

Appendix E- Response to Comments

The legal notice that informed the public that a draft permit and fact sheet were available for review was published in the Tacoma News Tribune on May 10, 2024. Ecology received comments on the draft documents during the public comment period, which ended on August 20, 2024. Ecology also held a virtual public hearing on June 13, 2024, to provide opportunity for oral testimony; no participants provided oral testimony.

Ecology thanks all commenters for their contributions to this process. Organizations and citizens providing written comments included:

- City of Tacoma Environmental Services Department
- Puget Soundkeepers/Communities for a Health Bay/Waste Action Project
- Washington Conservation Action
- Cythia Cannon
- Marz Chabot
- Karen Dinicola
- Darlene Shanfald
- Steve Williams
- Jesse Witmer

Below are the comments and Ecology's responses. Copies of the original comment documents (letters, emails, etc.) that were received by Ecology during the public comment period are available upon request.

Ecology received the following comments from City of Tacoma Environmental Services:

1. Change from BOD₅ to CBOD

Environmental Services greatly appreciates Ecology considering and moving forward with this requested change.

Ecology Response: *Ecology thanks you for your comment.*

2. Chlorine Effluent Limits, Page 6. Section S1. Discharge limits S1.A. Effluent limits Total Residual Chlorine Effluent Limits

Since the reasonable potential analysis calculations show "No" potential for exceedance of water quality standards, the Table 2 Effluent limits: Outfall 001 Average Monthly limits for Total Residual Chlorine should be restored to the current permit limits of 0.109 mg/L, or the technology based effluent Average Monthly limit of 0.5 mg/L.

Ecology Response: *Per Ecology's Permit Writer Guide, if the number of samples is less than 20, a coefficient of variability (CV) of 0.6 should be*

used to determine permit limits. If the number of samples is 20 or more, the CV should be calculated. The previous permit used a CV of 0.6, which resulted in a chlorine monthly average limit of 0.109 mg/L. Based on actual daily sampling DMR results for effluent chlorine levels over the last ten years, the new permit uses a CV of 0.78 to calculate a chlorine monthly average limit of .091 mg/L. No changes were made to the final permit.

3. PFAS Pretreatment Program Requirements, Page 31. Section S6.E. Identification and control of PFAS Discharges

Tacoma requests that Ecology replace the specific calendar dates in Section S.6E with durations from the issuance date of the final permit as follows:

1. Section S6.E.1. 365 days (1 year).
2. For Section S6.E.2. 730 days (2 years).
3. For Section S6.E.3. 1,095 days (3 years).

Ecology Response: *The deadlines for Sections S6.E.1, S6.E.2, and S6.E.3 will be changed to 1, 2 and 3 years, respectively, after the final permit's issuance date.*

4. PFAS Identification and Control of PFAS Discharges, page 31. Section S6.E.

It is recommended that Ecology provide the initial templates for source controls and best practices for the industrial categories Ecology has identified in the draft permit as known or suspected to discharge PFAs, including organic chemicals, plastics and synthetic fibers (OCPSF); metal finishing; electroplating; electric and electronic components; landfills; pulp, paper, and paperboard; leather tanning and finishing; plastics molding and forming; textile mills; paint formulating, and airports. Ecology should maintain a resource bank of pretreatment program materials and updates available to all permittees managing common PFAs control issues for compliance with Section S6.E.

Ecology Response: *Ecology thanks you for your suggestions and will forward them to the appropriate Ecology staff. For more information on Ecology's current PFAs program, please visit [PFAS - Washington State Department of Ecology](#).*

5. Additional Individual Permit Detailed Comments:

Appendix E Table 1: City of Tacoma Environmental Services Fact Sheet Comments

Section	Page	Description	Comment Received	Ecology Response
II.D.	14	Total Kjeldahl Nitrogen (TKN) in Wastewater Influent and Effluent Characterization Tables 3 and 4.	TKN needs to be changed to Total Nitrogen (or a note could be added) – Environmental Services has an existing letter approving our alternative testing procedure (ATP).	<i>Ecology acknowledges this comment within this Response to Comment document and will update the permit accordingly. Fact Sheets provided for public comment documents are typically not modified after close of the comment period.</i>
III.I.	36	"... if sampling indicates the possibility of problems, a more frequent and/or more comprehensive monitoring schedule would apply."	What is the definition of "problem"?	<i>In this context, a problem would be a reasonable potential to violate water quality standards. In the results of the annual 2020 priority pollutants analysis, nine pesticides were detected with two at levels that did not meet human health-based water quality criteria. The results for the annual 2017-19 and 2021-23 pesticide tests were non-detect. Overall, these results may be anomalous or may be due to previously undetected contaminants. Ecology staff will wait until results become available before any decisions are made.</i>
Appendix C	57	"Soluble BOD ₅ – ... filtering the raw sample	Environmental Services has typically been	<i>The permit does not require analysis for soluble BOD5 or COD5.</i>

		through at least a 1.2 um filter prior to running the standard BOD5 test is sufficient to remove the particulate organic fraction."	using a 1.5 um filter size for soluble BOD5. This should not be different for CBOD5. Please change this requirement to 1.5 um.	<i>No change was made to the fact sheet in response to this comment.</i>
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Appendix E Table 2: City of Tacoma Environmental Services Permit Comments

Section	Page	Description	Comment Received	Ecology Response
S2.A. Monitoring Schedule. Table 6	9	TKN Requirement	TKN needs to be changed to Total Nitrogen (or a note could be added) – Environmental Services has an existing letter approving our ATP.	<i>A footnote will be added recognizing use of an alternative test procedure for Total Nitrogen.</i>
Appendix A Table 2	51	TKN Requirement	TKN needs to be changed to Total Nitrogen (or a note could be added) – Environmental Services has an existing letter approving our ATP.	<i>Appendix A recognizes the use of alternative test procedures. No changes were made to Appendix A.</i>
Cover Page	1	Plant Zip Code	Please correct CTP's zip code to 98421.	<i>The zip code will be corrected.</i>
S2	9	BOD/CBOD sampling before or after disinfection Table 5 (Final	Both instances of BOD/CBOD mention following, at the end of S2.A. there is a footnote	<i>The footnote is current boiler plate language typically used in all NPDES permits issued by Ecology. Ecology</i>

		<p>Wastewater Effluent) text states, "The Permittee may take effluent samples for BOD5 and CBOD5 analysis before or after the disinfection process."</p>	<p>stating that "Take effluent samples for BOD5/CBOD5 analysis after the disinfection process," which appears to be inconsistent with that language. Table 5 also contains the text, "If taken after, the Permittee must dechlorinate and reseed the sample." SM5210B (section 4.b2), listed as a list of approved inorganic test procedures in Appendix A Table 1 (page 49) (and 40CFR136) states that, "If residual chlorine is present, dechlorinate sample. Sometimes chlorine will dissipate from sample within 1 to 2 h of standing in light; this often occurs during transport and handling."</p> <p>Tacoma suggests a change of language to reflect that dichlorination (<i>sic</i>) may not be required if chlorine</p>	<p><i>thanks you for your suggestions and will forward them to the appropriate Ecology staff for consideration. No changes were made to the final permit.</i></p>
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			residual is undetectable prior to BOD analysis, and to change "reseed," to "seed."	
Table 7	10	Sampling Sites	Please add a column for each sampling site Influent/Effluent/ sludge with an x for each parameter by matrix. Please clarify biosolids or sludge? S6.B is for the sludge not biosolids.	<i>Monitoring requirements for sludge are discussed in S6.B. Table 7 contains monitoring requirements for both pretreatment and permit reapplication purposes. EPA's permit application Form 2A defines the terms "biosolids" and "sewage sludge" interchangeably. No changes were made to the final permit.</i>
Table 7	10	Sludge	Sludge has been reported as a solid mg/Kg dry is this okay or are ug/L needed?	<i>Results should be reported in units consistent with test methods and sample matrices. No changes were made to the final permit.</i>
Table 7	10	Dioxin requirements	What is the rational for adding Dioxin? If we must do why is there no sunset clause?	<i>Dioxin is a listed priority pollutant and is required to be tested for annually for dischargers with industrial pretreatment as part of the application process. No changes were made to the final permit.</i>
S2	10	Pesticides and PCB's	Footnote s (page 12) for PP- Pesticides/PCBs mentions only	<i>The requirement for annual monitoring/reporting of</i>

