

APPENDIX C: RESPONSE TO COMMENTS ON THE PUGET SOUND NUTRIENT GENERAL PERMIT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND STATE WASTE DISCHARGE
GENERAL PERMIT FOR DISCHARGES FROM DOMESTIC WASTEWATER TREATMENT PLANTS
DISCHARGING TO THE WASHINGTON WATERS OF THE SALISH SEA.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

DECEMBER 1, 2021



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¹ <https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility>

Introduction

Summary of Permit Development

The Washington Department of Ecology (Ecology) issues this Response to Comments (RTC) as the Appendix to the June 16, 2021 Fact Sheet that accompanied the formal draft of the National Pollutant Discharge Elimination System (NPDES) Puget Sound Nutrient General Permit (PSNGP) effective January 1, 2022.

This permit authorizes nitrogen discharges from domestic wastewater treatment plants (WWTPs) to meet the requirements of the federal Clean Water Act and Chapter 90.48 RCW.

The PSNGP applies to 58 publically owned treatment works that discharge to the Washington Waters of the Salish Sea. Ecology developed this permit to control nutrient pollution from these point sources.

The June 16, 2021 Fact Sheet contains a detailed history of the public process used to develop this permit. Please find an [electronic copy of the Fact Sheet](#)² online through Ecology's website. Ecology's public process included:

August 2019 – October 2019: Ecology held a public comment period on the preliminary determination to develop the Puget Sound Nutrient General Permit.

January 2020: Ecology announced the decision to develop a general permit to control nutrients at the Puget Sound Nutrient Forum and conducted a stakeholder engagement to solicit feedback on the composition of an Advisory Committee to help develop conceptual permit approaches.

February 2020: Ecology held open nominations for Advisory Committee Members.

March 2020 – October 2020: Ecology held monthly virtual Advisory Committee meetings working towards a final recommendations document covering the conceptual permitting approaches.

November 2020: The chair of the Advisory Committee along with other members, presented the final recommendations to the Puget Sound Nutrient Forum.

January 2021 – March 2021: Ecology released a preliminary permit draft for an informal 45-day comment period using the Advisory Committee's recommendations as the basis for the proposed approaches. No response to comments were developed for the preliminary draft.

June 2021- August 2021: Ecology released the draft PSNGP for formal public comment on June 16, 2021. Ecology held formal hearings in July and received testimony on the draft permit. The comment period closed on August 16, 2021. This document responds to comments received in writing and also orally.

² <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Nutrient-Permit>

December 1, 2021: Issuance date for the Puget Sound Nutrient General Permit.

Summary of Changes

Ecology made changes to the permit to improve clarity and readability. The following are some of the changes made between the draft and final permits:

- Added a third discharger category for moderate loaders representing approximately 19% of the cumulative load discharged by all WWTPs proposed for coverage.
 - Special Condition S5 reflects requirements for Moderate Loaders. (See Special Condition S6 for small loader requirements).
 - Ecology recalculated action levels for moderate loaders based on the change in monitoring frequency to 1/week.
 - Corrective actions for moderate loaders require reductions to stay below the action level for the remainder of the permit term.
- Revised planning requirements for dominant and moderate loaders.
 - Removed the 3 mg/L annual average treatment target. Dominant and moderate loaders must determine AKART for annual treatment and select an alternative for meeting 3 mg/L (or the equivalent load) as an April – October seasonal average.
 - Added a performance incentive for jurisdictions that meet their action level and stay below 10 mg/L on an annual average basis. Incentives include a truncated optimization report and no AKART analysis.
 - Added a performance incentive for jurisdictions that meet their action level, stay below 10 mg/L on an annual average, and stay below 3 mg/L as a seasonal average. Incentives include a truncated optimization report and no Nitrogen Reduction Evaluation.
- Revised environmental justice requirements, adding identification of areas with higher incomes within the sewer service area.
- Revised the permit coverage modification requirements in S2.D.
- Added several definitions to the permit, including definitions for small, moderate and dominant loaders, bubbled action levels and septage.
- Revised Appendix C and D which constitute reporting requirements to satisfy the Nitrogen Optimization Plan for dominant and moderate loaders, respectively.
- Added Appendix E constituting reporting requirements to satisfy the Nitrogen Optimization Plan for small loaders.

Organization of the Response to Comments (RTC)

The table of contents lists the topics for which Ecology received comments. After the introduction sections, the Response to Comments is divided into three parts:

- Part I: Contains the summary of comments and responses to comments on policy and process issues.
- Part II: Contains the summary of comments and responses to comments on specific permit sections.
- Part III: Contains the summary of comments and responses to comments received during the formal hearings.
- Part IV: Contains the summary of comments and responses to comments received on the SEPA checklist.
- Part V: Contains the index that lists the name of each commenter and the submission code assigned by the comment database when originally submitted. The person who signed the comment letter (or email) is also listed. Submissions codes are used to identify commenters in Parts I, II, and IV.

Part I - General comments and Process

I-1.0 Timelines

Commenters: I-19, I-20, O-2, O-3, O-9, O-11, O-17, O-18, O-19, O-23, O-30, A-3, A-4, A-12, A-14, A-18, A-19, OTH-4, I-6, O-15

Delay the new permit

Summary of Comments Received: Ecology should delay the permit until:

- Science shows nutrients from WWTPs are problematic, the proposed solution (e.g., the permit) will result in ecological benefits, and funds can be directed to alternatives with better ecological benefit
- Science confirms impact of all nutrient inputs, all data can be evaluated and other viable alternatives can be explored and their benefits understood.
- Science confirms impact of nutrient impacts, all data can be evaluated, other viable alternatives can be explored and the impacts to utility rates can be evaluated.
- Ecology fully develops the Nutrient Reduction Plan, compares results from different models (SSM + watershed models), explore alternatives and builds a collaborative approach for a regional plan supported by all stakeholders. While improving water quality in the Salish Sea is an important goal, swift actions will slow post-pandemic

economic recovery, result in unaffordable sewer rates and result in building moratoriums to prevent nutrient load increases.

- Ecology can analyze the issue and implement a comprehensive solution.
- Other solutions such as water quality trading and bubble permits can be vetted.
- Science confirms impact of nutrient impacts, all data can be evaluated, other viable alternatives can be explored, the impacts to utility rates can be evaluated and GMA non-compliance risk can be mitigated.
- The SSM's inadequacy is resolved, the model's results are validated with sufficient sampling data and reviewed by a panel of independent 3rd party experts, and other nitrogen inputs into Puget Sound (non-point and river inflows) are evaluated and prioritized.
- Science confirms impact of all nutrient inputs, all data can be evaluated and other viable alternatives can be explored, their benefits understood and economic impact mitigated.
- There is certainty that this permit is the best, most cost effective, and fastest way to meet our shared goal of reducing nitrogen level in Puget Sound as potential costs for compliance will be passed to rate payers and add a significant financial burden.
- An investigation into targeted investment within problem areas may support better outcomes than the draft permit approach.
- Until sufficient information exists to justify the magnitude of investment to residents and business owners.

Ecology Response:

- Ecology has studied the nutrient overenrichment problem since the 1990s and must take steps to improve dissolved oxygen levels. Achieving standards will take time and this permit serves as an initial first step in what will be a multi-year process for point sources to implement treatment and reduce their nitrogen load.
- The Nutrient Reduction Plan will address all sources of nutrients. Jurisdictions have flexibility in how they reduce their point source loads in this permit term.
- Ecology is using the best available science to drive nutrient reduction decisions. Model results show that nutrient loads from municipal WWTPs, especially the largest plants, have a significant ecological impact within the WA waters of the Salish Sea (see the results in the published [Year 1 Optimization Scenario Technical Memo](https://www.ezview.wa.gov/Portals/_1962/Documents/PSNSRP/OptimizationScenarioTechMemo_9_13_2021.pdf)³). This general permit is one component of the overall nutrient reduction strategy. Both point and non-

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https://www.ezview.wa.gov/Portals/_1962/Documents/PSNSRP/OptimizationScenarioTechMemo_9_13_2021.pdf

point sources of nutrients must be reduced in order for the Salish Sea to meet DO standards. Municipal WWTPs must begin reducing nutrients with this first permit cycle starting with existing treatment process optimization.

- Permit requirements are geared towards understanding rate impacts from upgrade alternatives so that they may address affordability concerns. Each jurisdiction has the responsibility to update their capital facility plans to meet GMA requirements. Early planning required in this permit serves to provide information for those capital facility plans.

Commenters: I-17, I-18, T-3

Timelines are not aggressive enough.

Summary of Comments Received:

- Implement more stringent reductions within a 5 year (or sooner) timeframe.
- Implementation timeframes for nutrient load reductions need expediting. The permit should require the immediate load reductions from the largest dischargers within the first permit cycle. The proposed implementation schedule is too slow.
- Change the timelines and requirements in the NGP to ensure faster ecological outcomes. Ecology and the state need to take bold and timely actions that support the conservation and survival of fish and wildlife for current and future generations.

Ecology Response:

- Ecology is still completing the modeling necessary to derive numeric water quality based effluent limits. Plants that cannot comply with permit requirements must implement near term actions to reduce their nutrient loads during the first permit cycle; ahead of process upgrades necessary to achieve final, numeric water quality based effluent limits.

Commenters: O-5, O-32

Timelines are too aggressive.

Summary of Comments Received:

- Timelines in the draft permit are too short for utilities to handle the budget changes, rate increases and engineering requirements.
- The District has concerns over the permit's implementation pace as there will be increased demands for effluent testing, laboratory accreditation, engineering support and operator training.

Ecology Response:

- Ecology understands concerns over timeframes in the draft permit; jurisdictions are encouraged to be proactive and must begin thinking now about how to reduce their nutrient loads over the long term.

I-2.0 Plants Subject to Coverage

Commenters: O-17, O-21, A-1

Eligible Facilities

Summary of Comments Received:

- Why will 20-25 plants that discharge to Puget Sound not be required to seek permit coverage? How did Ecology determine to exclude those plants?
- Eliminate Birch Bay Sewer and Water District from general permit coverage.
- Plants with outfalls west of Point Wilson should be excluded from this permit as they are outside of Puget Sound.

Ecology Response:

- Ecology excluded private domestic WWTPs from permit coverage because the Agency does not issue new NPDES permits for domestic wastewater treatment facilities owned and operated by private entities ([Chapter 173-220-150\(4\)\(a\) WAC⁴](#)). Nutrient controls equivalent to those in the general permit will be required through the existing individual permits for these plants. Industrial facilities are a different class of discharger and cannot be included under the same general permit. Also, Ecology does not have jurisdiction for issuing NPDES permits to federal or Tribal facilities. Ecology with work with EPA through the 401 certification process to ensure conditions similar to those in the general permit are included in EPA's permits for federal and tribal facilities.
- Ecology has identified all domestic point sources as having a reasonable potential to contribute to existing DO impairments throughout Washington Waters of the Salish Sea. BBWSD is one of those plants; therefore, the jurisdiction must apply for permit coverage.
- Plants included in this first general permit discharge into the Washington Waters of the Salish Sea and contribute to existing impairments within Puget Sound.

Commenters: A-20

Focus on dominant loaders

Summary of Comments Received:

- The City of Langley urges Ecology to focus on dominant loaders during the permit cycle as they make up the majority of the nitrogen load entering Puget Sound. Small plants require time to acquire the capital necessary to meet the monitoring and planning requirements. Permit requirements for small facilities will require substantial

⁴ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-220-150>

investment and resources to develop. Postpone these planning requirements for qualifying plants until the second permit cycle and coordinate with a roving operator that has experience in assisting with planning efforts.

Ecology Response:

- All domestic WWTPs have reasonable potential to contribute to the existing DO impairments; therefore, the permit must cover all eligible POTWs, regardless of size. Requirements for small plants take into consideration resource limitations. In addition, Ecology has supplied grant funding to help offset the financial burden of this first permit and included separate funds for a regional study that will satisfy some permit conditions for jurisdictions that elect to participate. The scope of the regional study will depend on elective participation. See Ecology's [Puget Sound Nutrient Reduction Grants Program](#)⁵ webpage for grant guidelines, application requirements, and base award amounts.

I-3.0 Concerns over Growth

Commenters: O-31, A-10

Design Capacities

Summary of Comments Received:

- Will Ecology void portions of General Sewer Plans and Engineering Reports that are based on providing and maintaining wastewater treatment capacity?
- The Port Angeles WWTP has reserve capacity at the plant that the City cannot use to meet UGA wastewater utility expansions needed to protect critical areas without triggering the corrective action requirement which will require expensive capital improvements.
- Explain why Ecology has not considered design flows and the need to maintain treatment capacity in setting effluent limits with this permit.
- Will the general permit replace the obligations in individual permits to maintain treatment capacity within the service area of each plant?
- How has Ecology evaluated whether Tacoma will have to implement building moratoria to meet the proposed effluent limits?

Ecology Response:

- When planning for upgrades capable of removing nutrients, jurisdictions may use the previously approved plant capacities for sizing purposes. However, use of these capacities does not allow a nitrogen loading increase, rather each jurisdiction will need

⁵ <https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Puget-Sound-Nutrient-Reduction>

to target different treatment concentrations to meet a future numeric water quality based effluent limit.

- Ecology understands the complexity of meeting GMA requirements in addition to this new permit. Permit planning requirements for future capital improvements include a provision to determine the implementation schedule with Ecology.
- Effluent limits are narrative for this permit cycle. The permit consists of short term BMPs and when those BMPs aren't adequate, the permittee determines how to reduce their loads through a corrective action. Design flows are often much higher than existing flows and some capacity is likely available to implement treatment optimization. Allowing plants to discharge up to their design flows without additional treatment will increase the nutrient loading which is not allowed under the CWA when discharges contribute to existing impairments. Ecology does not expect Permittees to take actions that will alter their treatment capacity. Optimization means taking steps to improve treatment efficiency without redesigning unit processes.
- Permittees must stay within approved design flows and loads, and also meet water quality and technology based limits. The design flow and load triggers will stay in the individual permit, and the GP provides additional protections for water quality.
- Ecology does not believe Tacoma will have to implement a building moratoria to meet the narrative effluent limits because this permit does not stop growth. Rather, this permit serves as a first step in getting jurisdictions to plan for treatment improvements so they can grow without worsening the existing DO impairments. Ecology does not prescribe the planning actions jurisdictions may take to meet their service commitments while also meeting their water quality permit obligations.

Commenters: O-21, A-17

Growth Management Act

Summary of Comments Received:

- Concerns remain over how the WWTPs will meet their GMA obligations.
- The draft NGP does not include any allowance for growth. Our region has explosive growth exacerbated by expanded Naval operations. We have concerns that this permit will demand expedited nutrient reductions/capital improvements and result in unaffordable costs to the City's rate payers.
- The draft permit does not include a provision for growth or development without triggering the need for expensive capital improvements.
- The draft permit no longer includes a de minimis 5% growth allowance nor does it address potential de-urbanization trends seen from COVID-19. The city of Bremerton is growing which compromises our ability to stay under the action level threshold without triggering compliance issues or the corrective action requirement. We're proposing that

Ecology bring back the tiered action level structure with a 20% increase over baseline conditions rather than the arbitrary 5% allowance. The BACWA watershed permit allows a 15% increase in loads. Our proposed growth allowance will allow concurrent pursuit of adaptive optimization and planning activities. It will also allow us to characterize changes in our nitrogen load from optimization activities.

- Activities at Naval Base Kitsap (NBK) can cause the City of Bremerton's population to increase unexpectedly as the Navy does not provide vessel maintenance schedules for security reasons. It's possible that the influx of sailors (not including their family members and/or other supporting roles) can increase the population by 8%. Please develop a provisional variance or temporary permit modification to allow for this population influx which is beyond Bremerton's control. An example of such a temporary modification could include benchmarking and accounting for the Navy base activities and associated population changes. The City currently doesn't track these metrics.

Ecology Response:

- Ecology understands jurisdictions have GMA concerns. Each jurisdiction has responsibility to comply with GMA obligations in addition to the State Water Pollution Control act and the Federal Clean Water Act. Planning conditions in the permit will help gather information necessary for updated capital facilities plans necessary to satisfy GMA requirements.
- High rates of growth in our region are part of the reason Ecology initiated nutrient reduction requirements for point sources. Increased populations directly correlate to increased nutrient loads from domestic WWTPs. Nutrient loads cannot increase because discharges from domestic WWTPs contribute to DO impairments. Ecology understands there are complications related to military bases and the unknowns associated with changes in military populations. Those that are growing faster and cannot stay below their action levels will need to proactively reduce nutrients during the permit term.
- Discharges from domestic treatment plants contribute to the existing dissolved oxygen impairments in Washington waters of the Salish Sea. As shown in the [Year 1 Optimization Scenario Technical Memo](#)⁶, population growth will make the duration and extent of those existing impairments worsen. Jurisdictions that expect to exceed their action level during the permit term must reduce their nitrogen load through implementation of a corrective action. DO impairments prevent jurisdictions from increasing their nutrient loads above the current discharge level.
- San Francisco Bay does not have existing DO impairments. A growth allowance is counter to the Clean Water Act when existing discharges contribute to water quality impairments.

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https://www.ezview.wa.gov/Portals/_1962/Documents/PSNSRP/OptimizationScenarioTechMemo_9_13_2021.pdf

- Ecology encourages jurisdictions to take a proactive approach toward reducing nitrogen loads.

I-4.0 Economic Impact

Commenters: I-18

General Comments

Summary of Comments Received:

- Both Shelton and LOTT have been able to maintain reasonable rates for their customers while planning and implementing nutrient removal. Other jurisdictions need to find creative and reasonable solutions in order to meet Clean Water Act requirements. Parity is necessary - other communities should not be allowed to defer costs of upgrades because of economic impact.

Ecology Response:

- Ecology agrees that all plants with reasonable potential to cause or contribute to an existing DO impairment must find solutions to meet their regulatory obligations and reduce nutrients. Affordability may factor into achieving AKART or the development of compliance schedules necessary to meet numeric water quality based effluent limits (WQBELs). Economic impact is not a factor absolving a jurisdiction from having to upgrade their existing level of treatment to meet a numeric WQBEL.

Commenters: I-4, O-15, A-17, I-2, A-11, OTH-2, A-2

Concerns over cost

Summary of Comments Received:

- I support clean water and restoring Puget Sound. How will this be financed? Homeowners are not going to be able to bear the economic burden as many of us are currently strained financially.
- Ecology should realize the cost of all the environmental projects required and prioritize those with the greatest water quality benefit.
- Most plants designed for high-rate activated sludge treatment (BOD/TSS removal) cannot be easily optimized to reduce nitrogen over the existing baseline. If it's possible, year round optimization will not be able to achieve a removal rate capable of meeting a WQBEL in the range of 3-10 mg/L. My city's discharge into Sinclair inlet may result in even more stringent WQBELs which will require significant facility upgrades and costs orders of magnitude greater than what's required for treatment optimization. Initial engineering estimates to achieve 3 mg/L TIN is around \$190 million. Sidestream treatment brings that estimate to approximately \$200 million. Just meeting nitrogen

requirements could result in unaffordable sewer rates barring any other improvements necessary to meet collection system improvements, wet weather CSO controls, pretreatment program requirement, biosolids and overall asset management to sustain existing levels of treatment. We estimate a necessary 10% increase in rates starting in 2023 to meet a 2031 upgrade target rather than the 3% originally budgeted. This represents a 108% increase over current rate projections. Overall, we have concerns over affordability as large % of our customer base can be considered economically sensitive based on the EPA's 2020 affordability guidelines considering the lowest quantile rather than MHI. Without external funding, these high costs will require long compliance schedules and a phased approach to stay within affordability metrics as outlined in that EPA guidance and for the upgrades to be considered reasonable and viable.

- The approach Ecology used after holding meetings and taking comments on the preliminary draft likely places everyone into a situation where they trigger the corrective action instantly. Also, laboratory costs will increase by \$12,000/year for our small plant which is well above a 5% increase in our operational budget.
- The permit as proposed is unreasonable for small municipalities who cannot bear the financial impact and do not have staff to implement the requirements.
- Ecology needs to understand the significant economic impact this new permit will create. A regional study would be a cost effective way for small facilities to complete the economic evaluation and environmental justice review.
- Permit monitoring and reporting requirements will create a substantial economic burden on all dischargers. There hasn't been enough time to capture the new expenditures in existing budgets and rate structures. The permit should allow a one-year grace period to allow time to procure outside services, funding and make rate adjustments before the permit requirements take effect.
- The cost of complying with the permit requires scientific confirmation from a third party review/validation. The permit should not move forward without this third party review. Overall, the permit should have a holistic approach to nutrient management so that all sources have an equal responsibility to reduce nutrient loads. Undue burden and responsibility should not be placed on urban wastewater utilities as these will bear the cost burden for load reduction. Identify all sources and develop realistic and attainable reduction objectives.

Ecology Response:

- Ecology has asked each jurisdiction slated for permit coverage to start estimating upgrade costs necessary to meet future numeric effluent limits. We have asked jurisdictions to start investigating alternative rate structures and to identify both low

and high income populations within their service areas. Each jurisdiction will need to consider affordability of the upgrade solution and determine how it will be financed. The WA State Legislature has also provided \$9 million to help offset the cost of the requirements in the first permit cycle. See [PSNGP Grant Guidelines](#)⁷. We continue to pursue federal funds not unlike when WWTPs had to upgrade from primary to secondary treatment. Treatment upgrades will take time to plan for and finance; therefore, we must begin now.

- Ecology has a responsibility to fulfill requirements of the Clean Water Act as the agency has delegation from EPA for implementation of the NDPES program. Jurisdictions with concerns about competing WQ priorities should work with their Ecology permit manager to discuss implementation schedules. Some jurisdictions may be eligible for [EPA's integrated planning approach](#)⁸ so that they can address how to sequence meeting regulatory responsibilities under competing CWA requirements.
- We appreciate your concerns over cost and permit requirements. Ecology understands that high rate treatment may not be easily optimized. Different opportunities exist based on the type of treatment used at the plant. Optimization alone will not achieve reductions to between 3-10 mg/L TIN for most plants. Optimization is a measure for this permit term to prevent nutrient loads from increasing over the established baseline while we develop numeric effluent limits through the SSM and Nutrient Reduction Plan development. Ecology recognizes the need for long term compliance schedules and phased implementation in future permit cycles. We are also seeking external funding for this large infrastructure investment. Ecology urges those with other required WQ improvements to work with their permit managers to discuss site specific situations.
- Ecology has made changes in response to comments received. Treatment upgrades will take time and this permit serves as a first step for reductions. Monitoring requirements were adjusted in the revised draft reflecting concerns over cost and staffing resources.
- A third plant category was added in the revised permit.
- Ecology has funded a regional study for plants that would like to participate. See the previous response in this section.
- Dominant plants have more than one year before the first optimization submittal is due. Ecology has provided grant funding to help offset the financial burden from the first permit cycle.

⁷ <https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Puget-Sound-Nutrient-Reduction>

⁸ <https://www.epa.gov/npdes/integrated-planning-municipal-stormwater-and-wastewater>

- This permit represents one prong of the watershed based Nutrient Reduction Plan that will incorporate point and non-point source reductions. Point sources are not the only source that must be reduced. See the previous response addressing findings of the Year 1 SSM Optimization Scenario results. Current results show that the largest plants must make reductions in order to achieve water quality standards. Early planning in the permit will inform how Ecology sequences point source reductions.

Commenters: O-17, O-18, A-8

Economic Analysis

Summary of Comments Received:

- The permit contains a requirement to conduct an EJ review which includes demographics analyses and an affordability assessment to determine the impact of utility rate increases. Why won't Ecology take on this analysis including an in depth economic analysis of the impacts the PSNGP will have on Puget Sound residences and businesses in both the short and long terms? Has Ecology made any fiscal considerations?
- The permit conditions and related costs will have significant affordability impacts and may hinder Bellevue's ability to comply with the Growth Management Act. As written, the permit will cause large rate increases passed to our customers due to requirements that do not immediately improve water quality. Bellevue advocates for Ecology to conduct an economic analysis on the costs required to comply with the permit.
- The NGP as drafted does not contain any cost benefit analysis. The District is unsure whether the billion+ dollar investment will result in a measurable environmental benefit.

Ecology's Response:

- Ecology conducted an initial investigation into nutrient removal technologies in 2010 through a contracted study with Tetra Tech. Site specific requirements will drive the cost of any point source improvement which directly ties to future rate design. The EJ review/demographic analysis/affordability assessments cannot be taken on by Ecology as each jurisdiction must be responsible for these elements. Ecology designed this permit so that those who can maintain their existing nutrient loads do not have to do as much during the permit term. Entities that are growing will have to do more during the permit term to keep the impairment problem from worsening through the application of a corrective action. Ultimate solutions will take many years to design and construct, and Ecology will take this into account when developing compliance schedules to meet numeric WQBELs in future permit terms. Treatment alternatives need to be evaluated

by each jurisdiction during the first permit term so that they may address fiscal considerations.

- Each jurisdiction has the responsibility to determine capital improvements necessary to meet permit requirements and satisfy the Growth Management Act. Ecology worked with regional planners during permit development so that they're aware of the new permit and its requirements. These conversations garnered support from the planning community in regards to planning for dual endpoints to represent best and worst case treatment scenarios. Each jurisdiction has different dates for GMA reporting; this requirement is outside of the scope of the permit. Part of the reason the permit requires early planning is so jurisdictions can plan for future treatment investments in a way that allows Smart Growth and does not compromise affordability.
- Ecology understands the hesitation to make large capital investments. However, the science is clear that both point and non-point source reductions are required to meet numeric DO water quality standards in WA Waters of the Salish Sea.

I-5.0 Effluent Limits

Commenters: O-5, O-31, O-26

Narrative Effluent Limits

Summary of Comments Received:

- The permit draft doesn't define a narrative effluent limit. All items listed in table 7 are actions, not numeric limits. No examples of narrative WQBELs are provided. Items listed in Table 7 do not correlate with the description in the NPDES Permit Writer's Manual.
- Special condition S4 does not meet the requirements under 40 CFR 122.44(d) and (k) for narrative effluent limits. The permit and fact sheet do not explain how these narrative effluent limitations will result in compliance with water quality standards as required under state and federal regulations.
- How do narrative effluent limits result in compliance with DO WQS?
- Dischargers must implement all available BMPs immediately. The corrective action must require use of a BMP before the load increases as the point of the permit is to prevent discharges that violate water quality standards.

Ecology Response:

- The statement of basis accompanying the draft permit explains the application of 40 CFR 122.44(k)(3) for this first permit cycle, only. Ecology considers the items listed in the draft permit in Tables 4 and 7 to be BMPs. The listed BMPs for each of the discharger categories in the revised draft constitute the narrative limit for those groups. Tables 4,

7, and 10 in the revised permit constitute narrative effluent limits from dominant, moderate and small loaders, respectively.

- Ecology disagrees. The Clean Water Act authorizes use of narrative limits and BMPs when numeric limits are infeasible. Therefore, this permit complies with state and federal regulations.
- The BMP/narrative approach for this permit cycle meets the conditions of the Clean Water Act when numeric limits are infeasible per 40 CFR 122.44(k)(3). Compliance with the narrative limits equals compliance with standards for the permit term. Action levels are part of the BMP approach reflecting the current discharge condition and drive corrective actions if exceeded. Failure to implement corrective actions following action level exceedance is a permit violation resulting in non-compliance with the permit.
- Optimization and corrective actions are BMPs. Optimization is immediately required upon permit coverage. When optimization is not sufficient to "hold the load" the corrective action is required as the defined response to the action level exceedance.

Commenters: T-1, T-2, O-4, O-12, O-22, O-28, O-29, O-26

Numeric Effluent Limits

Summary of Comments Received:

- All plants should monitor nitrogen and the permit should set an effluent limit for all plants.
- Implement numeric caps for nitrogen loads in this first permit cycle and reduce them on an annual basis. The state may need to change certain policies to make solutions economically feasible.
- We appreciate the explanation provided on the narrative WQBEL approach used in the permit. However, Ecology must prioritize development of numeric WQBELs and implement them no later than the second permit cycle.
- The second permit version must include numeric nutrient limits since Ecology will have the opportunity to complete the additional SSM runs and incorporate plant specific information collected during the first permit cycle.
- Numeric effluent limits must be included to meet state and federal permitting requirements. Ecology needs to set numeric limits within this permit cycle and implement them as soon as possible within the permit term. As written, the permit will result in zero positive improvements during the 5 year permit term and possibly longer. Increased monitoring frequencies and development of real-time averages connected to annual limits will allow permittees and regulators to spot issues earlier and make corrective changes as they arise.

- Concrete actions are needed in the event that Ecology cannot meet the 2022 numeric WQBEL development via the Nutrient Reduction Plan. Ecology should include a permit condition that requires all dischargers to meet 3 mg/L TIN unless WQBELs indicate that a less stringent limit will result in water quality attainment within a reasonable timeframe.
- Ecology needs to develop WQBELs for all discharges and place these limits in the individual permits.
- Why is it not feasible to set numeric limits at AKART for the plants with existing engineering reports and design criteria per WAC 173-220-130(1)(a)?

Ecology Response:

- The permit requires influent and effluent monitoring of both inorganic and organic nitrogen. Future permits will contain numeric effluent limits which will supersede the narrative limit structure used in the first permit term.
- This permit is Ecology's initial step towards regulating nutrients in domestic wastewater treatment plant discharges. Numeric water quality based limits will be implemented as it is feasible to calculate them. Action levels for dominant and moderate plants are based on current average TIN loads. An exceedance of an action level results in additional nitrogen removal requirements through correction actions. Reducing action levels on an annual basis does not allow permittees time to optimize their existing nutrient removal capabilities.
- Ecology agrees that numeric WQBELs for each plant should be prioritized and developed during this first permit cycle so they can be included in the second permit cycle.
- The Clean Water Act authorizes the approach taken in this first permit cycle when numeric limits are infeasible.
- Ecology disagrees. This first permit will drive reductions from proactive jurisdictions and plants that cannot stay below their action level.
- A blanket requirement to meet 3 mg/L is inappropriate because the final solution will include a mix of WQBELs and TBELs which will be reflective of AKART, and 3 mg/L may not be reasonable for all permittees.
- Ecology continues to work towards development of numeric WQBELs for all dischargers.
- In general, plants (other than LOTT who has established design criteria) were not required to evaluate nitrogen reduction capabilities or required to establish any definitive effluent targets for nitrogen in their most recently approved engineering reports. The facilities have historically evaluated treatment necessary to meet secondary standards for conventional pollutants. Any nitrogen reduction achieved is incidental to their original design goals. The engineering reports for these facilities did

not examine the technology needed to specifically remove nitrogen and, therefore, did not do the economic analysis needed to establish an economic reasonableness for nitrogen reduction. The existing engineering reports support AKART decisions based solely on reducing conventional pollutants to the standards in state and federal regulations for secondary treatment.

