



## Mukilteo Water & Wastewater District

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March 3, 2021

Eleanor Ott, PSNGP Permit Writer  
Department of Ecology, Water Quality Program  
PO Box 47600  
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Re: Preliminary Draft Puget Sound Nutrient General Permit Comments

Dear Ms. Ott:

The Board of Commissioners of the Mukilteo Water and Wastewater District provide the following comments on the Preliminary Draft Puget Sound Nutrient General Permit (PSNGP). Our district owns and operates the 2.6 million gallons per day (MGD) Big Gulch wastewater plant which currently discharges effluent with a Total Inorganic Nitrogen (TIN) concentration of around 3 mg/l.

Regulations of this significance need to be based on accurate data and modeling:

Ecology staff has refused to address substantial concerns with the science and modeling associated with the Salish Sea Model and continues to overstate the contribution of wastewater plants to nutrient loading in the Sound. Prior to and throughout the Advisory Committee process, numerous questions and inaccuracies were raised relating to the assumptions, boundary conditions and conclusions of the Salish Sea Model. Rather than address these concerns, Ecology Staff indicated they would be basing their nutrient permit on the Model's conclusions.

The PSNGP process is not an isolated case. Ecology's use of inaccurate data (e.g., stating that "About 70% of the nutrient load comes from domestic wastewater treatment plants ... discharging to Puget Sound...") and its rush to regulate nutrients is no different than their recent mislabeling segments of the Columbia River as not meeting dissolved oxygen standards. This inaccurate listing was based on data provided to Ecology by a volunteer monitoring program that took measurements only in shallow areas along the Columbia River shoreline nearly a decade ago. The volunteer monitoring program was not designed to evaluate the river as a whole and did not include the large expanse of deeper, more free-flowing zones. Little other data was available at the time which resulted in this limited, nearshore data being

incorporated into the evaluation. Ultimately it created an inaccurate picture of water quality of the river. Although aware of the limitations, Ecology proceeded with listing segments of the Columbia River as not meeting water quality standards. Only after two years of scientifically defensible data collected and funded by the Discovery Clean Water Alliance did the updated information conclusively establish that the Columbia River complies with Ecology's water quality standards. As appropriately noted by the Discovery Clean Water Alliance, "Relevant, accurate, and up-to-date water quality information is essential to making sound policy decisions and setting appropriate environmental standards". To maximize our chances for cost-effective programs that actually address and resolve marine issues, the expectations and standards for Puget Sound data collection and modeling should be no different.

#### Insignificant impact by smaller Publicly Owned Treatment Works (POTWs):

According to the Preliminary Draft, Ecology intends to treat the smallest POTWs much the same as the largest. This is unlikely to produce cost-effective results, as significant and expensive upgrades to facilities with very small flows will not have a noticeable benefit to Puget Sound. Of the 58 plants proposed to be covered by the General Permit, the 41 smallest plants (in terms of current flows) contribute a total of 5% of the total nutrients coming from the 58 facilities. The 33 smallest plants together contribute less than 1%. Throughout the Nutrient Advisory Committee meetings, recognition (even by the Environmental Caucus) of the insignificant impact small plants has on nutrient loading and a consensus of reducing nutrient related requirements was voiced. However, other than monitoring frequency, the smallest and largest plants are treated essentially the same, with identical optimization and Tier requirements.

An argument has been made that small plants can have a noticeable impact in certain embayments due to local conditions. However, throughout this process Ecology has generally ignored locational issues, arguing that all plants regardless of size or site meet the new standards. We believe that in this case "one rule fits all" is inappropriate, and that restrictions on small POTWs should only be imposed when warranted by local conditions.

Ecology also noted in the Preliminary Draft that water-quality based effluent limits (WQBELs) will be released during the initial general permit term, and that the WQBELs are likely to affect how facilities are regulated and to what standards they will be held. Given this timeline and the minimal impact smaller plants contribute to the total nutrient loading, it makes more sense to only require Tier 1 optimization efforts and delay more extensive improvements until WQBEL's area established.