			<p>pesticides. Will PCBs be on a similar monitoring schedule for only the first two years or are those considered separately (they can be extracted from the same sample, but are run separately)? Environmental Services acknowledges that we had three reportable analytes in the chlorinated pesticides list that prompted this additional monitoring. Please consider modifying the subset, that was included on the quarterly schedule, to only include the pesticides that had reportable detections.</p>	<p><i>PCBs will remain the same.</i></p> <p><i>The requirement for quarterly monitoring of pesticides is based on the results of the 2020 priority pollutants analysis; nine pesticides were detected, with two at levels that did not meet human health-based water quality criteria. The permit's quarterly monitoring/reporting requirements for priority pollutant pesticides will remain the same.</i></p> <p><i>Pesticides and PCBs monitoring requirements in Table 7 have been amended to better reflect these requirements.</i></p>
S2	11	Sample Type	<p>Sample Type has changed from 24-hour time versus flow weighted. Was that an error?</p>	<p><i>The sample type description will be amended to 24-hour flow weighted composite.</i></p>
S2	11	BOD and TSS	<p>BOD and TSS Footnotes - added rotational basis for week except for holidays and</p>	<p><i>Rotational sampling requirements for BOD5 and CBOD5 will be removed. This footnote allows the permittee to adjust their rotational</i></p>

			weekends. Need clarification.	<i>sampling schedule to account for non-staffed days, such as holidays or weekends.</i>
S2	11	Footnote J on taking CBOD and BOD samples "after disinfection process".	Footnote J on taking CBOD and BOD samples "after disinfection process". Is this intended to include Contact Time or after dosing?	<i>Contact Time (CT) is a necessary part of the disinfection process, so sampling should occur after CT. No changes were made to the final permit.</i>
S2	12	Footnotes: "Monitoring of pesticides will occur quarterly during the first two years of the permit period. If sampling discloses no problems, monitoring may be reduced to once per year."	What is the definition of a "problem"?	<i>In this context, a problem would be a reasonable potential to violate water quality standards. In the results of the annual 2020 priority pollutants analysis, nine pesticides were detected with two at levels that did not meet human health-based water quality criteria. The results for the annual 2017-19 and 2021-23 pesticide tests were non-detect. Overall, these results may be anomalous or may be due to previously undetected contaminants. Ecology staff will wait until results become available before any decisions are made. No changes were made to the final permit.</i>

S2.E.	13	Frequency	Can there be a reduction in frequency after twelve months of monitoring for analytes that are only tested annually or quarterly after a 12-month period or must it be 12 months where the frequency is 1 month or less?	<i>Ecology will review each request and at its discretion grant the request when it reissues the permit or by a permit modification. No changes were made to the final permit.</i>
Table 11	35	Acute Toxicity Testing has second species.	Is it correct to have a second species?	<i>WET tests are required to have two species, a fish and an invertebrate, as per the Whole Effluent Toxicity Testing Guidance and Test Review Criteria (WQ-R-95-80, 2016) and the Permit Writer's Manual. No changes were made to the final permit.</i>
Appendix A	49	CBOD	CBOD is not listed in Appendix A.	<i>SM 5210-B is the approved test for BOD5 and is also used to test for CBOD5 when a nitrogen inhibitor is added. No changes were made to the final permit.</i>
S.2, Table 4, footnote e	8, 11	Table 4 list Influent CBOD5 minimum sample frequency at 3/week with the foot note "e". - Page 8 "e 3/week means (3) times	Our current lab staffing is not covering weekends, with the nature of a five-day CBOD test this would necessitate	<i>Rotational sampling requirements for BOD5 and CBOD5 will be removed.</i>

		during each calendar week and on a rotational basis throughout the days of the week, except weekends and holidays" - Page 11	adjusting our staffing to create weekend coverage. Environmental Services would like to request removing the requirement of rotational sampling on the CBOD Influent.	
Appendix A, Table 2	50	Table 2 lists a Quantitation Limit requirement for COD of 10 mg/L	Our current lab Quantitation Limit for COD is 15 mg/L. We would like to request that the Quantitation limits be updated to the lab Quantitation limits for these compounds.	<i>If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits). No changes were made to the final permit.</i>
Appendix A, Table 3	52	Table 3 lists Quantitation Limit requirements for Cadmium, Hexavalent Chromium, Chromium, Silver, Thallium, Zinc and Phenols of 0.25(Cd), 1.2(Cr6+), 1(Cr),	Partly based on the CFR 136 MDL studies, our current lab Quantitation limits are 0.5(Cd), 10(Cr6+), 1.5(Cr), 0.5(Ag), 0.5(Tl), 5(Zn) and 100(Phenols) ug/L. We would like to	<i>If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory</i>

		0.2(Ag), 0.36(Tl), 2.5(Zn) and 100(Phenol) ug/L.	request that the Quantitation limits be updated to the lab Quantitation limits for these compounds.	<i>documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits). No changes will be made to Appendix A.</i>
Appendix A, Table 5	53	Table 5 lists Quantitation Limit requirements for Acrylonitrile of 2 ug/L.	Partly based on the CFR 136 MDL studies, our current lab Quantitation limit for Acrylonitrile is 5 ug/L. We would like to request that the Quantitation limits be updated to the lab Quantitation Limit.	<i>If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below criteria (or applicable permit limits). No changes will be made to Appendix A.</i>
Appendix A, Table 8	56, 57	Table 8 lists Quantitation Limit requirements for the following Pesticide compounds at < 50 ng/L; Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, alpha-Endosulfan, bata-	Based on the CFR 136 MDL studies, our current lab Quantitation limit for all these compounds is 50 ng/L. We would like to request that the Quantitation limits be updated to the lab Quantitation Limit for Aldrin, alpha-BHC, beta-BHC, gamma-BHC,	<i>If the Permittee is unable to obtain the required DL and QL in its effluent due to matrix effects, the Permittee must submit a matrix-specific detection level (MDL) and a quantitation level (QL) to Ecology with appropriate laboratory documentation when the detection levels are too high to provide results near or below</i>

		Endosulfan, Endosulfan Sulfate, Endrin and Heptachlor.	delta-BHC, Chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, Dieldrin, alpha-Endosulfan, bata-Endosulfan, Endosulfan Sulfate, Endrin and Heptachlor.	<i>criteria (or applicable permit limits). No changes will be made to Appendix A.</i>
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6. Comments Related to Wastewater NPDES permit and Puget Sound Nutrient General Permit Elements (Pages 10-20)

The following comments and questions on the PSGNP were submitted by Tacoma Environmental Services:

- Ecology reliance on the Puget Sound Nutrient General Permit (PSNGP) is misplaced – the PSNGP is currently Stayed and Partially Invalidated
- Solely Relying on an Individual Permit Would Allow Ecology and Tacoma to Develop a Long-Term Approach Nutrient Loading for the Central Treatment Plant
- Modeling concerns for a Better Scientific Foundation
 - What steps has Ecology taken to update the science, model inputs, etc. as well as the use of the Salish Sea Model?
 - Is Ecology using the updated monitoring data with the Salish Sea Model?
- Concerns about the DO standard:
 - What steps has Ecology taken to update this standard?
- Concerns about Natural Conditions Provision Rulemaking
 - EPA disapproved the DO Natural Conditions Provision. What is Ecology's reasoning to not delay the issuance of the PSNGP considering the Reasonable Potential Analysis and Bounding Scenarios Report relied upon using this Provision?
 - How will the rulemaking process impact the future nutrient removal requirements and next steps?
 - What is the timing of this process to be fully implemented, including approval from the United States Environmental Protection Agency (EPA)?
- Cost Benefit Analysis
- Need for Investigation of other TIN Sources
 - What steps has Ecology taken to further identify opportunities to reduce other TIN sources besides domestic wastewater treatment plants?
 - What is the status of the Puget Sound Nutrient Reduction Plan? Environmental Services has not seen an update since the PSNGP was issued.
- Need for a Targeted Reasonable Potential Analysis

- Ecology does not have sufficient information to conclude total inorganic nitrogen discharges from the Central Treatment Plant are causing or contributing to a violation of the applicable DO standard
- PSNGP Public Comment Response Concerns
 - PSNGP Ecology Summary of Changes: Removing Bubble Permit Option for Tacoma
 - Why did Ecology remove the bubble permit option for Tacoma in the PSNGP?
 - Best Management Practices (BMPs) for Nutrient Removal
 - Please list the resources available for Nutrient Removal BMPs or Guidance for wastewater treatment plants (that were not designed for nutrient removal) when the PSNGP was issued.
 - Ecology Response Regarding All Known and Available Reasonable Technologies (AKART)

Ecology Response: *Ecology thanks you for your comments. Comments on the PSNGP are outside of the scope of this permit and will be forwarded to the appropriate staff. At this time, the PSNGP is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. In the event the PSNGP does not survive the ongoing legal challenges, this permit will be reopened, and nutrient reduction requirements will be included in the individual permit. No changes were made to the final permit.*

Ecology received the following comments from the Puget Soundkeepers:

- 1) The permit must include nutrient effluent limitations
 - a) Permits must include technology- or water quality-based effluent limits, whichever are more stringent.
 - b) Nutrient effluent limits are required to meet AKART.
 - c) Nutrient effluent limits are required to protect water quality.
 - d) This individual Permit must include nutrient effluent limits.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. In the event the PSNGP does not survive the ongoing legal challenges, this permit will be reopened, and nutrient reduction requirements will be included in the individual permit. No changes were made to the final permit.*

- 2) The permit must identify and limit PFAs pollution.