I-6.0 Sidestream Treatment

Commenters: O-16, O-28, O-29

Make sidestream treatment a permit requirement

Summary of Comments Received:

- Require the largest dischargers to invest in sidestream treatment during the permit term unless they have the capacity to meet a WQBEL within 10 years.
- Plants need to implement sidestream treatment. The preliminary draft had a provision for sidestream treatment; however, the draft permit no longer includes this provision as a viable option for shorter term nutrient reduction. Planning for future reductions through the NRE is helpful that does not serve as a substitute for near term load reductions. Several large dischargers have already developed cost estimates and performance expectations for sidestream treatment. While implementation of less than 5 years may result in a stranded asset, the largest dischargers have indicated that it will take decades to realize improvements necessary to meet WQS. Therefore, Ecology should require at least the largest two dischargers to invest in sidestream treatment during this permit term. The remaining dominant loaders should also bring on sidestream treatment during the permit term unless they can show how they will achieve the necessary capital improvements within the next 10 years.

Ecology Response:

- Ecology agrees that sidestream treatment may be a viable option for plants that have anaerobic digestion and could be a solution for reductions ahead of numeric effluent limits. However, it is not appropriate for the permit to prescribe this specific corrective action when a permittee may have other options available to comply with the permit. Implementation of SST is a major capital expense that requires adequate planning, engineering review, and financing. While the permit is silent on SST as a short term reduction action, dominant and moderate permittees may elect to pursue SST as a corrective action if they exceed their action level. Otherwise, SST must be considered as part of the Nutrient Reduction Evaluation as required in Special Conditions S4.E and S5.E.

I-7.0 Permit Incentives

Commenters: OTH-3, I-10, O-6

General Comments

Summary of Comments Received:

- The permit should include a provision absolving small plants who achieve < 8 mg/L from optimization and AKART requirements given that optimization will result in roughly a 7% reduction in the overall load.
- If a plant can reduce its discharge to below 10 mg/L TIN seasonally in addition to meeting the action level, the optimization plan should not be required on an annual basis.
- Plants that have already optimized/improved treatment processes have lower action levels. Previous permit versions contained relief for these plants performing better than 10 mg/L TIN. The current version does not have a similar off-ramp.
- Incentives are needed to increase early adoption of nutrient reduction activities.

Ecology Response:

- Ecology reinstated performance incentives for all plants that are able to maintain < 10mg/L TIN (annual average). Incentives include a truncated optimization report and no AKART analysis. Dominant and moderate loaders will also have to stay below their action level to be granted this incentive. Small plants must meet the 10 mg/L annual average requirement and also show their nitrogen load has not increased for the planning performance incentive to apply.
- Plants capable of meeting 10 mg/L as an *annual* average in addition to meeting an action level will have a performance incentive. However, elimination of the optimization plan submittal is not possible given that the report is part of the narrative effluent limit and considered a BMP. In the revised permit, any dominant or moderate loader that qualifies for the incentive will have a truncated optimization report requirement where they will have to confirm they met both their action level and the 10 mg/L annual average concentration threshold.

I-8.0 Regional Collaboration

Commenters: A-11, O-11, O-17

Regional Study

Summary of Comments Received:

- Ecology needs to actively participate in the studies required by the permit. A regional study focusing on economic impact, EJ, and possible solutions for nutrient reductions

from multi-family and commercial buildings would keep every municipality from having to conduct their own assessment. This would be more cost effective and result in more useful information.

- Ecology should collaborate with interested parties to develop a regional study that addresses feasibility, affordability, and equity.
- Does Ecology object to a group of dischargers and stakeholders taking on the development of a regional plan that addresses nutrients and other issues that adversely impact Puget Sound? If so, why?

Ecology Response:

- Ecology supports the use of a technical assistance project to satisfy optimization and planning permit requirements for small and moderate loaders. See previous responses in Part I that reference the PSNGP Grant Guidelines. Part of the \$9 million appropriation from the WA State Legislature was set aside for this purpose, for those who elect to participate. The scale and scope will depend on the number of jurisdictions that opt into the study.

Commenters: OTH-3

Regional Approach Needed

Summary of Comments Received:

- Amend the approach for addressing nutrients to improve regional collaboration in a way that provides access to expert science, increases funds for modeling/monitoring, allows for updated standards/WQ goals.
- The primary permittee should be a regional consortium (i.e., BACWA) rather than having over 50 individual agencies develop contrasting information using different assumptions. At least half of the \$9 million in funding should fund this organization's start up.

Ecology Response:

- Ecology appreciates the interest in ways to improve regional collaboration. The Puget Sound Nutrient Forum provides space for collaboration and dialogue over standards, modeling and the watershed based approach.
- Ecology appreciates the idea regarding a regional consortium of sewer agencies similar to BACWA. However, to date, dischargers have not shown an interest in forming a similar organization and Ecology has concerns that creating an organization like BAWCA at this stage would result in delay in achieving the nutrient reductions the region needs.

See previous responses that reference the PSNGP Grant Guidelines for information about a regional study.

I-9.0 Other General Comments

I-9.1 Affordable Housing

Commenters: O-31

Affordable Housing

Summary of Comments Received:

- How has Ecology evaluated the impact of the proposed effluent limits on the ability to develop low and moderate income housing?
- How has Ecology evaluated potential EJ concerns that will result from reduced access to affordable housing?

Ecology Response:

- The economic evaluation and the environmental justice permit conditions serve to assess the financial impact on the jurisdiction's ability to upgrade their treatment process to remove nitrogen. Each jurisdiction has the responsibility to provide a level of service to their customers which may involve adopting an alternative rate structure based on the range of incomes within the service area. See Part II – 4.3 for additional comments and responses on the economic evaluation and environmental justice requirements.

I-9.2 AKART

Commenters: O-26

AKART approach is flawed

Summary of Comments Received:

- Permittees must be at AKART prior to permit coverage.
- Ecology has provided no context for the word "reasonable" in the required AKART analysis.
- The permit does not require an AKART determination, only the submittal of a report in S4.D and S5.D.

Ecology Response:

- As discussed above, most permittees have historically only evaluated treatment necessary to meet secondary standards for conventional pollutants, and have not evaluated the reasonableness of nutrient removal treatment alternatives. The permit requires permittees to determine AKART for nitrogen removal during the permit term,

and Ecology will use that information to ensure each facility is implementing AKART for nutrients.

- Ecology referenced EPA's [2021 Financial Capability Assessment](#)⁹ as the basis for affordability that must be used in the economic analysis required for planning. In the context of AKART, "reasonable" is directly tied to rate impacts and affordability.
- In the revised permit, the planning requirements specifically require an AKART determination be made for each plant that cannot achieve 10 mg/L (annual average) and keep their load from increasing.

I-9.3 Anti-Backsliding

Commenters: O-21, O-12, O-31, O-26

Anti-Backsliding

Summary of Comments Received:

- The anti-backsliding provisions of the Clean Water Act will prevent Ecology from loosening TIN levels in the future.
- How have anti-backsliding regulations been evaluated in regards to the proposed effluent limits?
- How will this permit avoid triggering anti-backsliding provisions in the Clean Water Act? How will this permit interact with individual permits with numeric nutrient limits or different monitoring parameters and/or frequencies?
- Ecology must explain how replacing LOTT's numeric water quality based limit with an action level does not trigger anti-backsliding provisions of the CWA and meets anti-degradation policies and WQ standards.

Ecology Response:

- The reasonable potential determination and the existing DO impairments within the Washington Waters of the Salish Sea require nitrogen reduction from domestic POTWs (and other sources) in order to meet surface water quality standards. This permit is a first step in reducing nutrient from domestic point sources. Ecology cannot lawfully allow additional TIN loads under the Clean Water Act; therefore, less stringent effluent limits in future permits are unlikely.
- Anti-backsliding provisions prevent future versions of a permit from being less stringent than the current version. Narrative effluent limits will be superseded by numeric effluent limits in the next permit term. Action levels will no longer be applicable once

⁹ https://www.epa.gov/sites/default/files/2021-01/documents/2021_fca_guidance_-_january_13_2021_final_prepub.pdf

Ecology places permittees on compliance schedules working towards compliance with a numeric WQBEL. Monitoring frequencies may change in future permit cycles; however, no changes will occur until the nutrient reduction plan has been finalized.

- Individual permits with existing limits for ammonia due to aquatic toxicity will not be modified. In addition, wasteload allocations from DO TMDLs in individual permits will also still apply as do any other numeric limits. As Ecology develops numeric WQBELs for plants in this general permit, the more stringent of the two limits (between the GP and the individual permit) will apply.
- LOTT has a performance based limit for nitrogen in the current individual permit. This is not a water quality based effluent limit. The Budd Inlet TMDL will establish a WQBEL for LOTT. Ecology will assess the need for a compliance schedule to meet this limit once EPA approves the TMDL, and will apply the WLA to LOTT. LOTT must meet the requirements of both permits.

I-9.4 Compliance Schedules

Commenters: O-26

Compliance Schedules

Summary of Comments Received:

- As written Ecology must include a compliance schedule for some of the BMPs as the effluent limits are not immediately applicable.

Ecology Response:

- Compliance schedules will be used when/if a facility has to implement a corrective action and needs time to design and construct the solution. All other BMPs are immediately applicable.

I-9.5 Dual Permit Coverage

Commenters: O-31, O-26, O-21, A-8

Dual Permit Coverage and Individual Permit Nexus

Summary of Comments Received:

- How do state and federal regulations allow both an individual and general permit coverage for the same discharge?
- Is coverage under the PSNGP mandatory or voluntary?
- Will individual permits under administrative extension expire upon coverage by the general permit per WAC 173-226-300(5)?

- Ecology should use the existing individual permitting process to implement nutrient controls for the 58 treatment plants proposed for permit coverage given the expected range of future nutrient removal requirements.
- The issuance of a general permit in addition to an individual permit does not follow federal regulations.

Ecology Response:

- Ecology does not interpret our general permit regulations (WAC 173-226) as prohibiting Ecology from issuing a general permit for nutrient discharges while regulating remaining pollutants discharged from POTWs under their individual permits, provided permits contain consistent requirements. Where there may be a conflict between the GP and individual permit, Ecology will modify or reissue the individual permit.
- It is mandatory. All plants listed in S1 must apply for permit coverage by the date specified.
- There is no WAC 173-226-300(5). Ecology interprets this reference as meaning [Chapter 173-226-200\(5\) WAC](#)¹⁰. Individual permits regulate all other pollutants save for nutrients. Therefore, administratively extended individual permits regulating the other pollutants will not terminate upon coverage by the general permit.
- Ecology disagrees with using individual permits to implement nutrient controls for 58 WWTPs. While permittees are different in size, they are all domestic wastewater treatment plants and fall under the same discharger category.

I-9.6 Nutrient Discharge Fees

Commenters: OTH-3

Flush tax needed

Summary of Comments Received:

- Areas across the country (i.e., Long Island Sound) have used nutrient discharge fees to help develop cost-effective solutions for nutrient removal. ~\$6/pound N is an efficient tradeoff for maximizing nutrient reduction. Implementing a nutrient discharge fee (\$0.05-\$.10/lb N discharged) would help enable funding of a regional planning study, independent model evaluation, and cost-sharing for implementing optimization strategies. These fees also can support the state's clean water revolving fund and show that a POTW has the intent towards achieving clean water.

¹⁰ <https://apps.leg.wa.gov/wac/default.aspx?cite=173-226-200>

Ecology Response:

- Ecology has seen examples of a "flush tax" in other parts of the country to help offset upgrade costs and support SRF funding. The legislature would have to implement such a tax for the state or region. As legislators ask for ideas around funding improvements, Ecology will supply this information.

I-9.7 Narrative Standards**Commenters:** O-26*Narrative Standards***Summary of Comments Received:**

- Ecology has left out the interpretation and application of narrative criteria in 173-201A WAC in regards to nutrient pollution in Puget Sound.

Ecology Response:

- Ecology believes the requirements in the permit will result in nutrient reductions that not only lead to compliance with the dissolved oxygen criteria, but with the narrative criteria as well.

I-9.8 Regulated Pollutants**Commenters:** O-22, O-12, O-22, T-1*Pollutants Subject to Regulation***Summary of Comments Received:**

- The permit needs to include provisions for controlling phosphorus.
- Why is total inorganic nitrogen being regulated rather than total nitrogen?
- This permit should focus on controlling total nitrogen, not total inorganic nitrogen.
- In addition to nutrients, Ecology should include requirements to reduce CEC and PCPPs.

Ecology Response:

- As explained in the fact sheet, nitrogen is the primary nutrient driving productivity in the Washington Waters of the Salish Sea. Existing science does not support also controlling phosphorus from plants discharging directly into the Washington Waters of the Salish Sea. Ecology may elect to investigate phosphorus during watershed modeling.
- Nitrogen is the limiting nutrient in the Washington Waters of the Salish Sea. Inorganic nitrogen drives algal productivity as it is readily bio-available. In addition, domestic wastewater treatment plants discharge a very small fraction of organic nitrogen in their effluent as the majority ends up in biosolids. Therefore, this permit regulates TIN.

- We understand the concern associated with these CECs and PPCPs. The focus of this general permit lies in nutrient reduction. While nutrient removal technology does not remove all CECs there are some ancillary removal benefits. See the [informational paper developed by Ecology](#)¹¹ for more information. The State of Washington and the Department of Ecology have started to investigate and prioritize CECs.

I-9.9 Competing Clean Water Act Priorities

Commenters: OTH-3

Comprehensive planning needed

Summary of Comments Received:

- Long term WW planning needs to incorporate other treatment considerations (not just nutrients). Needs to consider CSO, SSOs, increasing reclaimed water, maximizing in stream flows, treat first flush stormwater, minimize toxics - dealing with these will be more cost effective vs. treating to 3 mg/L. A 3 mg/L treatment goal does not correlate with minimizing carbon footprints. Planning within this permit should integrate long-term nutrient reductions into the long term plans for each utility. Jurisdictions should update these plans every permit cycle. The permit needs to encourage use of "green engineering design" such as increased reclaimed water production, wetland discharges, sea level rise protections. Utilities and the Puget Sound Community at large would embrace these more readily. Trading that allows stagnant nitrogen loads for a specified number of years while green solutions get implemented would encourage broader action.

Ecology Response:

- Reductions will need to occur from both point and non-point sources within the Puget Sound region in order to meet water quality standards. Jurisdictions are responsible for their own long term planning and are encouraged by Ecology to consider integrated planning when faced with meeting multiple water quality regulations. Implementing nutrient reduction requirements will take multiple permit cycles, especially for the largest facilities. The permit does support increased production of reclaimed water and other progressive solutions to removing nutrient loads from entering Washington Waters of the Salish Sea. Ecology is amenable to a trading program. However, trading can only occur following the development of numeric WQBELs, equivalency factors, and Tribal consultation.

¹¹ <https://ecology.wa.gov/Water-Shorelines/Water-quality/Wastewater/Contaminants-of-Emerging-Concern>

I-9.10 Compliance with Individual Permit Conditions

Commenters: O-15, A-17, A-7

Compliance Concerns

Summary of Comments Received:

- The formal draft did not include language that would absolve permittees from compliance issues if optimization or pilot studies created effluent limit exceedances. Also, the permit language does not include a provision for Ecology to review and approve optimization strategies prior to implementation. The lack of these provisions place dischargers at risk of potential litigation when testing new technologies or operating their plants to increase nitrogen removal rates.
- How will Ecology address individual permit violations that result from optimization?

Ecology Response:

- Ecology has the authority to use enforcement discretion. In the event optimization causes an individual permit violation of a conventional parameter Ecology will evaluate the situation to determine the appropriate response. Permit managers are not treatment plant operators; therefore, it's inappropriate for Ecology to approve a potential optimization strategy prior to implementation. Plants that want feedback on optimization approaches can contact Ecology's roving operator providing technical assistance to discuss different strategies.
- Ecology has the authority to use enforcement discretion depending on the circumstances of any permit violation.

I-9.11 Reclaimed Water Applicability

Commenters: O-33, A-16

Allow more production of reclaimed water

Summary of Comments Received:

- Increased reclaimed water production is an important strategy for quickly and cost effectively reducing loads to Puget Sound. This strategy should be paired with sufficient monitoring and evaluation to ensure protection of public health and the environment.
- Increasing or generating reclaimed water from POTW effluent can reduce nutrient loads to Puget Sound although it's not developed in the current draft permit. Kitsap County believes the reclaimed water is a resource. Ecology should evaluate optimization requirements and consider how to incorporate reuse planning efforts to help meet action levels. POTWs currently evaluating or in progress of evaluating reclaimed water production should be recognized by Ecology. Requirements to meet 3 mg/L TIN should

be reconsidered if the County can implement a reuse alternative. Future limit development should consider actions a POTW takes to reduce effluent TIN loads into Puget Sound.

Ecology Response:

- Ecology supports the use of reclaimed water as a mechanism to reduce nutrient loads to Puget Sound. Any facility covered by this permit may seek authorization under Chapter 90.46 RCW and Chapter 173-219 WAC to develop new reclaimed water projects or to expand an existing project as part of their overall strategy to reduce nitrogen discharges to Puget Sound. Plants interested in developing or expanding reclaimed water projects should consult with the permit manager for their individual permit to discuss the steps they need to take for planning and permitting water reclamation.
- Ecology concurs that reclaimed water is a resource. While the permit is fairly silent on water reclamation (save for a consideration in long term planning), all strategies considered by jurisdictions to reduce their nutrient loading into Washington Waters of the Salish Sea are viable strategies for the first permit term and beyond. Ultimately, each jurisdiction must determine how to meet future effluent limits which will likely be load based. Reclaimed water alternatives that reduce the nitrogen load to Puget Sound can be combined with other treatment objectives to meet that load allocation.

[I-9.12 Revised Permit Approach](#)

Commenters: O-28, O-29

Retain Elements of the draft permit

Summary of Comments Received:

- Please do not weaken the following elements in the draft permit: retain the discharger categories, the largest loaders need to do more at a faster pace to reduce their loads. Require all utilities to conduct planning rather than triggering this requirement (as proposed in the preliminary draft) - action levels are too permissive as proposed which would delay necessary reductions, the revision to King County's action level reflect information shared during the advisory committee meetings. Do not revert to the higher numbers proposed in the preliminary draft.

Ecology Response:

- Ecology disagrees that action levels are too permissive. Changes made to action levels in the revised permit were for moderate loaders and those that provided additional information for consideration in the calculation. Action levels for the moderate loaders are in Special Condition S5. These loads changed because the monitoring frequency decreased to 1/week which affects the calculation. Ecology is working to outline a path for nutrient reduction in the Puget Sound region in a way that jurisdictions can

accommodate treatment upgrades necessary to restore DO concentrations. All permittees must complete early planning to find viable alternatives for nitrogen reduction. These plans will then inform the pace and path of compliance schedules once Ecology develops numeric WQBELs.

I-9.13 Urine Diversion

Commenters: I-5

Encourage urine separation

Summary of Comments Received:

- Ecology should do more to encourage urine separation at the source to reduce both nitrogen and phosphorus. This is a viable primary strategy to reduce nitrogen loads. Separation is scalable and can be implemented quickly. Results includes reducing energy use and freeing up capacity at existing plants ahead of necessary upgrades. There are options for recycling nutrients for agricultural use to avoid relying on industrial nutrient sources. CECs would also be removed as urine passes these into the wastewater stream which ultimately reach Puget Sound.

Ecology Response:

- Optimization requirements in the permit include investigations into source control opportunities at new residential and commercial buildings. This includes investigating opportunities for urine separation on building and city scale levels. Communities have autonomy to pursue whatever nutrient reducing solutions are available to them. Centralized treatment infrastructure is only one of many different solutions available to plants. Ecology encourages jurisdictions to find these source control opportunities, where practical.

I-9.14 Prioritize Tribal Treaty Rights

Commenters: T-2

Tribal Treaty Rights

Summary of Comments Received:

- Ecology should prioritize Tribal Treaty Rights when drafting permits. The draft PSNGP does not do this. Tribal members consume much more shellfish than compared to the general population and protection of this resource for future generations is of utmost importance.

Ecology Response:

- Ecology has made a point to keep Tribal staff updated during permit development and agrees Tribal Treaty Rights should be prioritized. This permit and future permit versions

serve protection of tribal treaty rights as POTWs will have to continue on a nutrient reduction path. Ecology invites Tribal consultation at any point.

I-9.15 Water Quality Trading

Commenters: O-22, O-10, I-18

Water Quality Offsets/Trading

Summary of Comments Received:

- PSA objects to nutrient trading with this permit.
- Ecology should allow watershed solutions as part of this GP so other nutrient sources can be reduced. Trading evaluations need to include a feasibility study looking at nonpoint source offset opportunities. Ecology should also consider a parallel NPS nutrient trading program in tandem with upgrades at Post Point as NPS reductions could achieve results more quickly and have a higher cost/benefit ratio than solely focusing on point sources.
- Any trading program should not result in impairments to tribal treaty resources. The state has a legal responsibility to consult with Tribes to ensure fulfillment of these treaty obligations and also environmental justice obligations during development of any such program.

Ecology Response:

- This first permit does not authorize nutrient trading as compliance tool. A nutrient trading program may be developed during the permit term for use in future permits; however, jurisdictions must come to Ecology with a viable proposal, which includes Tribal consultation.
- The Nutrient Reduction Plan will address both point and non-point nutrient reductions. Trading cannot be a part of this permit as trades may only occur with numeric WQBELs. Future trading opportunities are possible once the overall assimilative capacity is known. The magnitude of reductions required from point sources cannot be easily "traded away." Large-scale treatment plant reductions will still be necessary.
- Ecology agrees that a trading program cannot result in additional impairments to Tribal treaty resources, including Usual and Accustomed fishing grounds. To date, Ecology has offered Tribal consultation with the release of both the preliminary and formal permit drafts. An additional consultation invitation will follow the agency decision on this permit. And, at any time, any tribe may request to consult with Ecology on this issue.

I-10 Permit Support and Objections

I-10.1 General Permit Support

Commenters: I-3, O-28, A-9, OTH-3

General Support

Summary of Comments Received:

- Puget Sound needs protection from excess nutrients to preserve its ecosystems into the future. I support the permit and efforts to reduce excess nutrients from entering the sound.
- We disagree with the false claims related to uncertain science and that improving sewage treatment will not improve the health of Puget Sound. Now is the time to begin reducing sewage pollution as we have several communities that rely on clean water and Puget Sound deserves this protection. Ecology has held other parts of the state to the same water quality standard and required plants in Spokane to upgrade and meet Phosphorus limits. The west side of the state needs to be held to the same standard.
- This permit meets the overall goal of reducing pollutant exposure to SRKW and their prey.
- We agree with the first step of freezing loads and encouraging optimization during the permit term.

Ecology Response:

- Thank you for supporting this permit. Ecology agrees now is the time to reduce nutrients entering Washington Waters of the Salish Sea.

Commenters: I-25,I-26,I-27,I-28,I-29,I-30,I-31,I-32,I-33,I-34,I-35,I-36,I-37,I-38,I-39,I-40,I-41,I-42,I-43,I-44,I-45,I-46,I-47,I-48,I-49,I-50,I-51, I-53, I-54, I-55,I-56,I-57,I-58,I-59,I-60,I-61,I-62,I-63,I-64,I-65,I-66,I-67,I-68,I-69,I-70,I-71,I-72,I-74,I-75,I-76,I-77,I-78,I-79,I-80,I-81,I-82,I-83,I-85,I-86,I-87,I-88,I-89,I-90,I-91,I-92,I-93,I-94,I-95,I-96,I-97,I-98,I-99,I-100,I-101,I-102,I-103,I-104,I-105,I-106,I-107,I-108,I-109,I-110,I-111,I-112,I-113,I-114,I-115,I-116,I-117,I-118,I-119,I-120,I-121,I-122,I-123,I-124,I-125,I-126,I-127,I-128,I-129,I-130,I-131,I-132,I-133,I-134,I-135,I-136,I-137,I-138,I-139,I-140,I-141,I-142,I-143,I-144,I-145,I-146,I-147,I-149,I-150,I-151,I-152,I-153,I-154,I-155,I-156,I-157,I-158,I-159,I-160,I-161,I-162,I-163,I-164,I-165,I-166,I-167,I-168,I-169,I-170,I-171,I-172,I-173,I-174,I-176,I-177,I-178,I-179,I-180,I-181,I-182,I-183,I-184,I-185,I-186,I-187,I-188,I-189,I-190,I-191,I-192,I-193,I-194,I-195,I-196,I-197,I-198,I-199,I-201,I-202,I-203,I-204,I-205,I-206,I-207,I-208,I-209,I-210,I-211,I-212,I-213,I-214,I-215,I-216,I-217,I-218,I-219,I-220,I-221,I-222,I-223,I-224,I-225,I-226,I-227,I-228,I-229,I-230,I-231,I-232,I-233,I-234,I-235,I-236,I-237,I-238,I-239,I-240,I-241,I-242,I-243,I-244,I-245,I-246,I-247,I-248,I-249,I-250,I-252,I-253,I-254,I-256,I-257,I-258,I-259,I-260,I-261,I-262,I-263,I-264,I-265,I-266,I-267,I-268,I-269,I-270,I-271,I-272,I-273,I-274,I-275,I-276,I-277,I-278,I-279,I-280,I-281,I-282,I-283,I-284,I-285,I-286,I-

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General Support; make conditions more stringent

Summary of Comments Received:

- I support Ecology and the decision to develop this permit as municipal WWTPs are the largest source of nitrogen in the Washington waters of the Salish Sea. This permit has potential but needs more stringent requirements. Do more to reduce loads from the biggest treatment plants during the permit term. Make the action levels more stringent. Consider rolling compliance requirements. Make the corrective actions occur sooner. Ensure the permit meets Clean Water Act requirements. Population and climate change will make this situation worse and we need to act now.
- I support this permit. Utilities in our region need to control nutrients as other jurisdictions in our state have already taken on this problem. Require the largest dischargers do more, faster during this first 5 year permit cycle. Make the action levels more stringent. Do not let plants determine AKART, Ecology must take that responsibility. The time for nutrient reduction is now and the science supports the nitrogen reduction requirement from point sources.

Ecology Response:

- This permit serves as a first step towards reducing nutrient from domestic point sources. Action levels reflect existing discharger conditions for dominant and moderate loaders. Reductions from the largest plants will take time to scope, plan, fund and construct. New capital facilities must be addressed in Capital Facilities Planning as required by the GMA for most jurisdictions. Ecology agrees that the largest plants will need to make the most reductions to meet surface water quality standards. Since numeric WQBELs for each jurisdiction are currently not feasible, Ecology will use the approach in this permit to set forth the best path to realizing nitrogen reductions through treatment plant upgrades within a 15-20 year timeframe. Proactive jurisdictions have autonomy to do more to reduce their loads during the permit term. All plants must do what they can to remove nitrogen with their existing treatment processes through optimization. For those that cannot stay below their action level, the corrective action represents a way to reduce loads ahead of a full plant upgrade. This permit is enforceable and meets Clean Water Act requirements. See **Part II- 4.1 Action Levels** for responses to comments related to the use of the 99% upper confidence level for the action level.

Commenters: O-4, T-3, O-22,

Do more with the first permit

Summary of Comments Received:

- All WWTPs need to implement nutrient reduction regardless of location or ownership. The Nooksack delivers a large nutrient load into Bellingham Bay - reducing this nutrient load before it enters the bay could improve the DO levels and overall water quality in Bellingham Bay.
- Permittees need to start planning for nutrient reductions now while also considering how to accommodate future growth without increasing nutrient loads. The permit's monitoring and reporting methods need to be sufficient for documenting discharges and reductions while informing the adaptive management required for compliance with WQBELs and quantifying cumulative discharge effects. This first permit cycle should contain significant nutrient reduction requirements - mandating use of technologies that can remove both nutrients and CECs- which follows the SRKW Task Force recommendation.
- 1. Set interim effluent limits at AKART, pursuant to state law, by the end of the permit term. 2. Set WQBELs that must be met by the end of the permit term. 3. During the compliance period, cap monthly nutrient loads at a level lower than the 99% UCL action level proposed in the draft and include triggers for non-compliance during any month. 4. Use permit required monitoring and rolling monthly averages to allow for early actions in event of non-compliance. 5. Develop short term requirements for plants that exceed their action levels to limit the impact of increased nutrient loads in the receiving water 6. Address EJ so that it includes tribal usual and accustomed areas 7. Incorporate other requirements as necessary to meet WQS.

Ecology Response:

- Ecology is working to control nutrients from all sources - including point sources that discharge to tributaries leading to Puget Sound. The Nutrient Reduction Plan will include reductions of nutrient loads to tributary watersheds as part of the comprehensive solution needed to reduce nutrients in the Washington Waters of the Salish Sea. Both point and non-point reductions are necessary to achieve DO standards in the receiving water.
- This first permit sets the stage for nutrient reductions. The permit requires each jurisdiction to complete the analysis necessary to determine preferred treatment alternatives. See the [Contaminants of Emerging Concern and Wastewater Treatment Plants paper](#)¹² (Ecology Publication No. 21-10-006) on treatment technologies that may

¹² <https://apps.ecology.wa.gov/publications/SummaryPages/2110006.html>

also reduce some (but not all) CECs. Dominant and moderate plants that cannot stay under their action level will need to do more during the permit term ahead of knowing final nutrient limits.

- Ecology cannot set interim effluent limits at AKART for this first permit term because plants have not yet conducted an AKART analysis for nutrient removal. This first permit includes narrative WQBELs because numeric WQBELs for each plant which is infeasible for reasons provided in the fact sheet that accompanied the draft permit. Once Ecology develops numeric WQBELs, Ecology may use compliance schedules and interim limits for each plant as they make the necessary changes to their treatment processes. Permit required monitoring supports the action levels based on annual averages. The revised permit contains a corrective action requirement for both dominant and moderate loaders. These corrective actions require either a 10% load reduction or a requirement to stay below the action level, depending on the discharger category. The environmental justice requirement now reflects preservation of Tribal usual and accustomed areas. The general permit regulates nutrient discharges. Existing individual permits regulate the remaining discharges.

I-10.2 General Permit Objections

Commenters: I-23, I-24, I-311, I-332, I-333

General Objection to the Permit; not stringent enough.

Summary of Comments Received:

- I object to the draft permit allowing WWTPs to continue discharging toxics and nitrogen at levels already unsafe for aquatic life. Ecology has taken no regulatory action for over 20 years and water quality in Puget Sound has deteriorated as a result. The approach proposed does nothing to stop this pollution from the 58 treatment plants required to apply for the permit. The permit does not meet the Clean Water Act or Washington's own Water Pollution Control Act. Ecology should revise this permit and issue a permit with effluent limits that will protect Puget Sound now and into the future as population increases and climate change will only make things worse.

Ecology Response:

- As explained in the fact sheet, numeric effluent limits in the first permit term remain infeasible until Ecology conducts additional modeling. Dominant and moderate plants that cannot hold their load at existing levels must begin to implement nutrient reductions during the permit term.

Commenters: O-14

Objection to the Permit; Need to meet other Water Quality Goals

Summary of Comments Received:

- Nutrients are only one clean water act obligation and such an administratively heavy permit burden will take away from being able to meet other water quality goals.

Ecology Response:

- Jurisdictions have the responsibility to meet all Clean Water Act requirements. Those with competing priorities are encouraged to be proactive and consider integrated planning. See previous responses in **I-4.0 Economic Impact** and Error! Reference source not found.

I-11 Comments on the Fact Sheet

Ecology has not responded to comments received on the fact sheet which provides the statement of basis of the permit. The response to comments serves as the revised statement of basis for changes made to the permit, only.

I-11.1 Salish Sea Model, Watershed Reductions, DO Standards

Commenters: O-15, O-18, A-2, A-8, A-11

Existing science and the Salish Sea Model (SSM) do not support permit issuance.

