairment based on near or far field impacts. In addition, 40 CFR 122.44(d)(1)(iii) requires that the Reasonable Potential Analysis consider “the variability of the pollutant or pollutant parameter in the effluent”. The variability of TIN would not be available in the available monthly, quarterly or annual nutrient data points from the WWTPs. Ecology has made no effort to evaluate this variability.
8. Compliance concerns around TIN action levels: Ecology has indicated it will not enforce the TIN action levels as effluent limits. However, this will not prevent third party lawsuits against Puget Sound WWTPs to litigate values that are reasonably interpreted as effluent limits.
9. Arbitrary 5% Growth Allowance: Ecology has used an arbitrary 5% growth allowance for the second TIN action levels, which may not reflect actual growth that the City of Tacoma will experience until Ecology establishes a water quality based effluent limit (WQBEL). The City suggests using a more credible and accepted method with the Puget Sound Regional Council (PSRC) growth projections instead.
10. Differing Permit Conditions and Exceedances. Ecology has stated at Section II.D that Ecology will work to streamline permit compliance between the proposed general permit and active individual permits. Ecology has also stated at Section V.F of the PSNGP that Permittees will still be in compliance with their individual permits for BOD₅, TSS, and/or pH in the event of an intermittent exceedance of these limits when caused by optimization efforts or pilot studies related to nutrient reduction. The City is concerned that Ecology does not have authority to modify the individual permit through issuance of a general permit. In the absence of a modification to the individual permit, an intermittent exceedance will still be a violation of the individual permit and conflicting



requirements will remain in both permits which could trigger third-party enforcement actions.

11. Need for Compliance Schedules: The monitoring requirements in the draft permit are robust and will require the City to hire two full time employees to support the monitoring effort it will impose. In addition, the City is not certified for all of the parameters Ecology has proposed. Ecology needs to consider a more realistic compliance schedule to comply with the new monitoring requirements than allowing 30 days for compliance. In addition, the City would like to propose that instead of the monitoring requirements Ecology has proposed to consider annual waste characterization efforts that would establish representative seasonal data without requiring additional long-term staffing.
12. Future Need for Compliance Schedules: The City has recently completed planning cost estimates for upgrading its two treatment plants for nutrients removal with resulting a cost range of \$314M – 1.314B. Rate impacts for earlier planning capital cost estimates would result in rate increases of at least 200 – 300%. Consideration for a longer compliance schedule in the future will need to be included in future permits for time to implement, affordability adjustments, land acquisition, and implementation.
13. Annual Optimization Requirements: The City would like to propose that instead of an annual report submittal that Ecology consider a report every 3 years or at the end of the permit term to allow for time to collect baseline data, evaluate options, pilot options, and evaluate the pilot data.
14. Proposed Tier 3 Requirements: The Tier 3 planning requirements are extensive as written and attempting to parse those activities by facilities sizing may further complicate an already complex set of planning considerations. It may be well advised to allow individual utilities of each size to make their own site-specific decisions about what constitutes a practical and feasible Tier 3 action that best fits their facility.

Thank you for your consideration. Please see the attached document for the City's more detailed comments.

Attached: Puget Sound Nutrient General Permit – Preliminary Draft City of Tacoma Comments



Puget Sound Nutrient General Permit – Preliminary Draft

March 15, 2021

Ecology issued a Preliminary Draft Nutrient General Permit for Puget Sound January 27, 2021 at the link below and attached.

<https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Nutrient-Permit>

Ecology updated the Preliminary Draft on February 10, 2021.

Overview and Summary

Ecology states that the preliminary draft includes conceptual approaches proposed for inclusion as the main components of the permit and is accepting public comments until March 15, 2021.

The following is a brief summary of observations.

Preliminary Thoughts

There are both positive and negative aspects of what Ecology has published as a Preliminary Draft of the Puget Sound Nutrient General Permit. The presentation of the Preliminary Draft Permit is a text heavy report document that does not portray the actual permit structure that Ecology plans to publish in the actual Draft Nutrient General Permit. Consequently, at this time it is unclear how the action levels discussed in the preliminary draft will be translated into the permit structure, and whether the action levers will constitute effluent limits with compliance implications.

Additional thoughts:

- Opportunity to Review/Revise Effluent Data Used for AL₀ and AL₁
 - The opportunity presented by Ecology to review and revise the effluent data used to calculate action levels is positive because many utilities will have site-specific information that informs the raw data sets in ways that may influence the resulting annual loading calculations. The City of Tacoma is still reviewing the data sets that Ecology used and will have comments to include as part of the next draft permit.
- Compliance Schedules Provided?
 - The Preliminary Draft Permit does not address compliance schedules for implementation of nutrient reduction improvements associated with potential Water Quality Based Effluent Limits (WQBELs). Under Tier 3, the Preliminary Draft states that final design is to begin immediately in 2nd permit term once WQBELs are established. It should be noted that existing NPDES permittees are entitled to a compliance schedule under state regulations to adapt to new discharge requirements. The expectation for utilities to need multiple permit cycles to implement full-scale nutrient removal treatment improvements needs to be incorporated into all permitting, optimization, and nutrient removal planning.
- Effluent Reuse Not Included
 - Ecology doesn't appear to have included effluent reuse as a consideration for optimization in any of the optimization tiers in the Preliminary Draft General Permit. Effluent reclamation and reuse should be included in nutrient reduction planning for Puget Sound. Planning for effluent reclamation and reuse that would divert nutrient



loadings from Puget Sound may also have other benefits for the overall watershed, including provision of a new water supply. Planning for effluent reuse may influence other treatment process considerations, as well as effluent management opportunities that may represent a better approach to overall one water management. This supports the optimization of not only nitrogen loadings to Puget Sound but optimization of water management that considers wastewater as resource for beneficial use.