The permit provisions must be strengthened to meaningfully address PFAS pollution. We applaud that the draft permit includes the recognition of PFAS as a concern and requires an industrial user inventory update, and new or updated pretreatment agreements that include requirements for those sources to evaluate

pollution prevention and source reduction measures. However, the current draft permit includes ambiguous and weak provisions that the Plant will “evaluate” and “encourage” other best management practices and pollution prevention strategies for dischargers. The permit must include technology-based or water-quality based effluent limits, sampling specific to each industrial user (IU), pretreatment pollution reduction requirements with implementation deadlines, and an adaptive management approach that sets targets for reductions in PFAS discharge and updates strategies and targets as needed. The permit must be strengthened with the following provisions:

- a) Establish effluent limits in the permit.

Ecology must evaluate AKART for PFAS. That analysis can, in turn, inform the establishment of technology-based effluent limits. Ecology must also determine whether a more stringent, water quality-based effluent limit is necessary.

Ecology Response: *Thank you for your comment. At this time, Ecology is focusing on source control to manage PFAs contributions to municipal wastewater treatment plants. The influent PFAs monitoring is intended to help the city of Tacoma to characterize discharges into their collection system and track down sources of pollutants within the sewershed. As there are no numeric water quality criteria for PFAs, source control coupled with the influent monitoring constitutes AKART for PFAs. Once Ecology completes rulemaking to include numeric aquatic life criteria for PFAs, effluent monitoring will be required to assess compliance with water quality standards. For more information on the steps Ecology is taking to address PFAs in the environment, please visit:*

<https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/addressing-priority-toxic-chemicals/pfas>

No changes were made to the final permit.

- b) Clearly define PFAs in the permit.

We support incorporating Washington’s definition at RCW 70A.350.010 to ensure that attention is paid to the broad range of existing and new compounds within this chemical class.

Ecology Response: *Thank you for your comment. No changes were made to the final permit.*

- c) Expand the categories of users “suspected or known” to discharge PFAS to include aerospace and aircraft modification, industrial laundries, industrial gas manufacturing, and inorganic chemical manufacturing.

Ecology Response: *Thank you for your comment. The permit will be amended to include the aforementioned user categories.*

- d) Require source-specific sampling of influent from IUs and sampling of total plant influent and treated effluent.

The permit should require that IUs conduct initial sampling to determine PFAS discharge quantities and concentrations, and then require quarterly sampling for the IUs found to discharge PFAS. The permit should also require that the permittee determine a sampling schedule that enables it to assess relative contributions from IUs and non-regulated sources of wastewater (such as domestic wastewater), as well as to assess whether PFAS volumes or concentrations increase during treatment at the Plant.

Ecology Response: *Thank you for your comment. Ecology delegated authority to the City of Tacoma for permitting, monitoring, and enforcement over IUs discharging to their treatment system to provide more direct and effective control of pollutants. Requirements of the pretreatment program can be found in in section S6 of the permit, including the requirement to issue pretreatment permits, enabling the permittee to set IU monitoring requirements. No changes were made to the final permit.*

- e) Strengthen requirements for industrial users discharging PFAS.
The permit should specify that the permittee and its IUs must not only evaluate potential source reduction (such as product substitution) and operational changes to reduce PFAS, but that they must also consider treatment technologies to remove PFAS from wastewater before it is sent to the facility.

Ecology Response: *Thank you for your comment. Section S6.E of the permit provides a schedule for the permittee to 1) inventory/identify PFAs generating IUs, 2) begin including PFAs sampling/evaluation in the IUs pretreatment permits, and 3) implement of best management practices/pollution prevention strategies in IUs pretreatment permits. No changes were made to the final permit.*

- f) Specify implementation timelines for sampling and pollution prevention or pollution treatment practices.

Ecology Response: *Thank you for your comment. Section S6.E of the permit provides a schedule for the permittee to 1) inventory/identify PFAs generating IUs, 2) begin including PFAs sampling/evaluation in the IUs pretreatment permits, and 3) implement of best management practices/pollution prevention strategies in IUs pretreatment permits. No changes were made to the final permit.*

- g) Halt the application of sludge/biosolids until sampling and pretreatment measures are in place.

Ecology Response: *Thank you for your comment. Halting the application of biosolids is outside the scope of this permit. Ecology has a program that regulates the treatment, testing and application of biosolids and is separate from the Water Quality Program which oversees NPDES permits. For more information on the biosolids program and permit, please visit: [Biosolids - Washington State Department of Ecology](#)*

No changes were made to the final permit.

- 3) The permit violates Tier I anti-degradation requirements
Ecology fails to regulate nutrients and control PFAs from Tacoma Central and violates Tier I anti-degradation requirements.

Ecology Response: *As discussed in responses to above comments 1) and 2), Ecology believes that the issues of regulating nutrients and controlling PFAs are satisfactorily addressed, and through these actions, Ecology is taking appropriate and definitive steps to improve water quality and meet Tier I requirements. No changes were made to the final permit.*

- 4) The permit must prohibit failed Whole Effluent Toxicity (WET) tests

Ecology Response: *The new permit requires quarterly WET tests for acute toxicity, as did the previous permit. A review of WET test results during the last 5 years shows no violations of acute toxicity limits (i.e. 100% survival rate of the test species) at the acute critical effluent concentration (ACEC) of 4.5% (percent effluent at the boundary of the acute mixing zone). This means that there is no statistically significant difference in test organism survival between the ACEC sample and the control sample (0% effluent). WET testing conducted for effluent characterization required by the NPDES permit application showed that the “no observed effect concentration” (NOEC) and the “lowest observed effect concentration” (LOEC) were greater than the ACEC and the chronic critical effluent concentration (CCEC) of 0.9% (percent effluent at the boundary of the chronic mixing zone). These results show that the Central WWTP is in compliance with ACEC and CCEC requirements, therefore, there is no reasonable potential for effluent discharges to cause receiving water chronic toxicity, and the proposed permit will not include a chronic WET limit. The Central WWTP is required to retest the effluent for chronic toxicity as part of the application for permit renewal. No changes were made to the final permit.*

- 5) 6PPD and 6PPD-Quinone

The Permit authorizes discharges containing 6PPD/Q that present a reasonable potential of violating water quality standards, including the prohibition against

discharging toxics in toxic amounts. Ecology must include monitoring and treatment for 6PPD/Q to meet AKART and water quality standards.

Ecology Response: *6PPD-q and its major source, tire wear particles, are typically found in surface runoff and stormwater. The city of Tacoma maintains two separate collection systems, one for surface runoff/stormwater and one for sanitary sewage. The Tacoma Central Treatment Plant receives flow from only the sanitary sewer and not from the surface runoff/stormwater collection system.*

At present, 6PPD-q is not part of the priority pollutant list included in routine permit application scans and there is no approved 40 CFR Part 136 method for water quality permit application and compliance use. Ecology is aware that EPA recently published a draft analytical method for measure 6PPD-q using liquid chromatography with tandem mass spectroscopy (EPA Method 1634). This method was developed for use in testing samples from stormwater and surface water sources. While EPA states that using this method on other applications and matrices may be possible, the draft method does not at this time discuss the appropriateness for using this method to test sewage samples.

Ecology is also taking steps to regulate toxic pollutants through source control and/or product substitutions. Please visit Ecology's website for more information on work currently underway:

<https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/addressing-priority-toxic-chemicals/6ppd>

No changes were made to the final permit.