Summary of Comments Received:

- Too many significant scientific uncertainties exist with the use of the Salish Sea Model as the primary tool to drive regulatory requirement with the PSNGP. Additional studies are needed before issuance of any permit.
- Additional scientific investigations and monitoring are needed to improve the basis for the PSNGP. These additional studies will offer a broader suite of solutions and alternatives to improve DO in Puget Sound. Ecology should finalize the NMP, use external experts to validate the science and develop more effective alternatives.
- Ecology used unreliable statistical methods and outdated standards in the scientific basis for this permit. The impact of point source discharges compared to the natural oceanic inputs are negligible. The permit does not address other sources of nutrients such as stormwater.
- Ecology should complete the modeling prior to developing a general permit and placing requirements on dischargers.

Ecology Response:

- Ecology has studied the nutrient overenrichment problem since the 1990s and must take steps to improve dissolved oxygen levels. Achieving standards will take time and this permit serves as an initial first step in what will be a multi-year process for point sources. Opportunities to refine scientific basis of the permit will occur at each reissuance opportunity. The SSM constitutes the best available science for this permit and the agency's decision to reduce nutrient loads to the Salish Sea.
- Ecology and other stakeholders continue to pursue ongoing scientific and monitoring investigations. The agency is using a transparent stakeholder process, the Puget Sound Nutrient Forum, to vet model results and scope future model scenarios that address different solutions and reduction alternatives.
- Stormwater is outside the scope of this permit, but Ecology will evaluate potential nutrient reductions when it reissues existing stormwater permits. Ecology recognizes that the ocean serves as the largest nutrient input into Puget Sound. However, the anthropogenic inputs from WWTPs contribute to existing DO depletions because residence times (especially during low flow months) cause these nutrient loads to drive productivity and eutrophication leading to the anthropogenic allowance from human activities to be exceeded.
- See response to comments in Part I-1.0 Timelines related to delaying issuance due to scientific uncertainty.

Commenters: OTH-3, O-17, O-11

The SSM needs an independent third party review.

Summary of Comments Received:

- Other estuaries across the Country have used a "One Sound, One Science" approach which includes independent peer reviews of the model used in the scientific investigations. The likelihood of a multi-billion \$ investment requires an extensive review by an independent model group.
- Why did Ecology opt to use the SSM as the sole model for this purpose? How were internal and external peer reviews used? Has the model shown that reducing nitrogen loads from WWTPS will directly increase oxygen levels? Share results from the peer review.
- Does Ecology object to having an independent analysis to confirm modeling assumptions and results?

Ecology Response:

- The SSM constitutes the best available science and has gone through internal/external peer review. Results from Year 1 Optimization scenarios show that reducing loads from WWTPs will result in improved DO concentrations.
- We appreciate your comment regarding an independent analysis for confirming modeling assumptions and results. However, the request for independent 3rd party model review is outside the scope of the permit and its conditions. Please use the Puget Sound Nutrient Forum to discuss your modeling questions and requests for independent analysis.

Commenters: O-17, T-3, OTH-3

Watershed and Non-Point Source Reductions

Summary of Comments Received:

- What actions has Ecology taken to mitigate non-point nutrient sources? How does this compare to the level of mitigation proposed for WWTPs?
- Ecology needs to address land based watershed nutrient loads through riparian buffers, consider all nutrient sources that affect Tribal resources, and formally consult with Tribes to address shellfish and salmon recovery objectives.
- An integrated nutrient strategy that encompasses all sources of nutrients into an overall nitrogen budget is needed for both point and non-point sources. Canada needs to be included in this strategy.

Ecology Response:

- Ecology's Nutrient Reduction Plan will address both point and non-point source reductions necessary to meet DO standards in the WA Waters of the Salish Sea.
- Ecology agrees watershed inflows which include point source and non-point sources should be reduced. This is part of the overall Nutrient Reduction Plan.
- Ecology is simultaneously completing the Nutrient Reduction Plan to all sources of nutrients into the WA waters of the Salish Sea. The NGP is a subset of that overall program and addresses point sources. Canada is outside of Ecology's regulatory purview.

Commenters: OTH-3, I-14,

Change the DO Standards

Summary of Comments Received:

- Ecology needs to revise its DO standards prior to requiring capital planning from POTWs to ensure wise investments geared towards improving the health of Puget Sound.

Ecology Response:

- Changing standards is outside of the scope of this permit.

Commenters: O-31

Reasonable potential and DO standards

Summary of Comments Received:

- Does the RP determination discussed in the fact sheet constitute site specific information for each facility showing that the discharge causes or contributes to a violation of WQS?
- How did Ecology process SSM results to make the impairment determination used in the reasonable potential analysis?
- Has Ecology adopted a new DO standard based on how SSM results were processed and applied in the Bounding Scenarios Report?

Ecology Response:

- The reasonable potential determination included site specific information that confirms discharges of nutrients from domestic WWTPs contribute to existing DO impairments in Washington Waters of the Salish Sea.
- The SSM did not make an impairment determination. DO impairments are based on the current EPA approved 303(d) list. The SSM simply confirmed that discharges of nutrients from domestic WWTPs contribute to these existing DO impairments in the Washington Waters of the Salish Sea.
- Ecology has not adopted a new DO standard.

Commenters: O-31

Questions that should be raised at the Puget Sound Nutrient Forum

- How many model cells are out of compliance with DO standards when only based on the deepest layer of the cell?
- Does WQP 1-11 represent the current interpretation/application of the marine DO water quality standards?

Ecology Response:

- These questions are outside the scope of this response to comments.

Part II- Comments by Permit Section

II-1.0 S1 Permit Coverage

II-1.1 Plant Categories

Commenters: A-10

How were categories determined?

Summary of Comments Received:

- How did Ecology scientifically determine the cutoff between the small and dominant categories? Provide documentation.

Ecology Response:

- Ecology ranked cumulative nutrient loads using 2019 data available in the WQWebDMR system. The results of this initial ranking are included in Appendix D of the fact sheet. Based on comments received, Ecology added a third discharger category for moderate loaders. Ecology used the same data set to develop this third category. 2019 DMR data provided the total inorganic nitrogen loads for each discharger. These loads were graphed and Ecology discharger categories assigned based on breakpoints in that data. The results for the revised permit's categories are as follows:
 - Dominant Loads: > 80% of the cumulative TIN load
 - Moderate Loads: 19% of the cumulative TIN load
 - Small Loads: < 1% of the cumulative TIN load (discharges < 100 lbs/day TIN)

Commenters: O-14, O-5, O-6, O-21

Plant categories aren't appropriate.

Summary of Comments Received:

- Disagree with plant categories, please revise plant categories to more accurately reflect loads. We suggest using Largest Loader and Smallest Loader monikers rather than dominant and small.
- Disagree with plant categories. Requirements for small plants are not practical or necessary as they are barely 1% of the load.
- Disagree with plant categories, characterization seems arbitrary and implies they have the same overall impact on water quality.
- Disagree with plant categories, please rename plant categories to more accurately reflect loads. The way dominant plants were determined is unreasonable. Birch Bay is not a dominant loader.

Ecology Response:

- Ecology revised the permit to add a third discharger category for moderate loaders. The terminology used in the revised permit: dominant, moderate and small loaders will not be changed.
- All plants eligible for coverage under the general permit have reasonable potential to contribute to existing impairments. Permit requirements for small plants reflect their minority contribution of the overall load. Revisions to the permit include performance incentives for all WWTPs who keep their load from increasing and meet an annual average of 10 mg/L TIN or less.
- See the response in **Part II-1.1 Plant Categories**. Clear breakpoints in that loading data correspond with the plant categories used in the draft permit. Water quality impacts will be taken into consideration during development of numeric water quality based effluent limits.
- Birch Bay is a moderate loader in the revised permit.

Commenters: O-25, O-28, A-5, A-10, O-29

Create a third plant category

Summary of Comments Received:

- Create an additional category for the largest plants so the biggest dischargers do more, faster. These largest plants should have a corrective action requirement during the first permit term and not be subject to triggering the requirement which would delay nutrient reductions.
- Add a separate category for the biggest loaders. Require King County and Tacoma to implement actual reductions by 2030.
- Please rename plant categories to more accurately reflect loads. There are large differences between loads in the dominant category. Focus on the biggest dischargers first and phase reductions from smaller plants.
- The differences between the high and low loads in this category exceed two orders of magnitude. Please add a middle tier with reduced testing frequency and change the NOP requirements to better reflect the level of discharge from this group of plants. Small plants and the communities they serve have limited resources to take on additional costs related to increased testing, modeling and advanced treatment.
- There should be three categories of dischargers with a category for the largest plants that have the most load.

Ecology Response:

- Ecology added a moderate loader category to the revised permit. Dominant loaders are the top 7 plants comprising 80% of the point source load. Action levels for these moderate plants were recalculated with the basis of one sample (rather than two) per week. Revised action levels for moderate loaders and other permit requirements are now listed in Special Condition S5
- Permit requirements drive reductions from both dominant and moderate loaders that cannot stay below their action level. In the revised permit, no change was made to the dominant loader's corrective action requirement. The new corrective action condition for moderate loaders includes bringing the effluent load back under the action level for the duration of the permit term.

II-1.2 Eligible Discharges**Commenters: I-14**

Remove plants who do not always discharge to Puget Sound

Summary of Comments Received:

- Revise list of plants that must seek permit coverage. Exclude plants whose loads are not always entering the Sound. Not practical or necessary as they are barely 1% of the load.

Ecology Response:

- Ecology intends this permit to cover WWTPs discharging to Washington Waters of the Salish Sea that contribute to existing DO impairments. This includes plants that discharge to the Northern Bays and the Strait of Juan de Fuca.

Commenters: T-4

Include other WWTPs

Summary of Comments Received:

- Include private plants, industrial plants, and watershed plants in this permit. Ecology hasn't shown sufficient information supporting the exemption of these plants and we object.

Ecology Response:

- Ecology will use existing individual permits for industrial and private domestic plants. Industrial plants cannot be covered by the same permit since the nature of the discharge will vary dramatically from one industry to the next. Further, Ecology no longer writes NPDES permits to private domestic treatment plants. Those that have NPDES permits were given permits prior to the change made to WAC 173-221. We agree

that the watershed plants discharging to tributary waters also need nutrient controls. However, more information is necessary before making a decision to incorporate these plants into the general permit.

II-2.0 S2 Application for Coverage

II-2.1 Obtaining Permit Coverage

Commenters: O-14, O-5

Improve clarity

Summary of Comments Received:

- Revise S2.A.1 as follows: “Ecology will issue a decision on permit coverage within 60 days upon receiving a completed NOI application or the permit becomes effective per section S2.C”

Ecology Response:

- Ecology did not make this change.

II-2.2 How to Apply for Permit Coverage

Commenters: O-5

Electronic submissions

Summary of Comments Received:

- Duplicative text requiring electronic submission is confusing.
- What are the acceptable methods for signing the application for coverage electronically? Several methods exist; however, some may not be legal.

Ecology Response:

- Ecology combined S2.B.1 and 1.a to eliminate duplication.
- As with the individual permit, Permittees must utilize their electronic signature account to sign and submit electronic DMRs and Notices of Intent. The WWTP’s legally responsible party must sign the NOI.

II-2.3 Modification of Permit Coverage

Commenters: O-5, A-7, OTH-2

Clarification needed.

Summary of Comments Received:

- We suggesting adding “or” in to S2.D. Without it, it seems as though you are calling any modification of coverage a significant process change.
- Public notification for every process change or testing change is excessive.

- Please clarify and provide examples of a significant process change due to a corrective action. Does this only apply to plants or process modifications that go beyond optimization?

Ecology Response:

- Ecology removed the coverage modification requirement related to significant process changes from a corrective actions. Revised sentence: A permittee requesting a change in action level, a reduction in monitoring frequency, or otherwise requesting a modification of permit coverage, must submit a complete Modification of Coverage Form to Ecology. The self-reporting questions included in permit Appendices C, D and E were adjusted to reflect this change.
- Public notice is required for any modification that is not a minor modification under 40 CFR § 122.63. In general, public notice is required anytime a change occurs to a permit that can be considered less stringent. Requests for reduced monitoring or an increased action level are two examples where public notice would be necessary.
- Process changes resulting from a corrective action fall outside of the scope of treatment optimization. Ecology removed the permit coverage modification requirement for significant process changes due to a corrective action. The general conditions contain notification procedures for process modifications as do the jurisdiction's individual NPDES permit. Corrective action implementation will not result in a less stringent permit requirement.

II-3.0 S3 Compliance with Standards

Commenters: O-26

Permit illegal.

Summary of Comments Received:

- The narrative limit structure is not legal and does not satisfy claims in S3.A and S3.B.

Ecology Response:

- Ecology disagrees based on rationale provided in **Part**

- **II-3.2 S3.B – Presumed** compliance.

Commenters: O-5

Clarification needed.

Summary of Comments Received:

- The way S3.A is written implies that violating two of the three standards is permissible.

Ecology Response:

- Revised sentence: Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), **or** human health-based criteria in the Federal water quality criteria applicable to Washington (40 CFR Part 135.45).

II-3.1 S3.A – Reasonable Potential**Commenters:** O-31, A-7, A-17*Statement of Compliance***Summary of Comments Received:**

- Ecology determined POTW discharges cause or contribute to DO standard violations in Puget Sound. Compliance with conditions of the permit will not result in meeting water quality standards placing dischargers in immediate violation of condition S3.A. The permit doesn't meet the requirements of the Clean Water Act because compliance with the permit doesn't result in meeting water quality standards.
- Section S3 appears to be inconsistent with Ecology's statement that these discharges cause or contribute to an exceedance of water quality standards. If standards aren't being met, how can Ecology authorize the discharge of nutrients through coverage under this permit?
- As written, it appears as though nitrogen discharges are prohibited given the reasonable potential determination. Ecology should exclude nitrogen discharges from the clause unless there are limits in an individual permit.

Ecology Response:

- Ecology used 40 CFR 122.44(k) as the basis for the narrative limits in the general permit. Under that regulation, narrative effluent limits (i.e., BMPs) are allowed when numeric WQBELs are infeasible. As long as the permittee follows the BMPs in the permit and meets all the subsequent requirements in the event of a triggered corrective action, the permittee is in compliance with the permit. The required BMPs drive actions that will lead to compliance with water quality standards.
- Ecology believes that compliance with the narrative water quality based effluent limits will result in compliance with water quality standards and will not exclude nitrogen discharges from S3.

II-3.2 S3.B – Presumed compliance

Commenters: O-28, A-17, O-31

Clarification

Summary of Comments Received:

- List sidestream treatment in S3.B since dischargers don't consider this optimization.
- We believe that S3.B presumes compliance with WQS. Further, we assert that discharging nitrogen does not violate WQS due to Ecology's inability to develop numeric WQBELs for this permit cycle.
- What is the basis for language in S3 that presumes compliance with permit conditions will result in compliance with water quality standards?

Ecology Response:

- This section was revised to include reference to corrective actions that may be triggered during the permit term. SST falls under the corrective action category if pursued by a permittee.
- Ecology used 40 CFR 122.44(k)(3) as the basis for this permit. Permittees will be considered in compliance with the Clean Water Act and water quality standards provided they meet the permit's conditions and implement the required BMPs.
- The BMP/narrative approach for this permit cycle meets the conditions of the Clean Water Act when numeric limits are infeasible per 40 CFR 122.44(k)(3). Compliance with the narrative limits is presumed to result in compliance with standards for the permit term. Action levels are part of the BMP approach reflecting the current discharge condition as they drive corrective actions if exceeded. Failure to take corrective actions following action level exceedance is a permit violation resulting in non-compliance with the permit and with standards.

II-4.0 S4 Narrative Effluent Limits for WWTPs with Dominant Loads

II-4.1 Action Levels

Commenters: A-16, O-10, O-22, OTH-2, O-28, O-29, O-25, O-31, T-1, A-13, O-21, O-26

Action Level calculation

Summary of Comments Received:

- Ecology made several assumptions in the action level calculation for Kitsap County. While the County has confidence in the reported results, the data used does not represent historical TIN loads at the outfall as the sampling profile does not include weekend loadings at the POTW. Revise our action level for the Central Kitsap WWTP to 302,000 lbs/year to more accurately represent current annual loads.

- Recalculate the Post Point AL using revised data from WebDMR from August 2019. Allow a 1-year review for the calculation as the sampling in the permit will provide a better understanding of current loads.
- Set the action level as a weekly maximum, applicable year-round. Seasonal averages allow frequent violations.
- Elaborate on the basis of TIN action levels in Table 5 as the values are different than the AL₀ used in the preliminary draft. What's the basis for Edmond's AL? Why was the proposed sample adjustment not taken into consideration? Have the data gaps we listed in the comments provided on 3/15/21 been addressed?
- Ecology should develop a nutrient load limit for the entirety of Puget Sound to prevent additional eutrophication events and degradation of marine ecosystems. Action levels should be calculated on a regional basis as different areas in Puget Sound have different levels of resilience to nutrient loading.
- Action Levels are too permissive at the 99% UCL; Use a straight percentile of 75th or 90%iles
- How the actions levels were calculated?
- What is the basis and information used to derive the action levels?
- Reduce action levels annually rather than maintaining a static level so that there's an improvement in water quality. Maintaining current levels will not improve the receiving water.
- Please consider a different method for setting action levels.
- The numeric action level does not constitute a BMP. BMPs include activities and other practices that prevent or reduce pollution.

Ecology Response:

- Ecology reevaluated the proposed action level for Central Kitsap. This recalculation included an adjustment for seasonal stratification and a reduction in monitoring frequency from 2 samples per week to 1/week. The revised AL for Central Kitsap is 306,000 lbs/year.
- Ecology reevaluated the proposed action level for Post Point. The revised AL for Bellingham's Post Point WWTP is: 996,000 lbs/year. The permit includes a provision for requesting action level reassessment following at least 1 year of permit monitoring. In order for Ecology to process this modification of permit coverage, Permittees must also show that influent organic loads did not increase and that the increased sampling density resulted in better effluent characterization.

- Ecology selected an annual average because a specific critical season has not yet been established for the Washington Waters of the Salish Sea. In addition, the adverse impacts of nutrients occur over longer averaging times than toxics for which impacts can be seen over short periods of hours to days. In the [March 3, 2004 EPA memo from Director Hanlon](#)¹³, EPA notes that annual or seasonal loading limits are appropriate for nutrients.
- The proposed Action Level (AL) for the City of Edmonds (City), found in Table 5 of the draft Nutrient General Permit (NGP,) is based on changes the City requested in their 3/15/2021 comment letter and a new sampling frequency proposed for dominant loaders in the draft PSNGP. The City discovered data missing from the dataset used in calculating AL0 for 10/1/2019. Justification for adding this data point is found under comment No. 2 of the City's 3/15/21 comment letter on the preliminary draft (not formal draft) permit. Ecology added the missing data point to the data used in the action level calculation. The City also proposed removing the data point from 8/15/2019 demonstrating it was an outlier as presented in comment No. 3 of the City's 3/15/2021 comment letter. Ecology removed this outlier. In addition, the draft PSNGP further separated facilities into dominant and small dischargers based on cumulative loading from 2019. The City was a dominant discharger. This change between the preliminary draft and the draft NGP decreased monitoring from 16 samples a month to 8 samples a month. The change in sampling frequency, along with the requested data changes, resulted in a larger AL of 419,000 lbs/year. Please note, in the plant categories used in the revised permit, Edmonds qualifies as a moderate loader. Moderate dischargers will sample once per week. The number of samples per month is a parameter used in the bootstrapping calculation. The confidence interval on a mean of 48 samples (one per week) will be different than the confidence interval on 12 samples (one per month). The AL based on 4 samples per month is 432,000 lbs/year.

Ecology concludes the data on hand is our best representation of the discharge, we assume future data will follow that same historical distribution. That is true if the future sample size is larger or smaller than the historical sample size. The action level is calculated based on the confidence interval appropriate to the number of samples. Comment No. 6 from the City of Edmond's 3/15/21 comment letter was considered prior to the release of the draft PSNGP.

- Through modeling, Ecology is working towards determining the assimilative capacity of the Washington Waters of the Salish Sea and its sub-basins. This information will be used to develop the future numeric water quality based effluent limits. Regional load limits cannot be utilized at this time in the first permit cycle. There isn't enough

¹³

https://www.ezview.wa.gov/Portals/_1962/Documents/nutrients/EPA%20Nutrient%252https://www.ezview.wa.gov/Portals/_1962/Documents/nutrients/EPA%20Nutrient%20Limit%20Memo.pdf0Limit%20Memo.pdf

information to support this approach for the first 5 year permit term. Therefore, action levels will be based on each WWTP's existing performance. Ecology will consider sub-basin loading when developing final numeric water quality based limits and equivalency factors applicable to future permit cycles.

- Action levels were set using a statistical technique that created a probability distribution of average loads. The 99% UCL was selected based on the ranked averages of the loads. Ecology does not support using a straight 75th or 90th percentile for the action levels because the resulting value would be based on a single data point and not an average, representative load. We disagree that it is too permissive.
- Ecology calculated the action levels using a standard statistical method known as “bootstrapping”. This method provides upper and lower bounds for the average effluent nitrogen load given a sample of observed TIN loads for a given level of statistical confidence, e.g. 99%. The method used to calculate the action levels does not estimate the confidence interval around the mean of existing observations. It instead uses the past observed data to create multiple sets of probable data points the facility is likely to observe in future years when sampling at the monitoring frequency required by the permit. The analysis assumes no increase in loading and that the future distribution of data remains similar to the past distribution. The exercise ultimately produces an annual average load for which the predicted chance of future observed data exceeding that number is 1%. Values exceeding the upper threshold are very unlikely given prior observations, and are thus indicative of an increase in nutrient load.
- Action levels serve as a yardstick for the dominant and moderate loaders to evaluate success of their optimization efforts. Challenges already exist with holding loads at current levels. Dominant plants that cannot stay below their action levels with optimization must pursue a corrective action. The implementation of the corrective actions will result in decreased loads ahead of full facility upgrades.
- See responses earlier in this section. Ecology evaluated different approaches to setting the action level with the Advisory Committee and elected to move forward with the bootstrap statistical approach as no other clear alternative emerged as a possibility.
- The BMP/narrative effluent limit approach for this permit cycle are listed in revised Special Conditions S4, S5 and S6. The action levels themselves are not a BMP. Rather, the combination of monitoring, optimization (which is driven by staying under the AL for dominant and moderate plants), triggered corrective actions and planning constitute narrative water quality based effluent limits for the permit cycle.

Commenters: A-7, O-21, A-10, O-31

Action Level Clarification

Summary of Comments Received:

- Does an action level exceedance cause a permit violation?
- What is the impact of staying under the action level?
- What's the process for changing action levels? Will they be adjusted once new data is gathered?
- Will the action levels reduce as plants improve their performance?
- Do the action levels achieve compliance with DO water quality standards?
- Will discharges from plants at or below the TIN action level listed in S4.B cause or contribute to a violation of WQS?

Ecology Response:

- The action level is not a numeric effluent limit, and exceedance of the AL is not a permit violation. Exceedance of the action level triggers dominant loaders to identify a corrective action capable of reducing the effluent load by at least 10%. The facility specific (or bubbled, as applicable) action level is the basis for the 10% reduction. As long as the permittee has followed the response steps identified in the permit and pursues identification and implementation of the corrective action in accordance with the permit, the action level exceedance itself does not constitute a permit violation. See permit special condition S5.D for revised corrective actions for moderate loaders.
- Action levels represent the current annual average TIN load discharged by the moderate and dominant plant categories. Staying under the action level means that the discharger was able to prevent a load increase; therefore, they are not contributing further to the existing DO impairments.
- Most action levels will remain static during the first permit term. Some permittees may elect to use data collected during the permit term to augment the data used to set the original action level. However, this will not be the norm as plants must also show that organic loading did not increase for the action level to change. If an action level changes during the permit term, Ecology's procedure to document this change will involve a coverage modification that is subject to public notice.
- The action levels calculated represent current discharge conditions. New, reduced action levels will not be calculated as plants optimize. All plants will have to evaluate their nutrient loads after each 12 month period and adjust their optimization approach and/or pursue a corrective action if loads increase.

- The BMP/narrative approach for this permit cycle meets the conditions of the Clean Water Act when numeric limits are infeasible per 40 CFR 122.44(k)(3). Compliance with the narrative limits results in compliance with standards for the permit term. Action levels are part of the BMP approach reflecting the current discharge condition and drive corrective actions if exceeded. Failure to follow the response to action level exceedance is a permit violation resulting in non-compliance with the permit and with standards.

Commenters: O-25, O-6, A-17, O-9, A-16

Action Level Concerns

Summary of Comments Received:

- We have concerns over allowing permittees to renegotiate a higher action level after the permit becomes effective. Also, the compliance assessment should start at the beginning of the permit term and not after year 1.
- Proposed permit approach may prematurely trigger major capital investments rather than require incrementally lower effluent concentrations. Removing the action level (or increasing the action level) will provide additional flexibility as monitoring, optimization and planning are sufficient to achieve the primary goals of the permit at this stage which is to prevent increases in TIN loads.
- The permit as written will place our plant into immediate non-compliance.
- Action levels and implementation of nutrient reduction strategies should not be part of this draft permit until Ecology understands the effectiveness, cost, and feasibility.
- Do not implement action levels until plants have monitored for two years and developed their own baseline.

Ecology Response:

- The statistical basis for the action levels in this permit is an annual average and the assessment requirement occurs over the previous 12 month period. Therefore, the compliance assessment does begin with the effective date of the permit.
- The purpose of this permit is to prevent the existing DO impairments from getting larger in area or longer in duration by requiring dominant and moderate permittees to take corrective actions if their discharge exceeds their action level. Those plants that are seeing increased loads will need to find solutions during the permit term to offset their loading increase. Small plants will be responsible for holding their load without an action level; however, the moderate and dominant plants must have a loading baseline drawn which they must stay under.

- Permittees with concerns over exceeding their action level are encouraged to start identifying and implementing a corrective action before the requirement gets triggered. Following the response to action level exceedance in the permit (i.e., identifying and implementing the corrective action) will keep the permittee in compliance with the narrative limits in the permit.
- Ecology understands the burden a new permit places on permittees in our region. Existing impairments and the knowledge that a discharge in one location contributes to existing DO impairments requires Ecology to act. The requirements in the permit work to address discharges that are contributing to the existing DO impairments during the permit term. Given the amount of time necessary to solve the nutrient overenrichment and make both point and non-point source reductions, permittees need to do what they can now with their existing treatment systems to keep nitrogen discharge rates at or below current levels. Plants not able to stay below the action level must follow the corrective action response.
- Ecology used representative data from each dominant and moderate loader to calculate the action level. Permit conditions include a provision for revising an action level by proposing a modification of coverage if a jurisdiction can show that the additional data collected during year 1 supports a change. No revisions will be made to action levels if a jurisdiction's influent organic loads have increased from the baseline developed by Ecology. Modifications of coverage require public notice, and Ecology's approval of a revised action level would be an appealable action.

Commenters: O-5, O-26, A-13, O-4, O-29

Bubbled Action Levels

Summary of Comments Received:

- The draft permit does not include a definition or explanation of how the bubbled action level concept applies to permittees.
- Why are the facilities with bubbled action levels assessed together?
- Bubbled action levels appear to be ~3% lower than the sum of the individual plant loads.
- There is a lack of clarity around bubble-permitting in the draft PSNGP. The permit should be explicit about procedures for bubble permitting and what combination of steps across a jurisdiction's facilities would constitute compliance.
- The bubbled action levels for nine WWTPs could lead to increased nutrient discharges which may result in significant localized impacts. Clarify why Ecology is allowing jurisdictions to bubble their action levels and explain how Ecology intends to mitigate localized impacts.

- We do not support the use of bubbled action levels in the permit. Each individual plant under the bubble must submit a Nutrient Reduction Evaluation.

Ecology Response:

- Bubbled action levels apply to jurisdictions with multiple treatment plants. The bubbled action level is the sum of the individual action levels for that specific jurisdiction. Bubbled action levels only apply to WWTPs in the same assigned discharger category. The use of the bubbled action level gives more operational flexibility to dischargers during this permit term. Corrective actions triggered by a jurisdiction with a bubbled action level requires the load reduction requirement be applied to the summed action level total. It is not a reduction from an individual plant's action level. The revised permit includes a definition. Permittees with multiple plants may elect to opt out of the bubbled action level.
- Bubbled action levels are the sum of the ALs calculated for the multiple plants in the same discharger category under a single jurisdiction's purview. Any perceived reduction would be a result of rounding.
- Jurisdictions with bubbled action levels must satisfy all submittal requirements for each individual plant included in the summed total annual load listed in either Table 6 (dominant loaders) or Table 9 (moderate loaders). Compliance with the action level will be based off of the sum of annual loads for each of the plants included in the bubbled total. Bubbled action levels are only possible if the treatment plants are in the same discharger category. When granted a bubbled action level, the permittee must assess annually whether the sum of the loads from all plants exceeds the bubbled total and report this result with the optimization report requirement. In the revised permit, if a corrective action is triggered by a dominant loader exceeding their action level, then the permittee must determine how to reduce the combined nitrogen load for their facilities so that the result is at least a 10% reduction from the value in Table 6. The revised permit requires that moderate loaders triggering the corrective action requirement must reduce their effluent load below the values in in Table 9 for the duration of the permit term.
- At the time of issuance, Ecology has not conducted near field analyses or developed equivalency factors for discharge locations. If a jurisdiction meets the bubbled action level, then there has not been an increase in nutrient discharges. If a jurisdiction exceeds the bubbled AL, then they must implement corrective actions to reduce their load. Depending on the magnitude of exceedance for a dominant loader, this could result in a larger than 10% decrease as the jurisdiction will need to make changes to reduce the combined discharge load by 10% under the bubbled action level.

- A jurisdiction may elect to submit one Nutrient Reduction Evaluation for all plants; however, the analysis must meet permit requirements for all treatment plants under the purview of the utility.

II-4.2 Nitrogen Optimization Plan and Report

Commenters: I-28, A-7, O-9, O-31, O-10, A-17, A-16, O-26

General Comments

Summary of Comments Received:

- If optimization fails to reduce a plant's overall nitrogen load, sidestream treatment should be an immediate requirement as an intermediate solution. Bringing SST online while a plant continues to plan, design, finance, and construct a full upgrade will help offset increased nitrogen loads during that timeframe.
- What options are left for plants that maximize optimization but still cannot meet the action level?
- The draft permit does not provide jurisdictions with a path forward in the event no feasible optimization strategies exist that meet the reasonable criteria and 1-year implementation timeframe.
- Tacoma has no optimization strategies that can be developed, tested, modeled and implemented in under a year.
- Why does Ecology want optimization implementation costs? How is this helpful to the agency?
- As written, the optimization requirement is not reasonable. Additional time is needed to plan and evaluate possible strategies so that the permittee can avoid unintended NPDES permit violations. Upon implementation, the process needs to be incremental so that the treatment balance can be maintained before making additional incremental adjustments. Optimization can take anywhere from one to six years - depending on the approach and the existing treatment process. Estimating anticipated results from process modeling is also difficult given the variability of influent characteristics. Additionally, the planning requirements in the draft permit are resource intensive and will strain the availability of contracting external help to support all plants covered by the permit. As optimization and planning needs to occur simultaneously, this will constrain all available external resources during the 5 year permit term.
- Costs for optimization to stay below the action levels and/or to achieve the 10% load reduction corrective action may result in stranded assets that do not complement long term solutions- especially if compliance schedules will follow in future permit versions. Stranded assets are unreasonable for our City as any use of financial resources must provide long-term benefits and not be a temporary stop-gap. As a result the City may

not elect to implement some strategies that do not fit within the long-term facility planning anticipated for future WQBELs.