- Monitoring
 - Some utilities have expressed concern about the extent of monitoring requirements specified in the Preliminary Draft General Permit. A few comments for considerations related to monitoring are as follows:
 - Basing the monitoring requirements in Section IV. Monitoring and Reporting on Maximum Month Daily Flow (MMDF) may exaggerate the extent of monitoring requirements. It may be more appropriate to base the monitoring levels on actual wastewater flows.
 - The extensive influent nitrate/nitrite (NO_x) monitoring requirements are unnecessary. The influent nitrogen loadings are dominated by ammonia-nitrogen and frequent monitoring of ammonia is the priority for characterizing influent loadings. Influent NO_x monitoring 4 times per week is unnecessary.
 - Consideration should be given to substituting rapid analytical methods and on-line probes used for process control in nutrient removal facilities for at least part of the monitoring required in the Nutrient General Permit to provide useful data that may be acquired more economically than using the full blown EPA approved analytical methods. EPA-approved methods in 40 CFR Part 136 as is generally required in NPDES permits in Appendix A List of Pollutants and Analytical Methods, Detection Limits, and Quantitation Levels is costly and may require the use of outside analytical laboratories for many Puget Sound utilities. Some instrumentation manufacturers maintain reference lists of EPA-approved methods that are equivalent for use for compliance monitoring as methods listed in the federal regulations, along with associated acceptance letters (e.g. <https://www.hach.com/epa>).
- Exceedances of AL₀ Triggers Tier 2 Nutrient Reduction Action
 - Exceeding the AL₀ triggers a much more extensive array of optimization planning requirements in Tier 2 as outlined in the Preliminary Draft. Tier 2 may require a facility to invest in equipment or tools for successful implementation. It will take time for facilities to acquire the equipment or tools for implementation (e.g. planning, purchasing, delivery time, and installation).
- Exceedances of AL₁ Triggers Tier 3 Nutrient Reduction Action
 - Exceeding the AL₁ trigger directs utilities to the Nutrient Reduction Evaluation pathway with requirements during the 1st Permit Cycle (if not already achieving TIN <10 mg/L). The Tier 3 requirements for the Nutrient Reduction Evaluation are far more extensive than the optimization requirements under Tiers 1 and 2.
- Coordinated Reporting of Loadings Among Dischargers
 - Tracking of annual loadings under the General Permit does not seem to be coordinated in a way that would have the same schedule basis for reporting for all dischargers. It may be helpful in terms of overall Puget Sound load tracking to synchronize the reporting schedule for all under the General Permit and individual permits on the same



period of time, either on a calendar year basis January 1 through December 31, or on a seasonal basis October 31 through September 30.

- Nonpoint Source Loadings
 - The Preliminary Draft General Permit does not address nonpoint source loadings in a watershed approach either by monitoring and tracking nonpoint source loadings, or nonpoint source load reduction. It is the City's understanding that Ecology has not addressed nonpoint source loads in the Salish Sea Modeling efforts and should do so before moving forward with regulations on wastewater treatment plants.
- Tributary Point Source Loadings Not Addressed
 - Point source discharge contributions upstream of marine waters are not addressed in the Preliminary Draft General Permit or in Ecology's Bounding Scenarios Report. Ecology should work to understand this impact before moving forward with only regulating the direct marine dischargers to Puget Sound.

Ecology Requested Input

Ecology has requested input on a number of discussion topics included in dialog boxes in the preliminary draft of the General Permit.

Page 9: Do reviewers have feedback on whether the 95% UCL or 99% UCL is more appropriate for AL0? Ecology has considered both and would like additional input.

- The 99th percentile statistic for the upper confidence level is preferred. The 99th percentile captures the widest variability in the bootstrap calculations of the mean loading. The 99th percentile also seems more appropriate given the data set is not representative. Since the data for the City's two wastewater treatment plants is monthly, the variability of nutrients in the effluent cannot be representative with one data point a month. Furthermore, this data set could not be used to rate the facility for nutrient removal since it is not a representative data set.

Page 10: Do reviewers agree with this approach proposed for plants that have existing nitrogen-related effluent limits in their individual permits?

- Facilities that already have some level of nitrogen removal as a result of having existing effluent limits for ammonia or total nitrogen may find that the Tier 1 and Tier 2 optimization activities are less meaningful or do not resonate with what is relevant for those specific facilities. Tier 1 and Tier 2 are not relevant since these facilities already optimize daily for nutrient removal.
- The Tier 1 and Tier 2 optimization activities are more fitting with secondary treatment facilities that currently have no nitrogen removal, although some utilities may find that there are additional opportunities even if they are already operating nitrogen removal.

Page 10: Do reviewers agree with the approach proposed for calculating AL1 for facilities that have historically been able to maintain their annual average TIN effluent concentration below 10 mg/L?

- Facilities that already achieve effluent nitrogen levels of 10 mg/L should be able utilize 100% of their design flows to make full use of the facilities that have been capitalized to control nitrogen discharges, at least until such time that water quality-based effluent limits (WQBELs) may require that consideration be given to further nitrogen reduction requirements. To require facilities that already treat to the 10 mg/L level for nitrogen to jump to Tier 3 actions is a disproportionately large leap forward to more advanced, expensive, and difficult undue and



challenging to operate facilities prior to when some secondary facilities will have even undertaken Tier 1 optimization.

Page 19: Do reviewers have suggestions on what information permittees use to justify their decision making process when conducting financial and technical analyses to select (or eliminate) optimization strategies?

- As Ecology has noted that each facility is a unique combination of treatment processes, and each utility is a unique combination of financial circumstances. Therefore, it may not be possible and it is probably inappropriate, to try to define a universal financial reference point for utilities to all apply to the selection of optimization strategies. Puget Sound wastewater utilities are all responsible for a variety of compliance requirements, as well as sustaining the asset value of the collection systems, treatment facilities, biosolids management programs etc. and consequently all have different financial circumstances, user charge structures, financing plans, and so on. Decision-making on optimization activities is best left to individual utilities who are in the best position to address their site specific circumstances.
- In addition, generally we use Benefit /cost analysis to evaluate treatment plant improvements. Our problem here is that Ecology cannot quantify the benefits of reducing nitrogen discharges from existing plants.

Page 20: Do reviewers have suggestions for “reasonable investments” at small (<3 MGD), medium (3-10 MGD) and large (>10 MGD) that could be used to separate the two tiers of optimization actions required by this permit?