Ecology received the follow comments from the Washington Conservation Action (WCA):

- 1) Remove Tacoma from the Puget Sound Nutrient General Permit and reduce nitrogen and related pollution this permit term.
 - a) Ecology must require Tacoma to further reduce nitrogen and carbon loads, establish a nitrogen limit for Tacoma Central, and eliminate Tacoma from general permit coverage now.
 - b) If technology-based limits are not being considered, then Ecology should add 90th percentile values of actual existing nitrogen loads as interim nitrogen limits for the Tacoma Central Wastewater Treatment Plant in this individual permit.
 - c) Ecology could establish a technology-based nitrogen limit of 2 mg/L based on what the LOTT plant and JBLM plant are currently achieving. This is a known and reasonable technology that needs to be incorporated in this individual permit.

- d) At an absolute minimum, Ecology must add a clear statement that should the Puget Sound Nutrient General Permit be weakened or voided, that Ecology will reopen this individual permit.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. In the event the PSNGP does not survive the ongoing legal challenges, this permit will be reopened, and nutrient reduction requirements will be included in the individual permit.*

Wastewater utilities may use any treatment technology or combination of technologies that they can demonstrate provides treatment that constitutes “all known, available, and reasonable methods of treatment” and the discharge will comply with applicable water quality standards. The application of an arbitrary 2 mg/L TIN effluent limit does not meet the definition of AKART as it does not qualify as a “reasonable” method of treatment given the current treatment technologies used at the plant. The PSNGP requires Tacoma to conduct an AKART evaluation to address this issue. Ecology is also working on a water quality solution to the DO impairments within the Salish Sea. Modeling results may show that the WWTP must achieve a higher nutrient reduction efficiency than the defined AKART threshold. The next general permit cycle will contain either the AKART based limit, or the numeric water quality-based effluent limit – whichever is more stringent.

No changes were made to the final permit.

- 2) Tacoma is planning for sewage flow increases and is long overdue for future facility designs to avoid degradation.
- Tacoma is currently developing a long-term plan called Home in Tacoma that will substantially increase the number of people within Tacoma’s service area. Tacoma intends to pursue approval of a basic sewer plan that would lock in flow expansions without concomitant treatment technology upgrades that are long overdue. During the next permit cycle, Ecology needs to require Tacoma to submit plans for increases in flow projected in the coming decades that would also increase nitrogen and carbon loads to Puget Sound with status quo technology.
 - . . . [t]o achieve anti-degradation, if a facility is planning a new or expanded action, Ecology authorizes the action, and the action has the potential to cause measurable degradation to existing water quality at the edge of the mixing zone, dischargers must conduct a Tier II analysis.
 - Given that Ecology has determined that Tacoma and 57 other dischargers together have a reasonable potential to violate water quality standards for

dissolved oxygen and the population has grown substantially in the past 35 years, the antidegradation provisions are not met by this permit.

Ecology Response: *Thank you for your comment. As indicated in your comments, the city of Tacoma is currently in the process of preparing a General Sewer Plan (GSP). All GSPs submitted to Ecology for review and approval must meet requirements that are found in WAC 173-240-050. GSP requirements include, at a minimum, discussions on population trends and flow projections, adequacy of current infrastructure and treatment capabilities, water quality and other regulatory requirements that affect planning (such as the PSNGP, AKART and compliance with water quality standards), analysis of expansion and/or upgrade alternatives to meet future flow requirements, and service and capital costs for any proposed projects during the planning period. Placing requirements in the permit for submittal of a GSP or what must be included in the GSP is not needed.*

At this time, there are no plans to expand the Central WWTP beyond its current design capacity. Therefore, there is no need for a Tier II analysis. Ecology does not consider population growth or increases in flows or loadings that are still within current facility design parameters as a trigger for Tier II analysis.

No changes were made to the final permit.

- 3) Ecology cannot permit discharges of oxygen-demanding substances to Commencement Bay.
- a. Parts of Commencement Bay currently fall below the minimum levels of dissolved oxygen in the state water quality numerical criteria. Therefore, Commencement Bay has zero capacity for discharges of biochemical oxygen demanding substances.
 - b. . . . [a]t the moment there is no ability for Ecology to permit discharges of oxygen-demanding substances to waters that fall below the numerical criteria in the standards, and a compliance schedule is needed.

Ecology Response: *Thank you for your comment. Under WAC 173-201A-612, Table 612, Commencement Bay has multiple classes of use designation. Section III.D of the Fact Sheet provides the water quality criteria associated with these classes of use designation, which includes dissolved oxygen requirements. Based on dissolved oxygen levels in the effluent and ambient waters, calculations of dissolved oxygen levels at the chronic mixing zone showed that, at design flow, the discharge has no reasonable potential to violate water quality standards for dissolved oxygen (see Fact Sheet Appendix D—Technical Calculations).*

Fact sheet Section III.E. lists impairments within the vicinity of the discharge and also has detail covering the existing DO impairments throughout the Salish Sea. At this time, Ecology is focusing on reducing nitrogen as it is the primary nutrient impacting DO levels in the greater Puget Sound area. Please see the fact sheet associated with the PSNGP for more detail about how the municipal WWTP discharges contribute to violations of the state water quality standards.

No changes were made to the final permit.

- 4) Accelerate Progress toward Reducing Toxics
 - a. We concur with adding PFAS monitoring in Permit Section S2 Table 8 and described in Fact Sheet Section V.D.3 Pretreatment.
 - b. . . . [q]uarterly frequency for the influent is insufficient to fully characterize the influent levels of PFAS and entirely misses the effluent. We urge Ecology add effluent monitoring, and also to require weekly influent and effluent monitoring for the first two years of the permit, with a provision to decrease to monthly monitoring if Tacoma can demonstrate statistically that monthly monitoring would sufficiently characterize the variability in concentrations received at the plant.
 - c. Ecology must require biosolids PFAS monitoring as well given the widespread dispersal of biosolids, including in the TaGro consumer product.
 - d. Commencement Bay is on the 303(d) list for copper, lead, ammonium, and more, which underscores the likelihood of non-zero background levels for key toxics. Ecology must re-evaluate this analysis using more appropriate background concentrations that are much greater than zero.

Ecology Response: *Thank you for your comment. At this time, Ecology is focusing on source control to manage PFAs contributions to municipal wastewater treatment plants. The influent PFAs monitoring is intended to help the city of Tacoma to characterize discharges into their collection system and track down sources of pollutants within the sewershed. As there are no numeric water quality criteria for PFAs, source control coupled with the influent monitoring constitutes AKART for PFAs. Once Ecology completes rulemaking to include numeric aquatic life criteria for PFAs, effluent monitoring will be required to assess compliance with water quality standards.*

Ecology has a program that regulates the treatment, testing and application of biosolids and is separate from the Water Quality Program which oversees NPDES permits. For more information on the biosolids program and permit, please visit:

[Biosolids - Washington State Department of Ecology](#)

Review of the Environmental Information Management (EIM) database shows that most of the data collected on toxic contamination in Commencement Bay is for sediment and biotic tissue analyses. Most of the water samples taken did not include toxic contaminants, and were from the 1950s, 1970s, and 1990s; these were ignored. Samples taken along the shoreline were also ignored and not considered representative of ambient conditions due to their proximity to storm drains outfalls. Only one set of results (BRW-COMMENCEBAY), for copper, lead and zinc, was located; six samples were taken and analyzed in 2008-09. 90th percentile results were (dissolved metals):

- *Copper — 1.01 ug/L*
- *Lead — 0.0565 ug/*
- *Zinc — 1.38 ug/*

In one sediment sampling location (UWI-CB-281), 4 water samples were collected from the corer sampler on 4/13/2018. No explanation was given as to why or how the water samples were obtained. The only toxic contaminant reported was ammonium. 90th percentile results were 38.2 ug/L.

The Reasonable Potential (RP) analysis was rerun for copper, lead, zinc and ammonia with the 90th percentile results used for ambient background. Changes in RP results were minor, with no new limits required. Figure 1 provides a comparison of RP results.

No changes were made to the final permit.