- Permit requirements and the accelerated timeline will create a demand on engineering firms that will prolong the submittal process. Also, Ecology may not have the internal resources necessary to execute review and approval of the reporting requirements in a timely manner.
- The permit does not make optimization implementation enforceable.

Ecology Response:

- Ecology agrees that SST is a viable corrective action for those plants that utilize anaerobic digestion. See Part I-6.0 for other responses related to SST comments.
- Plants that maximize optimization but cannot meet the action level must pursue a corrective action to make more meaningful nutrient reductions ahead of a full upgrade. The revised permit contains this clarification.
- If a permittee determines no optimization strategies exist for the plant, then that jurisdiction must document the lack of options with the annual report and must move forward with the identification of a corrective action.
- Ecology had difficulty in determining an investment threshold for optimization. Knowing costs for implementation is an important metric for the agency.
- Ecology understands the concerns related to process modeling and has revised the optimization requirement to eliminate the required use of process modeling. See responses to comments later in this section related to the process model requirement. Permittees have the flexibility to determine how best to approach optimization at their plant. The permit requires permittees to document the optimization actions they take to comply with the narrative effluent limit. Each jurisdiction may decide on their own whether or not to hire a consultant to assist in optimization. That is not a permit requirement. Ecology is scoping a technical assistance project for optimization and possibly planning to support small and moderate loaders during the permit term. This may help provide some relief in obtaining consultant services. See response to comments in Part I for more information on the PSNGP Grant Guidelines and the technical assistance project.
- Ecology understands the concerns over stranded assets. Optimization is separate from corrective actions. Jurisdictions have autonomy to select optimization strategies that work with their existing treatment and utility budget. Exclusions must be documented in the Optimization Report. In the revised permit, dominant and moderate loaders that cannot stay below their action level must identify a corrective action and begin to implement the preferred solution at a pace and path agreed to by Ecology. These corrective actions are intermediate solutions designed to address discharges that contribute to existing water quality impairments. Ecology does not consider an

intermediate treatment solution that reduces nutrient loads for one to two permit cycles ahead of meeting a numeric WQBEL a stranded asset.

- Ecology understands the concerns related to additional reporting requirements and the finite number of qualified engineering professionals able to produce the documents. The technical assistance project funded by Ecology and the WA State Legislature may help to provide some relief to this concern. Jurisdictions may also want to approach planning in a proactive manner and secure the services of a consulting firm upon obtaining permit coverage.
- Optimization will be ongoing through the permit term and must start with permit coverage. Optimization reporting is satisfied by the reporting requirements in S10 and the reporting questions in Appendix C, D, and E. Failure to submit the report is an enforceable permit violation.

Commenters: I-14, O-14, O-6, A-5, A-7, O-10, O-31, OTH-2

Clarifications

Summary of Comments Received:

- Add a provision to S4.C that allows permittees to look at options that might reduce the effect of discharged nutrients. Suggested text: "Assess the options to vary the discharge location and/or timing if such actions might reduce the effect of the discharged nutrients."
- The permit should have an optimization definition that matches the fact sheet. Many POTWs may be considering large capital projects to comply with the permit.
- Define "reasonable implementation cost." A normalized metric Permittees can apply is necessary. Please provide additional guidance regarding this term in the revised permit.
- How a facility can document the exclusion of optimization strategies?
- Does Condition S4.C.1.b apply to consideration of an additional 10 percent reduction – namely, that a facility does not need to consider optimization strategies that exceed a reasonable implementation cost or timeframe that exceeds one year?
- What is the consequence if a facility has no optimization strategies that can be implemented to reduce nitrogen loading by an additional 10% within 5 years?
- Will a facility violate the permit when there are not reasonably available optimization strategies to achieve a 10% reduction in annual nitrogen loading?
- Is the nitrogen optimization plan submitted through the annual report?
- How do permittees communicate the optimization strategy selection by May 1, 2022? Is it solely at the city's discretion to identify the reasonable implementation cost? There

doesn't appear to be an upfront submittal. Rather, it's submitted through the annual report.

Ecology Response:

- The intent for optimization is to remove nitrogen loads from Washington Waters of the Salish Sea. Relocating nitrogen loads to deeper waters does not result in decreased loading. Ecology will study the impact of reduced nitrogen effects from relocated outfalls during numeric limit development. Ecology did not add this provision to the revised permit.
- Ecology revised the permit's optimization definition to better reflect the fact sheet.
- Ecology attempted to provide a threshold for "reasonable implementation costs" in the preliminary draft. The variability in budgeting for each jurisdiction makes this a difficult metric to define which is why the onus is on the permittee to determine and document this with their annual report.
- Jurisdictions have autonomy to determine their approach to optimization. The permit requires permittees to provide their rationale and any other criteria used in decision making with the annual report. This includes decision to eliminate an optimization strategy.
- The corrective action requirement in S4.D does not have the same considerations as the optimization requirement. Corrective actions should not be considered optimization as they are triggered when optimization is not sufficient to stay below the action level.
- Ecology and the permittee will agree on an implementation schedule based on the scale and scope of the corrective action proposed by the permittee. The permittee remains in compliance with the permit while working to implement the process change that will result in a reduced nitrogen load. Corrective actions are in addition to optimization.
- Yes, the questions in the annual report (Appendix C) satisfy the optimization requirements listed in S4.C for dominant loaders.
- Permittees do not need to provide the selection of strategies to Ecology prior to implementation. The intermediate milestones are included in the permit to keep the permittee moving towards reducing the nitrogen load as much as possible during the permit term. Permittees should begin working on prioritizing strategies upon the permit effective date. Ecology revised the permit requirement for initial selection of an optimization strategy to July 1; however, no reporting is required until March 31, 2023. Selection is left to the City's discretion.

Commenters: O-24, O-14, A-16,

Annual Report Requirement

Summary of Comments Received:

- Exclude LOTT from the annual nitrogen optimization plan given the current treatment processes used to remove nitrogen and the daily management and adjustment to operational strategies already in place at this facility. The annual report would be only a paperwork exercise and would not provide useful information.
- Exempt plants that have already invested in nutrient reduction infrastructure from the optimization requirement. The administrative burden will not improve plant performance and will divert staffing resources. Required DMRs will reflect plant performance.
- Plants utilizing nutrient removal infrastructure should not have to submit a NOP. Reporting will place an administrative burden on each facility that will do little to improve treatment performance.
- Plants need to determine a representative baseline. Selecting an optimization strategy prior to having a baseline will lead to inaccurate evaluations of TIN reduction.

Ecology Response:

- Ecology revised the permit to provide performance incentives for plants that reduce nutrient loads as initially proposed in the preliminary draft. Plants that meet the action level and stay below 10 mg/L TIN (annual average) will have to complete a truncated annual report that will satisfy the permit optimization requirement.
- Action levels serve as the optimization baseline for dominant and moderate loaders. Jurisdictions have flexibility in how they approach optimization.

Commenters: O-28, O-29, O-31, A-7, O-14, O-5, O-6, O-10, I-14, O-15, A-5, A-16, A-17, OTH-1, O-24,

Annual Report Questions

Summary of Comments Received:

- As part of the load evaluation in the optimization report (S4.C.2.b), Permittees should report a range of estimates for annual TIN load including 5th, 10th, 25th, 75th, 90th and 95th percentiles to understand the variability in nutrient loads. We also recommend Ecology use a different loading statistic for action levels as opposed to the proposed, overly permissive, 99th percentile.
- Calculating an annual loading average is not possible by March 2023 as there will only be one year of data in year two of the permit.

- How will 2022 data be used? Coverage will not begin until 90 days following issuance the permittee may not have prior TIN data with which to compare results. Total loads will also be skewed when comparing 2022 with 2023 since 2022 will not be a complete year.
- Does S4.C.2.b.i include accredited and non-accredited (process control) data? Or, only DMR/accredited data?
- The permittee should only document changes to the selected optimization strategy only if the strategy didn't meet the performance metric.
- Please explain how jurisdictions should develop the initial assessment approach for optimization strategy evaluation before and after implementation.
- How do you determine the number of days above the annual limit?
- The permits goal is to reduce annual mass loadings - the assessment of daily exceedances does not contribute to that objective.
- There are many attachments referenced in Appendix C. Can I presume these will be part of a single, annual report?
- Question 17 "Attach document including: date the exceedance occurred, the number of days the Action Level was exceeded during the reporting period, the adaptive management..." The Action Level is evaluated on an annual basis, thus the date of exceedance and the number of days exceeded do not apply.
- Question 21 "Did you submit discharge monitoring reports according to the required schedule? If no, attach a document describing/listing the missing records and corrective actions taken/or planned." Please clarify whether the DMRs for the general permit will be in addition to those for individual permits, or if the intent is that WWTPs can submit DMRs per the individual permit schedule and thus meet the requirements in the general permit.

Ecology Response:

- The AL value is based on the 99% upper confidence level of the probable distribution of simulated averages calculated using the bootstrapping method of statistical analysis applied to each jurisdiction's historical sampling data. It is not a direct percentile from the available data. For this reason, we will maintain the 99% UCL and will not use an alternative loading statistic. See **Part II-4.1 Action Levels** for more discussion. We respectfully decline to add the reporting requirement for the range of annual loading. This data will be available for all plants through PARIS and the WQWebDMR portal. Individuals interested in the loading variability may use the reported data to assess the ranges.

- Jurisdictions should use 2022 DMR data to calculate the annual average loading (per monitoring requirements in S6) for that year and report it to Ecology by March 31, 2023.
- 2022 data will be used to assess how nutrient loads change throughout the year and will be compared against action levels for dominant and moderate loaders to make sure that loads do not increase. The last date for possible permit coverage would make 2022 a 10 month year. Ecology has structured reporting so that DMRs track cumulative annual loads. ALs are set using an annual statistic. Permittees are encouraged to apply for this permit upon the issuance date so that Ecology may grant coverage as soon as possible.
- Only accredited data (that submitted with DMRs) should be used to satisfy S4.C.2.b.i.
- While jurisdictions should anticipate results from an optimization strategy, Ecology has removed the performance metric requirement in S4.C.1.c and S4.C.2.b.iii, tying optimization directly to the AL exceedance.
- The initial assessment requirement includes evaluating the existing level of treatment and determining the optimization opportunities that exist for that specific treatment process. Assessment methods may change based on whether the permittee elects to pursue process control, configuration or other operational changes. Ecology suggests the ease of implementation be used as a possible metric to determine feasibility.
- Ecology has removed the requirement to document the number of days the AL was exceeded. This requirement was originally included so permittees could evaluate at which point the AL was actually exceeded. However, given that the action level is not a numeric limit, the days it was exceeded could be misconstrued as non-compliance. An AL exceedance is not a permit violation provided the permittee follows the defined response required in the permit to implement a corrective action.
- Appendix C constitutes the annual report for dominant loaders. Permittees must provide attachments to each question as it applies to their facility.
- Ecology revised question 17 to remove the days of exceedance requirement.
- The general permit will have its own DMR, in addition to the individual permit DMR.

Commenters: A-7, O-6, O-9, O-10, A-5, A-16, A-17, O-15, T-4, A-17, O-31, O-29,

Optimization Timeframes

Summary of Comments Received:

- Optimization will take longer than one year if the jurisdiction collects data and applies adaptive management effectively.
- The 4 month timeframe to select an optimization strategy is insufficient for analysis and recommendation, especially when factoring in time required to select a consultant for this analysis. The number of plants covered by this permit will strain consulting

resources even if Ecology extends the timeframe. We request the timeline to complete the proposed requirements be extended.

- S4.C required King County to select a strategy within 4 months and implement it by March 31, 2023. Significant reduction from KC's three large treatment plants will involve construction which is likely to occur in that timeframe. KC also believes that it will exceed its action level starting in 2022 which triggers the 10% reduction by 2027. All constructible solutions will exceed the provided timeframes especially if it involves rerouting flows or building a new treatment plant.
- The 4 month timeframe to select an optimization strategy is insufficient for analysis and recommendation. We request a 12 month window after issuance to determine the best optimization strategy for our plant.
- The 4 month timeframe to select an optimization strategy is insufficient for analysis and recommendation, especially when factoring in time required to select a consultant for this analysis.
- The timeframe to select an optimization strategy is insufficient for analysis and recommendation, especially when factoring in time required to develop a process model.
- The timeframe to select an optimization strategy is insufficient for analysis and recommendation. We need time to evaluate strategies and potential benefits along with risk, implementation costs, and construction needs. We propose the initial optimization plan be required no earlier than Jan 31 2023 with initial implementation occurring no earlier than July 31, 2023.
- The timeframe to select an optimization strategy is insufficient for analysis and recommendation since the due date does not allow a full year of implementation, optimization and data collection. Determining effectiveness in fall and winter months will impact results as treatment may not be as effective when compared to warmer, summer months.
- Selecting an optimization strategy by May 31, 2022 does not provide enough time to assess, model, evaluate, select and implement. Additional time is necessary for this evaluation so that risks and costs are better understood. We also want Ecology approval and buy-in on the approach. We propose initial plan no earlier than one year from the effective date and implementation no earlier than May 31, 2023.
- Corrective actions need to cover short and long-term actions. Waiting up to 5 years for an exceedance to be addressed is unacceptable.
- Ecology should review and approve proposed optimization strategies prior to implementation. Without Ecology's approval, dischargers are subject to increased compliance risk when pilot testing or optimizing treatment for nitrogen removal when it was designed for a different purpose. This review would ensure a methodical approach

across all plants. Include an explicit review/approval of optimization approaches prior to implementation and build in time for this step.

- Overall implementation timeframes are too short. Developing the baseline used for comparison against optimization activities can take months. As can implementing strategies depending on whether there is any construction involved or difficulty in optimizing the process changes. Sufficient time needs to be provided to be able to measure any differences as a result of treatment performance optimization.
- Timeframes for assessing compliance with the action level and any corresponding corrective actions are too long and not result in protecting the receiving water. Structure corrective actions in a manner similar to the ISGP where quarterly exceedances trigger more stringent corrective actions.

Ecology Response:

- Optimization is a BMP that must be applied throughout the entire permit term. Permittees can utilize one strategy for the duration of the permit term if it's effective in keeping loads from increasing.
- Ecology revised the interim date for dominant and moderate loaders to select an optimization strategy as early as possible, and no later than July 1, 2022. No submittal is required until March 2023.
- If a jurisdiction believes they will exceed an AL early during the permit term, they should start pursuing a corrective action following documentation of this response in the annual report. The corrective action requirement is a prescribed path to compliance for plants that cannot hold the load.
- Initial treatment optimization assessment must start following permit coverage/effective date. The first annual report due March 31, 2023 must document progress and nitrogen loads discharged during 2022.
- Ecology revised the interim date for the initial optimization strategy selection. Permittees still must document results of initial selection with the annual report.
- The first report documenting optimization is not due until March 31, 2023. Interim dates provided in the draft permit were revised. Steps towards optimization treatment for nitrogen removal must begin after permit coverage. Waiting 18 months to implement a selected strategy is not acceptable.
- Ecology understands that results from optimization will differ depending on temperature and wet weather events. This is why plants must begin optimization strategy selection following the permit effective date and implement viable strategies as soon as possible.
- Ecology's permit managers and engineers are not treatment plant operators; therefore, they are not in a position to approve optimization approaches before implementation.

Ecology's technical assistance/roving operator staff may be of some assistance for plants who need guidance in selecting an optimization strategy.

- Corrective actions are left to each plant to determine. Short and long-term actions should be considered for this step. Long term actions, such as SST implementation, will take time to plan, design and construct. Immediate short term opportunities will depend on the existing treatment process. When a permittee triggers the corrective action, they must provide a schedule for implementation that meets the "as soon as possible" timeframe. Ecology must agree with that timeframe.
- Optimization occurs throughout the permit term. There is no specific requirement to change the approach on an annual basis. Rather, the requirement for dominant loaders involves annual reporting of the actions taken to reduce effluent nitrogen loads and justification of the approach taken. Ultimately, if the permittee cannot stay under the action level, they will have to develop a corrective action.
- In the event a dominant loader cannot optimize or triggers the corrective action, they must begin to implement an intermediate solution to reduce their nutrient load by at least 10% under the applicable action level. Timeframes for corrective actions will depend on whether the plant can stay below its action level. The size and scale of engineered solutions for a large WWTP are not comparable to stormwater treatment BMPs; therefore, they take longer to plan and implement. Ecology attempted to follow the ISGP approach with the concepts released in the preliminary draft. However, it became apparent that more autonomy on optimization approaches were needed within the treatment community as each plant utilizes a different treatment process. Ecology must approve the implementation schedule once a jurisdiction identifies a corrective action.

Commenters: O-6, A-5, O-10

Process Model Objections

Summary of Comments Received:

- Costs to develop a process model will likely be substantial for most covered by this GP due to training, characterization and annual software fees. The requirement, as written, may place a burden on many WWTPs. We propose this requirement should be optional for smaller utilities.
- Model outputs depend on the quality and quantity of the data used for calibration. Actual results may vary up to and over +/-10% which could cause actual loads to be much higher than what the model predicts. Comparing models annually will require a dynamic model over a 365-day period which is costly and takes a long time.
- Small/medium plants don't own a process modeling tool or have staff to run the software. Permit sampling requirements are not sufficient to reflect daily load fluctuations which will impact accuracy of the model outputs. Consider adding a range

to the model's predicted results for the expected % TIN removal (S4.C.1.a) and apply it to S4.C.1.c.

- Is the yearly load evaluation (S4.C.2.b.iii) a necessary step? Process model accuracy can vary widely - depending on the quality of the calibration, variability in wastewater characterization, and whether the model runs as a steady state or dynamic simulation. Dynamic models are very expensive and mostly suitable for conventional activated sludge process. The only accurate model for the trickling filter solids contact process is a steady state simulation; however, because this process wasn't designed for nitrogen removal, the fate of nitrogen cannot be simulated with the program. This limits usefulness of process models for predicting effluent nitrogen thereby making the requirement for process model comparison impossible for the Des Moines Creek plant (Midway Sewer District WWTP).
- Models can assist in design and are useful in comparing optimization options; however, the most accurate modeling results come from a 365-day dynamic simulation as long term steady state models can over-predict nitrogen removal by as much as 50%. The cost of modeling and sampling for this permit requirement is substantial and the City feels there is limited value in this requirement as it relates to the permit's nitrogen reduction goal. The City requests this requirement for comparison of actual performance to modeled performance for the annual load evaluation be removed from the PSNGP.

Ecology Response:

- After reviewing comments on the process model requirement, Ecology has decided to remove the provision from the final permit. Permittees must still report on their optimization assessment method. However, development of an empirical removal rate is no longer required. In addition, the load evaluation step will now be tied directly to the AL exceedance for dominant and moderate loaders. The assessment method requirement is left to utilities to determine as the evaluation will depend on the types of unit processes and the amount of available process data. Prior to optimization, utilities should understand current treatment plant performance as it relates to the plant specific optimization goal. If that goal is to stay below the action level, then the assessment starts with determining if the existing treatment performance is capable of achieving that TIN effluent target. If it's not, then the Permittee must create a list of all strategies that may aid in meeting the action level. Ecology is requesting that utilities document how they approached the initial treatment evaluation and narrowed down all possible strategies to create a short list of possible optimization approaches that allow them to stay under the action level. The initial approach for optimization must come from the short list of strategies identified by the jurisdiction. Optimization is an iterative process and Ecology understands that biological processes take time to respond to process control changes. This is why reporting on optimization occurs at a maximum frequency of once per year during the permit term.

Commenters: O-5, O-10, O-6, O-9, O-15, O-28, A-5, A-7, A-17, OTH-1, OTH-2, O-24, O-31, A-10, O-29, A-13

Septage Handling and Source Control

Summary of Comments Received:

- If plants refuse to take septage as a way to keep their nutrient load under the action level, and Ecology does not have an alternative solution for its treatment and disposal, haulers will likely dump shock loads in outlying areas of the collection system which has a potential to cause treatment interference at individual WWTPs.
- The requirement to develop a septage handling program to reduce nitrogen is unwarranted without providing rationale or preferred method.
- How does Ecology anticipate POTWs reduce TIN from residential homes?
- Source control is only cost effective when there is a high strength waste. Biological treatment is likely necessary for low strength nitrogen waste typical of domestic and industrial sources. This would ultimately require entities to maintain and operate biological pretreatment systems which would place undue burden on those entities and could conflict with existing contracts that cover wastestreams or previously approved comprehensive plans required under the GMA. This requirement should be optional. It shouldn't be a separate requirement. Rather, this program should be one option utilities can consider for optimization if it's feasible and doesn't conflict with existing agreements.
- Source control measures from new multifamily residential/commercial buildings and septage handling will take years to implement and require regulatory change across many jurisdictions. Placing restrictions on septage handling may cause some purveyors to illegally discharge into sewer manholes or the environment. This should be optional and not required as additional time is needed to evaluate these measures.
- Refusal to accept chemical toilet waste and septage from regional haulers is a readily available optimization strategy. Changes to how the City manages septage may result in these wastestreams being moved to environmentally sensitive locations, illegal dumping, or discharge to state waters without treatment.
- The draft permit appears to encourage elimination of septage handling which will likely result in decreased maintenance of on-site sewage systems and pump out systems which could worsen water quality in Puget Sound. We recommend Ecology consult with utilities like LOTT where they've been able to meter in septage to the plant to avoid shock loads.
- Non-biological treatment of nitrogen is only effective for high N strength wastes in the form of ammonia. Low strength waste needs biological treatment. This requirement is not cost effective. Developers and owner groups will push back. This requirement can

inhibit growth within cities and conflicts with comp plan/GSP and possibly the state's growth management plan.

- Current pre-treatment authorities do not extend to residential properties. Does Ecology have examples of strategies that jurisdictions can use for consideration? If so, please provide them.
- The cost of pre-treatment or full satellite treatment and its impacts on affordability are not understood. The nature of the City's existing service area make these inapplicable or practical. Since Ecology removed the growth allowance, we'll need to aggressively implement optimization strategies to stay under the action level. Overall, we're concerned that the actions required for permit compliance will have unintended consequences that will result in environmental degradation or delays in planned projects to improve the environment. We currently accept septage and RV cleanout at minimal costs. A change to our septage handling practices where we could no longer accept that waste or have to impose significant fees may result in illegal discharges. Another example is that the City may need to eliminate/delay projects currently planned to improve WQ and expand our collection system. If delayed, planned extensions of services to un-sewered areas would reduce influent nitrogen load growth but come at a cost of delaying infrastructure improvements which are protective of water quality.
- What is expected with the requirement to reduce influent nitrogen loads? It may take several years to develop and implement given programmatic changes that will be necessary.
- The source control investigation is better as part of the NRE vs the annual reports. Moving the requirement will provide the time necessary to make these evaluations and implement a holistic assessment of these opportunities. Can Ecology provide this flexibility as either part of the NRE or part of the optimization plan? Please clarify/provide guidance on how to identify strategies from dense residential/commercial buildings. Does this require monitoring of flows/loads and installation of equipment?
- No guidance was provided on possible strategies jurisdictions should consider for meeting the source control permit condition.
- The intent of the source control requirement is unclear and raises concerns about diverting TIN loads from WWTPs. WWTPs are uniquely designed and operated to ensure adequate treatment prior to discharge. If this section intends to achieve load reductions through on-site septic systems or decentralized, on-site wastewater systems under private management, this increases the chance that WW will not be treated to appropriate standards and limits opportunities for resource recovery such as reclaimed water. Increasing the number of septic systems is counter to GMA and not sustainable. Pretreatment requirements shifts the responsibility to private entities who may not provide reliable treatment. Does Ecology intend to require WWTPs control nitrogen

from non-residential sources through pre-treatment? Refusal of septage is not sustainable. LOTT stopped accepting commercial hauled waste in 2020 to reduce loads for permit compliance. Haulers now have to travel further and illegal dumping is a concern. If these elements remain in the permit, define "septage."

- The City of Port Angeles cannot accept increases in septage without risk of triggering AL requirements.
- The draft permit contains provisions that appear to prohibit septage handling which has the possibility of complicating routine maintenance of onsite sewage systems and pump out facilities which could lead to additional water quality issues in Puget Sound. We recommend consulting with utilities (like LOTT) who have septage management programs.
- The influent nitrogen reduction measures/source control program should be removed from the permit.

Ecology Response:

- The permit is silent on septage handling requirements and does not require WWTPs to stop receiving septage. Nothing in the permit requires or allows jurisdictions to miss other regulatory obligations or end agreements to provide services to other entities. Plants should have discussions with their septage clients to help manage the inflow as part of optimization, and report on this in their optimization reports.
- The source control requirement serves as a proactive measure to reduce nitrogen loads from new construction of multi-family and commercial buildings. There is no requirement to investigate reductions from single family residences. Onsite treatment/reuse and urine diversion/stabilization/treatment are viable alternatives for building and city scale diversion and treatment. Ecology encourages jurisdictions to be forward thinking and identify opportunities to reduce loads in ways other than centralized treatment.
- Ecology clarified the language in this section. The permit requires an ongoing investigation of opportunities for pretreatment and strategies for reducing TIN on a building scale. It's a separate element in the nitrogen optimization plan. Implementation is not a requirement in this first permit- rather it's an opportunity for jurisdictions to investigate the likelihood of these smaller scale, decentralized solutions ahead of planning for a centralized treatment upgrade.
- Ecology understands this is a difficult transition for treatment plants- neither septic tanks or current treatment at most WWTPs in the region remove nitrogen. The permit does not require jurisdictions to stop taking septage and high strength RV waste- rather, it asks jurisdictions to look at opportunities to manage septage differently.

- Proactive jurisdictions will look at the building scale TIN reduction as a way to stave off a need for upgrading centralized treatment. We agree that it may take several years to develop which is why the requirement in this first permit is to look at opportunities and identify potentially successful strategies for implementation.
- The intent of this requirement is not to increase the number of septic systems or to refuse septage. Rather, jurisdictions are encouraged to talk to septage haulers within their service area and find ways to manage that inflow in a way that avoids shock loads to the treatment system.
- The revised permit contains a definition for septage.
- After consideration, permittees must still report on the source control investigations with the optimization report. However, the Nitrogen Reduction Evaluation may incorporate findings of the investigations and apply them as part of the overall reduction approach selected by the permittee.
- Identifying strategies for commercial/dense residential buildings includes assessing the efficacy of building scale treatment solutions (e.g. Hassalo on Eight in Portland, Oregon) and opportunities for urine diversion and treatment. Additional monitoring of loads from buildings and installation of equipment is not required under this permit condition.
- This requirement will stay in the permit.

Commenters: O-31

Individual Permit Violations from Optimization

Summary of Comments Received:

- How should plants address negative treatment impacts from required optimization? The documentation requirement in S4.C.2.a.iv does not clarify if a facility can violate the individual permit due to optimization or if negative impacts will be addressed in a modified/reissued individual permit. Must optimization strategies that have negative impacts to treatment performance be considered?

Ecology Response:

- Ecology considers all of the factors involved in the situations that lead to permit violations and has the authority to apply enforcement discretion on a case-by-case basis if it concludes such discretion is warranted. If an exceedance of a conventional parameter effluent limit in an individual permit occurs as a result of facility implementing an optimization strategy, Ecology will evaluate all of the facts about the situation before deciding how to respond to the violation. Permittees do not have to select strategies that may compromise overall treatment performance.

Commenters: A-13, A-17, O-6, O-10, A-16, O-14, O-9, O-31, T-2, A-7, OTH-1, OTH-2, O-4, O-25, O-28, O-16

Corrective Action Requirement

Summary of Comments Received:

- The corrective action requirement with a future limit around 3mg/L may leave stranded assets. SST will likely be an initial response to the permit as written. Ecology should ensure infrastructure built to meet these interim requirement has a useful life and does not have to be abandoned at the next upgrade.
- The basis of the 10% reduction is not clear. Is it 10% from the maximum year? The average of the exceedance years? Minimal exceedances may require less than a 10% load reduction to stay below the AL. We believe a range of load reductions is more appropriate. We propose that load reductions triggered by the AL exceedance target a 5-10% load reduction.
- S4.D.1.b requires selection of additional optimization strategies if the utility exceeds the action level. The District's treatment system does not facilitate nitrogen removal and we're not sure opportunities for optimization exist. Amend this requirement so that additional optimization is necessary only if the utility has cost-effective options that have not yet been implemented.
- Amend S4.D.1.b so that additional optimization is necessary only if a cost-effective option exists.
- The 10% reduction requirement is problematic in two ways: it does not recognize a 10% reduction may not be possible with optimization thereby requiring a capital upgrade project/compliance schedule. It does not recognize that a capital project may be incompatible with long term reduction efforts leading to stranded assets. Ecology should allow compliance schedules and consider compatibility with long term efforts. We recommend Ecology amend the permit to clarify any corrective action would be implemented in accordance with a compliance schedule agreed to by the utility and Ecology and that feasible approaches should be evaluated in regards to compatibility with longer term removal efforts.
- S4.D.1.b assumes changing strategies is warranted when the implemented strategy may only require time to be effective.
- Is the intent to pursue optimization in lieu of large capital project? Engineering reports take time and involve unexpected costs. For the first AL exceedance, selecting an additional optimization strategy as stated in S4.D.1.b is more reasonable.
- The corrective action approach as written does not allow POTWs to exhaust their list of optimization strategies and immediately forces more costly measures.

- The permit should not require reduction below the AL. Update references to 10% reduction OR reduction needed to attain the action level. Also, we believe the 12 month timeline for implementation is inadequate to complete the task.
- Allow 18 months for the completion of the truncated engineering report.
- Delete the engineering report section and focus on the NRE which offers a comprehensive evaluation on feasibility, effectiveness and costs. The NRE should come before implementation of corrective actions.
- The permit does not clarify how a facility can meet the 10% load reduction if it's already maximized nitrogen removal to the fullest extent.
- If a plant optimizes treatment for nitrogen removal but exceeds the action level, what other adaptive management strategies are left since the plant has achieved maximum nitrogen removal?
- Load reduction requirements should be 10% below the action level. As written, the 10% reduction may not necessarily reduce the nitrogen load below the action level. Many opportunities exist. Permittees must be encouraged to adopt them.
- This appears to be a capital improvement requirement. Design and construction can take longer than 5 years. What's the consequence if the solution can't be implemented within 5 years or if the 10% reduction isn't realized?
- The timeline for the corrective action engineering report is unclear.
- For smaller plants (a few MGD), a more cost effective approach would be to implement a solution that focuses on the higher level reduction ultimately needed vs. 2 separate projects. Can the ER submitted be the NRE (rather than a separate report)? If so, then a phased approach might be possible that may not immediately target 3 mg/L TIN (depending on the development of limits for each plant).
- No deadline is given for the implementation of the corrective action when triggered. Is the permittee not required to achieve the reduction by a certain deadline, provided they start implementation?
- The timeline for the O&M Manual Update for the selected corrective action is too short.
- Ecology must use more urgent timelines for this permit to avoid the prolonged submission of plans from the largest dischargers. The timeline for improvements must come from Ecology, not the discharger. 2030 should be the implementation deadline for capital investments for the largest dischargers.
- Deadlines are needed for the largest dischargers so that they do more to reduce their nutrient loads at a quicker pace. Together, Seattle and Tacoma contribute over 70% of the anthropogenic nitrogen load and need to implement intermediate reductions within the next 5 years while also targeting a 2030 upgrade date for permanent process improvements.

