

# City of Lynnwood

Please see attached letter dated March 15, 2021.

March 15, 2021

Department of Ecology  
Northwest Regional Office  
3190 160th Avenue SE  
Bellevue, WA 98008-5452

RE: Lynnwood Wastewater Treatment Plant  
NPDES Permit No. WA-0024031  
Comments to Draft General Permit Nutrient Removal

The City of Lynnwood contracted with RH2 Engineering, inc. to review the Draft Permit on behalf of the City. The following are the comments presented.

The Preliminary Draft Puget Sound Nutrient General Permit proposes to assign the City of Lynnwood Action Levels for Total Inorganic Nitrogen (TIN). The first action level, AL0, was calculated as 340,000 lb TIN/year. The second action level, AL1, was calculated as 357,000 lb TIN/year. The City of Lynnwood has collected monthly 24-hr composite samples of the effluent for TIN species on a monthly basis from 2014 to early 2019. In 2019, the NPDES permit changed the sampling frequency to quarterly. The City calculated their annual TIN discharge (lbs TIN/year) based on this historical data. In 2017, the annual load based on the monthly samples is calculated to be 358,054 lbs TIN/yr. Therefore, in 2017, the City would have been in violation of AL0 and AL1. In 2018, the annual TIN discharge was calculated to be 348,219 lbs TIN/yr. Therefore in 2018, the City would have been in violation of AL0.

The stated objective of the Action Levels is to cap TIN discharges at current levels and require the City to maintain or optimize their WWTF to achieve effluent TIN loads consistently below these thresholds for this first permit cycle. However, the current methodology used by Ecology already places the City in violation. The data used in the calculation, and the calculation methodology needs to be re-examined such that these historical years are under the Action Levels.

In reviewing the data provided by Ecology in use of the calculation, it was noted that Ecology is attempting to convert the quarterly samples in latter years to monthly data to input in the model. For the City of Lynnwood's WWTF, the concentration of the effluent nitrogen constituents are directly linked to the overall plant flow and what is happening in

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the collection system. The WWTF does not have nutrient laden side streams from a solids handling process, therefore there is no variability in the effluent associated with side streams. The City's WWTF also does not nitrify or denitrify and is not designed for nutrient removal. Therefore, the effluent concentration is not a function of operations in the plant. It is primarily a function of the collection system. During dry weather periods, with flows less than or equal to 4 MGD, the plant effluent TIN concentration is 29 mg/l on average. During wet weather periods, flows between 4 and 6 MGD, the plant effluent concentration is 23 mg/l on average. During higher wet weather periods where daily flow exceeds 6 MGD, the average effluent concentration is 15 mg/l. In the data set provided by Ecology, in one instance an effluent TIN concentration of 13.6 mg/l was measured from a 24 hour composite sample collected on a day of flows over 6 MGD. Ecology then used this concentration to fill in monthly gaps with a flow as low as 4 MGD in one instance. The resultant load is extremely low and not representative of the plant. The concentrations measured in the effluent from the 24 hour composites are only valid for the day the sample was collected. The load is representative, and maybe could be used on other days, but the concentration is solely a function of the flow in the plant that day. That is one example of data being incorrectly used in this calculation.

The City of Lynnwood is requesting that Ecology re-evaluate their data and calculations such that the City receives Action Levels that appropriately use the representative data collected and do not place the City in immediate violation. If you have any questions or require further information, please call me at 425-670-5250 or email [jewell@lynnwoodwa.gov](mailto:jewell@lynnwoodwa.gov).

Sincerely,

CITY OF LYNNWOOD

John C. Ewell III, P.E.  
Treatment Plant Supervisor  
Public Works Department

Cc: William Franz, City of Lynnwood  
Jared Bond, City of Lynnwood  
Dan Mahlum, RH2 Engineering, Inc.