Figure 1

Reasonable Potential Calculation - Page 5											
Facility		Tacoma Central WWTP						Aquatic Life		Acute	Chronic
Water Body Type		Marine						Human Health Carcinogenic		22.0	145.0
								Human Health Non-Carcinogenic		186.0	
Pollutant, CAS No. & NPDES Application Ref. No.		COPPER - 744058 6M Hardness dependent	COPPER - 744058 6M Hardness dependent	LEAD - 7439921 7M Dependent on hardness	LEAD - 7439921 7M Dependent on hardness	ZINC - 7440666 13M hardness dependent	ZINC - 7440666 13M hardness dependent	AMMONIA, Criteria as Total NH3	AMMONIA, Criteria as Total NH3		
Effluent Data	# of Samples (n)	23	23	23	23	23	23	483	483		
	Coeff of Variation (Cv)	0.38	0.38	0.29	0.29	0.15	0.15	0.3	0.3	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)	9.51	9.51	0.48	0.48	44.53	44.53	52,290	52,290		
	Calculated 50th percentile Effluent Conc. (when n>10)					33.7	33.7	37900	37900		
Receiving Water Data	90th Percentile Conc., ug/L	0	1.01	0	0.0565	0	1.38	1	38		
	Geo Mean, ug/L					0	0				
Water Quality Criteria	Aquatic Life Criteria, ug/L	Acute 4.8	4.8	210	210	90	90	12,971	12,971		
		Chronic 3.1	3.1	8.1	8.1	81	81	1,948	1,948		
	WQ Criteria for Protection of Human Health, ug/L	-	-	-	-	2900	2900	-	-		
	Metal Criteria	Acute 0.83	0.83	0.951	0.951	0.946	0.946	-	-		
	Translator, decimal	Chronic 0.83	0.83	0.951	0.951	0.946	0.946	-	-		
	Carcinogen?	N	N	N	N	N	N	N	N		
Aquatic Life Reasonable Potential											
Effluent percentile value		0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950		
s $s^2 = \ln(CV^2 + 1)$		0.367	0.367	0.284	0.284	0.149	0.149	0.294	0.294		
Pn $Pn = (1 - \text{confidence level})^{1/n}$		0.878	0.878	0.878	0.878	0.878	0.878	0.994	0.994		
Multiplier		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Max concentration (ug/L) at edge of...		Acute 0.359	1.323	0.021	0.075	1.915	3.232	2,378	2,413		
		Chronic 0.054	1.057	0.003	0.059	0.291	1.661	362	399		
Reasonable Potential? Limit Required?		NO	NO	NO	NO	NO	NO	NO	NO		
Aquatic Life Limit Calculation											
# of Compliance Samples Expected per month											
LTA Coeff Var (CV), decimal											
Permit Limit Coeff Var (CV), decimal											
Waste Load Allocation, ug/L											
Lang Term Averages, ug/L											
Loading LTA, ug/L											
Metal Translator or 1?											
Average Monthly Limit (MML), ug/L											
Maximum Daily Limit (MDL), ug/L											
Human Health Reasonable Potential											
s $s^2 = \ln(CV^2 + 1)$						0.14917	0.14917				
Pn $Pn = (1 - \text{confidence level})^{1/n}$						0.878	0.878				
Multiplier						0.84055	0.84055				
Dilution Factor						186	186				
Max Conc. at edge of Chronic Zone, ug/L						0.18118	0.18118				
Reasonable Potential? Limit Required?						NO	NO				
Human Health Limit Calculation											
# of Compliance Samples Expected per month											
Average Monthly Limit (MML), ug/L											
Maximum Daily Limit (MDL), ug/L											
Comments/Notes:											
References: WAC 173-201A, Technical Support Document for Water Quality-based Toxics Control, US EPA, March 1991, EPA/509/2-90-001, pages 56/93											
Override formatting & show Aq. Life Limit Calc?											
Override formatting & show HH Limit Calc?											

- 5) Eliminate Sanitary Sewer Overflows (SSOs) and Reduce Inflow and Infiltration (I/I)
- a. Ecology must add how much I/I contribute to dry weather flow and non-storm wet weather flow. Special Condition S4.E describes the Inflow and Infiltration Evaluation due in March 2025. However, the only trigger for action is to not increase I/I by 15 percent or more. This is insufficient when a system like Tacoma experiences ongoing SSOs. **Not letting SSOs worsen does not protect public health.** Rather than wait for a future trigger, Ecology must include more substantive requirements around reducing I/I in a special study in this individual permit given the persistent SSOs that occur.
 - b. Ecology should require a much more detailed I/I assessment as a permit provision, including metering of jurisdictions and incentives for I/I abatement plus video of pipe condition to support asset management.

Ecology Response: *Thank you for your comment. I/I is typically associated with storm flows entering the sewer system, either directly via inflow due to illicit connections or manhole covers, or indirectly via infiltration due to saturated soils surrounding old or damaged pipes and manholes walls. Comparing low flows during the dry season versus high flows measured during the wet season and storm events is how I/I is calculated. In addition to the I/I monitoring and annual reporting requirements in section S4.E, Tacoma is also required to provide annual reports on actions taken to improve their sewer system, which is discussed in section S9. Actions taken by Tacoma to meet section S9 permit requirements include:*

- *Rehabilitation and replacement of sewer lines*
- *Development of and asset management program to manage risk*
- *Conducting video inspections and smoke testing to identify damage and illicit connections*
- *Annual cleaning and inspection of major sewer lines entering the Central WWTP*
- *Development of a digital model of the sewer collection system to determine hydraulic capacities and identify bottlenecks*
- *Collecting hydrologic data from rain gauges and metered manholes of sewer system basins and subbasin to identify areas with high I/I*
- *Eliminate illicit connections to the sewer system when encountered*
- *Upgrade pump stations to increase reliability*

Appendix E Table 3: Work Completed on Tacoma Central Wastewater Treatment Plant:

<i>Year</i>	<i>Rehabilitation/ Replacement \$M Spent</i>	<i>Rehabilitation/ Replacement Linear Feet</i>	<i>Video Linear Feet</i>	<i>Illicit Connections Corrected</i>
2023	6.9	9,446	413,000	0
2022	9.2	23,700	286,687	0
2021	9.2	22,530	428,857	0
2020	9.2	20,359	356,557	4
2019	8.7	33,396	376,030	5
2018	7.8	11,126	481,413	6
2017	5.2	11,250	692,047	4
2016	4.2	13,653	850,710	12

Source: Overflow/Bypass Elimination Annual Progress Reports, 2016 - 2023

Based on the amount of work Tacoma annually performs to reduce I/I and SSOs, Ecology believes that it is not necessary to place further requirements in section S9.

No changes were made to the final permit.

- 6) Address Tribal Treaty Rights, Environmental Justice, and Affordability
 - a. [t]he description of receiving waters must include the Tribes with treaty-protected resources in the impacted waterways, and we urge Ecology to consult directly with the Puyallup Tribe as well as others such as Squaxin Island Tribe, Nisqually Tribe, and Suquamish Tribe with Usual and Accustomed Areas that are impacted by the discharge based on Ecology's Salish Sea Modeling and circulation patterns in the Salish Sea. For example, the Fact Sheet could include the following: *"This proposed permit authorizes discharges of treated domestic wastewater to Commencement Bay. Due to Puget Sound circulation patterns, effluent from the Tacoma Central outfall flows throughout South Puget Sound. Collectively, these receiving waters are within the Usual and Accustomed Areas of the Puyallup Tribe, Squaxin Island Tribe, Nisqually Tribe, and Suquamish Tribe. In addition, members of the public recreate within these waters, including for swimming, boating, shellfishing, fishing, and other active and passive uses."*
 - b. Given the passage of the HEAL Act and the goals outlined in Ecology's 2023 – 2025 Strategic Plan, this permit cycle must make environmental justice a direct and actionable component of the requirements under individual sewage permits, and in this permit specifically for the Tacoma Central plant. We recommend that Ecology require Tacoma to conduct an environmental justice assessment of what Black, Indigenous, and other

People of Color currently experience impacts from the Tacoma Central discharge.

- c. Ecology should require a summary of how Tacoma will address affordability, which may include programs that focus on low-income households.

Ecology Response: *Thank you for your comment. Ecology agrees that Tribes with treaty protected resources should be recognized in the fact sheet. Fact sheet shell modifications will be discussed with the Permit Writer's Workgroup (the Water Quality Program's permit policy making body). Changes may be made to the permit shells moving forward. Tribes in the South Sound that with impacts to their treaty protected resources include the Puyallup Tribe, the Squaxin Island Tribe, the Nisqually Tribe and the Suquamish Tribe. During the permit comment period, Ecology individually notified Puyallup Tribe, the Squaxin Island Tribe, the Nisqually Tribe and the Suquamish Tribe inviting them to comment and consultation.*

Ecology agrees that environmental justice (EJ) is a priority for the Agency. At this time, the significant agency actions subject to environmental justice assessments include rulemaking, new grant/loan programs, agency requested legislation and capital projects over \$12 million. Individual permits do not qualify for environmental justice assessments. If the city of Tacoma requests funding more than \$12 million from Ecology to fund a capital project, an EJ assessment of how black, indigenous and other people of color experience impacts from the facility's discharge will also be required.

