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Brian Walker, Plant Manager

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Jeremy Reiman
Department of Ecology, Water Quality Program
P.O. Box 47600
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Mr. Reiman,

The City of Anacortes (the City) operates a 4.5MGD Conventional Activated Sludge Treatment Plant. Since the issuance of the originally issued Puget Sound Nutrient General Permit in 2022 the City has worked towards and has been very successful at optimizing its conventional system for Biological Nutrient Removal (BNR). The >50% reduction in TIN however, has come at a significant cost. Optimization for BNR greatly diminishes the plant's treatment capacity and significantly increases energy demands. The City's facility has two each of primary clarifiers, aeration basins, and secondary clarifiers. When optimized, the plant requires both aeration basins to be online to produce the appropriate MCRT and HRT for stable BNR without degradation of effluent quality through solids loss from the secondary clarifiers. This capacity issue leads the City to have great concern with the interim limit strategy outlined in Appendix H of the PSNRP. This section states:

"Performance-based limits are typically established based on the 95th percentile of current concentrations or loads. Ecology plans to use this method for interim limits in permits when a compliance schedule is incorporated as discussed above."

The City does not agree with this strategy as our most current concentration or loads are based on performance achieved only while diminishing the designed redundancy of our infrastructure. Our current BNR performance represents the best that this plant can achieve without a major facility upgrade. Imposing 95th percentile performance based on the most recent data may not be long-term achievable. More importantly, such limits would effectively punish the City for having invested resources and engaged in earnest in the optimization effort. Sending the message that, in retrospect, doing nothing would have been the better option, Ecology will negatively affect the collective buy-in of the PSNRP.

The City recommends staying consistent with the action levels within the Puget Sound Nutrient General Permit (PSNGP) as the City continues to explore ongoing optimization options that do not diminish plant capacity.

The City is also concerned with the use of most current concentrations based on

performance due to a lack of effluent total nitrogen data. The 2022 PSNGP required the City as a “moderate” loader to collect effluent total inorganic nitrogen (TIN) data twice per week. This data is lacking the total Kjeldahl portion of total nitrogen to provide a more robust and accurate dataset.

The City is also concerned/confused that the 2025 Draft PSNGP still points to TIN action levels which is inconsistent with the shift towards total nitrogen referenced by the PSNRP. Looking forward, towards the permit-required testing for nitrogen totals in either individual permits or the next iteration of the PSNGP, the shift towards TN presents practical issues with data reliability. Most moderate and small WWTPs are not accredited for TN analyses (either digestion or proprietary) and there are well documented problems with the availability and reliability of those data being provided by outside laboratories. Continuing with TIN reporting or making statistical conversions to TN values may be better alternatives.

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