Ecology further states: "...nutrient loads cannot continue to increase in an uncontrolled manner while facilities work toward eventual reduction." Given that population growth at these smaller plants is typically minor, that nutrient concentration levels are characteristically stable, and the insignificant percent of current nutrient loading, it is an overstatement to classify these plants as contributing to an increase in nutrient loading "in an uncontrolled manner." As previously mentioned, it makes more sense to require Tier 1 optimization efforts and delay more extensive Tier 2 and Tier 3 requirements until WQBELs are established – if then.

Why regulate POTWs that are currently achieving nutrient discharge concentrations of less than 10 mg/l:

Ecology has identified 14 POTWs that are currently achieving nutrient discharge of less than 10 mg/l. Most of these plants are achieving a discharge concentration level of less than 6 mg/l. Ecology's Preliminary Draft Report states, "...facilities currently discharging 10 mg/l or less do not need to complete actions beyond monitoring and annual optimization reporting during this permit cycle". Other than not being required to perform planning requirements described in Section VI of the Preliminary Draft Permit, there appears little benefit to these well-run, low nutrient discharging plants. With WQBELs scheduled to be established within the first permit cycle, it is difficult to understand or justify why these plants need to be regulated under the General Permit. Monitoring protocols for "compliant" plants should be based on the specific goals, and a requirement to spend time and resources evaluating optimization opportunities is wasteful.

Specific to Mukilteo Water and Wastewater's Big Gulch Wastewater Treatment Facility, we are currently discharging around 3 mg/l of TIN. There is no logical explanation as to why we need the frequency of monitoring or to spend the time and resources considering optimization options, or for our Ecology Permit Manager to review and approve this report. This is a waste of time and resources for both the District and Ecology, just as it is for the other 13 plants that are also discharging low concentration levels of nutrients (less than 10 mg/l of TIN). For these plants, overall regulations and requirements should await issuance of the WQBELs.

The Preliminary Draft includes a set of questions to which Ecology was seeking responses. We are providing our input in Attachment A to this letter.

Sincerely,



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Commissioner Jeff Clarke



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Commissioner Tom McGrath



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Commissioner Mike Johnson

## Attachment A

These are the Mukilteo Water and Wastewater District's responses to the set of questions raised by Ecology staff in their Preliminary Draft General Permit, with a general comment relating to exceedance of Action Level parameters. It appears that once a Plant exceeds an Action Level it is placed in a higher Tier with higher requirements. An exceedance that may have been caused by a one-time natural event or a one-time event at the Plant should not be an automatic trigger to moving to a higher Tier. Requirements to move from one Tier to another should occur after two consecutive exceedance occurs, subject to noted concerns that actions other than Tier 1 have minimal if any benefits.

### Calculation Methods

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

Getting us to focus on 95% v. 99% diverts attention from the main issues: are caps realistic? And is "bootstrapping" appropriate given the paucity of data? Also, throughout the process DOE has done a poor job of explaining the differences between 95% and 99%. The 99% gives operators slightly more room for accommodating unusual conditions. Is that true? Is it significant?

*Do reviewers agree with this approach proposed for plants that have existing nitrogen related effluent limits in their individual permits? P. 10*

Does this mean that POTWs getting individual permits after the GP is issued will be treated differently from those who came before? That would not feel right. A "General Permit" is supposed to set generally applicable requirements.

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

No, AL1 should be based on 100% of the Plant's rated capacity. Ecology is inappropriately establishing nutrient limits prior to issuance of WQBELs, which we are told will be established within the first permit period.

Also, there was considerable discussion at the Advisory Committee that POTWs with capacities of 3 MGD or less, which include 11 of the 14 Plants below the 10 mg/l concentration level, contribute little to the nutrient load and are in some cases already in the performance range Ecology seeks. Ecology however continues to press for them to be treated the same in terms of needing to install new treatment systems if the standards are not met.

### Optimization

*Do reviewers have suggestions on what information permittees use to justify their decision-*

*making process when conducting financial and technical analyses to select (or eliminate) optimization strategies? P. 19*

In general, Tier 1 optimization efforts makes sense as they focus on operational strategies with very little, if any, equipment procurement. For small Plants and Plants discharging concentration levels of less than 10mg/l, any efforts beyond Tier 1 is a waste of time and resources given WQBELs will be established within the first permit cycle. No actual benefit to Puget Sound will be realized by requiring small Plants and Plants discharging concentration levels of less than 10 mg/l to perform Tier 2 and/or Tier 3 optimization efforts.