Further, the PSNGP requires the city of Tacoma to conduct an EJ review to identify communities of color, low-income populations, Tribes and indigenous populations within the sewershed and conduct an affordability assessment to identify impacted populations with EJ considerations. Information collected by the city of Tacoma during this review will help the county determine what populations within the sewershed experience impacts resulting from the Tacoma Central WWTP discharge.

No changes were made to the final permit.

7) Increase Public Transparency and Accountability

- a. The permittee must be responsible for the quality of the data in PARIS. Ecology must stipulate that each permittee is solely responsible for the accurate and complete reporting in databases such as PARIS and any errors in reporting are subject to fines. We recommend that Ecology add a new provision to Special Condition S3.A such as *"The permittee is solely responsible for ensuring that electronically-submitted data are accurate and reflect the actual conditions of the plant. Any errors are the*

responsibility of the permittee and subject to fines for inaccurate reporting.”

Ecology Response: *Thank you for your comment. Each facility covered by an individual permit must provide accurate and representative data as required on the Discharge Monitoring Reports (DMRs). Further, permittees must certify that data is “true, accurate and complete” when submitting data into the online portal. Section G1.4 provides the certification language required for all persons signing a document. In addition, permit managers also review DMRs on monthly basis for accuracy and permit compliance. Permittees already have the responsibility to ensure data submitted is accurate and reflects the operating condition of the plant.*

No changes were made to the final permit.

- b. Special Condition S3.B mentions allowing the permittee to submit hard copy reports. Because these would not be available to the public, this option must be removed from the final permit. Further, all PDFs submitted to Ecology must use text recognition so that the information is searchable.

Ecology Response: *Thank you for your comment. Any hard copies of documents and reports required by the permit and received by Ecology are logged into PARIS and are available for in-house review by the public. Interested parties may use public records requests to review hard copy documents.*

No changes were made to the final permit.

- c. Special Condition S3.F needs far more transparency added to the permit provisions around reporting permit violations. We generally agree with the distinct phases of notification, beginning with “immediately” in Special Condition S3.F. However, Ecology needs to define “immediately”.

Ecology Response: *Thank you for your comment. Immediate reporting means reporting of permit violations without delay of any interval of time from the moment the permittee becomes aware of the violation. Priority should first be given to stopping an active noncompliance.*

Permit managers should also log instances of notifications of noncompliance into the communications section in PARIS which makes these instances publicly available. Otherwise, interested parties may use public records requests to find instances of reported noncompliance.

No changes were made to the final permit.

- d. [w]e disagree with S3.F.6, which allows Ecology to waive the requirement for a written report based on an oral report. Oral reports are not available

to the public and are insufficient to document sewage spills. Ecology should strike this section entirely, and should also ensure that the oral reports are instead written documents and searchable in a public-facing portal.

Ecology Response: *Thank you for your comment. Our standard permit language requiring oral reports aligns with federal regulations under 40 CFR 122.41(l)(6)(iii). When received, oral reports should be entered into the PARIS communication log which places the notification in a publicly facing database. Waving the written report is part of enforcement discretion which is determined by the permit manager and/or the unit supervisor.*

No changes were made to the final permit.

- 8) We generally agree with the statement in the Fact Sheet page 18 that “the permit does not authorize discharge of the non-reported pollutants.” Ammonia is required under this permit and could be construed by the discharger to create a double-permit situation that the dischargers have consistently claimed. Ecology should remove Tacoma from the Puget Sound Nutrient General Permit and include specific limits for nitrogen in this permit that require decreases in nitrogen load.

Ecology Response: *Thank you for your comment. This individual permit addresses ammonia toxicity, only. It does not address the DO impact from ammonia – that falls under the PSNGP.*

No change was made to the fact sheet.

- 9) Fact sheet page 25 notes that “Ecology uses the expected 95th percentile pollutant concentration, the 90th percentile background concentration, the centerline dilution factor, and the lowest flow occurring once in every ten years to perform the reasonable potential analysis.” This is why we previously commented that the Puget Sound Nutrient General Permit use of the 99th percentile load estimates is exorbitantly high and to the benefit of dischargers rather than the protection of Puget Sound. As Ecology considers how to evolve this permit, we urge you to consult the action levels from the Puget Sound Nutrient General Permit but adopt the 90th percentile of actual existing loads in lieu of the general permit action limits.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. This comment appears to be on the PSNGP and will be forwarded to the appropriate staff.*

No change was made to the fact sheet.

- 10) Fact Sheet page 29, Section III.E. lists the water quality impairments but only at the point of discharge. This section neglects to reflect Ecology's analyses that demonstrate the Tacoma Central discharge contributes to violations of the state water quality standards for dissolved oxygen in various inlets of South Puget Sound. This needs a characterization of the farfield impacts of carbon as well as nitrogen as both contribute to the DO violations.

Ecology Response: *Thank you for your comment. Currently, Ecology is focusing on reducing nitrogen as the primary constituent impacting DO levels in the greater Puget Sound area. The Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used to address this concern from the Tacoma Central WWTP discharge.*

No change was made to the fact sheet.

- 11) Fact Sheet page 29, Section III.E. references the Puget Sound Nutrient Reduction Program, which clearly states that the "... cumulative impact of point and nonpoint sources of nutrients, specifically nitrogen, contribute to areas of dissolved oxygen depletion in Puget Sound and the Salish Sea." Permit sections that conflict with this finding must be edited as out of date.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients and address DO depletion in the Tacoma Central WWTP discharge.*

No change was made to the fact sheet.

- 12) Fact Sheet Section III.G.3 Dissolved Oxygen: BOD5 and Ammonia Effects states that "[n]atural decomposition of organic material in wastewater effluent impacts dissolved oxygen in the receiving water at distances far outside of the regulated mixing zone." This needs to be updated to reflect that impacts to dissolved oxygen also occur through increased primary productivity that results from anthropogenic nutrient inputs, including from the Tacoma Central plant.

Ecology Response: *Thank you for your comment. Ecology agrees that anthropogenic nutrient inputs, which include nitrogen and carbon from the municipal wastewater discharges into the greater Puget Sound area, increase primary productivity rates which exacerbate DO depletions. This includes the discharge from the Tacoma Central WWTP which is why this facility is covered by the PSNGP.*

No change was made to the fact sheet.

- 13) Fact Sheet Section III.G.4 pH fails to discuss ocean acidification. However, the Ocean Acidification Blue Ribbon Panel, co-chaired by former Ecology Director Jay Manning, clearly states that human nutrient inputs from wastewater treatment plants lead to deleterious impacts to shellfish by decreasing the aragonite saturation state below that which would occur without human nutrient inputs. The report also recommends reducing nutrient inputs where they are contributing to worsening acidification. Ecology's analyses quantify the decreases in aragonite saturation state in portions of Puget Sound that occur due to the discharge of sewage treatment plant nutrients. This section needs to be expanded to include appropriate context related to pH.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge.*

Addressing ocean acidification is outside the scope of this permit; this comment will be forwarded to the appropriate staff. To see what actions Ecology is taking in response to ocean acidification, please visit:

[*Ocean acidification - Washington State Department of Ecology*](#)

No change was made to the fact sheet.

- 14) We concur with adding Enterococci monitoring in Special Condition S2 Table 5; however, this should be analyzed once per day, coincident with the fecal coliform monitoring frequency as they both indicate pathogenic organisms.

Ecology Response: *Thank you for your comment. Currently Ecology is building a data set showing attainment of the primary contact recreation standard through dual bacteria monitoring during this permit cycle. Enterococci monitoring does not need to occur at the same frequency as the monitoring for fecal coliform as there is no limit for enterococci in this permit cycle.*

No changes were made to the final permit.

- 15) Special Condition S3.A.8.c needs to be updated because Enterococcus does not use a geometric mean for water quality compliance. From the state water quality standards for marine waters Table 210(3)(b) *"Enterococci organism levels within an averaging period must not exceed a geometric mean value of 30 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample values exist) obtained within the averaging period exceeding 110 CFU or MPN per 100 mL."*

Ecology Response: *Thank you for your comment. The cited WAC section clearly states to use the geometric mean value of the collected data.*

No changes were made to the final permit.