- Decisions on “reasonable investments” are best left to individual utilities who are most well-informed on the individual site specific circumstances related to funding, financing, and affordability for their local customers. Nitrogen reduction requirements for Puget Sound are only one part of the requirements associated with compliance responsibilities for wastewater utilities. The broader considerations of sustaining asset values with renewal and replacement programs to continue successful operations of their collection systems, treatment facilities, and biosolids management programs all must be considered in assessing affordability of any new investments. The potential costs associated with additional levels of nitrogen control need to be balanced with all of the other expenses planned or required by individual utilities.

Page 20: Are there any additional Tier 1 optimization actions that should be included in this document?

- The Tier 1 activities outlined in the preliminary draft provide a broad range of potential concepts for optimization that may, or may not, apply to any individual facility depending upon the existing treatment process and where utility begins to consider optimization. This list is adequate as a general outline and is not necessary to provide more specific or restrictive definitions for what constitutes Tier 1 optimization. That is better left to individual utilities to consider in light of site specific circumstances.
- It is recommended that Ecology reconsider including septage handling as a consideration for optimization, since this may have the unintended consequence of discouraging the acceptance of septage and the potential to divert septage loadings to potentially inappropriate disposal that could have deleterious impacts on Puget Sound water quality. Source control, or pollutant minimization planning, may be a more appropriate approach to considering whether or not there is a potential to reduce influent nitrogen loadings. However, it is not clear that there are



readily available source control techniques for nitrogen as have been found for phosphorus (e.g. laundry detergents and dishwashing detergent reformulations), although there could perhaps be some unique circumstances where there are industrial contributions of ammonia or nitrogen compounds that might be reduced.

Page 21: Are there any additional Tier 2 optimization actions that should be included in this document?

- The consideration of additional optimization actions in Tier 2 should include the opportunity for planning for effluent reclamation and reuse that would divert loadings from Puget Sound. Planning for effluent reuse could begin at this stage and influence other treatment process considerations, as well as effluent management opportunities that may represent a better approach to overall one water management. This supports the optimization of not only nitrogen loadings to Puget Sound but optimization of water management that considers wastewater as resource for beneficial use.
- There needs to be a period of time to evaluate the efficacy of any Tier 1 strategies that have been implemented before we move on to the Tier 2 strategies.

Page 21: Are the tiers broken out appropriately?

- The question about breaking out the action by tiers suggests that there may be some priority, or serial order, for the bulleted activities listed under each heading. However, it may be inappropriate to suggest that the tiers be broken out in a greater detail because site specific circumstances will actually dictate what is practical to undertake as the Tier 2 action for any given wastewater facility.

Page 22: Ecology is soliciting input on what types of Tier 3 actions plants must take to achieve further nutrient reduction, sooner, if they exceed their second action level trigger. Should these actions vary by facility size?

- The Tier 3 planning requirements are extensive as written and attempting to parse those activities by facilities sizing may further complicate an already complex set of planning considerations. It may be well advised to allow individual utilities of each size to make their own site-specific decisions about what constitutes a practical and feasible Tier 3 action that best fits their facility.
- None of these actions make any sense until we have WQBELs. Beginning design for facilities that may or may not meet regulatory requirements is a waste of resources. If there is some way that WWTPs can assist Ecology in determining what the WQBELs should be that might be useful?

Page 22: Do reviewers have feedback on Ecology's proposed use of a standardized form for the annual optimization report?

- There are both advantages and disadvantages to using a standardized form for the annual optimization report. A standardized format, especially for reporting numerical data on treatment plant performance and loadings, may be advantageous in structuring uniformity that supports a broader analysis of overall Puget Sound loading conditions. The disadvantage of attempting to structure the annual report uniformly is that each utility will be reporting different information depending upon a variety of factors that include their status with regard to the action levels, the tier level of optimization activities they are pursuing (and what phase that



effort is in), and the great variety of site-specific facilities differences between each facility. However, having a template to define what Ecology needs to see in this report.

Page 26: Do reviewers have examples of information from an existing, unrelated planning process that could meaningfully apply to meet this nutrient reduction evaluation requirement?

- There are great variety of planning documents available as examples for both nutrient reduction evaluations and other wastewater facility planning processes, including optimization reports. As noted in the preliminary draft, some utilities may already have planning reports available in the state as definitions for engineering reports, re-rating studies, etc.

Page 26: Aside from treatment solutions, do reviewers have feedback on types of questions a regional study could answer? How could a regional study like this be used to develop and/or support a nutrient trading framework?

- There are potential advantages and disadvantages to a regional approach for treatment technology assessments. An advantage may be, as noted in the preliminary draft, the ability for multiple utilities to collaborate on the investigation of new or innovative technologies, without repeating the same investigation for each individual utility. In that way technology evaluations may be shared and new applications more broadly applied. Regional studies could also explore unregulated compounds in the effectiveness of nutrient reduction technologies in the removal of other constituents.

Page 27: Do reviewers prefer one approach to a regional study over the other? Ecology is soliciting specific feedback on how to develop permit requirements for a regional study that advances understanding of treatment upgrades by building on existing bodies of knowledge related to nutrient treatment processes.

- It is not clear what two approaches Ecology is considering? It is also not clear what constitutes a neutral third-party for a technical study of treatment technologies? It is not clear as to whether Ecology seeks a technology evaluation, or an educational process for a collaboration among diverse stakeholders. These may be two separate or parallel efforts that are needed to address both technology issues, and separately communication and education issues with the non-technical group of stakeholders.
- A regional study must first determine what the problem is and where it exists. The SSM could then be used to determine the best investments from a cost/benefit perspective. This could inform a collaborative regional approach to nutrient management which could include nutrient trading between plants and between point sources and non-point sources.

Page 27: Do reviewers have feedback on whether a regional study should be limited to WWTPs < 10 MGD so that larger facilities can conduct their own evaluation? Or, should Ecology provide minimum elements that must be satisfied leaving participation up to each discharger?

- The regional study could be structured to both receive site-specific input from larger utilities in summary form, with more detail available from their individual evaluations, as well as shared information for smaller utilities to potentially utilize. A regional study needs to include all treatment plants.



