



August 16, 2021

Electronic comments: <https://wq.ecology.commentinput.com/?id=QFkVE>

Or mail hard copy to:

Eleanor Ott, PSNGP Permit Writer
Department of Ecology
Water Quality Program
PO Box 47600
Olympia, WA 98504-7600

Subject: Draft Puget Sound Nutrient General Permit Comments

Dear Ms. Ott:

We believe Ecology will agree that the intent of the Nutrient General Permit (NGP) is not to inhibit growth, nor raise utility rates beyond what our customers can reasonably afford. That said, we are concerned that the effluent limits, timelines, lack of consideration for growth and lack of consideration for US Navy operations in the Draft Nutrient General permit as written may have unintended negative consequences for the City. We are also concerned that the comments we submitted in March on the Preliminary Draft Permit were never responded to and appear to not have been considered. With that said, we offer the following comments on the Draft Puget Sound Nutrient General Permit, dated June 2021 (Draft NGP). Some comments may reference the January 2021 Preliminary Draft Puget Sound Nutrient General Permit (Preliminary Draft NGP).

1. The earlier Preliminary Draft NGP included specific language stating that dischargers will be considered in NPDES permit compliance should effluent limits be exceeded as a result of optimization efforts or pilot studies related to nitrogen reduction. These explicit protections have been removed in the current Draft NGP. Absence of such provisions opens dischargers to compliance risk when testing new technologies and/or operating more aggressively to achieve some degree of nitrogen removal in infrastructure not designed for such purposes. Please add the language back into the permit.
2. Condition S3.A prohibits discharges that cause or contribute to violations of water quality standards. Ecology's assertion is that current nitrogen discharges are causing violations of

water quality standards for dissolved oxygen in Puget Sound. Hence under Condition S3.A nitrogen discharges could be interpreted as prohibited discharges. Ecology should exclude nitrogen discharges from that clause, unless nitrogen discharge limits are already included in individual permits.

3. Condition S3.B states that Ecology “presumes” a facility will be in compliance with water quality standards unless monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards when the facility “fully” complies with “all permit conditions, including planning, optimization, sampling, monitoring, reporting, waste management, and recordkeeping conditions.” The City asserts that discharge of nitrogen is not in violation of water quality standards because Ecology has been unable to develop numeric water quality based limits for nitrogen at this time.

4. The earlier Preliminary Draft NGP included a 5% growth allowance between first and second Action Level (AL) tiers. The current Draft NGP removes this de minimis growth allowance. The City reiterates the absence of accommodations for ongoing near-term growth is overly restrictive relative to City and broader regional growth projections. A greater increase in baseline AL is more appropriate for standard planning and implementation time scales, and consistent with forecast growth projections from our Metropolitan Planning Organization. The Puget Sound Regional Council (PSRC) report “Vision 2050” forecasts growth for metropolitan cities within Kitsap County; since Bremerton is the only Metropolitan City in Kitsap County, the forecast growth is for Bremerton. The growth projection by 2036 is 14,000 people, and 27,000 people by 2050. Assuming a linear increase to 2036 and 2.3 people per housing unit, we are forecast to add 450 housing units to our baseline each year going forward. Bremerton is currently exceeding this forecasted increase, with more than 2,500 housing units in production (under construction or with approved or pending permits).

It should be noted that the Vision 2050 forecast was made prior to the COVID-19 pandemic, with the resulting exponential increase in work-from-home trend that is occurring both locally and nationwide in what the press reports as the “Great Relocation.” It is expected that many workers in Seattle who had previously not considered commuting to work from Bremerton (with our affordable housing) feasible, will now move to Bremerton. Further, it does not consider potential trends in de-urbanization following the pandemic. Thus, the original 5% growth allowance corresponded to less than a 2-year horizon for the City, which has now been removed in the current Draft NGP. In terms of the ability to stay within AL thresholds, locations such as Bremerton that may receive migration from the urban Seattle core would be at a disadvantage, whereas urban areas would be advantaged by such migration. Overall, the City is concerned that the absence of growth allowance and macroeconomic factors driving growth will lead to compliance challenges.

Given the circumstances described above, the City proposes that a tiered AL structure with 20% increase over baseline conditions is more appropriate and represents a meaningful rather than arbitrary and de minimis growth allowance. Based on more specific growth forecasts and observed housing starts, we project our proposed 20% growth allowance to be reached in only six years. Our proposed growth allowance is comparable to growth allocations in other nutrient discharge management strategies nationwide. For example, regional nutrient discharge management framework used for San Francisco Bay Area Clean Water Agencies (BACWA) allowed for 15% growth over baseline conditions. The City feels that our proposed growth allowance is more appropriate to allow the concurrent pursuit of adaptive optimization actions and nutrient removal planning activities required under the draft NGP. This growth allowance will also enable appropriate time to characterize changes in nitrogen discharge resulting from initial optimization activities.