*Do reviewers have suggestions for “reasonable investments” at small (<3 MGD), medium (3-10 MGD) and large (>10 MGD) that could be used to separate the two tiers of optimization actions required by this permit? P. 19*

Specific to small Plants and as mentioned above, any efforts beyond Tier 1 are a waste of time and resources given WQBEL’s will be established within the first permit cycle. No actual benefit to Puget Sound will be realized by requiring small Plants to perform Tier 2 and/or Tier 3 optimization efforts. As noted in the cover document, given that population growth served by smaller plants is typically minor, nutrient concentration levels are characteristically stable, and the insignificant contribution of current nutrient loading from small Plants, it is a gross overstatement by Ecology to classify these plants as contributing significantly to the increase of nutrient loading.

*Are there any additional Tier 1 optimization actions that should be included in this document? P. 20*

No comment, however, Ecology should realize and acknowledge that utilizing existing tankage reduces a Plant’s rated capacity, in effect possibly triggering permit requirements associated with exceeding 85% of Plant influent capacity.

*Are there any additional Tier 2 optimization actions that should be included in this document? P.21*

No comment.

*Are the tiers broken out appropriately? P. 21*

Is it realistic and appropriate to require Plants to invest in short term improvements that are not part of a long-term solution? Given WQBELs will be established within the first permit cycle, Ecology should be focusing on the big picture and not potentially requiring Plants to waste ratepayer funds on short-term solutions. Ecology exaggerates the “uncontrolled increase in nutrient loading” when in reality flow and nutrient concentration levels generally increase slowly.

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

The draft states: "...indicates that more significant near-term steps need to be taken to reduce nitrogen in the plant effluent during the first permit term." Tier 3 actions are likely to require Plants to waste ratepayer funds on short-term solutions. This implies that exceeding the AL1 number during the initial six-year permit period would necessitate steps that actually "reduce nitrogen". Most likely, WQBELs will be established before a plant could design, permit, and set rates for short term improvements that may not be a part of a long-term solution.

Tier 3 actions should depend on extraordinary circumstances on a Plant-by-Plant basis.

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

No comment.

#### Planning

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

No comment.

*Aside from treatment solutions, do reviewers have feedback on types of questions a regional study could answer? How could a regional study like this be used to develop and/or support a nutrient trading framework? P. 27*

- What is the effect of surface water runoff on the Dissolved Oxygen (DO) problem in the Sound?
- What is the effect of agricultural practices on the DO problem?
- What measures could be taken to reduce surface water and agricultural impacts?
- What alternatives might be feasible for treatment of septage waste?
- What is the most cost-effective approach to solving the DO problem?
- How could a trading program produce more cost-effective solutions?
- What technologies and methods are most effective and cost-effective for various sizes and situations?
- Should significant investments be made in very small (less than 3 MGD or less than 1 MGD) treatment plants to reduce their nutrient levels? Is that investment better spent elsewhere?

- Is a regional approach to funding solutions fairer and more effective than doing a facility-centric approach?
- How will global warming affect the DO problem? Will it negate any efforts made by plants?
- What impact will the opening of the Victoria tertiary treatment plant have on nutrient levels in the Salish Sea? How does that change affect the need for improvements to GP-covered facilities?
- An explanation of how the large treatment plants in Central Sound affect/impact Port Susan Bay and Budd Inlet, as well as the other affected inlets.

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

We do not understand the question. Are you asking about content? Direction? Who carries out the study? The Draft text appears to be saying that the sole purpose of a Regional Study is to evaluate different methods for solving a problem that Ecology believes exists. In fact, there are serious questions to be addressed as to the nature, source, and solution to that problem, all of which should be addressed in a Regional Study. Ecology wants us to think those questions have been answered, but they refuse to discuss the science behind their conclusions.

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

A regional study should be regional: it should cover all areas and all facilities.

*Do reviewers have feedback on the proposed timeframes for this evaluation? P. 28*

No comment.

*Is there interest in folding this type of treatment technology information sharing into an existing stakeholder process? P. 28*

No comment.

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

No comment.