Page 28: Do reviewers have feedback on the proposed timeframes for this evaluation?

- Experience from San Francisco Bay suggests that more than 3 to 4 years may be needed to complete a regional study (for 35 facilities) and for Puget Sound it may well take a full permit cycle five years (for 58 facilities).

Page 28: Is there interest in folding this type of treatment technology information sharing into an existing stakeholder process?

- The existing stakeholder process does not seem to be well suited for technical discussions on treatment technology. It may be more appropriate to share the results of treatment technology studies developed in a separate venue than with the broader stakeholder process.

Page 29: Do reviewers have suggestions or ideas for other Tier 3 actions that Ecology should consider? Should plants be able to identify different Tier 3 actions during the permit term provided Ecology pre-approval?

- Effluent reclamation and reuse should be included in nutrient reduction planning for Puget Sound. Planning for effluent reclamation and reuse that would divert nutrient loadings from Puget Sound may also have other benefits for the overall watershed, including provision of a new water supply. Planning for effluent reuse may influence other treatment process considerations, as well as effluent management opportunities that may represent a better approach to overall one water management. This supports the optimization of not only nitrogen loadings to Puget Sound but optimization of water management that considers wastewater as resource for beneficial use.
- Contributing to the establishment of WQBELs would be the most helpful. This could be through additional WQ data collection or funding for SSM model runs.
- Individual Plants should be able to propose additional actions in lieu of the proposed actions by Ecology. An approval process should be considered for this option.

The following are comments on the content of the Preliminary Draft General Permit:

Cover Page:

- The Preliminary Draft was updated on February 10th. Why didn't Ecology send out a Public Notice that the draft was updated?

Page 1, II. Coverage Requirements. A:

- Reference for WAC 173-226-050 (3)(b)(iv): "In the opinion of the director are more appropriately controlled under a general permit than under individual permits."
 - State and Federal regulations prohibit Ecology from requiring that an operator be subject to both a general and individual permit.
- "Below state water quality criteria"
 - What dominant species or beneficial use was identified for the criteria? This is unclear.



Page 2, B. Coverage Proposal:

- Will Ecology be updating all Individual Permits to remove the conflicts between the General Permit and the existing Individual Permits (e.g. monitoring requirements, etc.)? And if so, what process will be used, will it be concurrent with issuance of the general permit, and what is Ecology's authority? What effect issuance of the general permit will have under 40 C.F.R §§ 122.28(a)(1), (b)(2)(v) and WAC §§ 173-226-080(3), 200(7) upon operators with an unexpired individual permit, and what effect issuance of the general permit will have under WAC 173-226-200(5) upon operators with expired permits that have been administratively extended?

Page 7, F. Permit Fees:

- So there will be two permit fees for the same discharge? What is the permit fee for the General Permit? Since the permit fees are currently capped, will Ecology be modifying the cap before the permit is issued?

Page 7, III. Nutrient Action Levels:

- *"About 70% of the nutrient load comes from domestic wastewater treatment plants..."*
 - Presentations from Ecology indicated that a majority (90+%) of the nitrogen entering Puget Sound is from the Ocean. So is the stated 70% (69% in Ecology presentations) the WTPP of the anthropogenic load? What is this percentage in relation to the natural nitrogen load, the loading from the Pacific Ocean, from Canada, non-point sources, etc.?
 - According to the Bounding Scenarios Report on Page 30, for 2006, 2008 and 2014 the WWTPs only accounted for 22.8 - 24.3% of the relative non-oceanic source contribution (not including the Ocean) for the total DIN loading to Puget Sound. Where did 70% (or 69%) come from?
 - Has a Cost/Benefit Analysis been completed for nutrient removal yet? Should we be looking at non-point sources instead?
- *"The SSM and associated reports discuss dissolved inorganic nitrogen (DIN) but use data representing total inorganic nitrogen (TIN) as a model input. TIN includes both the dissolved and suspended portions of inorganic nitrogen. The Salish Sea Model did not use a ratio, or other method, to calculate an assumed dissolved component from the TIN data."*
 - Did Ecology make any effort to ask Utilities to help evaluate the ratio to understand how conservative this approach is? Tacoma was not contacted. Why did Ecology not make an effort to understand the sensitivity of this impact to dissolved oxygen?
- *"The SSM confirmed that these discharges have reasonable potential to cause or contribute to the D.O. impairment. Also, current individual permits do not address this pollutant. Therefore, this permit must require the Permittees to control nutrients consistent with the Clean Water Act and Washington's Water Pollution Control Act."*
 - Did Ecology look at each discharge separately to confirm every wastewater treatment plant has a reasonable potential? Based on the Bounding Scenarios Report, it does not appear that Ecology did this analysis even by a watershed basis or basin level. So how can it broadly say every wastewater plant has a reasonable potential to cause or contribute to the DO impairment? What is the DO impairment based on? What dominant species is impacted? This is based on a standard from 1967, which Ecology has



admitted it has no records of basis for. Why hasn't Ecology updated this standard in 54 years?

- Reference to 40 CFR 122.44(d)(1)(iii):
 - This requires the State must do the following process: "(ii) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water."
 - This requirement was not met for the following reasons:
 - The data for the WWTPs used in the SSM was either monthly, quarterly, or annual data (with a few exceptions), which would not be a representative data set and would not account for variability of nutrients in the WWTP effluent.
 - It is unclear if Ecology has evaluated the sensitivity of the dominant species (which species did Ecology evaluate?) to toxicity testing.
 - Ecology did not evaluate every effluent discharge individually as part of its modeling effort.
- *"Modeling is necessary to quantify these far-field impacts and to derive applicable numeric WQBELs."*
 - If "Modeling is necessary to quantify these far-field impacts and to derive applicable numeric WQBELs...", then how can Ecology say there is a reasonable potential that all WWTPs impact all of Puget Sound?
 - What is Ecology's plan for establishing WQBELs? A TMDL? Will the process be more transparent?