- 16) Special Condition S6.A.1.f requires Tacoma to publish all domestic water users not in compliance with pretreatment requirements in the largest daily newspaper. This is no longer sufficient to reach the Tacoma populace. Ecology should add a requirement that Tacoma publish this information on the front page of the Environmental Services Division web page and leave it visible for the duration of the permit term, adding sequentially each of the five years of the permit term.

Ecology Response: *Thank you for your comment. 40 CFR 403 has specific requirements for how enforcements are published and made available to the public. The previously approved Industrial Pretreatment Program developed by the city of Tacoma contains the procedures for publishing SIU non-compliance used by the delegated pretreatment program.*

No changes were made to the final permit.

- 17) We concur with Special Condition S6.A.1.j that Tacoma "... must develop a Memorandum of Understanding (or Inter-local Agreement) that outlines the specific roles, responsibilities, and pretreatment activities of each jurisdiction."

Ecology Response: *Thank you for your comment. Ecology appreciates WCA's support in this area.*

- 18) We concur with including PFAS source identification and/or reduction activities included in the pretreatment report described in Special Condition S6.A.5.

Ecology Response: *Thank you for your comment. Ecology appreciates WCA's support for PFAs requirements in the permit.*

- 19) While Ecology requires reporting on sediment quality under Special Condition S9.B, storing the data in EIM decouples the data from DMRs. Ecology should require Tacoma to summarize sediment data within their DMRs, in addition to adding to EIM. However, Ecology should explicitly include instructions that the PDF must be searchable and available to the public electronically. The sediment reports should also include trend analyses including data from previous permit terms.

Ecology Response: *Thank you for your comment. At this time the facility is required to monitor sediments for characterization as sediment data has not been collected since the 1990s. Our sediment management program*

requirements include uploading sediment data directly to EIM, which is publicly searchable geographic information system. Any submittal related to this permit requirement will be available for review on request. PARIS and DMRs are focused on monitoring discharge parameters specified by the permit and are not an appropriate place to store environmental data for a sediment data report.

No changes were made to the final permit.

20) In the Fact Sheet Section II.B summarizing water quality in the receiving waters, temperature, pH, dissolved oxygen, alkalinity, and salinity are averaged over the entire water column. Dissolved oxygen is missing entirely and should be added. Averaging over the water column is not appropriate for stratified marine waters, especially where the water quality standards specifically preclude averaging that would hide an impairment.

Ecology Response: *Thank you for your comment. The fact sheet is intended to provide a general overview of available ambient water quality data. Dissolved oxygen was listed in this section.*

No change was made to the fact sheet.

Ecology received the following comments from members of the public via email or Smart Comments:

- Cynthia Cannon
- Marz Chabot
- Karen Dinicola
- Darlene Schanfald
- Steve Williams
- Jesse Witmer

Cynthia Cannon

Hello Ms. Mckittrick,

I appreciate this opportunity to comment on the regulations related to this critical treatment plant that serves Tacoma, Fife, Fircrest, Milton, Pierce County and King County.

1. Nutrient Effluent Limitations—I support the inclusion of specific limits for nutrients like nitrogen and phosphorus in the permit. These limits are essential to ensure that the treatment plant complies with both state and federal pollution control laws, as nutrient pollution is a major contributor to water quality problems like low dissolved oxygen levels, in Puget Sound.

2. Inclusion of PFAS Monitoring and Controls—I advocate for stronger measures to monitor and reduce PFAS (per- and polyfluoroalkyl substances) pollution. PFAS are harmful, persistent chemicals commonly discharged by wastewater treatment plants. The permit should require effluent limits, regular monitoring, and targeted pollution prevention measures to effectively manage these toxic substances.
3. Anti-Degradation Requirements—To prevent further deterioration of water quality in already polluted areas like Commencement Bay, the permit must comply with Tier I anti-degradation requirements. I support taking stronger action to reduce pollutants, especially nutrients and PFAS, to meet these regulatory standards.
4. Whole Effluent Toxicity (WET) Testing—I request the inclusion of WET effluent limits in the permit to protect aquatic life. A single failed WET test should be considered a violation of water quality standards, and the permit should be revised to ensure such failures are prohibited.
5. 6PPD-Quinone Pollution—In addition, I call for the monitoring and control of 6PPD-quinone, a toxic substance derived from tire wear particles that poses a significant threat to salmon and other aquatic life. I urge that the permit should include specific measures to address this pollutant, which is not adequately covered.

Again, thank you for this opportunity to comment on these essential regulations.

Cynthia

Cynthia Cannon

Ecology Response: *Thank you for your comments. In response to your comments, please see our responses to Puget Soundkeeper's comments No. 1-5, respectively.*

Marz Chabot

The water deserves to be clean, and we deserve clean water. To protect it, it is imperative that environmental standards are upheld and that important additions to the permit are made. Without monitoring for nutrients like nitrogen and phosphorus, it will be impossible to track compliance with state pollution laws. And nutrient pollution is a major factor in low water quality.

Ecology Response: Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. In the event the PSNGP does not survive the ongoing legal challenges, this permit will be reopened, and nutrient reduction requirements will be included in the individual permit. No changes were made to the final permit.

It's important to make sure that the water quality does not get any worse and that reductions in harmful pollutants like the ones on car tires are made.

Ecology Response: *Thank you for your comment. Please see our response to Puget Soundkeeper's comment No. 5.*

Karen Dinicola

Dear Vince,

At long last, the Department of Ecology's Southwest Regional Office is on the cusp of reissuing the NPDES permit for one of the City of Tacoma's two wastewater treatment plants.

It is difficult for me to express my disappointment that after more than a decade of back and forth between the City of Tacoma and the Department there is just about nothing in the proposed reissued permit for the City's Central Tacoma Plant that will tangibly improve the quality of the water coming out of the discharge pipe into Commencement Bay and Puget Sound. Numerous "advanced" treatment technologies have been developed and proven effective since the CTP's current permit was issued in 2010, and many were known at that time; yet this proposed draft reissued permit does nothing to get the City closer to implementing any of them at the plant.

I have now been a City of Tacoma Environmental Services Commissioner for ~14 or 15 months. I cannot count the number of times that outgoing Environmental Services Director Mike Slevin has told the Commission that "there will not be a major upgrade of the CTP until the 2050s" (when deterioration of the infrastructure will ultimately necessitate its replacement). Most of my fellow Commissioners are of the opinion that it is the Department's duty as the regulatory agency implementing the Clean Water Act to force the City to invest in major improvements before that time; it is not incumbent on the City to take this initiative – and rest assured, the City of Tacoma will not take steps absent clear regulatory drivers. The Commission has been told that the City's current budget proposals focus on increasing funding for staff and capital projects to maintain current assets; there is no funding included for any action related to the utility's comprehensive plan or PSNGP-required planning beyond that already allocated for external contracting. [Please note that I submit this letter not as a Commissioner but as a concerned and (better than average) informed citizen.]

According to the answers given to questions at Ecology's public information session for the CTP permit, the only requirements for the City to plan for (and thus enable the slow and arduous process of engineering design, construction, and operation of) technological improvements to its sewage treatment systems at the plant lie in the Puget Sound Nutrient General Permit which is under appeal and thus subject to additional delays. Ecology's permit writer stated at the information session that if the Department were to lose the PSNGP appeal those requirements would be incorporated in a CTP permit modification – which the City would be able to appeal and further delay.

A substantial CTP upgrade should begin in the next ten years regardless of the eventual permit discharge limit for total nitrogen.

- Suggested change: to address this risk, please direct the permit writer to add a new Special Condition to the draft NPDES permit for the CTP which begins “This Special Condition is effect if and only if for any reason the PSNGP becomes unenforceable” and is followed *verbatim* by the planning requirements and nutrient monitoring requirements of the PSNGP for which the City is currently responsible. The CTP permit and PSNGP must overlap to drive water quality improvements.

Ecology Response: *Thank you for your comment. At this time, the Puget Sound Nutrient General Permit (PSNGP) is the mechanism being used for controlling nutrients in the Tacoma Central WWTP discharge. In the event the PSNGP does not survive the ongoing legal challenges, this permit will be reopened, and nutrient reduction requirements will be included in the individual permit. No changes were made to the final permit.*

- Suggested change: require the City to begin financial planning during this permit term for a substantial plant upgrade to enable construction and operation of advanced treatment in the 2030s at latest.