Ecology Response:

- Permittees may elect to plan for phased reductions at their treatment plants. Intermediate reductions through the corrective action requirement that span the period between this first permit cycle and a full facility upgrade should not be considered stranded assets.
- The basis for the 10% reduction is off of the facility's action level, not the documented exceedance, an average of documented exceedances, or off the maximum exceedance. This could result in a necessary reduction that is greater than 10%, depending on the loading trends at the facility. The 10% reduction requirement serves as a way to keep the impairment problem from worsening during the permit term. Those that exceed their AL will have to do more than optimize existing treatment during the permit term to keep their loads from increasing.
- S4.D.1.b requires permittees to continue optimization while also looking forward to identifying a corrective action following an action level exceedance. Optimizing existing treatment is a primary tenet of the permit and will not be removed from the permit. If a jurisdiction believes they have limited optimization opportunities and will exceed the action level, they should be prepared to identify and implement a corrective action. The revised permit makes this clarification. Permittees in this situation would need to follow the corrective action procedures in the revised permit following submittal of the first annual report documenting no optimization opportunities exist.
- Permittees may justify their decision to maintain an optimization strategy if they exceed an action level while they work to identify a corrective action.
- Yes, the overall intent is for plants to pursue optimization in lieu of large capital projects for as long as possible provided loads do not increase. Exceedance of the action level shows that a plants load is increasing which cannot legally occur under the Clean Water Act. Working towards a corrective action does not absolve the plant from continuing to optimize treatment during that time prior to implementation.
- In the revised permit, dominant loaders and moderate loaders that cannot hold their loads at current levels must follow the corrective action requirement after documenting the action level exceedance with the annual report.
- Plants at risk of exceeding the action level during the permit term need to do more to reduce their load. For dominant loaders a marginal TIN reduction may not keep the plant from exceeding the action level later in the permit cycle. The 10% reduction requirement for dominant loaders remains in the permit. In the revised permit, moderate loaders must identify a corrective action to bring them below the action level for the duration of the permit term.
- The NRE addresses long term upgrades necessary to meet WQS. The corrective action requirement is a shorter term, intermediate solution ahead of full facility upgrades. Ecology is open to the submittal of an early NRE outlining a phased approach to

reduction in lieu of the corrective action engineering report, provided the first phase will be started following Ecology approval of the plan and schedule.

- The 10% reduction requirement should not be considered an optimization strategy. Rather, it's an intermediate action for dominant loaders to reduce loads ahead of a full facility upgrade.
- The 10% reduction requirement for dominant loaders is based on the facility's action level. Edits were made to the permit language to add clarification.
- Corrective actions are required when optimization is not an effective tool to reducing nutrient loads. Ecology understands that the corrective action may involve a capital improvement for larger, more complex plants. Implementation timeframes will vary and will be agreed to by the permit manager. Ideally, improvements will occur as soon as possible; however, there may be some instances where additional time is required for construction.
- Plants have 12 months after documenting the action level exceedance in the annual report to provide the engineering report. If a permittee finds they exceeded the action level in 2023 with the annual report due March 2024, the ER would be required with the March 2025 annual report.
- Ecology is amenable to permittees electing to submit the NRE addressing phased implementation to satisfy the corrective action engineering report. If a permittee goes this direction, Ecology must agree to the treatment modification and schedule.
- The implementation schedule will depend on the scope of the corrective action proposed by the permittee. In the revised permit, implementation must occur "as soon as possible" and on a schedule agreed to by Ecology.
- The revised permit now reflects a 6 month window for submitting the O&M update after implementation to allow time for the plant to focus on the process change.
- A limitation to the pace and path for reductions exists as Ecology has not completed the modeling necessary to develop numeric WQBELS. Therefore, Ecology cannot in good faith target a 2030 full facility upgrade date for the largest dischargers as regulatory uncertainty exists on the trajectory of final effluent limits. Compliance schedules for achieving these numeric WQBELs will be necessary, especially for the largest dischargers. Corrective actions focus on shorter term or intermediate reductions and Ecology will work to implement these as soon as possible when triggered by dominant (S4) and moderate loaders (S5).

II-4.3 Nitrogen Reduction Evaluation – Dominant Loaders

Commenters: O-10, OTH-1, O-5, A-7, O-31, O-6, A-6, O-26, A-5

General Comments

Summary of Comments Received:

- Ecology needs to develop WQBELs otherwise utilities face the risk of investing in stranded assets. This is especially true for plants who have invested in the infrastructure and may be able to meet the requirements during the first permit cycle.
- Will Ecology accept previously completed work for elements of the NRE or will all facilities have to complete a new evaluation? Does this serve as an engineering report for future implementation so that another report doesn't have to be completed?
- Why is LOTT the only plant excluded from the NRE? LOTT does not meet the 3 mg/L annual treatment goal as they only reduce TIN during the summer months. Budd Inlet's impairment would seem to mandate LOTT's participation in the NRE.
- The LOTT exception shows that permit requirements are not standardized. This should not be part of the general permit.
- No regulatory standard for the NRE was provided and a permittee has no basis to know what constitutes an approvable evaluation.
- Utilities should be allowed to use additional evaluation criteria above the effluent end point in the treatment technology evaluation. Looking towards GHG emissions, biosolids generation and overall energy use will lead to more sustainable outcomes that may reduce overall environmental impacts than only looking at effluent limits.
- Ecology needs to consider the undue burden of the permit's requirements (the submission of the AKART analysis, NRE and other implementation schedules) on low-income customers. SPU recommends Ecology use EPA's updated financial Capability Assessment guidance for selection/elimination of optimization strategies, technology investments and associated implementation schedules.
- LOTT will be subject to a future WLA from the Budd Inlet TMDL. Absolving them from the NRE does not make sense and the 4-year allowance for a plan is too long.
- What does viable timeframe mean in S4.E.5.f? When does it start? At the development of an RFP or after award for predesign?

Ecology Response:

- Ecology is working to determine numeric WQBELs during the first permit term. Plants with nutrient reduction processes who are able to stay below their action level (as applicable) and meet 10 mg/L TIN (annual average) will have abbreviated optimization and planning requirements. No AKART analysis is required for plants that stay below their action level and also meet a 10 mg/L TIN annual average concentration through

the permit term. Plants that meet the exclusions previously mentioned and maintain < 3 mg/L TIN on a seasonal basis do not have to submit an NRE.

- Ecology will accept sections of previously completed work for elements of the NRE. It's likely that an engineering report will be required as part of the compliance schedules that will apply when final numeric WQBELs are known. If a jurisdiction wants to use elements of a previous report, the permittee should notify their permit manager.
- Ecology has revised the performance incentives in the general permit. See the previous response in this section. LOTT will soon have a WLA from the Budd Inlet TMDL (due Spring 2022) which will supersede the action level in this general permit. Any planning necessary for LOTT to meet the WQBEL will be required at that time if they meet the exclusions listed above.
- The requirements for the NRE are provided in S4.E. Approvable evaluations will contain all the required elements listed in this permit section.
- Jurisdictions have autonomy to consider additional evaluation criteria like greenhouse gas emissions, biosolids generation and energy use in their analyses. Ecology strongly supports considering factors that drive a jurisdiction's decision to use the most sustainable means of reducing nutrients from their facility. However, these additional criteria may only be used when assessing the differences between various nutrient reduction strategies. They may not be used as a basis to support a claim that the jurisdiction should not implement any nutrient reduction at their facility.
- Ecology encourages the use of EPA's 2021 Financial Capability Assessment Guidance in development of reports and when conducting affordability assessments for all dischargers. See previous responses in Part I and also the fact sheet for a link to these guidelines.

Commenters: O-24, O-6, O-10, O-31, A-7, OTH-1, A-16, O-12, A-11

Planning Targets

Summary of Comments Received:

- AKART does not define a clear goal for effluent nutrient reductions and is subjective. Ecology has given no indications that the SSM results support that the 3 mg/L planning requirement is necessary for protection of Puget Sound. The model may provide a numeric limit that is more appropriate to achieve goals of the PSNSRP. We request the NRE requirements be modified to reflect limits specific to findings of the SSM year one and year two optimization scenarios that will be completed during the PSNGP term. The draft permit does not provide jurisdictions with a path forward in the event no feasible optimization strategies exist that meet the reasonable criteria and 1-year implementation timeframe.
- Meeting 3 mg/L on an annual basis is likely not possible. Temperatures dictate whether nitrification can or cannot occur. Winter months preclude the biological processes

necessary for nitrification/denitrification. LOTT suggests removing the 3 mg/L annual average requirement. If an annual average is to be used, Ecology should work with numbers that are more attainable, i.e., 8 mg/L.

- Investigations into annual averages of 3 mg/L TIN is unreasonable and should be removed. WQBELs should be the driver for advanced treatment assessments. Requiring this assessment at this stage is unreasonable.
- What's the basis for inclusion of a requirement to evaluate treatment technologies capable of meeting 3 mg/L?
- Section S4.E.3 only references 3 mg/L as a target and removed the 8-10 mg/L reference from the preliminary draft. We assume not all facilities will need to meet a 3 mg/L limit but must have a plan to achieve it. Would a phased approach to meeting 3 mg/L be a practical approach for those plants who do not have to meet 3 mg/L initially?
- Kitsap County has started looking at opportunities to reduce TIN loads; however, the planning to 3 mg/L is a concern. Ecology proposes a 3 mg/L TBEL that would not be achievable with the investments already made to add BNR at the Central Kitsap plant. We support nutrient reduction; however, Ecology has not supplied science supporting the 3 mg/L planning requirement. The dual season is also contradictory. A seasonal requirement does not make sense if looking at an annual reduction to 3 mg/L. Designing for both annual and seasonal will require different technologies and solutions deemed "substantial alterations of concept or basic considerations."
- What is the season referenced for planning in Section S4.E.3?
- Utilities should not be treated the same, regardless of size. The way small plants who cumulatively contribute < 1% of the total load need to be treated differently. Having all municipalities look at reaching 3 mg/L is a burden for small utilities and premature until Ecology sets final limits. Treatment technologies capable of achieving 3 mg/L are vastly different than technologies capable of reaching 8 mg/L.

Ecology Response:

- Permit revisions reflect planning for a seasonal 3 mg/L TIN limit (April – October) and also an AKART analysis to determine a more attainable treatment level that can be achieved year round.
- The NRE requirements do reflect limits specific to findings in the SSM year 1 optimization scenarios. Salish Sea Model Year 1 Optimization scenario results released in September 2021 support the 3 mg/L planning requirement as the results showed that reductions across all point and non-point sources are required to meet standards. Ecology is amenable to phased nutrient reduction at plants that elect to achieve AKART first. AKART and the site specific determination will depend on the affordability of treatment solutions.

- Ecology is amenable to permittees electing to submit the NRE addressing phased implementation to satisfy the corrective action engineering report. If a permittee goes this direction, Ecology must agree to the first phase and its implementation schedule.
- Ecology has not proposed 3 mg/L as a TBEL. The final permit includes a revision to planning where treatment solutions for 3 mg/L are only required on a seasonal basis. The AKART analysis applies year round. Plants that meet their action level (as applicable) and stay below 10 mg/L (annual average) will not have to submit an AKART evaluation and will have truncated optimization reporting.
- The revised permit now reflects a season of April – October for the 3 mg/L TIN planning target.
- Viable timeframes for implementation begin from the moment when the discharger has a numeric effluent limit.
- Ecology understands the disparity between the treatment technologies capable of meeting the best and worst case treatment scenarios represented by 8mg/L and 3 mg/L. Dominant and moderate loaders must complete early planning requirements for 3 mg/L (or the equivalent load) from April - October. Small plants must conduct an assessment and identify a treatment technology that meets the intent of AKART for nutrient removal.

Commenters: O-24, OTH-2, O-31, A-5, A-7, A-13, O-16, O-19, O-28, O-29

AKART

Summary of Comments Received:

- Adding advanced treatment will cause an economic impact in all cases and hardship exists in all communities. How will water quality improvements be realized in an equitable fashion if AKART is determined using this criteria? Utilities have tools to provide ratepayers relief while also implementing plans to support upgrades. An AKART assessment methodology needs to be uniform across permittees and the same economic thresholds should apply to all.
- Ecology should provide additional guidance to help frame the AKART analysis and financial test considerations, including a proposed list of treatment technologies required for analysis.
- The AKART analysis in the NRE is very focused on grey infrastructure. Can non-point source reductions and offsets/trading be considered in the AKART analysis?
- Since Ecology determined and courts affirmed that BNR and other advanced technologies are not AKART for Puget Sound, it's assumed these technologies need no consideration. The permit/fact sheet provide no explanation for considering these types of technologies AKART.

- AKART analysis will vary from plant to plant and is too subjective. Cost implications will also vary from utility to utility.
- Ecology should provide a cost threshold to determine what's affordable. The term "reasonably feasible" is not defined and needs to be placed into the context of the region's ability to pay for these upgrades. An economic analysis is recommended.
- Individual WWTPs should not have to determine the best available treatment technology that's economically achievable. Ecology should do that work to reduce the economic burden on WWTPs.

Ecology Response:

- Achieving AKART is a separate requirement from meeting a WQBEL. WQBELs are based on the response of the receiving water and ensure the plant doesn't cause or contribute to a violation of surface water quality standards. When meeting WQBELs, Ecology can offer compliance schedules; however, the expense of a solution does not absolve the permittee from meeting the numeric water quality based limit. Ecology suggests jurisdictions use EPA's Financial Capability Assessment to assess economic impact for both AKART and WQBEL end points. This tool can be used to also plan for financing future improvements.
- Please see the new BNR section in the Criteria for Sewage Works Design (scheduled for release in January 2022) for a list of treatment technologies that would likely satisfy AKART. EPA's 2021 Financial Capability Assessment contains two alternatives for assessing financial capability to meet CWA requirements. This is the financial guidance Ecology suggests using for the economic evaluation.
- Non-point source reductions and offsets/trading cannot be considered in the AKART analysis as they're only applicable for meeting WQBELs. Trading may be possible in future permits if there's interest from the permittees and Tribes agree that a trading program would not jeopardize Usual and Accustomed fishing areas. Ecology will enter into Tribal consultation prior to development of any trading program.
- Ecology denied the AKART petition as the treatment thresholds were not reasonable for all jurisdictions within Puget Sound. AKART also cannot be limited to one area of the State. Ecology recently updated the Criteria for Sewage Works design to include a section on BNR. Please see that new section for types of technologies that may satisfy AKART on a facility-specific basis.
- AKART is meant to be a facility specific endeavor based in part on the treatment solutions affordability. This is why each plant that doesn't meet the performance incentive must conduct the AKART analysis. Ecology expects there will be variation in the results of the AKART analysis based on affordability and current treatment.
- EPA's 2021 Financial Capability assessment is the tool which jurisdictions should use to determine what is affordable for their community.

- The AKART determination is a site specific exercise, and each permittee needs to assess the level of treatment that meets the AKART standard for their facility. Ecology has approval authority for this determination which will prevent the uneven application of the standard across permittees. See previous responses about the new section in the *Criteria for Sewage Works Design* and its connection to AKART.

Commenters: OTH-2, A-7, A-13

Economic Evaluation

Summary of Comments Received:

- The variety of treatment processes considered will include those found to be inapplicable or inappropriate due to site-specific conditions and eliminated from further consideration. Please confirm that permittees do not have to complete economic evaluations for alternatives considered but screen out after the initial evaluation.
- Why is Ecology asking for utility rate structure information?
- Data taken during the pandemic years should be excluded from analysis because the pandemic created substantial differences in the influent coming into the plants as well as recovered fees. It is unknown whether this would skew TIN analysis and/or economic evaluations in the next several years.

Ecology Response:

- Permittees do not have to conduct an economic evaluation for alternatives considered but screened out after initial evaluation.
- The economic evaluation ties directly into the AKART determination and the EJ requirement to determine what overburdened populations can afford to pay for their sewer service. Rate structure information is requested so that jurisdictions can consider revisions to the rate structure approach to make rates more equitable.
- Any exclusions of pandemic years in the economic evaluation is left to the jurisdiction to justify in their report.

Commenters: O-17, O-25, O-31, O-16, O-22, O-28, O-32, T-2, A-7, O-29, OTH-2

Environmental Justice

Summary of Comments Received:

- Why won't Ecology perform the EJ analysis including the economic analysis of the PSNGP's impact to Puget Sound residents and businesses over the short and long terms? Does Ecology not consider fiscal impacts?
- We support the EJ requirements in the permit; however, as written they do not address Tribal Usual and Accustomed areas. The connectivity between Puget Sound's basins create situations where pollutants in one location impact water quality miles away. The

delicate food web which includes Salmon is changing as a result of cumulative effects from these regional WWTPs. Discharger specific EJ investigations will overlook cumulative effects in areas where discharges overlap (South Puget Sound) which could impact long term needs to support Tribal Treaty Rights. Work with Tribes to ensure plants address Treaty Rights in their planning.

- The permit provides no explanation of overburdened communities or how to determine how much an overburdened community can afford to pay for WW treatment. We're don't understand why Ecology is asking for this information. No regulatory standard exists in Ecology's applicable regulation and there's no basis for a WWTP via the state constitution or statute to vary utility rates based on EJ. Ecology should complete the EJ assessment and take on this analysis prior to issuing the permit.
- EJ requirements don't include Tribal Usual and Accustomed areas. Ecology should consult directly with Tribes to make sure all analyses are protective of Treaty Rights.
- Ecology missed some important considerations for a comprehensive EJ assessment. The permit should require dischargers to identify communities disproportionately affected by the failure to regulate and reduce nutrient loads. Don't confine the analysis to service areas as communities outside of the rate payers that may be adversely affected. Ecology continues to fail to address this problem allowing impacts to those communities to get worse while externalizing the costs of pollution. Permit requirements should also include identifying communities within the service area in excess of the national median income. These are communities that can bear higher utility costs. This information is necessary so that alternative rate structure proposals can be more equitable. In addition, dischargers should identify the funding burdens placed on sewer rates and be transparent about what goes into those fees and any hidden taxes. The analysis should also cover how state funding and a lack of income tax (regressive tax structures) impact the ability of the discharger to pay for the urgent nutrient controls. Lastly, the assessment should include a comparison of rates for Puget Sound to comparable cites - PDS, SFO, Berkeley or communities in/around Chesapeake Bay.
- Add an element to the EJ Review requiring identification of Tribes with Usual and Accustomed areas affected by a jurisdiction's WWTP discharge, including how tribal treaty rights may improve from treatment improvements.
- The EJ review is overly burdensome for each jurisdiction to conduct separately. Ecology stated publically available data can be used and that Ecology doesn't set utility rates; however, that's not clear in the draft permit language. Requiring this information indicates that Ecology does have some review and recommendation criteria that may impact rate structures. A coordinated study covering effected permittees would be more effective than having individual plants perform the EJ review.
- What will Ecology use as the basis for affordability in the environmental justice review?
- Since utility rate structures rely on a cost of service, describe how alternative rate structures could be applied.

- Edmonds receives wastewater from several adjacent communities including flows from the King County wastewater system. Edmonds also sends a portion of its flow to King County and the Lynnwood WWTP. These service agreements require Edmonds to pay a proportional share of all O&M and capital treatment plant upgrade costs at two treatment plants. Because the service area is so diverse with demographics that widely vary across different government jurisdictions, there isn't a way to develop an accurate and defensible EJ review. Affordability will vary greatly across the service area.

Ecology Response:

- Ecology recognizes this effort will take many years and be an expensive undertaking. The agency is not required to conduct an economic impact analysis for this permit per WAC 173-226-120(1) as it does not directly cover small business. Jurisdictions have the responsibility to provide a level of service to all utility customers. Part of this responsibility includes understanding demographics within the service area and ensuring the level of service can be maintained while working to comply with the permit's requirements. Ecology cannot conduct this analysis as each utility has the responsibility to set rates and determine how to make the level of service affordable in their communities.
- Ecology has offered Tribal Consultation at every step of permit development and will offer consultation again with the final permit upon the Agency's decision to issue. Ecology will assess cumulative effects in the development of numeric WQBELs.
- The permit contains a definition for overburdened communities. Each utility has a responsibility to provide a level of service for all their customers. The EJ provision in the permit follows the HEAL act recommendations to incorporate EJ principles into significant agency actions. The requirement exists for permittees to determine how to offset impacts for those communities identified as they may be disproportionately impacted by rate increases. Each jurisdiction must complete this assessment because the rate impacts are tied directly to the cost of the preferred treatment alternatives which is not up to Ecology to determine.
- The intent of this permit and its future iterations is to protect Usual and Accustomed fishing areas. Environmental justice requirements in the current permit directly relate to setting rates for upgrades. Ecology intends these upgrades to service Tribal Usual and Accustomed fishing interests.
- Requirements were revised to include the identification of communities within the sewer service area that exceed the median household income in S4.E.5.d.ii.
- Ecology is pursuing a technical assistance project for small to moderately sized permittees that may address planning requirements. Rate impacts must be known in

order to evaluate affordability for AKART and to ensure jurisdictions are able to provide the necessary level of service to all customers.

- EPA's [2021 Financial Capability Assessment](#)¹⁴ should be used as the basis for affordability.
- Ecology agrees that each jurisdiction has the responsibility to provide a level of service to their customers which may involve adopting an alternative rate structure based on areas with low income populations and also areas where incomes are higher than the median household income. Other options may include budget based rates, using surcharges, varying rates by season, different fixed charges based on customer-class distinctions, peak set base rate models, customer select rate models, and value of service pricing that can take into account a sliding scale based on property values.
- Variability of the ability to pay for sewer service is the driver for the affordability analysis. Ecology recommends asking the jurisdictions that provide wastewater treatment to collect and provide this information.

Commenters: O-28, O-6, O-10, A-5, A-10

Implementation Timeframes

Summary of Comments Received:

- Require the preferred alternative from the NRE be implemented no later than 2030.
- The NRE currently requires a high level of effort for 3 different effluent conditions. The NRE report requires a consulting engineering firm to develop. Given the number of plants proposed for coverage under this permit, we have concerns that there will not be enough consultants to complete the analyses given the proposed timelines
- We request the permit requires the NRE be started by Dec 31, 2025 and allow 30 months for submission after initiation of the plan.
- The facility plan level effort will be expensive and time-consuming. A finite number of consultants will also make completing this requirement challenging. Ecology should phase this work by making additional plant categories and requiring reductions from the dominant loaders, first.

Ecology Response:

- Ecology cannot require a compliance timeframe for an unknown numeric WQBEL. Findings in the NRE will be used to set compliance schedules in the next permit which will have a timeframe for meeting numeric WQBELs "as soon as possible."

¹⁴ https://www.epa.gov/sites/default/files/2021-01/documents/2021_fca_frn_pre-publication.pdf

- Ecology understands the concerns over consulting resources. Some plants may elect to participate in a regional study. Proactive procurement of consulting services is recommended.
- Starting the NRE at the end of this permit term may create a lag in development of GMA required Capital Facilities Plans. Jurisdictions need to determine their preferred alternative for meeting numeric WQBELs so that the solutions can be integrated into GMA planning requirements. The deliverable date remains unchanged.
- Ecology has added a 3rd plant category in the final permit for moderate loaders.

II-5.0 S5 Narrative Effluent Limits for WWTPs with Small Loads

II-5.1 Plant Categories

Commenters: O-5, O-13

General Comments

Summary of Comments Received:

- S5.A refers to plants with "small loads"; however, the permit does not define a "small load." Please define this term.
- The draft requires "small" plants to develop a Nitrogen Optimization Plan and AKART analysis, regardless of their current TIN concentration. The permit also absolves LOTT from some requirements due to current performance. Ecology provides no explanation as to why a "small" discharger with low effluent TIN will have to develop these studies. Why should these plants be treated differently than LOTT?
- Add a 3rd category for moderate loaders

Ecology Response:

- Small loaders are those plants whose discharge constitute less than 1% of the point source load, which equates to a TIN discharge of less than 100 lbs/day. The revised permit includes a definition.
- Ecology has reinstated performance incentives for all discharger categories. See responses in the **Part**

- **II-4.3 Nitrogen Reduction Evaluation – Dominant** Loaders for responses related to the performance incentive.
- Ecology has added a 3rd plant category in the final permit for moderate loaders.

II-5.2 S5.B Optimization – Small Loaders

Commenters: A-7, A-11, I-11, O-5, A-20, O-5, O-28, A-7, OTH-2

Nitrogen Optimization Plan

Summary of Comments Received:

- Who is responsible for determining the optimization goal? What are the criteria? It appears to be self-identified.
- What does reasonable mean in terms of treatment optimization? How do you define a reasonable implementation cost?
- Can optimization strategies that reduce plant capacity be excluded? How should they be evaluated if flows continue to increase to a plant?
- If a jurisdiction applies adaptive management correctly, it will take longer than one year to optimize treatment.
- The December 2022 deadline for small plants to select and implement an optimization strategy is not reasonable or realistic. Ecology should take on a regional study so that Ecology can explore all alternatives to improving Puget Sound's water quality. Nutrient reduction may not be the best approach for small plants to improve the health of the Salish Sea.
- The utility caucus has repeatedly told Ecology that most plants already apply adaptive management. Documenting "all" efforts [per S5.B.2] would be an administrative burden and open jurisdictions to lawsuits if they didn't document some actions.
- Jurisdictions will have difficulty distinguishing between implementation costs and normal operating costs.
- Please clarify if permittees need to evaluate annual or monthly loads.
- Report a range of estimates for annual TIN loads in the optimization plan. Include 5th, 10th, 25th, 50th, 75th, 90th, and 95th percentiles.
- What does "applicable monitoring data" mean in S5.B.2.b.i? Does this include data from non-accredited testing (i.e., process control testing)?
- Removal rate analysis in S5.B.2.b.ii requires influent monitoring
- Do permittees need to prioritize a list of possible optimization strategies in the first year of the permit?
- Suggest changing the language in S5.B.1.a.iii to "...apply the chosen optimization strategy." The current meaning is unclear.

Ecology Response:

- Optimization goals are self-identified and will vary based on the type of treatment process utilized at the treatment plant. The purpose of setting an optimization goal for plants that do not have an action level is to narrow down the optimization strategies that will improve nitrogen reduction and keep the effluent load from increasing. While the overall intent is to prevent loading increase, examples of optimization goals include better energy efficiency, better aeration controls, or striving for a specific targeted performance from a unit process.
- Ecology tried to define a "reasonable implementation cost" with the preliminary draft. Comments received made it apparent that no single metric could be applied for all plants due to variability in how jurisdictions budget for treatment operations. Approximately 5-10% of an equipment budget is the threshold originally proposed with the preliminary draft. Each jurisdiction will need to make this assessment on their own and support their decision making in the report.
- Jurisdictions have autonomy on optimization strategy selection and may exclude strategies that might reduce the plant's overall treatment capacity. If flows (and thereby loads) continue to increase at the plant to a point where the AL will be exceeded or effluent loads increase, then that triggers a CA for dominant and moderate loaders. Small plants need to do everything possible to hold their load during the permit term and document how the jurisdiction adaptively managed optimization to correct the loading increase.
- Treatment optimization occurs throughout the permit term with various reporting requirements depending on the discharger category. Plants may elect to maintain a strategy and not change course on an annual basis. The optimization report requires justification from the jurisdiction if no changes will be made to the strategy after the assessment S6.B.2.c.
- No reporting is due for small plants until March 31, 2026. The intermediate deadline for selection gives the plant a year to determine their course for treatment operation, which Ecology considers reasonable. Year 1 SSM opt modeling has shown nutrient reduction is necessary for all plants to meet WQ standards. Ecology has provided funding for a regional study to satisfy permit conditions for small and moderate loaders that would like to participate in that option.
- Ecology understands that adaptive management is fundamental to treatment operations. The revised permit contains modified language to clarify documentation.
- Ecology revised the cost documentation requirement in S6.B.2.a.i to reflect upfront costs, only. Cost reporting for O&M has been removed.

- Permittees need to evaluate the annual loads for optimization reporting.
- Data will be available through PARIS for anyone that would like to evaluate the range of estimates for annual TIN loads in a jurisdiction's optimization plan. The range of percentiles was not added to the permit.
- Only accredited testing should be used for the load evaluation step. Process control monitoring should not be used for this analysis. A clarification was made.
- Monitoring for all plants includes influent monitoring so that a % removal can be quantified.
- Small loaders need to develop a prioritized list during the first year of the permit and select one for implementation by December 31, 2022. No reporting is required until March 31, 2026 for this discharger category.

Commenters: I-8, O-5, A-7, I-11, A-20

Influent Load Reduction/Source Control

Summary of Comments Received:

- For non-delegated jurisdictions, Ecology has the responsibility and authority to develop strategies for managing nutrients at the source. Ecology cannot pass these responsibility to non-delegated entities.
- What is the rationale for developing a septage handling program to reduce nitrogen? Without justification, this requirement is unwarranted. Septage program requirements will be difficult at some small WWTPs. If plants stop taking septage, haulers will likely turn to unsafe disposal practices.
- Has Ecology considered options for reducing septage handling? What sort of programs or controls does Ecology envision? Growth moratoriums? Zoning restrictions? Plumbing code modifications?
- As written, the source control program would require additional staff to evaluate, permit and monitor. Has Ecology looked at the impact on existing pre-treatment programs?
- Small WWTPs won't be able to effectively study ways to reduce TIN source loads. Treat this as a regional issue, not one for individual plants.
- Pretreatment authorities do not include residential properties. Please provide known strategies for this requirement that plants can use for consideration.

Ecology Response:

- Ecology understands the limitations for non-delegated jurisdictions. While pretreatment permitting responsibilities can't be passed to non-delegated entities, permittees have an obligation under their individual permit to coordinate with Ecology whenever they identify that a discharger qualifies as a SIU and discharges pollutants that may interfere with the operation of the POTW or result in a pass through of pollutants. A non-domestic discharger that sends wastewater with high nitrogen loads to a treatment plant may qualify as needing a pretreatment permit to reduce this load. The local jurisdiction must work with Ecology to determine whether such a permit is warranted. In addition, local jurisdictions have full authority to set development standards in their local ordinances as necessary to protect the integrity of their wastewater treatment system. This could include establishing local codes designed to reduce nitrogen loads from new development.
- Plants that receive septage are encouraged to look at management opportunities to help reduce shock loading to the treatment system. The purpose of an ongoing program is to reduce TIN loads from septage handling practices, not to eliminate the receipt of septage. The permit requires the local jurisdictions to explore better ways to continue taking septage.
- Ecology is focused on how septage is managed at the facility and how is it introduced to the plant. Growth moratoriums, zoning restriction, and plumbing code modifications are not the intent.
- At this time, the permit requires a review of nitrogen sources from SIUs as a way to reduce loading to the plant. Delegated pre-treatment programs have flexibility in how to implement controls. It is possible that opportunities will be limited as domestic wastewater carries the majority of nitrogen loads. Requirements for the first permit are to look at opportunities. The permit is silent on next steps as those are left to the jurisdiction to determine.
- The regional study proposed by Ecology will address this permit requirement for small and moderate loaders who decide to opt into the study. Ecology agrees that septage handling is a regional issue.
- The requirement is to identify ways that nitrogen loads can be reduced from new multifamily/dense residential and commercial developments. Ecology understands this is outside of the pre-treatment authority. City and building scale solutions exist for urine separation/treatment and onsite treatment and reuse. Proactive jurisdictions have autonomy to allow forward thinking building scale reductions to be part of the overall solution.