Page 8:

- *"In a receiving water as complex as Puget Sound, the modeling work necessary to develop numeric WQBELs for each discharge is comprehensive and requires extensive internal and external review."*
 - There have been many concerns voiced about this process, which have not been resolved including, but not limited to: addressing scientific uncertainties, representative data collection, establishing a dissolved oxygen standard that is biologically based, etc.. What is Ecology's plan to address these issues? Why is Ecology moving forward before addressing these issues?
- *"While Ecology has documented reasonable potential implementing a numeric WQBEL for nitrogen in this first permit cycle remains infeasible. Additional modeling is necessary to quantify both the far-field water quality effects from all discharges and the corresponding effluent limits necessary to prevent an exceedance of the D.O. standard."*
 - Ecology notes it does not know far-field effects, so how can it have a reasonable potential that all facilities have an impact on all impaired areas in the Puget Sound?
 - Where has the Reasonable Potential been documented? Is this the Bounding Scenarios Report? While the Report itself may have been peer-reviewed, the application of the SSM by Ecology has not been peer-reviewed.



- *“Then Ecology will allocate the overall nutrient loading capacity amongst the wastewater discharges and watersheds. Draft allocations for point and non-point sources will be developed with the draft Nutrient Source Reduction Plan in 2023.”*
 - How will this be evaluated? With a TMDL? The SSM? Will the Uncertainties list and other concerns be addressed first? Will the process be more transparent and involve the Public for review and comment? Will the modeling files be openly shared for review as well as available for use of optimization strategies and potential water quality trading in the future?
- *“While Ecology actively pursues the necessary modeling to make development of numeric WQBELs feasible, 40 CFR 122.44(k) states that best management practices (BMPs) to control or abate the discharge of pollutants are acceptable when numeric WQBELs are infeasible. Ecology believes that a combination of a nutrient action level, planning requirements, and treatment efficiency optimization constitutes a suite of BMPs that meets the intent of 40 CFR 122.44(k) for this first permit term.”*
 - Nutrient action levels are not BMPs.
 - Where are these steps listed in any guidance document from EPA or Ecology? BMPs appear to be for stormwater, not wastewater.
- *“The annual optimization report and its adaptive management requirement form the narrative limit proposed by Ecology for the first permit term. The nutrient action levels as described in this preliminary draft document serve as the “yardstick” for facilities and Ecology to use when assessing the effectiveness of the optimization BMPs and determining whether additional actions are required. This permit proposes using two action level thresholds loads for each facility, ALO and AL1. See Section III.E for information about these two action levels. Any exceedance of either ALO or AL1 will trigger further action as outlined in Sections V and VI of the preliminary draft proposal.”*
 - The proposed Optimization Report requirements contained in the draft permit mandate that permittees develop, implement, and maintain an optimization strategy which will evaluate alternative methods of operating the existing wastewater treatment facility to optimize the removal of nitrogen throughout the year, including, but not limited to, operational changes designed to enhance nitrification and denitrification, incorporation of anoxic zones, and modifying septage receiving policies and procedures. This mandate of a specific internal process or combination of processes in the draft permit clearly conflicts with the holding of the U.S. Court of Appeals for the Eighth Circuit in the case of Iowa League of Cities v. EPA. In that case, the court held that EPA-imposed requirements which “apply effluent limitations to a facility’s internal secondary treatment processes rather than at the end of the pipe” “clearly exceed EPA’s statutory authority,” as effluent limitations – including water quality related effluent limitations – “are restricted to regulations governing ‘discharges from point sources into navigable waters.’” The U.S. Court of Appeals for the D.C. Circuit likewise has held that “the statute is clear: the EPA may regulate the pollutant levels in a waste stream that is discharged directly into the navigable waters of the United States through a ‘point source’; it is not authorized to regulate the pollutant levels in a facility’s internal waste stream.” In other words, Ecology (and EPA) generally cannot, in setting either technology-based or water quality-based effluent limitations (WQBELs), mandate any particular treatment control technology or facility design. Rather, Ecology has the authority to set discharge



limits that apply at the point of discharge into a navigable water, and permittees have the flexibility to determine which process(es) are necessary to achieve compliance. Also importantly, permit writers may only impose WQBELs to the extent “necessary to meet water quality standards.” At this time, Ecology has not set WQBELs and has admitted it does not have the ability to at this time. Setting limits at this time and requiring optimization is arbitrary. Ecology does not have the authority to require utilities to make the operational and design changes contemplated by the draft PSNGP requirements. Additionally, such requirements would entail mandatory restrictions on the utilities’ capacity, thereby potentially limiting the ability for Puget Sound communities to grow in the future. For many communities, excess treatment capacity has been planned, installed, and approved by Ecology to ensure the community can continue to grow and remain economically healthy. The proposed PSNGP would potentially require part or even all of that excess capacity to be used for optimization modifications. While optimization can provide a low-cost option for certain utilities to employ in nutrient reduction, it must be left up to the utility to decide to employ these operational and design changes.

- Where is a “narrative limit” defined?
- What does Ecology mean by “yardstick”?

Page 9:

- *“Ecology has determine that the confidence level of interest is 99% for determining the annual loading baseline, ALO.”*
 - Ecology is using monthly or quarterly data and computing an annual load. Ecology is then calculating confidence intervals (CLs) for the annual load using the monthly/quarterly data points. The CLs for annual loads should be calculated from the calculated annual load not from the periodic data.
- *“Ecology used at least 3 years of data in the baseline action level (ALO) calculation. Ecology verified whether enough data for each facility exists to make a reasonable representation of the unmeasured data by using cumulative distribution functions as a check. For those 11 facilities that did not have enough data, Ecology proposes requiring those facilities to collect additional data during the first year of the permit to establish a representative data set and calculate the nutrient action level. Note that this data collection may extend into permit year 2 depending on the availability of existing data at the time of issuance. Coverage modifications will then be used to add nutrient action levels for these facilities that did not have enough data.”*
 - Based on discussions with other utilities and knowing Ecology used 2014 - 2020 data for Tacoma - it does not appear that all of the data sets are consistent for every facility's calculated action level. How can limits/targets be set with a General Permit if every facility is using a different data set timeline?
 - What is a “cumulative distribution function”?
 - What is Ecology's definition of a "representative data set"? Monthly data would not be permitted per Ecology's regulations for a Re-Rate Study, so why is it considered representative for this permit and being used for a reasonable potential analysis?
- *“Daily flows were matched with concentration data to capture variability and follow the recommendation from the Advisory Committee.”*
 - This would only make that sample point representative for that given day; however, a diurnal and waste characterization sampling effort should be undertaken to evaluate



what is representative for each facility seasonally. Monthly and quarterly data points are not representative and would not capture variability from a WWTP. Would Ecology consider having utilities undertake a waste characterization effort to define representative data seasonally?