Ecology Response: *Thank you for your comment. The city of Tacoma is currently in the process of preparing a General Sewer Plan (GSP). All GSPs submitted to Ecology for review and approval must meet requirements that are found in WAC 173-240-050. GSP requirements include, at a minimum, discussions on population trends and flow projections, adequacy of current infrastructure and treatment capabilities, water quality and other regulatory requirements that affect planning (such as the PSNGP), analysis of expansion and/or upgrade alternatives to meet future flow requirements, and service and capital costs for any proposed projects during the planning period. Placing requirements in the permit for submittal of a GSP or what must be included in the GSP is not needed. No changes were made to the final permit.*

I support the common-sense PFAS source control requirements proposed in the draft permit and encourage the Department to add such requirements to all NPDES permits for all POTWs across the State. More coordination is needed across regulatory programs to successfully address PFAS.

- Suggested change: the plant operator should maintain (or have access to) a continually updated database of industrial and commercial dischargers, similar to that required for the MS4 permit and Toxics Source Control activities. The City’s Source Control professionals may leverage those and other requirements to comply and hold users of these and other toxic chemicals accountable for keeping them out of the sewer systems. If additional authority is needed, a

compliance schedule for a new City of Tacoma ordinance should be added to this permit, as well as for the other jurisdictions served by the CTP.

Ecology Response: *Thank you for your comment. Ecology delegated authority to the City of Tacoma for permitting, monitoring, and enforcement over Industrial Users (IUs) discharging to their treatment system to provide more direct and effective control of pollutants. Requirements of the pretreatment program can be found in in section S6 of the permit. No changes were made to the final permit.*

Pesticides are also likely a source control problem and should be addressed as such. Upstream conveyance system monitoring is more likely than discharge monitoring to identify and thus address the source of this problem.

- Suggested change: the pesticide monitoring should be supported by additional targeted source control requirements including upstream conveyance monitoring to identify and remove the sources of DDT and heptachlor epoxide.

Ecology Response: *Thank you for your comment. In the results of the annual 2020 priority pollutants analysis, nine pesticides were detected with two (DDT and heptachlor epoxide) at levels that did not meet human health-based water quality criteria. The results for the annual 2017-19 and 2021-23 pesticide tests were non-detect. Because these results may be anomalous or may be due to previously undetected contaminants, pesticide monitoring requirements were increased from annual to quarterly for the first two years of the permit. Ecology staff will wait until results become available before any decisions are made on additional testing requirements. No changes were made to the final permit.*

Thanks to numerous studies by the Department of Fish, Wildlife and University of Washington, and many others, the Department now has substantial scientific information about other threats to the health of biota in Puget Sound from personal care products and pharmaceuticals which were not well understood in 2010.

- Suggested change: add annual monitoring requirements for a broad range of these chemicals with a wide variety of chemical behaviors to inform future choices among technological improvements to treatment methods at the plant and establish somewhat of a baseline for measuring improvements over (a long period of) time.

Ecology Response: *Thank you for your comment. Ecology is conducting numerous studies on Contaminants of Emerging Concern (CECs), which include personal care products and pharmaceuticals, to develop future policies and procedures to reduce and eliminate these chemicals from our environment. To learn more about what Ecology is doing, please visit:*

<https://ecology.wa.gov/water-shorelines/water-quality/wastewater/contaminants-of-emerging-concern>

At this time, water quality criteria have not been established for many of these chemicals. However, several constituents are already monitored as they are considered priority pollutants by Ecology and the EPA. In addition, Ecology also relies on WET testing which covers many pollutants for which there are no numeric water quality standards. WET testing implements the Clean Water Act's prohibition of the discharge of toxic pollutants in toxic amount. At this time, Ecology is not expanding the list of toxics monitored at the Tacoma Central WWTP. No changes were made to the final permit.

Please accept this communication not only as formal public comment on Draft NPDES permit for City of Tacoma Central Treatment Plant but as input to be taken into consideration in updating other permits issued by the Department's Northwest and Southwest Regional Offices.

I hope you are well and enjoying your summer!

Sincerely,
Karen Dinicola

Darlene Schanfald

I would like to know how the earlier hold on any permits for sewage solids might also affect allowing for an NPDES permit, since effluent is about as contaminated as the solids, post WWTP "treatment".

The Nisqually Delta Association appealed Ecology's 5-year, biosolid permit decision to the PCHB in 2022. (Decision released on Jan. 29, 2024) The PCHB remanded back to Ecology an action consistent with the decision that it focus on the SEPA deficiencies. It requires Ecology to consider impacts caused by PFAS, PBDEs and microplastics,

"The Board remands for Ecology to comply with SEPA by including in its environmental checklist and resulting determination an explicit and full disclosure and review of information on the environmental impacts of PFAs, PBDEs, and microplastics in biosolids that are stored, transported, and land applied under the General Permit. See, e.g., *Conservation NW v. Okanogan Cnty.*, 194 Wn. App. 1034 (2016).⁸

"The Board GRANTS IN PART, Nisqually Delta Association and Ed Kenney's (Appellants) Motion for Partial Summary Judgment on Legal Issue No. 8, and DENIES the State of Washington, Department of Ecology's Motion for Summary Judgment on Legal Issue No. 8. [Earlier in the brief the PCHB said it did not need to rule on the other arguments because of its ruling on Issue No. 8.]

"The Department of Ecology's decision to issue the General Permit is reversed based on noncompliance of the DNS with SEPA requirements. The matter is remanded to Ecology for action consistent with this decision.

SO ORDERED this 29th day of January, 2024."

Ecology Response: *Thank you for your comment. The status of the biosolids permit is outside the scope of this permit. Ecology has a program that regulates the treatment, testing and application of biosolids and is separate from the Water Quality Program which oversees NPDES permits. For more information on the biosolids program and permit, please visit:*

[Biosolids - Washington State Department of Ecology](#)

In addition, we now learn that 6-PPD Quinone is not the only tire problem. The lead weights in some of the tires are also dire problems for waterways:

<https://earthjustice.org/article/lead-wheel-weights-are-the-deadly-car-accessory-we-dont-need-or-want?sourceid=1047022&safelist=y&emci=a82e2cd9-595a-ef11-991a-6045bddbfc4b&emdi=708e13f1-675d-ef11-991a-6045bddbfc4b&ceid=1086123>.

Ecology Response: *Thank you for your comment. Regarding 6-PPD, please see our response to Puget Soundkeeper's comment No. 5. Lead is a priority pollutant monitored under the permit and was analyzed under the reasonable potential analysis.*

WA is supposed to be cleaning up its waterways, yet we seem to keep the pollution pouring in to them. NPDES permits are an avenue for continuing the pollution. Ecology should take a strong position against this continuance.

Ecology Response: *Thank you for your comment. Please see Section I of the Fact Sheet for a discussion on how Ecology uses NPDES permits for the protection of water quality.*

Steve Williams

Good Morning,

I support the comments made by Communities for a Healthy Bay and Puget Soundkeepers.

In addition, I would like to see the Department recognize, in some consistent manner, the probable impact of climate change on permits and other regulatory matters. We may not know the exact time frame or the exact impact, but we know it is not only coming, it's already here.

In Tacoma, as one example, the Plant is probably going to be subject to higher water levels. Permitting should take this into account somehow. There will be other impacts.

Thanks.

Steve Williams

Ecology Response: *Thank you for your comments. Please see our responses to Puget Soundkeeper's comments No. 1-5 in response to your comment.*

To learn more about how Ecology is responding to and planning for future impacts of climate change in Washington state, visit:

[Responding to climate change - Washington State Department of Ecology](#)

Jesse Witmer

Good day,

I am writing to voice my support for the adoption of the recommendations of Communities for a Healthy Bay and the Puget Soundkeeper with respect to the Tacoma central wastewater treatment plant permit.

As a long-term Tacoma resident, environmentalist, and sailor, I want to make sure we do everything within our power to not mortgage the cleanliness of one of our best and most important natural resources simply because its cheaper, easier, or not legally required. We should not be seeking shortcuts or skimping on keeping our Puget Sound clean; not only is it shortsighted for us in the near future, but our children and future generations will never forgive us for taking away their opportunity to have a clean, habitable environment.

Please let me know if you have any questions, or if there is anything else I can do to help with this.

Very Respectfully,

Jesse Witmer

Ecology Response: *Thank you for your comments. Please see our responses to Puget Soundkeeper's comments No. 1-5 in response to your comment.*