5. For treatment facilities such as the City's designed for conventional high-rate activated sludge secondary treatment for BOD and TSS removal only, it is possible that some optimization measures may be able to marginally reduce nitrogen discharges over baseline conditions. However, such optimization measures cannot be reasonably expected to provide full year-round nitrogen removal to meet future water quality-based effluent limits (WQBELs) expected to be in the range of 3 to 10 mg TIN/L as indicated in the draft NGP. Furthermore, the City's discharge to Sinclair Inlet might result in stringent WQBELs. Significant facility upgrades will be required to achieve such limits, and associated costs will be orders of magnitude greater than those for optimization efforts. Preliminary engineering studies estimate the 20-year net present value of upgrades to achieve 3 mg TIN/L is more than \$190 million and would be \$200 million total if sidestream treatment is included as an interim upgrade. Nitrogen removal requirements alone could result in unaffordable sewer rates in the City and ignores all of the other financial demands that must be met for the City's collection system, wet weather CSO control, the pretreatment program, biosolids management, and asset management renewal and replacement costs to sustain existing levels of treatment

Assuming optimization per the draft NGP, construction of upgrades to achieve 3 mg TIN/L in 2031, and rate increase implementation in 2023 to minimize the order of magnitude of annual rate increases, we estimate the need for 10% rate increases beginning in 2023, rather than the currently programmed 3% annual rate increases. Annual 10% rate increases would double wastewater rates by 2029, and by 2031 would represent a 108% increase over current rate projections. Of particular note and concern is that the monthly bill as a percentage of median household income would cross the 2.0% median household income (MHI) affordability threshold in 2029, assuming that MHI increases by 3.0% per year. The 2% MHI affordability threshold was established in 1995 EPA guidance, and represents an EPA-accepted threshold for "large economic impact" on residents. We anticipate that rate increases of this magnitude may be considered unaffordable to large portions of the

community of customers served by the City and considered economically sensitive based on updated draft EPA affordability guidelines published in 2020 that considers the lowest quintile rather than MHI. In absence of external funding, we anticipate that costs of this magnitude will require phased implementation and long compliance schedules to stay within affordability metrics outlined in recent draft EPA guidance and thus be considered reasonable and viable.

6. In the event of an AL exceedance, Condition S4.D.1.a. requires dischargers to determine when the exceedance occurred and number of days of exceedance. The basis for determining potential exceedance is not clear, nor is the accounting of days of exceedance. The permit does not specify how discharges for non-sampling days will be accounted for. For example, if an individual day exceeds the daily average equivalent of the calendar year AL load basis, is that considered a daily exceedance? Or is exceedance based on a cumulative calendar year discharge, with days of exceedance based on remaining days of year after the AL is exceeded (or more accurately, estimated to have been exceeded)? For these reasons, the requirement to track number of days the Permittee discharged above the action level should be removed from the permit language.
7. A 10% reduction in nitrogen discharge load is required in the event of AL exceedance for two consecutive years, or three of five years. The basis of accounting for the 10% reduction is not clear. For example, is this a 10% reduction from the average of the exceedance years, from the maximum exceedance year, or a different basis? Furthermore, for minimal exceedances of ALs, load reductions of less than 10% may be sufficient to reduce discharge loads to below the AL. The City believes a range of targeted discharge load reduction is more appropriate to allow for variability and uncertainty in any implemented load reduction approaches. We propose that discharge load reductions, if triggered by AL exceedance, target a range of 5 to 10% load reduction or that which is required to stay below AL exceedance thresholds if less than 5 to 10% reduction is required to do so.
8. The City is concerned that monies spent for facility modifications to stay within the proposed AL, and/or achieve 10% load reductions in the event of AL exceedance under the draft NGP structure, may result in sunk cost investments that do not support the long-term approach, suboptimal long-term approaches, and poor use of assets when viewed in context of meeting WQBELs, particularly if WQBEL-based compliance schedules follow immediately on the heels of discharge load cap strategies. The City would consider such sunk cost investments unreasonable. We want to be sure that any use of City financial resources to meet nitrogen discharge ALs provide long-term benefits and that the associated improvements not be rendered obsolete if treatment requirements dramatically change over short time scales as a result of Ecology first issuing the General Permit with optimization requirements and then later revealing water quality based effluent limits. For these reasons, the City may elect to

not implement certain higher-tier optimization steps that may result in sunk assets that do not fit with the City's long-term facilities planning framed by anticipated WQBEL adoption.