- *“When a day has only one parameter sampled, Ecology calculated the load with the measured value and the representative value of the other parameter.”*
 - How was the "representative value" determined?

Page 10:

- *“Any exceedance of ALO triggers the facility to select and complete a Tier 2 nutrient reduction action. See Section III. D regarding actions required for facilities that are currently achieving average annual effluent concentrations below 10 mg/L TIN.”*
 - This is in effect a cap (or limit) the exceedance of which has a consequence.
- *“Ecology understands that it will take time for most facilities to plan, design, and construct upgrades that will meet numeric water quality standards. However, to prevent water quality impairments from spreading in extent or duration, nutrient loads cannot continue to increase in an uncontrolled manner while facilities work toward eventual reduction.”*
 - Is Ecology suggesting a moratorium if optimization efforts are unsuccessful?
 - Plants cannot plan to meet numeric water quality standards that do not exist.
- *“The second action level proposed by this permit attempts to balance the need to reduce nutrients within an optimization framework while allowing plants some limited use of the previously approved capacity. For this reason, Ecology proposes that the AL1 adds a modest increase (5%) to the baseline ALO, allowing some of this permitted capacity to be utilized before implementing additional nutrient reduction actions. Ecology is not intending to stop growth with the development and issuance of this permit. Plants seeing increased growth rates must make a concerted effort to plan and adopt nutrient reduction solutions faster than those who are not growing as quickly.”*
 - Ecology has previously approved facilities for treatment capacity and is now essentially taking that capacity away with this permit.
 - Requiring utilities to move forward with upgrades and planning for upgrades before WQBELs is completely unreasonable.
- *“Any exceedance of AL1 triggers the facility to select and complete a Tier 3 nutrient reduction action.”*
 - How much time does a utility have to complete an action? It isn't clear in the draft permit.
 - What defines "completeness"?
- *“The Advisory Committee recommended facilities now operating under 10 mg/L be exempt from additional general permit requirements beyond monitoring and optimization.”*
 - Why did Ecology include limits for those facilities?

Page 13:

- It is Tacoma's understanding that the limits for the King County facilities were calculated differently than for the other utilities. Why? Shouldn't the calculation be the same for every utility?



- It is Tacoma's understanding that 2014 - October 2020 data was used to calculate the two caps. Why was 2020 data used? This is not a typical year. In addition, the Central Treatment Plant had a dewatering upgrade installed in 2015, so 2014-2015 data is not representative of current conditions. Furthermore, monthly data is not a representative data set and would not be allowed for a Re-Rate Study. The City of Tacoma is continuing to review the data that was used for the calculation of the two caps and will have additional comments in the near future.
- Based on a quick calculation for the first cap shown for the North End Treatment Plant, the cap would have been exceeded based on 2020 data. Is it Ecology's intent to set limits that are automatically triggered?
- In addition, both of Tacoma's facilities have limited opportunities to "optimize" for nutrients, since neither was designed for nutrient removal.
- Facilities will need time to collect representative influent and effluent data (a year, assuming data is typical) before reduction efforts may be evaluated.

Page 14:

- These objectives are fairly vague. Monitoring should have a specific purpose. Will this data be used to further refine the SSM? Will this data be used for permit compliance? How will this data be used in evaluating the performance of optimization strategies? Is this the right data to evaluate optimization strategies? Would Ecology consider changing the monitoring requirements to seasonal waste characterization efforts, which would provide representative data for optimization as well as the SSM? (see next comment)
- *"In the formal draft, Ecology will describe a pathway for reducing (not eliminating) monitoring through a coverage modification and administrative order for permittees that have established a representative baseline following year 2 of the permit cycle."*
 - Would Ecology consider a waste characterization effort (requiring seasonal, robust sampling) to evaluate representative data instead of the current monitoring described in this draft? As described, the City will need to hire two full time employees to support the sampling effort. It will take time to hire qualified staff for these positions. The current proposed compliance within 30 days is not enough time to hire staff. In addition, the City and many other utilities are not certified for all of these parameters. That effort will also take time and approvals from Ecology (does Ecology have enough staff to support this effort?). In the meantime, while facilities are waiting for approvals from Ecology the samples will need to be taken to an external lab that is certified for that parameter. Do the supporting labs in the area have the capacity to take on this sampling effort? Furthermore, all of the monitoring costs will require budgeting changes that will also take time to process (e.g. Council approval with potential rate impacts).
- *Table 5:*
 - Is Ecology determining these factors must follow all approved methods from 40 CFR 136.3? Will DOE accreditation division have enough time to approve all treatment plants new requested methods? The last certification request took over 6 months to be approved by Ecology for Tacoma.
 - Tacoma does not have the ability to eliminate the side stream component from its influent. In addition, the dewatering filtrate should be included in the influent loading since it can account for approximately 20-30% of the total influent loading. Why does Ecology not want it included?



- Tacoma has a Letter of Understanding for Total Nitrogen ("Total COT-TN"). This is method WM920550. Is this still an acceptable way to calculate TKN?
- How will the cBOD and TOC data be used in the permit? Will there be carbon limits in future permits?

Page 15:

- See previous comment on TKN.
- The rotational basis for testing would not work for both holidays and weekends. Some holidays are observed on weekends but may be moved to week days. Can this be just standard to say sample 4 times a week except weekends?
- *"Total Monthly Flow" calculation:*
 - This does not include total monthly flow of received solids that create a sidestream within the plant for these calculations because you have excluded any "side-stream returns from inside the plant". There is no mass balance equation to account for this.
- *Footnote J:*
 - Ecology is not including any external solids loads to this equation that may enter after influent composite samples. How should the utilities equate the amount of loading caused by this?