II-5.3 S5.C Planning

Commenters: I-11, O-5, A-11, A-7, I-8, A-20

AKART

Summary of Comments Received:

- The AKART analysis will be expensive and have little positive result.
- What is the effluent goal for the AKART analysis? Technologies will differ depending on the final effluent limit.
- What is the intent of the treatment technology analysis in the AKART evaluation?
- Plants with low TIN loads will have to bear large costs to complete the optimization plan and AKART analysis. For plants like Mukilteo who treat TIN to < 3 mg/L, the benefit to these requirements are unknown to insignificant. Exempt small plants with discharges < 8 mg/L from optimization and AKART requirements.
- Consider a regional study to take on the AKART analysis for small facilities

Ecology Response:

- All POTWs will be subject to nutrient reduction. And, that final solution will include a mix of WQBELs and TBELs. All facilities under the permit must ensure that AKART is in place, but certain plants under the permit may not require numeric WQBELs Ecology has funded a technical assistance project that may take on this analysis. See previous responses.
- Ecology has not provided an effluent goal for the AKART analysis and expects to receive a range of results. AKART represents a technology based approach to controlling nutrients, not a water quality based approach. So, the effluent goals are not tied to receiving water quality. The economic evaluation will be what defines the effluent goal for each plant in the AKART analysis.
- Ecology has reinstated performance incentives in the final general permit. See previous responses for a description of these incentives.
- Ecology has funded a regional study for those who elect to participate. The scope of the study will depend on how many jurisdictions join.

Commenters: A-7, O-5

Environmental Justice

Summary of Comments Received:

- What is the basis for affordability in the EJ review (S5.C.3.d)?
- The economic evaluation and environmental justice reviews would be more cost effective if taken on as a regional study.
- How can alternative rate structures be applied where a utility has developed their rate based on a cost of service?

Ecology Response:

- Ecology has elected to use the EPA's 2021 Financial Capability Assessment as the basis for determining affordability. Jurisdictions can select from one of two paths provided in that document to determine fiscal impact.
- Ecology has provided funding for a coordinated technical assistance project that could include the economic evaluation and EJ review for plants who participate. See previous responses with a link to the PSNGP Grant Guidelines. Ecology received 7 comments on the draft guidelines and final guidelines reflect the feedback received.
- Ecology agrees that each jurisdiction has the responsibility to provide a level of service to their customers which may involve adopting an alternative rate structure based on areas with low income populations and also areas where incomes are higher than the median household income. Other options may include budget based rates, using surcharges, varying rates by season, different fixed charges based on customer-class distinctions, peak set base rate models, customer select rate models, and value of service pricing that can take into account a sliding scale based on property values or income levels.

II-6.0 S6 Monitoring Schedules and Sampling Requirements

Commenters: O-13, O-21, O-22, OTH-2, A-5, A-7, A-16, I-8, OTH-1, O-14, T-4, A-13, O-26

General Comments

Summary of Comments Received:

- Reduce sampling to 1/week for moderate loaders (new category) as this can be incorporated into schedules and budgeting more easily. 2/week is too frequent. Make other adjustments to exclude weekends/holidays and to exclude the rotational basis requirement - at least for CBOD if not for other parameters as the hold time is insufficient to hold over a weekend or holiday.

- Remove duplicative and unnecessary monitoring from the draft permit.
- Monitoring frequency should be weekly for nutrient parameters - including TN and TP.
- Please identify an effective start date for the influent/effluent monitoring. A minimum of 60 days should be granted to allow jurisdictions to develop sampling and analysis plans and/or obtain 3rd party analytical services.
- Do permittees need to report process control sample results if monitored at a different location in the plant?
- How does Ecology handle continuous monitoring devices used for process control if they don't use an accredited method?
- How would Ecology handle a continuous monitoring device that uses accredited methods?
- Ecology must develop additional fields in the electronic DMR in order for the County to comply with this reporting requirement. While additional data can be attached, historically these attachments are overlooked or entirely lost. Our recommendation is to append additional data in a quarterly submittal where fields for this information already exist.
- Change column title (Tables 9 and 10) to "Minimum Sampling or Calculation Frequency"
- Include language to allow small plants with consistent data the ability to reduce the influent/effluent sampling and testing frequency. Influent sampling should be established on a plant by plant basis.
- Flow measurement is already required with the individual permit; this is one example where language may conflict between individual permits or could cause dual violations.
- Are flow and internal process control parameters exempt from the S6.E requirement? Do they need to be reported on the DMR?
- Fixed sampling schedules used in individual NPDES permits prove to be representative of pollutant loadings. Suggest removing the requirement for sampling on a rotational basis (footnote b).
- What does footnote b in Table 11 mean?
- Why does this permit require CBOD since individual permits require BOD analyses? Would the 5-day BOD analysis be sufficient?
- There is poor TOC correlation with CBOD. Why has Ecology made this a requirement?

- Revise Table 10 with EPA approved methods, as listed under Table 1B of 40 CFR 136, with sufficient sensitivity. Update the QL for nitrogen parameters that references the sufficiently sensitive method.
- Remove the QL for the most sensitive method (footnote k).
- Use the calculate nutrient values feature in the WQWebPortal to populate DMR data. Plants should not have to duplicate data entry for DMRs.
- Use monthly average flows to set limits rather than the sum of monthly flows over one year. Dry summer month flows can skew annual averages by averaging down high flow events that can cause water quality violations.
- Sampling and reporting for the PSNGP should be consistent with applicable NPDES permit requirements.
- Influent and effluent sampling is not enough to show compliance with S3 which requires permitted discharges to not cause or contribute to violations of water quality standards. The permit must include a provision to monitor receiving waters to show compliance with standards.

Ecology Response:

- The base sampling frequency for the moderate loader category is 1/week. Monitoring requirements were also adjusted to exclude weekends/holidays and the rotational basis requirement leaving representative sampling design up to each jurisdiction.
- Monitoring requirements were designed to support optimization and track nutrient loading. Requirements were streamlined between the preliminary and formal drafts. Permittees with identical monitoring requirements in their individual permits may use those results to satisfy the general permit.
- Monitoring frequencies for plants are based on plant size and their capacity to take on the additional requirements. Dominant loaders have a weekly monitoring requirement for all nutrient parameters save for TKN. No phosphorus monitoring is required with this permit as phosphorus is not the limiting nutrient in the Salish Sea.
- Monitoring must begin once the permit is effective and the jurisdiction has permit coverage.
- Permittees are only required to report monitoring results using 40 CFR 136 methods at their influent and effluent locations. Process control results may be used to help with optimization.
- Ecology does not accredit process control continuous monitoring devices (See Chapter 173-220-210(3)(c)). Results from the process control analyses may be used to support

optimization. Process control monitoring cannot be used to satisfy permit monitoring requirements in S7.

- Ecology's LAU has lab accreditation responsibility and does not typically accredit continuous monitoring devices. A standard operating procedure for the parameter would need to include a detailed description of the equipment and how it is used. At a minimum, the laboratory would need to meet requirements in 40 CFR 123.6 regarding method modifications and analytical requirements. It is also possible that a validation study may be required.
- Ecology revised the due date for the DMR. Each permittee will have a separate DMR for this permit which is due by the 15th of each month similar to the individual permit DMR due date. Monitoring information will not be reported with the individual permit's DMR unless the permittee can satisfy individual permit requirements with the monitoring collected under this general permit.
- Change made to table header.
- The permit has a provision for plants to request a reduction in monitoring under S7.F. Influent sampling is necessary to support the percent removal requirement in the optimization reporting.
- The general permit is separate from the individual permit and stands alone. The flow measurement language is necessary as jurisdictions need to report flows on the day nitrogen samples are taken. Flow measurement calibration requirements should not differ between the general permit and an existing individual permit.
- Flow measurements are required on the day nitrogen samples are taken and must be reported on the DMR at the specified frequency. LAU does not accredit flow measurement or process control parameters. Process control results should not be reported on the DMR. They may be used to help support optimization.
- Ecology removed the rotational basis sampling requirement leaving jurisdictions responsible for developing a representative sampling schedule. The purpose of the rotational basis footnote is to vary sampling to gather more representative data rather than sampling the same day/time during the week.
- CBOD₅, a subset to BOD₅, provides information regarding the DO demand from carbonaceous sources only. It does not include nitrogenous oxygen demand. Permittees with BOD₅ limits and monitoring in their active individual permits may discuss an individual permit modification to implement a CBOD₅ effluent limit in lieu of BOD₅ provided the WWTP has design ratings based on CBOD₅. Ecology does not have CBOD₅ data for most plants and this information is important for future model runs. The BOD₅

analysis does not provide the same information as a CBOD₅ analysis and is not sufficient for this permit.

- There are no specific, universal relationships between CBOD₅ and TOC that work for all plants. But, plant-specific relationships can be developed. The Salish Sea Model uses particulate and dissolved organic carbon inputs. Where that data is not available, modelers make assumptions and approximations based on treatment technology. TOC analyses in the general permit will be used to refine these plant-specific relationships between CBOD₅ and TOC. The frequency of the TOC analysis was reduced to 1/quarter in order to capture temporal variability and allow refinement of model inputs in future model runs.
- Methods for analysis reflect Ecology's understanding of the most sensitive methods requirement. Footnote K gives permittees flexibility to use a different 40 CFR 136 method. No changes will be made.
- Permittees are required to calculate the nutrient load based on the flow discharged on the sample collection day which follows the Advisory Committee's recommendation. These monthly loading averages are then summed every month to track the cumulative annual total against the action level (for applicable facilities).
- Sampling and reporting requirements support the permit conditions.
- The BMP/narrative approach for this permit cycle meets the conditions of the CWA when numeric limits are infeasible. Compliance with the narrative limits results in compliance with standards for the permit term. Influent and effluent monitoring is sufficient to show compliance with BMP implementation. This permit will not require receiving water monitoring.

II-7.0 S7 Discharges to 303(d) or TMDL Waterbodies

Commenters: T-4, A-7, O-26

General Comments

Summary of Comments Received:

- Add additional language to S7 preventing discharges to receiving waters on the 303(d) list. Provide additional detail on the approach for waters with and without a TMDL.
- If EPA approves a TMDL, would the permittee have two permits that regulate nitrogen discharges?
- Language in S7 isn't sufficient.

Ecology Response:

- Additional language preventing discharges to receiving waters will not be added to this section. Wasteload allocations from DO TMDLs approved by EPA during the permit term will be incorporated into either this general permit through a permit modification or the permittee's existing individual permit, not both.
- No, if EPA approves a DO TMDL, the wasteload allocation will be in only one permit. Two permits will not be used to regulate nitrogen discharges.
- Ecology disagrees.

II-8.0 S8 Solid and Liquid Waste Disposal**Commenters: A-7***General Comments***Summary of Comments Received:**

- Language in S8 already exists in the individual permit but it's different. This is a section where permittees could generate two violations for the same action due to conflicts in the text.

Ecology Response:

- Ecology evaluated the language in both the individual permit and the GP. Ecology removed this special condition in the final permit. Permittees must follow the provisions of this special condition as written in their individual NPDES permit.

II-9.0 S9 Reporting and Recordkeeping Requirements**Commenters: OTH-2, A-7, T-4, O-14***General Comments***Summary of Comments Received:**

- Individual permit DMRs are due the 15th of each month. Please confirm that the 28th will be the deadline for both the GP and the individual permit and that one submission per month will satisfy both permits.
- S9.B.1.a should be an "or" statement.
- Does S9.B.5.a include process control monitoring? If so, then that's in direct conflict with S6.E.7. Would this apply if the additional monitoring is performed with an unaccredited method?
- Are the annual reports connected to the monitoring results so that plants can demonstrate performance, effectiveness and show progress on nutrient reductions?

- Coverage will not be effective until Ecology issues a coverage letter. Does Ecology expect permittees to begin monitoring prior to the GP effective coverage date?
- Check the table 6 reference in S9.D.3. Is this correct? Table 6 shows bubbled action levels.

Ecology Response:

- Ecology revised the due date for the DMR. The DMR for the general permit is due by the 15th of each month. Each jurisdiction will have two DMRs- one for each permit.
- Ecology revised S9.B.1.a for clarity. Both the influent and effluent sampling must occur at the frequencies listed in S7.
- No, this does not include process control monitoring. This provision applies only to S7 monitoring which require use of accredited methods.
- The annual reports are tied to monitoring results required under S7.
- Ecology does not expect permittees to monitor prior to obtaining permit coverage.
- Change made to reflect the correct table number. Table 5 is the correct reference.

II-10. Submittal Requirements and Documentation

Commenters: O-13, O-14, OTH-2

General Comments

Summary of Comments Received:

- Update Table 1 with all submittal requirements including the annual reports, NOP, NRE, etc., the frequency and the first submittal date. This will help prevent confusion. Clearly identify permit reporting requirements with the submittals requirements outlined in each subsection.
- Allow for electronic documentation to prevent retainage of hard copies.

Ecology Response:

- The revised permit now includes an updated Table 1 with all submittal requirements.
- Electronic copies of documents listed in Table 2 are acceptable. Hard copies are not required.

II-11. General Conditions

Commenters: A-7, OTH-2, O-31

General Comments

Summary of Comments Received:

- Language in G1 sounds like typical permit violation language. Does exceeding a "target value" cause a permit violation? If no, where is that explained in the permit?
- Does the action level exceedance constitute a violation or does it simply trigger the corrective action and wouldn't be considered a violation if the permittee followed the corrective action steps?
- How many permits will each discharge ultimately have? "Specific general permit" language in G5.G contradicts the general permit rule.
- The AC discussed leniency for optimization where it causes a violation of a conventional parameter regulated in the individual permit. The preliminary draft included some language but that was removed from this permit version. Please explain why this language was removed.
- Does the permittee have to reapply via a Notice of Intent similar to the Biosolids GP?
- There are inconsistencies between the GCs in the draft general permit and individual permits. These conditions may conflict with each other and cause duplicate violations.
- Why does G20.C require the permittee to report changes to sludge use or practices? This should be part of the individual permit, only.
- The bypass provision in G25 directly modifies the administratively extended permit for Tacoma. This is a violation of federal and state regulations that prohibits the modification of expired and administratively extended permits. This condition is unlawful and cannot be included in a general permit applicable to Tacoma and other jurisdictions with administratively extended permits.

Ecology Response:

- Exceeding an action level does not constitute a permit violation provided the jurisdiction follows the defined response for exceedance and implements the corrective action as written in S4.D. and S5.D for dominant and moderate loaders. The fact sheet also contains this information.
- Each permittee will have two permits- the GP specifically controls nutrient discharges while the individual permits regulate all other discharges.
- Ecology removed language referencing individual permits in G5.

- Ecology may, on a case-by-case basis, use enforcement discretion when optimization causes a permittee to exceed a conventional limit in the individual permit.
- Each permittee must reapply for coverage using the electronic Notice of Intent 180 days prior to the expiration of the current general permit.
- Ecology has tried to identify elements in the draft GP that conflict with the IP and has made revisions to language to try and eliminate these occurrences. The intent is not to cause duplicate violations between permits.
- Where appropriate, general conditions now reference the applicable language in the Permittee's individual permit.

II-12. Definitions

Commenters: O-14, A-9, O-5, OTH-1

General Comments

Summary of Comments Received:

- Adaptive management is not clearly defined in the permit. As the basis for this permit, Ecology should provide a definition.
- Definitions are different between the general and individual permits.
- Include a definition of "dominant TIN load."
- The definition of day includes a midnight to midnight reference. Most plants operate without 24-hour staffing and collect samples in the morning so that the 24-hour period would actually be closer to the 8am to 8 am timeframe. This hasn't been an issue with individual permits. Can I assume our standard sampling protocol will be acceptable under the general permit?

Ecology Response:

- Permit includes a definition for adaptive management
- The definitions in the general permit are not intended to be different from the individual permit definitions and have been corrected.
- The revised permit includes a definition for dominant, moderate, and small loaders.
- The standard sampling protocol is acceptable.

Part III- Hearing Testimony

III-1.0 Morning Hearing

Commenters: Rebecca Singer, Corrine Hamburg

General Comments

Summary of Comments Received:

- Ecology should complete the Puget Sound Nutrient Management Plan and determine reductions from both point and non-point sources. Before implementing treatment technology, we need a level of certainty that justifies the investment. We do not know how the SSM will set limits. The draft permit will mandate large spending on grey infrastructure when other actions will result in faster nutrient reductions. Current rates will need to increase in order to meet all Clean Water Act obligations to Puget Sound and this permit adds to that increase. Ecology should explore restoration alternatives such as establishing and protecting new shellfish growing areas, restoring eelgrass and kelp beds, fixing failing septic systems, lowering temperatures with green stormwater infrastructure, and planting trees along streams and shorelines to leverage resources across the region and address environmental concerns in a holistic manner.
- The current monitoring schedules in the draft permit will strain small and medium sized plants that have limited staffing on the weekend. The rotational basis for the monitoring will cause difficulty. Please also add a middle size category for treatment plants instead of the two categories proposed in the current permit draft.

Ecology Response:

- Modeling results show that reductions from all sources (point and non-point) are necessary to meet water quality standards. This includes treatment scale solutions as well as restoration work in the watersheds. Jurisdictions have an obligation to meet all Clean Water Act requirements and Ecology recommends considering integrated planning when there are competing priorities and finite resources. Focusing on restoration alone will not be sufficient to achieve DO standards if jurisdictions do not reduce their domestic point source nutrient loads entering the WA Waters of the Salish Sea.
- Ecology removed the rotational basis sampling requirement leaving the representative sampling responsibility to each jurisdiction to determine. The revised permit includes a third category for moderately sized loaders.

III-2.0 Evening Hearing

Commenters: Kamuron Gurol (KC), Kimberly Stark (KC), Bruce Nairn(KC), Mindy Roberts, Al Nelson (Northshore Utility District), Curtis DeGaspri (KC)

General Comments

Summary of Comments Received:

- Ecology should complete the Puget Sound Nutrient Management Plan and determine reductions from both point and non-point sources. Before implementing treatment technology, we need a level of certainty that justifies the investment. We do not know how the SSM will set limits. The draft permit will mandate large spending on grey infrastructure when other actions will result in faster nutrient reductions. Current rates will need to increase in order to meet all Clean Water Act obligations to Puget Sound and this permit adds to that increase. Ecology should explore restoration alternatives such as establishing and protecting new shellfish growing areas, restoring eelgrass and kelp beds, fixing failing septic systems, lowering temperatures with green stormwater infrastructure, and planting trees along streams and shorelines to leverage resources across the region and address environmental concerns in a holistic manner.
- Other estuaries across the country with nutrient impairment have conducted a review of their dissolved oxygen standards and have either adopted or are working towards developing DO standards with biological relevance. Ecology has not done this. Why not?
- The Salish Sea Model's uncertainty underestimates the error associated with DO depletion estimates used as the basis for this permit. I believe the calculations from Ecology's modeling team are correct; however, an external peer review is necessary for how the team estimates the DO depletion uncertainty. Ecology should conduct a transparent peer review in regards to the regulatory application of the SSM. Predicting DO depletions is very difficult and Ecology should be commended on their progress as many aspects are similar to predicting future climate conditions. Multiple models should be used to understand the range of depletion predictions so we can understand the possible outcomes and identify approaches best suited for improving the tools used to evaluate the water quality problem.
- Please do not discount the number of public comments received on this permit. In general, WEC supports the direction of the permit and the steps taken to begin reducing nutrient loads from domestic sewage. Please accelerate the pace and path of the general permit as we need to get to cleaner water faster. This includes requiring optimization and sidestream treatment during the permit term. In addition, the Nutrient Reduction Evaluation needs an implementation deadline. Upgrades in 2070 will not be sufficient and that's the risk of allowing utilities to provide their implementation timeframes. Tacoma, Seattle and King County are the majority of the nitrogen load.

Create a mega category for these largest dischargers and make them do more during the permit period. We also disagree with the use of the 99%ile for characterizing current loads. That statistic is too permissive when current loads cumulatively contribute to water quality standards nonattainment.

- Northshore Utility District sends wastewater to King County and we are concerned with the cost implications of this permit. I support what Kameron Gurol said earlier and I also think additional modeling and review of the results are necessary.
- Reductions from large wastewater treatment plants will not measurably improve water quality outcomes. How will Ecology address improvement of seagrass health and salmon populations?

Ecology Response:

- Modeling results show that reductions from all sources (point and non-point) are necessary to meet water quality standards. This includes treatment scale solutions as well as restoration work in the watersheds. Jurisdictions have an obligation to meet all Clean Water Act requirements and Ecology recommends considering integrated planning when there are competing priorities and finite resources. Focusing on restoration alone will not be sufficient to achieve DO standards if jurisdictions do not reduce their domestic point source nutrient loads entering the WA Waters of the Salish Sea.
- Dissolved oxygen standards development falls outside the scope of the draft permit.
- Requests for SSM peer review and challenges to the model's application fall outside the scope of the draft permit.
- Ecology wants to acknowledge the time and effort spent from anyone who took the initiative to provide comment on the draft permit. The revised permit does include a third category for dischargers, carving out the moderate loaders from the originally proposed dominant loader category. We agree that upgrades need to occur in a timely fashion; however, an implementation deadline for jurisdictions based on the planning targets in the NRE remains problematic as those effluent limits are not final and may change based on model results. The 10% reduction requirement for dominant loaders meets the intent of this permit. Proactive jurisdictions have autonomy to pursue more aggressive reductions. Ecology considers optimization a BMP and implementation of all BMPs is required to meet the narrative effluent limits in the permit. See previous responses related to the action level calculation in **Part II-4.1 Action Levels**.
- We understand the concerns related to economic impact which is why Ecology pursued a grant to help implement permit requirements. See previous responses with a link to

grant guidelines. The agency is committed to finding additional funding to help offset the cost of future treatment upgrades.

- Our best available science shows reductions from treatment plants will improve DO concentrations within the Washington Waters of the Salish Sea. Restoration alternatives will be part of the Nutrient Reduction Plan.

Part IV- State Environmental Policy Act (SEPA) Comments

IV-1.0 Non-Project Checklist

Commenters: I-14

General Comments

Summary of Comments Received:

- Ecology has misrepresented the need for a Nutrient General Permit and should revise the checklist responses as the outdated marine dissolved oxygen standards are faulty. Consider not using best available science and updating the criteria.

Ecology Response:

- Ecology appreciates the comments submitted on the non-project checklist. The use of the existing standards in the scientific investigations and modeling that led to Ecology determining to develop this permit falls outside the scope of this response to comments. Please direct questions and concerns over the marine DO standards to the Puget Sound Nutrient Forum and Ecology's Watershed Management Section.

Part V – Commenter Index

V-1.0 Individual Submissions Received via SmartComments

Submission Code	Commenter Name	Submitted By
I-1	Erica Fot	
I-2	Anonymous Anonymous	
I-3	Michael Koslosky	
I-4	Brenda Limric	
I-5	John Marshall	
I-6	Steve Hitch	
I-7	Cory Prusha	
I-8	Mukilteo Water and Wastewater District	Jim Voetberg
I-9	Port Gamble S'Klallam Tribe Natural Resources Department	Josh Carter
I-11	Town of Coupeville	Joseph Grogan
I-12	Jeanne Kohl-Welles	
I-14	Lincoln Loehr	
I-15	John Corso	
I-17	Phyllis Farrell	
I-18	Erica Marbet	
I-19	Gordon Holtgrieve	
I-20	Claudia Balducci	
I-22	Joe Dell	
I-23	Anonymous	Beabeachwatcher@gmail.com
I-24	Megan Hartz	

Submission Code	Commenter Name	Submitted By
I-25	Darcy Carlson	
I-26	Hannah Carpenter	
I-27	Denise Lytle	
I-28	Leila Mohseni	
I-29	Alex Zecha	
I-30	Tracy Ouellette	
I-31	Jean Richardson	
I-32	David Cunningham	
I-33	Gary Bornzin	
I-34	Dennis Bahr	
I-35	Nicholas Barcott	
I-36	Alison Merz	
I-37	Liisa Wale	
I-38	Megan Warren	
I-39	Virginia Davis	
I-40	Anna Esquibel	
I-41	Kim Kosa	
I-42	Wendy James	
I-43	Suzanne Mitten-Lewis	
I-44	Wolt Katie	
I-45	Valerie Snyder	
I-46	Nichole Carubia	
I-47	Andrea Zinn	
I-48	Lise Grace	

Submission Code	Commenter Name	Submitted By
I-49	Cheryn Zimmer	
I-50	Michael Rynes	
I-51	Nicholas Lenchner	
I-53	Rachel Budelsky-Olson	
I-54	Stephen Bailey	
I-55	John S	
I-56	Marianne Flanagan	
I-57	Janet Higbee-Robinson	
I-58	Monica Aebly	
I-59	Alexa Fay	
I-60	Wesley Banks	
I-61	Larry McCarter	
I-62	Judith Cohen	
I-63	Nicholas Sherman	
I-64	Judith Fey	
I-65	Asphodel Denning	
I-66	Terra Hadley	
I-67	Nancy White	
I-68	Linda Ehrlich	
I-69	Mark Giese	
I-70	Lorraine Johnson	
I-71	Joe Wiederhold	
I-72	Sarah Bauman	
I-73	David Scheer	

Submission Code	Commenter Name	Submitted By
I-74	Cara Fleming	
I-75	Norm Conrad	
I-76	Patti Santangelo	
I-77	K O	
I-78	Winn Wilson	
I-79	Vivian Bartlett	
I-80	Karen Holderman	
I-81	Marian Larson	
I-82	Gavin Bornholtz	
I-83	Dominique Gard	
I-84	Nancy Ging	
I-85	Edward Kaeufer	
I-86	Hannah Newell	
I-87	Rebecca Canright	
I-88	Stan Parker	
I-89	Mark Canright	
I-90	Wendy Smalls	
I-91	Amy Hansen	
I-92	Kathy Bradley	
I-93	Bronwen Evans	
I-94	Susan Vogt	
I-95	Bob Burr	
I-96	Jim Haley	
I-97	Meryle Korn	
I-98	Pam Borso	

Submission Code	Commenter Name	Submitted By
I-99	Jennifer Campbell	
I-100	Susan Kroll	
I-101	Brooks Anderson	
I-102	Laurie Gogic	
I-103	Wendy Eakle	
I-104	Kevin Clark	
I-105	Joy Gardner	
I-106	Joy Gardner	
I-107	Emily Van	
I-108	Betty Barats	
I-109	Amy Mower	
I-110	David Laws	
I-111	Jamie Shields	
I-112	Aleks Kosowicz	
I-113	William Wollner	
I-114	Jeanne Ripp	
I-115	J H	
I-116	T T	
I-117	J G	
I-118	Debra Wontor	
I-119	Joel Johnson	
I-120	Faye Bartlett	
I-121	Caroline Sévilla	
I-122	Jorge De	
I-123	Nilah Macdonald	

Submission Code	Commenter Name	Submitted By
I-124	R Larson	
I-125	Timothy Mullen	
I-126	Richard Kite	
I-127	Peckie Peters	
I-128	Ken Maurice	
I-129	JL Angell	
I-130	Jenny Maida	
I-131	Stephen Shubert	
I-132	Richard Johnson	
I-133	Mark Koritz	
I-134	Lynne Pendleton	
I-135	Tina Cummings	
I-136	Colleen Curtis	
I-137	Matthew Messmer	
I-138	Tika Bordelon	
I-139	William Young	
I-140	David Trasoff	
I-141	Stephen Bailey	
I-142	Stephen Bailey	
I-143	Brian Myrick	
I-144	Art Hanson	
I-145	Amy Hansen	
I-146	Rebecca Canright	
I-147	Mark Canright	
I-148	Kathleen Nichols	

Submission Code	Commenter Name	Submitted By
I-149	Paula Rotondi	
I-150	Carrie Blackwood	
I-151	Susan Bakke	
I-152	Christopher Grannis	
I-153	Ted Hammer	
I-154	Martha Hammer	
I-155	Susan Albert	
I-156	Mackenzie Bishop	
I-157	Tom Hahney	
I-158	Jay Kosa	
I-159	Steve Knutzen	
I-160	Susan Pevonak	
I-161	Karen Burns	
I-162	April Hinkle-Johnson	
I-163	D C	
I-164	Clarissa Mansfield	
I-165	Michael Rynes	
I-166	Nicholas Lenchner	
I-167	James Hipp	
I-168	Nicholas Barcott	
I-169	Melba Dlugonski	
I-170	Kerry Brehan	
I-171	Cynthia Bentley	
I-172	Howard Sharfstein	
I-173	Diana Campbell	

Submission Code	Commenter Name	Submitted By
I-174	Virginia Davis	
I-175	Theresa Delaney	
I-176	Norm Conrad	
I-177	Valerie Snyder	
I-178	Sonja Hinz	
I-179	Kendra Webley	
I-180	Barbara Foster	
I-181	Deborah Kaye	
I-182	Miles Gilmore	
I-183	Katy Velasquez	
I-184	Lindsay Taylor	
I-185	Heath Bohlmann	
I-186	Wendy Bartlett	
I-187	David Laws	
I-188	Dina Pearl-Thomas	
I-189	Carol Armstrong	
I-190	Sarah Bauman	
I-191	Lynne Oulman	
I-192	Kristin Sykes-David	
I-193	Amelia Becke	
I-194	Stephanie Trasoff	
I-195	Doreen Sadler	
I-196	Ursula Mass	
I-197	Judith Cohen	
I-198	Diane Tanner	

Submission Code	Commenter Name	Submitted By
I-199	Jim Kosa	
I-200	David Scheer	
I-201	Stephanie Manzo	
I-202	Wynne Lee	
I-203	Elizabeth Longwell	
I-204	Denise Lassaw	
I-205	Jaye Stover	
I-206	Barbara Hoch	
I-207	Elisabeth Washburn	
I-208	Sarah Knudsen	
I-209	Lorraine Holcomb	
I-210	Piper Mertle	
I-211	Meryle Korn	
I-212	Lorraine Johnson	
I-213	Darcie Nielsen	
I-214	David Gould	
I-215	Lynn Colson	
I-216	Barbara Davidson	
I-217	Corinne Salcedo	
I-218	Flannery White	
I-219	Becky Kilpatrick	
I-220	Denise Weeks	
I-221	Janet Hamill	
I-222	Carol Oberton	
I-223	Eileen Herring	