9. The Draft NGP does not appear to require Ecology review and approval of proposed optimization strategies prior to implementation, which we believe should be included. Absence of such review and approval steps opens dischargers to compliance risk when testing new technologies and/or operating more aggressively to achieve some degree of nitrogen removal in infrastructure not designed for such purposes. Optimization strategies should be reviewed and approved by Ecology prior to implementation to ensure a methodical approach that has Ecology concurrence. The NGP should explicitly require Ecology review and approval of optimization approaches prior to implementation and allow appropriate time for such activities.
10. Considering the Jan 1, 2022 proposed effective date of the draft NGP and 90-day period for application for coverage under the NGP, insufficient time is provided to meet the proposed May 1, 2022 deadline to implement one optimization strategy. The City needs time to evaluate optimization strategies including potential nutrient removal benefits along with process risks, costs associated with optimization strategies, and possibly construct modifications required for optimization strategies. Further, Ecology will require time to approve the selected optimization strategy prior to implementation as noted above. Therefore, we propose that the initial optimization plan be required no earlier than Jan 31, 2023 and implementation of an initial optimization action, to the extent one is available, be required no earlier than July 31, 2023 based on preceding NGP milestones and deadlines cited in this paragraph.
11. A circumstance unique to the City is the presence of US Navy vessels at Naval Base Kitsap-Bremerton (NBK). The number of NBK vessels in port can vary and is outside the City's control. Further, the Navy does not provide vessel schedule projections for security reasons. Uncertainty and variability in vessel portage and associated wastewater generation complicates AL management for the City. As an example, the Navy recently brought the USS Nimitz supercarrier to Bremerton. Ship company for the Nimitz is over 3,500 sailors excluding the air wing. Should the Navy require this full company to support activities, the sailors themselves would increase Bremerton's population by 8% without accounting for associated family members and/or contractors supporting Navy activities related to the Nimitz.

In order to accommodate the potential for sudden and dramatic changes in population driven by US Navy activities, we request that Ecology's NGP or Bremerton's individual permit allow for provisional AL variances or temporary modifications to account for such population changes outside the City's control. We ask that the permit structure open the door for such temporary modifications, with the mechanistic details to be developed in more detail during permit development. An example approach could involve benchmarking and

accounting of Navy base activities and associated transient population changes. The City does not currently track such movements in detail, and the feasibility of such an approach or comparable approach require further development.

12. Condition S4.C.3 requires the Nitrogen Optimization Plan and Report to include “an ongoing program to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources.” Requiring pre-treatment or full satellite treatment for new major residential developments and industries would be common examples of strategies to reduce influent TIN loads per this approach. The cost of any such improvements and resultant impacts on affordability are not understood, and are not considered in our preceding Comment No. 5 related to affordability. We expect that the nature of the City’s service area will render these approaches not applicable or not practical at reasonable costs. Given that Ecology has removed any allowance for growth, the City will need to aggressively implement currently unknown optimization strategies to stay within the AL.

We are concerned that actions the City must necessarily take for compliance with the permit may have unintended consequences that result in environmental degradation, or delays for currently planned projects to improve the environment. As an example, the City currently accepts outside wastes dominated by septage and recreational vehicle cleanout, but also occasionally includes landfill leachate. To encourage environmentally-responsible waste disposal, the City currently accepts RV discharges at no cost, and septage and leachate at minimal cost. A readily-available optimization strategy suggested in Condition S4.C.3 would be changes to septage handling practices whereby the City could no longer accept such wastes, or impose a significant fee for such wastes, which may result in illegal discharges of these waste streams to more environmentally-sensitive locations or dumping and discharge to state waters without treatment.

Another example is that the City may need to eliminate or delay projects currently planned to improve water quality since they would expand our wastewater collection system. For example, if eliminated or delayed, the City’s planned extension of service to unsewered areas (including waterfront properties) would reduce influent nitrogen load growth but come at the cost of delaying these infrastructure improvements which are ultimately protective of water quality.

Finally, we are very concerned that the draft NGP does not include any allowance for growth. As we have stated in this letter, due to the explosive growth currently underway, coupled with the expansion of Naval operations and variability of homeporting, we are concerned that Ecology will demand expedited nutrient reduction capital improvements at an unaffordably high cost to the City’s ratepayers.

Our concern is that the proposed Nutrient General Permit as written sets the City up for immediate exceedances of TIN due to the concerns outlined above. We are additionally

concerned that the comments we submitted in March on the Preliminary Draft Permit were never responded to, and appear to not have been considered. We appreciate the opportunity to comment on the Draft NGP and look forward to Ecology's responses to our comments. If any of our comments are unclear, we would be happy to sit down and review them. Please feel free to contact me at (360) 473-2376 if you have any questions.

Sincerely,

Tom Knuckey, PE
Director of Public Works and Utilities