Page 16:

- *Effluent Flow Meter Requirement:*
 - Tacoma's NETP only has an influent flow meter. It will take time for the facility to add an effluent flow meter. Please consider this for a compliance schedule.
- Please see previous TKN comments.

Page 18:

- *"Ecology proposes that monitoring data be summarized, reported, and submitted monthly on the electronic DMR form provided by Ecology within the Water Quality Permitting Portal."*
 - Please consider changing the due date of results from the 15th to the 20th of every month to allow time for data to be reviewed and reported.

Page 19:

- *"Ecology proposes modifying, as necessary, duplicative nutrient monitoring requirements in individual permits prior to or during normal reissuance schedules for expired permits after the proposed general permit is issued and effective."*
 - Tacoma's permits expired and have been administratively extended since 2014 and 2015. When may the City expect new permits?
- *"This proposed permit uses optimization of existing treatment processes as a primary mechanism for dischargers to stay below the nutrient action level and reduce nitrogen in their discharge to the greatest extent possible during the permit term."*
 - The majority of the facilities identified for compliance with this permit were not designed for nutrient removal. What technical basis does Ecology have for concluding



that facilities will be able to optimize and stay below the nutrient action levels and or reduce nitrogen?

- *“All treatment facilities covered by this general permit must identify short term actions (low cost controls and process changes focused on improving existing performance) and begin implementing them in the first year of the permit.”*
 - Facilities will need to gather influent data first for at least a year to understand removal performance. Ecology cannot expect improvement in the first year when facilities do not know their removal capabilities prior to making changes (with limited to no influent data sets). The majority of facilities will also need to conduct waste characterization efforts over the course of a year to create a models (e.g. Biowin) of their facilities to start identifying options for optimization.
- *“In annual reports, facilities must document what was tried, document what was learned, identify next steps, determine what is not feasible as a near term solution, and use monitoring data to quantify results.”*
 - Is there a template for this?
- *“The most successful optimization strategies include a detailed influent characterization and process performance review based on historical and current data.”*
 - The majority of facilities do not have influent nitrogen characterization data available at this time. This will take time. How can Ecology realistically expect facilities to start Optimization in the first year without adequate data?
- *“Increasing this awareness across all levels of the utility’s organization from operators to laboratory analysts will aid in decision making when it comes to identifying what it will take to reduce the facility’s effluent nutrient load.”*
 - Will the plant ratings change due to the increased awareness in nutrient loading? Will there be resources for training for operators and laboratory analysts?

Page 20:

- *“Tier 1 action starting in year 1...”*
 - Do we begin implementing Tier 1 strategies in year one or do we begin evaluating Tier 1 strategies in year 1? We will need time to design a QAPP and collect baseline data as well time to evaluate the potential strategies before implementing otherwise we may not understand the unintended consequences of the strategy.
- *“In the first year of the permit, dischargers must evaluate their ability to implement items in the list below (and also other strategies not listed) for effluent TIN reduction.”*
 - Without adequate baseline and representative data, this is an unreasonable request. Facilities will need time to collect baseline data first to be able to evaluate the strategies listed in the preliminary draft permit.
 - What are the other strategies not listed? Why are they not listed?
- *“Tier 2 actions are triggered when a permittee exceeds ALO following the annual compliance assessment after the previous reporting period.”*
 - There needs to be a period of time to evaluate the efficacy of any Tier 1 strategies that have been implemented before we move on to the Tier 2 strategies.

Page 21:



- *“All facilities that exceed AL1, regardless of maintaining a TIN effluent concentration below 10 mg/L, will be required to advance planning efforts towards nutrient reduction.”*
 - Advancing planning efforts before WQBELs have been established is a waste of time and public funds. High level planning documents for potential upgrades would be acceptable, but would not set up a utility to be able to go straight to final design when WQBELs are established.

Page 22:

- *“Early development of the nutrient reduction evaluation for achieving effluent concentration bookends of 10 mg/L and 3 mg/L as described in the Planning Preliminary Draft. Construction of any solutions identified with these analyses is not expected within the permit term. Final design would begin immediately in the second permit term once numeric water quality based effluent limits are established.”*
 - Final design could not begin immediately. Typical next steps after a WQBEL is established would be:
 1. Alternatives Analysis to establish the best treatment alternative for the established limit.
(mid step/concurrent step with Engineering Report: property procurement)
 2. Engineering Report (required approval from DOE)
 3. Preliminary Design
 4. Final design could begin.
- *“Familiarizing operators and staff with the facility’s processes and flow schematics.”*
 - What does this look like in the plan? Operators and staff are already familiar with the processes at their own plants.
- *“Developing facility specific nitrogen reduction goals.”*
 - Goals? Could Ecology provide guidance to develop goals? Recommend deleting this. The prior bullet point to evaluate the reduction potential would be the target - assuming the potential pans out. Would the goals be based on the potential reductions?
- *“Evaluating nitrogen reduction potential from commercial and residential users.”*
 - Will Ecology provide some guidance on how to do this?
- *“Ecology proposes to require this annual Nitrogen Optimization Plan as an electronic permit submittal.”*
 - Rather than an annual report - a report at the end of the permit cycle makes more sense. It is going to take time to:
 1. Hire an experienced consultant.
 2. Create a Plan and QAPP.
 3. Gather representative baseline data (over the course of at least a year) to be used to evaluate reduction potentials.
 4. Try reduction potentials and document next steps.
This could take 2-4 years to complete.
 - Will Ecology respond to the annual reports? Is the purpose of the Annual Report to document progress is occurring?