Submission Code	Commenter Name	Submitted By
I-224	Dagmar Fabian	
I-225	Dale Cox	
I-226	Teresa Allen	
I-227	Maria Demars	
I-228	Thomas Wilmore	
I-229	Philip Humphries	
I-230	Liz Marshall	
I-231	Annie Prevost	
I-232	Dianne Davis	
I-233	Cynthia Camlin	
I-234	Bonnie Goss	
I-235	L Adams	
I-236	Sophia Jackson	
I-237	Bonnie Rohrer	
I-238	Dan Senour	
I-239	Bruce Wade	
I-240	Sean Edmison	
I-241	Mark Ashworth	
I-242	Stephanie Peterka	
I-243	Elsie Lamb	
I-244	David Smith	
I-245	Carol Smith	
I-246	Wendy Eakle	
I-247	Jeanette Lim	
I-248	Cynthia Franklin	

Submission Code	Commenter Name	Submitted By
I-249	Jo Lowenthal	
I-250	Jude Green	
I-251	Mary Holder	
I-252	Carl Ullman	
I-253	Margo Margolis	
I-254	John Miller	
I-255	Julie Carpenter	
I-256	Vic Bostock	
I-257	Angi Cunningham	
I-258	Kit Muehlman	
I-259	Robert Mazur	
I-260	Betty Barats	
I-261	Annapoorne Colangelo	
I-262	Janet Murray	
I-263	Bob Riek	
I-264	Bret Warrick	
I-265	Mary Solum	
I-266	Andrea Fenwick	
I-267	Emma Maas	
I-268	Megan Taylor	
I-269	Laura Krupa	
I-270	Susan Vogt	
I-271	Edward Kaeufer	
I-272	Kathryn Allen	
I-273	Sarah Hodgkins	

Submission Code	Commenter Name	Submitted By
I-274	Simon Bakke	
I-275	Courtenay Chadwell-Gatz	
I-276	Lise Grace	
I-277	S. Almskaar	
I-278	Stan Parker	
I-279	Nicole Novelli	
I-280	Shaun Hubbard	
I-281	Richard Donnelly	
I-282	Liam Weydert	
I-283	Carlo Voli	
I-284	Janet Lehwald	
I-285	Will Middlebrooks	
I-286	Suzanne Steel	
I-287	Friedrich Ulrich	
I-288	Cara Jaye	
I-289	Ellen Bradley	
I-290	Tom Mcneely	
I-291	John Holstein	
I-292	Jai Boreen	
I-293	Kathleen Chen	
I-294	Carolyn Gregg	
I-295	Randall Potts	
I-296	Noreen Fujita-Sacco	
I-297	John Graber	
I-298	Joe Wiederhold	

Submission Code	Commenter Name	Submitted By
I-299	Deborah Johnson	
I-300	Matt Shaffer	
I-301	Stephanie Manzo	
I-302	Charis Weathers	
I-303	Ross Marquardt	
I-304	Robin Thomas	
I-305	Rebecca Rettmer	
I-306	Kevin Clark	
I-307	Heidi Graham	
I-308	Lynn Rosenblum	
I-309	Helen Glidden	
I-310	Gayle Janzen	
I-311	Kathy Bradley	
I-312	Karin Gunderson	
I-313	Diane Rose	
I-314	Lyle Anderson	
I-315	Margarette Grant	
I-316	Roland Vlaicu	
I-317	Jean Kroll	
I-318	Kendra Schmiedeskamp	
I-319	James Scarborough	
I-320	Naida Paneak	
I-321	Jane Ward	
I-322	Rae Hovsepian	
I-323	Jeanne Ripp	

Submission Code	Commenter Name	Submitted By
I-324	Karlee Deatherage	
I-325	Mark Henderson	
I-326	Brian Yanke	
I-327	Kate Hughes	
I-328	Sharon Holford	
I-329	Cynthia Franklin	
I-330	Sarah Jones	
I-331	Jay Richards	
I-332	David Ragsdale	
I-333	David Prescott	
I-334	Tobi Solvang	
I-335	Joseph Debin	
I-336	Von Taylor	
I-337	Peggy Willis	
I-338	Gena Dilabio	
I-339	Diane Mccutcheon	
I-340	Shary B	
I-341	Krista Harris	
I-342	Kristin Fitzpatrick	
I-343	Eve McClure	
I-344	William Derry	
I-345	Leigh Bangs	
I-346	Peggy Butler	
I-347	Mark Blitzer	
I-348	Leslie Yamada	

Submission Code	Commenter Name	Submitted By
I-349	Claudia Hevel	
I-350	David Habib	
I-351	Tom Weir	
O-1	WASWD	Judi Gladstone
O-2	City Of Bothell	Erin Leonhart
O-3	Lake Whatcom Water And Sewer District	Justin Clary
O-4	RE Sources	Kirsten Mcdade
O-5	Washington Association Of Sewer & Water Districts	Judi Gladstone
O-6	Midway Sewer District	Marc Montieth
O-7	See W-Series Index For Individual Commenter Names	Washington Environmental Council
O-8	Seattle Aquarium	Robert W. Davidson
O-9	City Of Auburn	Lisa Tobin
O-10	City Of Bellingham	Steve Bradshaw
O-11	Northshore Utility District	Alan Nelson
O-12	USEPA Region 10	Jennifer Wu
O-13	City Of Anacortes	Rebecca Fox
O-14	Pierce County Planning And Public Works	Patrick Kongsle
O-15	City Of Everett	John Rabenow
O-16	Sierra Club Washington State Chapter	George Watland
O-17	City Of Kirkland	Penny Sweet
O-18	City Of Bellevue	Cheryl Paston
O-19	Puget Sound Naval Shipyard & Intermediate Maintenance Facility	

Submission Code	Commenter Name	Submitted By
O-21	Birch Bay Sewer And Water District	Robert Carmichael
O-22	Puget Soundkeeper Alliance	Earthjustice/Janette Brimmer
O-23	Woodinville Water District	Patrick Sorensen
O-24	LOTT Clean Water Alliance	Lisa Dennis-Perez
O-25	Surfrider Foundation, Washington Chapters	
O-26	Northwest Environmental Advocates	Nina Bell
O-27	See W-Series Index For Individual Commenter Names	Washington Environmental Council
O-28	Washington Environmental Council	Mindy Roberts
O-29	Envwa, ZWW, NDA, OEC, CHB, Seattle2030, Whalescout, Whale&Dolphin, Na'ahillahee, DERT, Others	Mindy Roberts
O-30	City Of Maple Valley	Tawni Dalziel
O-31	City Of Tacoma, Environmental Services	Mike Slevin
O-32	Lake Stevens Sewer District	Mariah Low
O-33	Washington Water Trust	William Stelle
O-34	See P-Series Index For Individual Commenter Names	Puget Soundkeeper Alliance
T-1	Jamestown Tribe	Hansi Hals
T-2	Port Gamble S'Klallam	Josh Carter
T-3	Northwest Indian Fisheries Commission	Justin Parker
T-4	Suquamish Tribe	A Osullivan
A-1	City Of Sequim	Pete Tjemsland
A-2	Sammamish Plateau Water	John Krauss

Submission Code	Commenter Name	Submitted By
A-3	City of Mercer Island	Jason Kintner
A-4	City of Tukwila	Allan Ekberg
A-5	Lakehaven Water And Sewer District	John Barton
A-6	Seattle Public Utilities	Andrew Lee
A-7	Alderwood Water & Wastewater District	Dick Mckinley
A-8	Silver Lake Water And Sewer District	Curt Brees
A-9	Tara Galuska	
A-10	City of Port Angeles, WA	Thomas Hunter
A-11	Town of Coupeville	Molly Hughes
A-12	Cross Valley Water District	Mike Johnson
A-13	King County Department of Natural Resources And Parks	Rebecca Singer
A-14	City of Renton	Armondo Pavone
A-15	WA Department Of Fish & Wildlife	Kelly Susewind
A-16	Kitsap County Sewer Utility	Chris Sheridan
A-17	City of Bremerton	Tom Knuckey
A-18	City of Sammamish	Audrie Starsy
A-19	Skyway Water And Sewer District	Cynthia Lamothe
A-20	City Of Langley	Randi Perry
OTH-1	BHC Consultants	Tom Giese
OTH-2	City of Edmonds	Pamela Randolph
OTH-3	William Stelle	Michael Connor
OTH-4	Kathy Lambert	

V-1.1 Bulk Submission Received from Puget Soundkeeper Alliance (O-34)

Submission Code	Commenter Name
P-1	Catherine Adams
P-2	Marsha Adams
P-3	Tisa Agloro
P-4	Teresa Allen
P-5	Jill Alles
P-6	Robert Allyn
P-7	Molly Alves
P-8	Joan Alworth
P-9	Katie Ames
P-10	Amy Amoroso
P-11	Charlie Anderson
P-12	Glen Anderson
P-13	Matthew Anderson
P-14	Angell JL
P-15	Amelia Apfel
P-16	Gregory Armstrong
P-17	Christine Avery
P-18	Shary B
P-19	Dennis Bahr
P-20	Dori Bailey
P-21	Laura Bailey
P-22	Stephen Bailey
P-23	Keri Bailey-Gregerich
P-24	Norman Baker

Submission Code	Commenter Name
P-25	Lynne Bannerman
P-26	Pamela Barber
P-27	Noel Barnes
P-28	Jonathan Bartick
P-29	Laura Bartick
P-30	Cathy Barton
P-31	James Bates
P-32	Sarah Bauman
P-33	Judith Baxter
P-34	Terra Bell
P-35	C Beatley
P-36	Derek Benedict
P-37	Cathleen Berg
P-38	Bonnie Bledsoe
P-39	Robert Blumenthal
P-40	Patrick Boot
P-41	Tika Bordelon
P-42	Danial Border
P-43	Jai Boreen
P-44	Rob Bowman
P-45	Natalie Boydston
P-46	Kathy Bradley
P-47	Craig Britton
P-48	Anthony Brown

Submission Code	Commenter Name
P-49	Robert Brown
P-50	Tina Brown
P-51	Sharmayne Busher
P-52	Kathleen Butt
P-53	Jim Byrne
P-54	Coleman Byrnes
P-55	Rebecca Cable
P-56	Brenda Campbell
P-57	Mark Canright
P-58	Michael Caputo
P-59	Barbara Cardarelli
P-60	Linda Carroll
P-61	Curtis Cawley
P-62	Lisa Ceazan
P-63	Sarah Chambers
P-64	Joanna Chesnut
P-65	Maureen Chomko
P-66	Michelle Chor
P-67	Cyrus Christenson
P-68	Maxine Clark
P-69	Roger Clark
P-70	Jarett Cloud
P-71	Kelley Coleman-Slack
P-72	Randall Collins
P-73	Mike Conlan

Submission Code	Commenter Name
P-74	Patrick Conn
P-75	Sarah Cooke
P-76	Laurie Cooper
P-77	Rebecca Cooper
P-78	Timothy Couch
P-79	Keith Cowan
P-80	Larry Cowan
P-81	Michelle Crow
P-82	Lakota Crystal
P-83	Steven Cudd
P-84	Laurette Culbert
P-85	Judy Cundy
P-86	Heather Davidson
P-87	John Doherty
P-88	Julia DVM
P-89	Mr. Dahlgren
P-90	Karen Davis
P-91	Virginia Davis
P-92	Janice Delacy
P-93	Brandie Deal
P-94	Tara Demers
P-95	Asphodel Denning
P-96	Joni Dennison
P-97	Rory Denovan
P-98	Michael Depew

Submission Code	Commenter Name
P-99	Irene Derosier
P-100	Devinney Claudia
P-101	Ron Digiacomio
P-102	Norman Dick
P-103	Amanda Dickinson
P-104	Laurie Dils
P-105	Jamie Donaldson
P-106	Eleanor Dowson
P-107	Rosemarie Drop
P-108	John Dubois
P-109	Elisabeth Duffy
P-110	Tim Durnell
P-111	Roberta E.
P-112	Eric Edwards
P-113	Carol Else
P-114	Frannie Ein
P-115	Carol Ellis
P-116	Deborah Engelmeyer
P-117	Kean Engie
P-118	Blair Englebrecht
P-119	Nance Epstein
P-120	Lori Erbs
P-121	Susan Ervin
P-122	Tina Ethridge
P-123	Chad Evans

Submission Code	Commenter Name
P-124	Glenn Franko
P-125	Gill Fahrenwald
P-126	Abigail Fanestil
P-127	Cleo Faraone
P-128	Patricia Fero
P-129	Melissa Firch
P-130	Gregory Fite
P-131	Mary Fleck
P-132	Fay Foreman
P-133	Lorraine Foster
P-134	Larry Franks
P-135	Jeff Freels
P-136	Susan Froeschner
P-137	Kevin Gallagher
P-138	Vicky Gannon
P-139	Joy Gardner
P-140	Michael Garten
P-141	Lynn Garvey
P-142	Christopher Gazzola
P-143	Sandra Gehri-Bergman
P-144	John Gerich
P-145	Jackie Gerspach
P-146	Sandy Gese
P-147	Barrie Gile
P-148	Laurie Gogic

Submission Code	Commenter Name
P-149	Tamara Gonzalez
P-150	Joyce Grajczyk
P-151	Elaine Green
P-152	Jude Green
P-153	Judy Gribble
P-154	Bruce Gundersen
P-155	Neal Hallmark
P-156	Michael Halloran
P-157	Janet Hamill
P-158	Aimee Hamilton
P-159	Donna Hamilton
P-160	Bob Hannigan
P-161	Graci Hanson
P-162	Jaci Harris
P-163	Diana Harrison
P-164	Lorraine Hartmann
P-165	Elizabeth Hauser
P-166	Michelle Hawkins
P-167	Marilyn Heiman
P-168	Gregory Heller
P-169	Margaret Heller
P-170	Cheryl Henley
P-171	Daniel Henling
P-172	Mark Hennon
P-173	Christine Hickey

Submission Code	Commenter Name
P-174	Jennifer Hill
P-175	Rich Hladky
P-176	Drew Hoefer
P-177	Michael Hoffman
P-178	Felicity Hohenshelt
P-179	Paula Holroyde
P-180	Carolina Hood
P-181	Bernadette Horse
P-182	Jared Howe
P-183	Allison Jacobs
P-184	Bob Jacobs
P-185	Vanessa Jamison
P-186	Gayle Janzen
P-187	Emily Johnson
P-188	Lorraine Johnson
P-189	Nancy Johnson
P-190	Whitney Jones
P-191	Dorothy Jordan
P-192	Joan Kalvelage
P-193	Alexandra Kaufman
P-194	Mike Keary
P-195	Sophia Keller
P-196	Laura Kesler
P-197	Harrie Kessler
P-198	Chloe Key

Submission Code	Commenter Name
P-199	Wendy Kliment
P-200	Janice Klinski
P-201	Cassie Koomjian
P-202	Mark Koritz
P-203	Jeanette Kors
P-204	Ryan Kriegbaum
P-205	Kathryn Lambros
P-206	R Larson
P-207	Jonny Layefsky
P-208	Gayle Leberg
P-209	Nicholas Lenchner
P-210	Sara Lewis
P-211	Deborah Lipman
P-212	Sammy Low
P-213	Thom Lufkin
P-214	Kate Lunceford
P-215	Tom Lux
P-216	Margaret M
P-217	Carol MS
P-218	Susan Macgregor
P-219	Sarah Madill
P-220	Lawrence Magliola
P-221	Margo Margolis
P-222	Nancy Markham
P-223	Shannon Markley

Submission Code	Commenter Name
P-224	Chris Marrs
P-225	Miranda Marti
P-226	Ruth Martin
P-227	Catherine Martinez
P-228	Priscilla Martinez
P-229	Ursula Mass
P-230	Mary Masters
P-231	Matthew Matulovich
P-232	Deborah Mccarthy
P-233	Gloria Mcclintock
P-234	Logan Mcclish
P-235	Daviann Mcclurg
P-236	Sharon Mccluskey
P-237	Rebecca Mcdonough
P-238	Susan Mcrae
P-239	Rosario Medina
P-240	La Midderhoff
P-241	Joan Miller
P-242	Travis Miller
P-243	Nina Minsky
P-244	Mallory Mixdorf
P-245	Lisa Mize
P-246	Noemia Mlekarov
P-247	Albrecht Mollie

Submission Code	Commenter Name
P-248	Randy Moore
P-249	Stuart Mork
P-250	Amy Mower
P-251	James Mulcare
P-252	Anne North-Jones
P-253	Desiree Nagyfy
P-254	Ingrid Naumann
P-255	Brittney Nelson
P-256	Kathy Nelson
P-257	Terry Nightingale
P-258	Ranell Nystrom
P-259	Lynda Obrien
P-260	Stacy Oaks
P-261	Julia Otani
P-262	Alice Owen
P-263	Stan Parker
P-264	Stacy Parr
P-265	Holly Parsons
P-266	Camille Pedersen
P-267	Gregory Penchoen
P-268	Sharyn Pennington
P-269	Lela Perkins
P-270	Rimbos Peter
P-271	Thom Peters
P-272	Maddie Petrovich

Submission Code	Commenter Name
P-273	James Pierson
P-274	David Polda
P-275	Sarah Polda
P-276	Mara Price
P-277	John Primrose
P-278	Peggy Printz
P-279	Ben Rall
P-280	Laura Ramon
P-281	Rachel Rapp
P-282	Philip Ratcliff
P-283	Joanna Redman-Smith
P-284	Alisa Reeb
P-285	Virginia Reilly
P-286	Robert Richards
P-287	Susan Ring
P-288	Nancy Rittenhouse
P-289	Patricia Rodgers
P-290	Diane Rose
P-291	Margot Rosenberg
P-292	Barbara Rosenkotter
P-293	Amanda Rudisill
P-294	Linda Rudman
P-295	Joyce Rudolph
P-296	Dawn Rutherford
P-297	Jennifer Rux

Submission Code	Commenter Name
P-298	Margrett Ruyle
P-299	Kathryn Ryan
P-300	Diona S
P-301	John S
P-302	Sarah Salter
P-303	Andrea Sames
P-304	Lynsey Sandum
P-305	Jennifer Scarlett
P-306	John Schmidt
P-307	Vicky Semones
P-308	Dan Senour
P-309	Lauren Sewell
P-310	Fredericka Shapiro
P-311	Bc Shelby
P-312	Nancy Shimeall
P-313	Michael Shurgot
P-314	Deborah Siefert
P-315	Pamela Sieck
P-316	Todd Sigley
P-317	Sarah Sing
P-318	Jacqui Skill
P-319	Gail Sklar
P-320	Gloria Skouge
P-321	Mary Smith
P-322	Sheryl Sparling

Submission Code	Commenter Name
P-323	Jack Stansfield
P-324	Lozz Starseed
P-325	Chris Stay
P-326	Debbie Stempf
P-327	Stacey Sterling
P-328	Tonya Stiffler
P-329	Nancy Stokley
P-330	Lucinda Stroud
P-331	Diane Sullivan
P-332	Thomas Swoffer
P-333	Polly Taylor
P-334	Cornelia Teed
P-335	Adam Tischler
P-336	Richard Tomlinson
P-337	Stephanie Trasoff
P-338	Maureen Traxler
P-339	Cheryl Trosper
P-340	Pieter Turley
P-341	Ray Uriarte
P-342	Emily Van Alyne
P-343	Debra Vandegrift
P-344	Ann Vador
P-345	Barbra Vigars
P-346	Kathryn Vinson
P-347	Steven Voliva

Submission Code	Commenter Name
P-348	Mark Volmut
P-349	Joan Walker
P-350	Ernie Walters
P-351	Sean Walters-Heart
P-352	Cherie Warner
P-353	Marie Weis
P-354	Dora Weyer
P-355	Nancy White
P-356	Joe Wiederhold
P-357	Chris Wilke
P-358	Janet Williams
P-359	Michealyn Willman
P-360	Kathryn Willson
P-361	Renick Woods
P-362	Amanda Wyatt
P-363	Janet Wynne
P-364	Mel Yanik
P-365	Nancy Yount
P-366	Wendy Ysasi
P-367	Laura Zeffer
P-368	Jessica Zickefoose
P-369	Kenneth Zirinsky
P-370	John alder
P-371	tom borst

Submission Code	Commenter Name
P-372	gloria fischer
P-373	j g
P-374	peter giese
P-375	Niele gillooly
P-376	james hipp
P-377	A l
P-378	diane marks
P-379	Darius mitchell
P-380	Connie nelson
P-381	paul potts
P-382	elyette weinstein
P-383	r weiss
P-384	Elizabeth Whitney
P-385	Lisa Alishio
P-386	Pamela Ng
P-387	Cleopatra Cutler
P-388	Rosie Wilson-Briggs
P-389	Mason Costantine
P-390	Dan Fulwilee
P-391	Ilona Brose
P-392	Heidi DeAndrade
P-393	Joe Picco
P-394	Kristin Plischke

V-1.2 Bulk Submission Received from Washington Environmental Council (O-7 and O-27)

Submission Code	Commenter Name	Submission Code	Commenter Name
W-1	Mimi Abers	W-25	Beverly Antonio
W-2	Mike Abler	W-26	Maria Aragon
W-3	Barbara Abraham	W-27	Gilbert Arcos
W-4	Jan Ackerman	W-28	Behnoosh Armani
W-5	L Adams	W-29	Dolores Arndt
W-6	Marsha Adams	W-30	Kathleen Arnold
W-7	Karen Ahern	W-31	David Arntson
W-8	Kathleen Ahern	W-32	Michael Arveson
W-9	Heidi Ahlstrand	W-33	Mark Ashley
W-10	Kim Aicone	W-34	Sigrid Asmus
W-11	Claire Aiello	W-35	John Astaunda
W-12	Sky Aisling	W-36	Maria Asteinza
W-13	Charles Alexander	W-37	Robert Astyk
W-14	Virginia Alexander	W-38	Gail Atkins
W-15	Hannah Alex-Glasser	W-39	Wendy Atmore
W-16	Margaret Alic	W-40	April Atwood
W-17	Brude Allen	W-41	Patricia Auer
W-18	Billie Allen	W-42	M Aufrecht
W-19	Teresa Allen	W-43	Jane August
W-20	Cornell Amaya	W-44	Darla Austerman
W-21	Judith Anderson	W-45	Judy Avery
W-22	Sharon Anderson	W-46	Linda Avinger
W-23	Stacee Anderson	W-47	Elizabeth Award
W-24	Diane Anicker	W-48	Laura Aymond

Submission Code	Commenter Name
W-49	Shary B
W-50	Shary B
W-51	Lara Backman
W-52	Dennis Bahr
W-53	Dave Baine
W-54	Ravinder Bajwa
W-55	Darlene Baker
W-56	Norman Baker
W-57	Sara Bakker
W-58	Patricia Baley
W-59	Joan Balfour
W-60	Linda Ball
W-61	Jeff Ballou
W-62	Brian Baltin
W-63	Leigh Bangs
W-64	Wesley Banks
W-65	Betty Barats
W-66	Ierulli Barbara
W-67	John Barger
W-68	Scott Barlow
W-69	Noel Barnes
W-70	Wendy Bartlett
W-71	James Bartlett
W-72	Vivian Bartlett
W-73	William Bartley

Submission Code	Commenter Name
W-74	Diane Basile
W-75	Diane Basile
W-76	James Bates
W-77	Jewell Batway
W-78	Sarah Bauman
W-79	John Bayer
W-80	Evan Beattie
W-81	Judith Beaver
W-82	Lynette Bech
W-83	Ralph Becker
W-84	Gary Beckerman
W-85	Jeanie Bein
W-86	Aggie Beletsky
W-87	Jenny Belgarde
W-88	Sharon Belk-Krebs
W-89	Stephanie Bell
W-90	Charlene Bender
W-91	Derek Benedict
W-92	Nicole Benert
W-93	Mary Bennington
W-94	Ken Benoit
W-95	Irene Bensinger
W-96	Jen Bentzel
W-97	Ric Berkholtz
W-98	Rebecca Berlant

Submission Code	Commenter Name
W-99	Steve Berman
W-100	James Bernard
W-101	Judith Bernard
W-102	Sharon Bersaas
W-103	Susan Betourne
W-104	Michael Betz
W-105	Monica Beyer
W-106	Sara Bhakti
W-107	Oleksii Bilous
W-108	Karel Bircher
W-109	Scott Bishop
W-110	Diane Bisset
W-111	Evelyn Bittner
W-112	Vince Bjork
W-113	Barbara Blackwood
W-114	Tina Blade
W-115	Leticia Bland
W-116	Mark Blandford
W-117	Mark Blitzer
W-118	Pablo Bobe
W-119	Art Bogie
W-120	Beverly Boling
W-121	Tracey Bonner
W-122	Antoinette Bonsignore
W-123	Monica Bonualas

Submission Code	Commenter Name
W-124	Tika Bordelon
W-125	Jai Boreen
W-126	Dean Borgeson
W-127	John Borland
W-128	Julie Boss
W-129	Vic Bostock
W-130	George Bourlotos
W-131	Caroline Bowdish
W-132	Patty Bowen
W-133	Joan Bowers
W-134	Jason Bowman
W-135	Shelly Bowman
W-136	Sandy Bowman
W-137	Ken Box
W-138	Ernest Boyd
W-139	Lorraine Brabham
W-140	Kathy Bradley
W-141	Michael Brandes
W-142	Jennifer Brandon
W-143	Bryan Branson
W-144	Daniel Brant
W-145	Barbara Braun
W-146	Patti Brent
W-147	Deborah Brent
W-148	Lynn Brevig

Submission Code	Commenter Name
W-149	Anna Brewer
W-150	Dr Brooks
W-151	Kris Brown
W-152	Tina Brown
W-153	Sf Brown
W-154	Dr Brown
W-155	Donna Browne
W-156	Harry Brownfield
W-157	Beth Brunton
W-158	Jim Brunton
W-159	Teresa Bryan
W-160	Perry Bryant
W-161	Matt Brzezinski
W-162	Barbara Buchan
W-163	Judith Buczek
W-164	Rev Burg
W-165	Carole Burger
W-166	Sara Burgess
W-167	Sally Burke
W-168	Charlie Burns
W-169	Eric Burr
W-170	John Burrows
W-171	Patricia Burton
W-172	Peggy Butler
W-173	Peggy Butler

Submission Code	Commenter Name
W-174	D C
W-175	Joan Caiazzo
W-176	Jody Caicco
W-177	Robin Calderon
W-178	Beth Call
W-179	Richard Camp
W-180	Carrie Campbell
W-181	Rebecca Canright
W-182	Mark Canright
W-183	Ken Canty
W-184	Cigdem Capan
W-185	Peter Capen
W-186	Barbara Cardarelli
W-187	Joel Carlson
W-188	Cheri Carlson
W-189	Jean Carman
W-190	Ruth Caron
W-191	Catherine Caron
W-192	Gary Carone
W-193	Helen Carrick
W-194	Linda Carroll
W-195	Elizabeth Casanova
W-196	Tom Cashman
W-197	Candice Cassato
W-198	John Casseday

Submission Code	Commenter Name
W-199	Susan Castelli-Hill
W-200	Dr Caswell
W-201	Janet Cavallo
W-202	Lisa Ceazan
W-203	Guy Chan
W-204	Robyn Chance
W-205	Philip Chanen
W-206	David Chaney
W-207	Robert Chang
W-208	Ralph Chappell
W-209	Stacie Charlebois
W-210	Melvin Cheitlin
W-211	Joanna Chesnut
W-212	Vivian Chin
W-213	M'lou Christ
W-214	Carrie Christensen
W-215	Karen Christiansen
W-216	Susan Christiansen
W-217	Janelle Church
W-218	Urszula Cieslak
W-219	Maxine Clark
W-220	Todd Clark
W-221	Elly Claus-Mcgahan
W-222	Robert Clawson
W-223	G Claycomb

Submission Code	Commenter Name
W-224	Cynda Cleveland
W-225	Sonia Cobo
W-226	Judith Cohen
W-227	Annapoorne Colangelo
W-228	Jackie Cole
W-229	Tracy Cole
W-230	Kelley Coleman-Slack
W-231	Heidi Colkitt
W-232	Miah Collier
W-233	Carol Collins
W-234	Randall Collins
W-235	Stephanie Colony
W-236	Marisa Coluccio
W-237	Amy Compestine
W-238	Pete Compton
W-239	B Coniglio
W-240	Patrick Conn
W-241	John Conner
W-242	Norm Conrad
W-243	Necole Cook
W-244	James Cook
W-245	Carolyn Cooper
W-246	David Cordero
W-247	Mark Coria
W-248	Mark Coria

Submission Code	Commenter Name
W-249	Mary Cormier
W-250	Alyza Cornett
W-251	Alyza Cornett
W-252	Marianne Corona
W-253	Jennifer Corrigan
W-254	David Cosby
W-255	Sandra Couch
W-256	Sandy Covich
W-257	Keith Cowan
W-258	Thomas Cox
W-259	Lanie Cox
W-260	Tom Craighead
W-261	Jason Crawford
W-262	Narda Crew
W-263	Lisa Critchlow
W-264	James Cronin
W-265	Susan Crowley
W-266	Elizabeth Cruickshank
W-267	Lisa Crum-Freund
W-268	M Cruz
W-269	Lakota Crystal
W-270	Lakota Crystal
W-271	Danielle Crystal
W-272	Karen Curry
W-273	Stephen Curry

Submission Code	Commenter Name
W-274	Colleen Curtis
W-275	Michael Czuczak
W-276	LIII D
W-277	Mr Dahlgren
W-278	Diana Dahlman
W-279	Keith D'alessandro
W-280	Suzann Daley
W-281	Inge Dalland
W-282	Miriam Danu
W-283	Randall Daugherty
W-284	Jean Davis
W-285	Virginia Davis
W-286	Carter Davis
W-287	Christina Davis
W-288	Thomas Dawley
W-289	April Dawn
W-290	April Dawn
W-291	James Dawson
W-292	Brandie Deal
W-293	Carla Decrona
W-294	Theresa Deluca
W-295	Carey Demartini
W-296	Laurie Denis
W-297	Asphodel Denning
W-298	Linda Depew

Submission Code	Commenter Name
W-299	William Derry
W-300	Claudia Devinney
W-301	Felicity Devlin
W-302	Kathryn Dewees
W-303	Zachary Dewolf
W-304	Amanda Dickinson
W-305	Gena Dilabio
W-306	Gena Dilabio
W-307	Karen Dingmon
W-308	Patricia Dion
W-309	Gary Dirks
W-310	Teresa Dix
W-311	Angie Dixon
W-312	Melba Dlugonski
W-313	Jana Doak
W-314	Jani Doctor
W-315	Tiffany Dodge
W-316	Linda Dodson
W-317	David Doering
W-318	Yeshi Dolma
W-319	Gail Dominick
W-320	Bruce Donnell
W-321	Patricia Doran
W-322	Ann Dorsey
W-323	Uwe Dotzauer

Submission Code	Commenter Name
W-324	Daniel Draheim
W-325	Arlene Dreeste
W-326	Gage Drews-Newman
W-327	Breana Driscoll
W-328	Chris Drumright
W-329	Eleanor Dubois
W-330	Tim Duda
W-331	William Dudley
W-332	Vincent Duffy
W-333	Frederick Duhring
W-334	Denny Duncan
W-335	Dorothy Dunlap
W-336	Ssharon Dunn
W-337	John Dunn
W-338	Samuel Durkin
W-339	Rebecca Durr
W-340	John Dwyer
W-341	Christina Dyson
W-342	Sally Eastey
W-343	Mary Easton
W-344	Monica Ebben
W-345	Amber Eby
W-346	Sean Edmison
W-347	Deborah Efron
W-348	Lisa Ehle