Page 23:



- *“Prepare a Nutrient Optimization Plan and submit it to Ecology for review and approval before {Date = one year after permit issuance date}. Thereafter, submit annual updates for review and approval.”*
 - What is the approval process and timeline for implementation? Does Ecology plan on getting additional staff/resources to approve 58 optimization plans annually?
 - Recommend changing this to at least two years minimum or one report at the end of the permit cycle. This will take time – especially to be effective. Unfortunately, there may be limited opportunities to optimize for nutrients at facilities that were not designed for nutrient removal. See earlier comments.
 - Please see earlier comment about the Iowa and EPA case and optimization. How will Ecology evaluate what is acceptable? Will Ecology be able to respond quickly?
 - The City has a Re-Rate Study that was submitted in 2012 and is still waiting for approval.
 - The City also has two expired permits - does Ecology have enough staff to respond quickly to 58 Optimization Plans quickly and keep moving on other regulatory requirements?
- *“Evaluate the different optimization strategies identified in C.ii to maximize nitrogen removal capabilities and select the actions your facility will implement over the next year. Provide detail on cost implications and lack of affordability for those strategies not selected due to financial reasons.”*
 - What about other reasons? Examples:
 - Would not be able to meet existing BOD or TSS limits?
 - Additional maintenance issues due to strategy impacts (e.g. struvite)?
 - Since Ecology has not provided a quantifiable benefit for nitrogen removal what criteria should we use to establish affordability?
- *“In the first annual submittal, indicate the expected outcome of each Tier 1 activity selected for implementation.”*
 - What would we base this on since we have nearly no baseline influent data? Data collection will need to occur the first year. This step should occur in the second year.

Page 24:

- *“After the baseline year, select additional nitrogen reduction strategies from either Tier 1, Tier 2 or other previously identified facility specific strategies. The annual total TIN load reported on the DMR should be used to determine which tier of actions must be used. If the facility stays below ALO, no additional Tier 2 actions are required.”*
 - It would make more sense to evaluate the success or failure of implementing the Tier 1 strategies initially selected before selecting another set of strategies.
- *“Provided the permittee has complied with the notice and report requirements and is implementing the approved adaptive management response as outlined above, and continuing to reduce nitrogen in the discharge as much as possible, Ecology will consider the Permittee in compliance with their individual permit, despite any temporary BOD, TSS and/or pH violations caused ~~to~~ by optimization or pilot testing.”*
 - It sounds like Ecology wants Facilities to prioritize nitrogen removal over BOD and TSS removal? If the optimization strategies result in violations of BOD and TSS, then it seems like that strategy should not be continued to protect Puget Sound's water quality.



Page 25:

- *“Per the Advisory Committee’s recommendation each plant that is not already achieving*
- *TIN concentrations <10 mg/L will be required to conduct a nutrient reduction evaluation during this first permit cycle.”*
 - What if facilities have already evaluated this recently? Will those efforts count towards this requirement?
- *“Identify additional strategies that can further reduce TIN concentrations to a range of 3-4 mg/L.”*
 - What if a facility does not have enough space onsite to treat to this level?
- *“Additional information on why TIN is the focus is presented in the Action Level preliminary draft document.”*
 - What is the “Action Level preliminary document”?
- *“Each WWTP would formally notify Ecology if electing to participate in the regional study to establish submittal due dates for their Nutrient Reduction Evaluation report. See Section VI.C for information on a regional study.”*
 - This would be much more valuable after we have done more model runs and have a better idea of the potential impact of each individual treatment plant.

Page 26:

- *“Ecology suggests all treatment facilities conducting this evaluation have at least 3 years of nutrient-related operating data.”*
 - This will require waste characterization efforts for three years. That will take time to plan and implement.
- *“Evaluate more significant site-specific main stream treatment plant upgrades, side stream treatment options, and “outside the fence opportunities,” such as alternative effluent management options (i.e. disposal to ground, reclaimed water beneficial uses), pretreatment programs, source control, expanded maintenance and line replacement, and other I/I reduction efforts, requiring separate plumbing and/or other building scale solutions, and evaluation of septage handling practices.”*
 - Is Ecology suggesting that we evaluate separating liquid and solids plumbing alternatives? How much detail are you asking for? This list seems fairly exhaustive.
- *“Develop an example rate structure to consider funding shortages and ensure environmental justice in plant upgrades.”*
 - How does Ecology suggest we address Environmental Justice through our rate structure given the constraints of the State Constitution?
- *“Rather it is a feasibility investigation and does not require the level of detail required in WAC 173-240-060 for an engineering report.”*
 - Will Ecology be providing guidelines for this?
- *“The outcome of this or any proposed planning or evaluation requirement could support a regional nutrient reduction framework and a potential, future nutrient trading program.”*
 - Is Ecology committing to a regional approach to nutrient management? What would that look like? What would Ecology's role be?

Page 27:



- *“In either case, if the facility exceeds AL1 at any point during the permit term, they must complete a Tier 3 action as detailed in the Optimization preliminary draft proposal within 12 months.”*
 - 12 months is not enough time to hire a Consultant and complete a report of this magnitude. At least 2-3 years would be needed to complete this effort.
 - How did Ecology come up with 12 months?

Page 28:

- *“If determined to be financially viable, include a schedule for design and implementation.”*
 - WWTPs will need guidance from Ecology on how to determine financial viability of a project.
- *“The second Tier 3 option is additional Nutrient Reduction Evaluation work during the first permit term. This expanded NRE report would be due within 18 months of exceeding the action level. This option allows for a facility to evaluate different treatment process upgrades capable of achieving low nitrogen concentrations (3-4 mg/L TIN) and initiate a pilot test. Once Ecology receives notification of this Tier 3 option selection, the facility must:”*
 - 18 months is not enough time. At least 2-3 years will be needed to complete this type of effort. Additional time will also be needed for a pilot effort.
- *“Develop a scope of work submittal for the pilot study after selection of the treatment technology and submit to Ecology for acceptance. This scope of work must include information on the overall project description, project goals and objectives, project narrative including the scale of the pilot relative to facility design flow, work plan and assessment criteria, required monitoring, possible impacts to the primary treatment train, a project schedule, and how results will be evaluated.”*
 - How quickly will Ecology respond?

Page 32:

- This flow chart should include a question to evaluate if the data is representative or not. Monthly and quarterly data are not representative of the variability in nutrient effluent quality.