Submission Code	Commenter Name
W-349	Noah Ehler
W-350	Beth Eisenbeis
W-351	P Elle
W-352	Mike Elledge
W-353	Charles Ellenberger
W-354	Nancy Ellingham
W-355	Shemayim Elohim
W-356	Michael Emery
W-357	Klaudia Englund
W-358	Lori Erbs
W-359	Linda Erickson
W-360	Hilarie Ericson
W-361	Marshall Erling
W-362	Cecile Ervin
W-363	Victor Escobar
W-364	Gregory Espe
W-365	Gale Espinosa
W-366	Eric Esposito
W-367	Dan Esposito
W-368	Tina Ethridge
W-369	Lois Eulberg
W-370	Bronwen Evans
W-371	Chad Evans
W-372	April Eversole
W-373	Megan Faber

Submission Code	Commenter Name
W-374	Hilke Faber
W-375	Dagmar Fabian
W-376	Gill Fahrenwald
W-377	Jennifer Fairchild
W-378	Michelle Fairrow
W-379	Bonnie Faith-Smith
W-380	Sebastian Falkowski
W-381	Annette Fallin
W-382	Aisha Farhoud
W-383	Bob Farrell
W-384	Andrea Faste
W-385	Jon Fayth
W-386	Karen Fedorov
W-387	James Feit
W-388	Vincent Feliciano
W-389	Ruth Felix
W-390	Ava Ferguson
W-391	Mary Ferm
W-392	Paul Ferrari
W-393	Alfred Ferraris
W-394	Judith Ferrell
W-395	Jean Ferrier
W-396	Jill Feuerhelm
W-397	Dr. Fielder
W-398	Jeannie Finlay-Kochanowski

Submission Code	Commenter Name	Submission Code	Commenter Name
W-399	Wendy Fischer	W-424	Sanja Futterman
W-400	Barry Fishman	W-425	F G
W-401	Kaitlin Fitch	W-426	Jörg Gaiser
W-402	Kristin Fitzpatrick	W-427	Querido Galdo
W-403	Kristin Fitzpatrick	W-428	Sandra Garcia
W-404	Robert Fladger	W-429	Elizabeth Garratt
W-405	Teresa Fleener	W-430	Mary Ganttmeier
W-406	Patricia Fleetwood	W-431	Esther Garvett
W-407	Charles Fletcher	W-432	Gina Gatto
W-408	Frank Florio	W-433	Sandra Gehri-Bergman
W-409	Fa Forman	W-434	Sandra Geist
W-410	Karen Fortier	W-435	Douglas Gemmell
W-411	Beverly Foster	W-436	Derek Gendvil
W-412	Jordan Fostering	W-437	Brian Gibbons
W-413	Faith Franck	W-438	Jody Gibson
W-414	Rebecca Frank	W-439	Scott Gibson
W-415	Glenn Franko	W-440	John Gieser
W-416	Jane Frazer	W-441	Joe Gillard
W-417	Jane Frazer	W-442	Nicole Gillespy
W-418	Stephen Friedrich	W-443	Jesse Gillman
W-419	Richard Friesenhengst	W-444	Niele Gillooly
W-420	Barbara Fristoe	W-445	Jennifer Gindt
W-421	Richard Frye	W-446	Edith Gish
W-422	Shearle Furnish	W-447	Donna Glaser
W-423	Kristina Fury	W-448	Rebecca Glass

Submission Code	Commenter Name
W-449	Nancy Gleim
W-450	Mary Glover
W-451	Bryan Goffe
W-452	Laurie Gogic
W-453	Warren Gold
W-454	Susan Goldberg
W-455	William Golding
W-456	Kathy Golic
W-457	Maria Gomez
W-458	Tara Gonzales
W-459	Emma Goode-Deblanc
W-460	Margaret Goodman
W-461	Gay Goodman
W-462	William Goodwin
W-463	Martha Gorak
W-464	Eve Gordon
W-465	Tim Gould
W-466	Robyn Grad
W-467	Steve Graff
W-468	Margaret Graham
W-469	Gianina Graham
W-470	Joyce Grajczyk
W-471	Linda Granato
W-472	Vicki Grayland
W-473	Arden Green

Submission Code	Commenter Name
W-474	Jeffrey Green
W-475	Donald Greenberg
W-476	Judy Greene
W-477	Barbara Gregory
W-478	Marc Gregory
W-479	Steven Gregory
W-480	Jonah Griffith
W-481	Stephen Grove
W-482	Mark Grzegorzewski
W-483	Chris Guillory
W-484	David Guren
W-485	John Guros
W-486	Perry Gx
W-487	Carole H
W-488	Robert H
W-489	David Habib
W-490	David Habib
W-491	Deborah Hagen-Lukens
W-492	Carol Haines
W-493	Sara Hale
W-494	Jim Haley
W-495	Dorothy Hall
W-496	Lisa Halpern
W-497	Michele Ham
W-498	Martha Hammann

Submission Code	Commenter Name	Submission Code	Commenter Name
W-499	Richard Han	W-524	Carolyn Haupt
W-500	Judith Hance	W-525	Christopher Hawkins
W-501	David Hand	W-526	Chris Hazynski
W-502	Ann Hansen	W-527	Mia Heavyrunner
W-503	Andrea Hanes	W-528	Jo Hebberger
W-504	Lois Hanson	W-529	Lizette Hedberg
W-505	Art Hanson	W-530	Janet Hedgepath
W-506	Barbara Harper	W-531	Kristina Heiks
W-507	Krista Harris	W-532	Bridgett Heinly
W-508	Cathy Harris	W-533	Angela Hembroff
W-509	Shirlene Harris	W-534	Patricia Hemphill
W-510	Shirlene Harris	W-535	James Hendrickson
W-511	Kym Harris	W-536	Alana Hendrickson
W-512	Julie Harris	W-537	Cheryl Henley
W-513	Mark Harris	W-538	Daniel Henling
W-514	Zoe Harris	W-539	Carole Henry
W-515	Brent Harrison	W-540	Anne Henry
W-516	Madelyn Hart	W-541	Sandra Herald
W-517	Patti Harter	W-542	Mari Herbert
W-518	Lorraine Hartmann	W-543	Birgit Hermann
W-519	Jo Harvey	W-544	Richard Hernandez
W-520	Kara Harvin	W-545	Carrie Heron
W-521	Robert Haslag	W-546	Rose Herrmann
W-522	Donald Hattaway	W-547	Claudia Hevel
W-523	Barclay Hauber	W-548	Nancy Hevly

Submission Code	Commenter Name
W-549	Nicholas Heyer
W-550	Patrick Hickey
W-551	Jennifer Hickey
W-552	Lacey Hicks
W-553	Patti Highland
W-554	Blanche Hill
W-555	Michael Hill
W-556	James Hipp
W-557	David Hirst
W-558	Lynn Hoang
W-559	Sally Hodson
W-560	Megan Hoerler
W-561	William Hoffer
W-562	Randolph Hogan
W-563	Sandi Hogben
W-564	Felicty Hohenshelt
W-565	Lehman Holder
W-566	Valerie Holland
W-567	Katherine Holmes
W-568	Bill Holt
W-569	Sherry Holyk
W-570	Victoria Holzendorf
W-571	Rona Homer
W-572	Ellen Homsey
W-573	Dennis Hood

Submission Code	Commenter Name
W-574	Linda Hood
W-575	Ruth Hooper
W-576	John Hopkins
W-577	Jovohn Hornbuckle
W-578	Abigail Houghton
W-579	Anitra House
W-580	William Huddle
W-581	Laura Huddlestone
W-582	Gary Hull
W-583	Gary Hull
W-584	Adrianna Hulscher
W-585	Lisa Hunkler
W-586	Kristi Hunziker
W-587	Dianne Hurst
W-588	Sally Hurst
W-589	Helen Hustad
W-590	Jodi Igard
W-591	Noreene Ignelzi
W-592	Teresa Igoe
W-593	Mana Iluna
W-594	William Insley
W-595	Bridget Irons
W-596	Takako Ishii-Kiefer
W-597	Jim Jachimiak
W-598	Andrew Jackson

Submission Code	Commenter Name
W-599	S Jacky
W-600	Zann Jacobbrown
W-601	Kathryn Jacobs
W-602	Vanessa Jamison
W-603	Rita Jaskowitz
W-604	Asukaa Jaxx
W-605	Mary Jeffrey
W-606	Robert Jehn
W-607	Joseph Jennings
W-608	Penelope Johansen
W-609	Lorraine Johnson
W-610	Lorraine Johnson
W-611	Richard Johnson
W-612	Joel Johnson
W-613	Glenna Johnson
W-614	Elizabeth Johnson
W-615	Diana Johnson
W-616	Erin Johnson
W-617	Elizabeth Jonach
W-618	Bobette Jones
W-619	Clayton Jones
W-620	Mark Jones
W-621	Carolee Jones
W-622	Sandra Joos
W-623	Alena Jorgensen

Submission Code	Commenter Name
W-624	Nathaniel Jungbluth
W-625	Eileen Juric
W-626	Nicholas Jurus
W-627	William Justis
W-628	Edward Kaeufer
W-629	Peter Kahigian
W-630	/Deb Kalahan
W-631	Joe Kaleel
W-632	Fred Karlson
W-633	Bonnie Karrin
W-634	Jeffrey Kaufman
W-635	Ronald Kaufman
W-636	James Kawamura
W-637	Deborah Kaye
W-638	Patricia Keefe
W-639	Marcia Kellam
W-640	Sophia Keller
W-641	Cecelia Kellogg
W-642	J Kelly
W-643	Angela Kelly
W-644	Elizabeth Kelly
W-645	Kindy Kemp
W-646	Elizabeth Kennedy
W-647	Kate Kenner
W-648	Melanie Kenoyer

Submission Code	Commenter Name
W-649	Steve Kent
W-650	M Keogh
W-651	Tim Kerfoot
W-652	Tara Kerr
W-653	Wayne Kessler
W-654	Karen Khan
W-655	Amy Kiba
W-656	Ji-Young Kim
W-657	Carolyn Kine
W-658	Fawn King
W-659	Ruth King
W-660	Theodore King
W-661	Cathy King-Chuparkoff
W-662	Jamie Kitson
W-663	Christine Klunder
W-664	Joann Koch
W-665	Ericka Kohn
W-666	Richard Kolber
W-667	Mark Koritz
W-668	Raleigh Koritz
W-669	Vivian Korneliussen
W-670	Robin Kory
W-671	Rebecca Kosbab
W-672	Michael Krall
W-673	Marquam Krantz

Submission Code	Commenter Name
W-674	Wendy Krauss
W-675	Leslie Kreher
W-676	Kelly Krieger
W-677	Lynn Krikorian
W-678	Juli Kring
W-679	Mary Krohner
W-680	Esther Kronenberg
W-681	Esther Kronenberg
W-682	Esther Kronenberg
W-683	Suzanne Kruger
W-684	Jeff Kulp
W-685	Keren Kumar
W-686	Cathie Kwasneski
W-687	Cathie Kwasneski
W-688	Vince L
W-689	Roberta Lafrance
W-690	Rich Lague
W-691	Judith Laik
W-692	Peta-Maree Lamb
W-693	Barbara Lamb
W-694	John Lambert
W-695	Kathryn Lambros
W-696	Doug Landau
W-697	Lj Lanfranchi
W-698	Maureen Lang

Submission Code	Commenter Name	Submission Code	Commenter Name
W-699	Mr Lapite	W-724	Thomas Libbey
W-700	Candace Laporte	W-725	Ann Lidnin
W-701	David Laramie	W-726	Nancy Lill
W-702	Rocío Lario	W-727	Marilyn Lindahl
W-703	Kelly Larkin	W-728	Virgene Link-New
W-704	Julia Larsen	W-729	Deborah Lipman
W-705	Erik Larue	W-730	Hannah Liu
W-706	Firstname Lastname	W-731	Cj Livingston
W-707	Edward Laurson	W-732	David Lockman
W-708	Sander Lazar	W-733	Ken Loehlein
W-709	Jay Lazerwitz	W-734	Robert Lombardi
W-710	Jane Leavitt	W-735	Chris Loo
W-711	Dennis Ledden	W-736	Joanne Lopata
W-712	John Lee	W-737	Robin Lorentzen
W-713	Kathleen Lee	W-738	Lorrell Louchard
W-714	Christopher Lee	W-739	Steve Lovelace
W-715	Nick Leggett	W-740	Delorse Lovelady
W-716	Linda Leighton	W-741	Tamar Lowell
W-717	Evelyn Lemoine	W-742	Maria Lubienksi
W-718	Elizabeth Lengel	W-743	Lorie Lucky
W-719	Blake Lenoir	W-744	David Ludden
W-720	Bob Leppo	W-745	Thom Lufkin
W-721	Beth Levin	W-746	Kate Lunceford
W-722	Marilyn Levine	W-747	Linda Lundell
W-723	Alisha Leviten	W-748	Vanassa Lundheim

Submission Code	Commenter Name	Submission Code	Commenter Name
W-749	Mary Lynn	W-774	Diane Marks
W-750	Denise Lytle	W-775	Frances Marquart
W-751	Susan Macdonald	W-776	Melodie Martin
W-752	Alexis Macdonald	W-777	Melodie Martin
W-753	Melvin Mackey	W-778	Priscilla Martinez
W-754	Kristyn Macphail	W-779	Sheila Maseda-Gille
W-755	Michelle Macy	W-780	Donna Mason
W-756	Sally Madigan	W-781	Carolyn Massey
W-757	Storie Madrid	W-782	Carolyn Massey
W-758	Ellen Madsen	W-783	Peter Mastenbroek
W-759	Andrew Magallon	W-784	Tina Matzke
W-760	Maria Magana	W-785	Dorian May
W-761	Lawrence Magliola	W-786	Joseph Mayo
W-762	Millie Magner	W-787	Cheryl Mcatee
W-763	Luke Magnotto	W-788	Ellen Mccann
W-764	Debbie Mahder	W-789	Annie Mccann
W-765	Larry Mahlis	W-790	Gloria Mcclintock
W-766	Eugene Majerowicz	W-791	Eve Mcclure
W-767	Jesse Mallory	W-792	Eve Mcclure
W-768	Tania Malven	W-793	Patrick Mccormick
W-769	Pete Mandeville	W-794	Diane Mccutcheon
W-770	Dennis Marceron	W-795	Judy Mcdonald
W-771	Giampiero Mariani	W-796	Mary Mcgaughey
W-772	John Markham	W-797	John McGill
W-773	Shannon Markley	W-798	William Mcgunagle

Submission Code	Commenter Name
W-799	Amy Mckay
W-800	W Mckenna
W-801	Lori Mckenna
W-802	Julia Mclaughlin
W-803	Annie McMahan
W-804	Nancy McMahan
W-805	Marilyn McMullen
W-806	Tom Mcneely
W-807	Karin Mcnett
W-808	Angela Mcphee
W-809	Leslie Mcquistin
W-810	Audrey Meade
W-811	Valerie Mehring
W-812	Fran Merker
W-813	Jennifer Messina
W-814	Lisa Messinger
W-815	Lisa Messinger
W-816	Kristen Meston
W-817	Elizabeth Metcalf
W-818	Allison Mettler
W-819	Rita Meuer
W-820	Eric Meyer
W-821	Colonel Meyer
W-822	Marilee Meyer
W-823	Mary Michael

Submission Code	Commenter Name
W-824	Carmela Micheli
W-825	Marie Michl
W-826	Richard Miescher
W-827	Dennis Milam
W-828	Shannon Milhaupt
W-829	Marlene Miller
W-830	Claudia Miller
W-831	Lea Miller
W-832	Marjorie Millner
W-833	Hayley Mills-Lott
W-834	Ken Mincin
W-835	Jim Minick
W-836	Nina Minsky
W-837	Jonathan Mitchell
W-838	Diane Moan
W-839	Leila Mohseni
W-840	Helen Moissant
W-841	Nelson Molina
W-842	Ben Moore
W-843	Judy Moran
W-844	Claire Morency
W-845	Mckenna Morrigan
W-846	Daniel Morris
W-847	Eleanor Morris
W-848	Florence Morris

Submission Code	Commenter Name
W-849	Margaret Moulden
W-850	Amy Mower
W-851	Eric Moyle
W-852	James Mulcare
W-853	Jessica Mullin
W-854	Heather Murawski
W-855	Lauren Murdock
W-856	Christopher Murphy
W-857	Op Murphy
W-858	Kathleen Murphy
W-859	Susanne Murray
W-860	Clifford Myers
W-861	Jim Mynar
W-862	Mary N
W-863	Rev Nagy
W-864	Desiree Nagyfy
W-865	Alex Nakamura
W-866	Suzanne Nattrass
W-867	Brent Naylor
W-868	William Neal
W-869	Sally Neary
W-870	Elizabeth Nedeff
W-871	Grace Neff
W-872	Linda Nelson
W-873	Thora Nelson

Submission Code	Commenter Name
W-874	Katherine Nelson
W-875	Tobey Nelson
W-876	John Nelson
W-877	Anne Nequette
W-878	Linda Neth
W-879	Paul Netusil
W-880	Suzanne Nevins
W-881	Natalie Niblack
W-882	James Nichols
W-883	.Michele Nihipali
W-884	Donna Niles
W-885	Chris Nolasco
W-886	George Norris
W-887	Chelsea Norvell
W-888	Stephen Noseworthy
W-889	Roger Nystrom
W-890	K O
W-891	Leonard Obert
W-892	Lorie Oblad
W-893	Sharon O'brien
W-894	Mary Oconnell
W-895	Kathleen O'connell
W-896	Sean O'dell
W-897	Deanne O'donnell
W-898	Deanne O'donnell

Submission Code	Commenter Name
W-899	Deanne O'donnell
W-900	Jeanne Oliver
W-901	Carol Olivier
W-902	Donna Olsen
W-903	Carl Olson
W-904	Dean Onessimo
W-905	Samantha Orszulak
W-906	Javier Ortiz
W-907	Hillary Ostrow
W-908	Tyler Otto
W-909	Lynne Oulman
W-910	Charleen Ounsworth
W-911	James Owen
W-912	Amaya P
W-913	Jo Pa
W-914	Grace Padelford
W-915	Grace Padelford
W-916	Urmila Padmanabhan
W-917	Shelly Pahk
W-918	Trisha Pahmeier
W-919	Susan Paine
W-920	Laura Paise
W-921	Pamela Pakker-Kozicki
W-922	John Paladin
W-923	Julieann Palumbo

Submission Code	Commenter Name
W-924	Marco Pardi
W-925	Pawiter Parhar
W-926	Stan Parker
W-927	Barry Parker
W-928	Deborah Parker
W-929	Stacy Parr
W-930	Jennifer Parrish-Hill
W-931	Adina Parsley
W-932	Rama Paruchuri
W-933	Jessica Pate
W-934	Ki Paul
W-935	Jean Pauley
W-936	Michelle Pavcovich
W-937	Nancy Peacock
W-938	Tia Pearson
W-939	Elizabeth Peck
W-940	Sharon Pederslie
W-941	Tyra Pellerin
W-942	Jamie Peltier
W-943	Gregory Penchoen
W-944	Kristin Penn
W-945	Jeff Perzynski
W-946	Art Peskind
W-947	Nancy Peters
W-948	Erik Peterson

Submission Code	Commenter Name
W-949	Kristina Peterson
W-950	Dave Pierot
W-951	J Michael Pinc
W-952	Faye Pineda
W-953	Robin Pinsof
W-954	Genevieve Pittelkau
W-955	Amy Platt
W-956	Mary Platter-Rieger
W-957	Sarah Polda
W-958	David Polda
W-959	David Polda
W-960	Rebecca Pollinzi
W-961	Maureen Porcelli
W-962	Linda Porter
W-963	Carol Porter
W-964	Mary Powers
W-965	Debbi Pratt
W-966	Mara Price
W-967	Carol Price
W-968	Alisa Prinos
W-969	Lin Provost
W-970	Deidre Puffer
W-971	Nancy Quackenbush
W-972	Natacha Quesnel
W-973	Jenina Quinn

Submission Code	Commenter Name
W-974	Ellen Quinn
W-975	Andrew R.
W-976	Joseph Raap
W-977	Lynn Rabenstein
W-978	Danuta Radko
W-979	Don Rahm
W-980	Christopher Rahm
W-981	Pamela Rains
W-982	Hank Ramirez
W-983	Debbie Ramos
W-984	Karen Ratzlaff
W-985	Laura Ray
W-986	Rene Ray
W-987	Peter Reagel
W-988	Maryellen Redish
W-989	Les Rees
W-990	Melissa Rees
W-991	Lenore Reeves
W-992	Debra Rehn
W-993	Robyn Reichert
W-994	Karen Reid
W-995	Ethel Renner
W-996	Rocky Reuter
W-997	Michele Reynolds
W-998	Sue Rhomberg

Submission Code	Commenter Name
W-999	Chris Riesch
W-1000	Lezlie Ringland
W-1001	Janet Riordan
W-1002	Mrs Risser
W-1003	Javier Rivera
W-1004	Jim Roberts
W-1005	Elizabeth Roberts
W-1006	Amy Roberts
W-1007	Robby Robinson
W-1008	Mallory Robinson
W-1009	Rajwantee Robinson
W-1010	Bob Rodgers
W-1011	Pamela Roger
W-1012	Bonnie Rohrer
W-1013	Jelica Roland
W-1014	Janna Rolland
W-1015	Charis Rosales
W-1016	Anthony Rosner
W-1017	Douglas Ross
W-1018	Patricia Rossi
W-1019	Florie Rothenberg
W-1020	Emily Rothman
W-1021	Danielle Rowland
W-1022	Amanda Rudisill
W-1023	Linda Rudman

Submission Code	Commenter Name
W-1024	Derya Ruggles
W-1025	George Ruiz
W-1026	Elena Rumiantseva
W-1027	Sandra Russell
W-1028	Judith Ryan
W-1029	Kathryn Ryan
W-1030	Lillian Ryan
W-1031	Erin Rye
W-1032	Lynette Rynders
W-1033	John S
W-1034	Susie Saalwaechter
W-1035	Tanara Saarinen
W-1036	Tanara Saarinen
W-1037	Patricia Safrin
W-1038	Claire Sagen
W-1039	Joe Salazar
W-1040	Nancy Salovich
W-1041	Sarah Salter
W-1042	Paul Sampson
W-1043	Julia Sanderson
W-1044	Daniel Sandvig
W-1045	Silvia Santos
W-1046	John Sarna
W-1047	Michelle Sarnoski
W-1048	Michael Saunders

Submission Code	Commenter Name
W-1049	Janet Saupp
W-1050	Mark Sawyer
W-1051	Diana Saxon
W-1052	Dre Say
W-1053	E Scantlebury
W-1054	Dennis Schaef
W-1055	Darlene Schanfald
W-1056	Taen Scherer
W-1057	Bob Schmelter
W-1058	Roger Schmidt
W-1059	Susan Schmidt
W-1060	Sue Schnaidt
W-1061	Betsy Schultz
W-1062	Phebe Schwartz
W-1063	Eric Schwartz
W-1064	Marian Schwarzenbach
W-1065	Jean Schwinberg
W-1066	Carol Scott
W-1067	Michael Seager
W-1068	Mary Sebring
W-1069	Ellen Segal
W-1070	Kimberly Seger
W-1071	Peter Seidman
W-1072	Kim Sellon
W-1073	Debbie Sequichie-Kerchee

Submission Code	Commenter Name
W-1074	Susan Severino
W-1075	Caroline Sévilla
W-1076	Caroline Sévilla
W-1077	Lauren Sewell
W-1078	Jennifer Shafer
W-1079	C.V. Shaw
W-1080	Nancy Shaw
W-1081	Lauren Shelzam
W-1082	Roger Sherman
W-1083	Jamie Shields
W-1084	Susann Shiffman
W-1085	Bruce Shilling
W-1086	Forest Shomer
W-1087	Susan Shouse
W-1088	Heidi Shuler
W-1089	Carol Sibley
W-1090	Lisa Siegfried
W-1091	Jane Sielken
W-1092	Becky Sillasen
W-1093	Dawn Silver
W-1094	Ilene Silver
W-1095	Kevin Silvey
W-1096	Beatrice Simmonds
W-1097	Michael Siptroth
W-1098	Steven Skal

Submission Code	Commenter Name
W-1099	Ann Skinner
W-1100	Gloria Skouge
W-1101	Elizabeth Sloss
W-1102	Kim Smith
W-1103	Marsha Smith
W-1104	Diana Smith
W-1105	Rebecca Smith
W-1106	Stephanie Smith
W-1107	William Sneiderwine
W-1108	Donna Snow
W-1109	Dan Snyder
W-1110	Joon Song
W-1111	Shannon Sorem
W-1112	Mary Sorokie
W-1113	Diane Sparks
W-1114	Christy Spear
W-1115	Vana Spear
W-1116	Debbie Spear
W-1117	Andrea Speed
W-1118	Andrea Speed
W-1119	Cheryl Speer
W-1120	Melissa Spengler
W-1121	Ilya Speranza
W-1122	Gerry Sperry
W-1123	Mark Spevak

Submission Code	Commenter Name
W-1124	Susan Spilecki
W-1125	Mary Splan
W-1126	Leslie Spoon
W-1127	Constance Spoor
W-1128	Sheila Squillace
W-1129	Alycia Staats
W-1130	Roman Stadtler
W-1131	Michael Stamm
W-1132	Gerry Stamper
W-1133	Maryann Staron
W-1134	Lozz Starseed
W-1135	John Staunton
W-1136	Greg Stawinoga
W-1137	Kathleen Steele
W-1138	Terran Steinberg
W-1139	A.L. Steiner
W-1140	Brigitte Steinmann
W-1141	Michelle Stepp
W-1142	Richard Stern
W-1143	David Stetler
W-1144	Katie Stevens
W-1145	Kyle Stevenson
W-1146	Kristin Stewart
W-1147	Jackie Stolfi
W-1148	Judith Stone

Submission Code	Commenter Name	Submission Code	Commenter Name
W-1149	Dorothy Strassner	W-1174	Tanya Taylor
W-1150	Ann Stratten	W-1175	Liz Taylor
W-1151	Jim Strickland	W-1176	Cornelia Teed
W-1152	Helen Stuehler	W-1177	Joan Temple
W-1153	Don Stutheit	W-1178	Kimberly Teraberry
W-1154	Marilyn Subala	W-1179	Pamela Tetarenko
W-1155	Diane Sullivan	W-1180	Susan Thiel
W-1156	George Summers	W-1181	James Thoman
W-1157	Steve Sundquist	W-1182	Kat Thomas
W-1158	Liann Sundquist	W-1183	Gary Thomasson
W-1159	Bonnie Svec	W-1184	Lorraine Thompson
W-1160	Jennifer Svenson	W-1185	Tj Thompson
W-1161	Irene Svete	W-1186	John Thompson
W-1162	Michael Swan	W-1187	Eileen Thompson
W-1163	Craig Swanson	W-1188	Mike Thompson
W-1164	Doug Swanson	W-1189	Elizabeth Tickman
W-1165	Thomas Swoffer	W-1190	Hillary Tiefer
W-1166	Giles Sydnor	W-1191	Guay Tippet
W-1167	T T	W-1192	Myra Toth
W-1168	F T	W-1193	Erline Towner
W-1169	Scott Tallman	W-1194	Stephanie Trasoff
W-1170	Jane Tapp	W-1195	Nathan Trimble
W-1171	Prof Tartaglia	W-1196	Kristine Trumbo
W-1172	Karla Taylor	W-1197	Sau Tsang
W-1173	Polly Taylor	W-1198	Patrice Tullai

Submission Code	Commenter Name
W-1199	David Turnoy
W-1200	Nj Tuttle
W-1201	Neal Umphred
W-1202	Wanda Unger
W-1203	Victoria Urias
W-1204	Steve Uyenishi
W-1205	Selim Uzuner
W-1206	Donna Vakdez
W-1207	Jennifer Valentine
W-1208	Emily Van Alyne
W-1209	Matthew Van Camp
W-1210	Satya Vayu
W-1211	Marie Veek
W-1212	Brian Venable
W-1213	Mary Venos
W-1214	Michele Vignieri
W-1215	Michele Villeneuve
W-1216	Jennifer Vining
W-1217	Sybille Vital
W-1218	Niki Vogt
W-1219	Susan Vogt
W-1220	Miranda Vorhees
W-1221	Susan Vossler
W-1222	Nora Vralsted
W-1223	Bruce Wade

Submission Code	Commenter Name
W-1224	Andrew Wadsworth
W-1225	Norman Wagner
W-1226	Carol Walker
W-1227	Nadine Wallace
W-1228	Patrice Wallace
W-1229	Susan Wallace
W-1230	Robert Walling
W-1231	Kevin Walsh
W-1232	Elizabeth Walton
W-1233	Cucinotta Wanda
W-1234	Tracy Wang
W-1235	Rosemary Ward
W-1236	Cherie Warner
W-1237	Alicelia Warren
W-1238	Chris Washington
W-1239	Linda Wasserman
W-1240	Joanne Watchie
W-1241	Patricia Waterston
W-1242	Harold Watson
W-1243	Martin Watts
W-1244	Margaret Weant-Leavitt
W-1245	Dean Webb
W-1246	Dean Webb
W-1247	Roger Wechsler
W-1248	Jason Weinstock

Submission Code	Commenter Name
W-1249	Tom Weir
W-1250	Laura Weiss
W-1251	Shannon Welles
W-1252	Cabell Westbrook
W-1253	Jennifer Westra
W-1254	Dora Weyer
W-1255	Nancy White
W-1256	Edward Whitesell
W-1257	Sandra Whitmore
W-1258	Den Wichar
W-1259	Joe Wiederhold
W-1260	Teena Wildman
W-1261	James Wiley
W-1262	Kimberly Wiley
W-1263	Kimberly Wiley
W-1264	Carol Wiley
W-1265	Janice Wilfing
W-1266	Alixandre Wilkins
W-1267	James Williams
W-1268	Morris Williams
W-1269	Steve Williams
W-1270	Peggy Willis
W-1271	Emily Willoughby
W-1272	Kevin Willson
W-1273	Merlin Wilson

Submission Code	Commenter Name
W-1274	Steve Wilson
W-1275	Winn Wilson
W-1276	Rachel Wilson
W-1277	Marian Wineman
W-1278	Marguerite Winkel
W-1279	Lisa Winters
W-1280	Deb Wolf
W-1281	Barton Wolfe
W-1282	Margaret Woll
W-1283	Vickie Woo
W-1284	Susan Wood
W-1285	R Wood
W-1286	Peter Wood
W-1287	J Woodworth
W-1288	Cathy Wootan
W-1289	Pam Workman
W-1290	Don Worley
W-1291	Lacey Wozny
W-1292	Katherine Wright
W-1293	Georgina Wright
W-1294	Teri Wright
W-1295	Blake Wu
W-1296	Patricia Wynn
W-1297	Bill Yake
W-1298	Leslie Yamada

Submission Code	Commenter Name
W-1299	Guadalupe Yanez
W-1300	Susan Yarnell
W-1301	Toni Yeaton
W-1302	Rena Zaman-Zade
W-1303	Vicki Zarrell
W-1304	Ms Zentura
W-1305	Laura Zerr
W-1306	John Zey
W-1307	Russ Ziegler
W-1308	Russ Ziegler
W-1309	Eric Zimdars
W-1310	Kenneth Zirinsky
W-1311	Marie Zwicker

