

DRAFT RECOMMENDATIONS DOCUMENT

Background information

To be added: will include committee purpose and list of AC members (or this can go in a cover letter)

This committee makes these recommendations for the purpose of achieving an actual, not perceived, water quality improvement. This committee has explored where the flexibilities are for the first permit term. Our final recommendation is a justifiable and defensible solution that utilizes the widely variable and in many cases very limited available data. The following combination of approaches will achieve Ecology's goal to prevent nutrient-related water quality problems in Puget Sound from continuing to worsen during the first permit term, while also allowing contracted plant capacity to be utilized to support smart growth and comply with Growth Management Act requirements.

How to calculate and implement a cap to keep the problem from getting worse

This first PSNGP must set achievable limits or targets.

Comment from PK: This is Ecology's stated goal and doesn't necessarily reflect an emerging area of group agreement.

The establishment of requirements in the PSNGP must be based on analysis of the data for each facility. Plants operate differently and impact water quality differently. Because one size is not going to fit all there is not one single solution to develop effluent limits.

Comment from PK: There needs to be a structure put in place to distribute the cap equitably at this stage. Given that many WWTPs are in different phases of the process (planning, design, construction, operations), capping could send plants backwards or impose burdensome rates depending on how it is done. Existing processes could be used to help individual plants determine what their cap should be.

Comment from PK: There are a number of variables that can impact sampling validity including sampling procedures, sampling intervals, load variations (internal process and external system influences) and flow. Ecology will need to develop a standardized approach to data collection to ensure these factors don't skew the permit parameters that will be imposed on the facility.

Comment from PK: Some facilities calculate their daily flow using a running totalizer or pump run times. This will result in variations in the time between readings from one day to the next (e.g. 22 hours one day and 26 hours the next). If the plant has an Infiltration/Inflow issue, this could ultimately skew the data significantly during an event. Again, Ecology will need to develop a standardized monitoring and sampling program to ensure accurate data collection before imposing any caps.

Comment from PK: Even small variations can have major impacts at smaller treatment plants. Many of these facilities are heavily impacted by seasonal variations, equipment functionality, and competing priorities.

Comment from PK: Ecology might think the "main challenge for the cap calculation" is the wide variety of data, but plant operators might think the challenge is setting a cap without cutting off growth. And Environmental groups might think something else.

The committee recommends that the cap be **seasonal/annual**. Far field inputs annually and local inputs seasonally? What science confirms where and which limits need to be met year round? Does PSNF have this answer? How will Ecology address concerns with the modeling year?

PUGET SOUND NUTRIENT GENERAL PERMIT ADVISORY COMMITTEE

The committee recommends that the same caps **should/should not** be established for all WWTPs and that the caps be applied **in zones or individually**.

The committee recommends that these alternates to a cap can/should be considered:

- targets versus limits
- a combination of targets and incentives
- load reductions instead of a cap

The committee agrees that a representative load is most accurately determined using the flow for the day of the sample collection.

Comment from WS and MR: Agree that this is scientifically valid approach

Calculate the average so that seasonal variations don't show up as a trend.

Comment from MR: I think the point here is that the method should be robust enough that the seasonal variation should not show up as a trend in loads.

Comment from WS: My initial thought is that an average load would need to encompass the wide variety of seasonal loads; you can do more in the summer and might not be able to do anything in the winter. Having talked to key plant staff, they advise having different limits for different seasons.

The committee recommends using a non-parametric 95% confidence interval) where if a plant's average load doesn't increase it will still be in compliance. Focus on a plant's overall pattern, not a single day, for assessing compliance.

Other possibilities: How might the cap approach utilize influent loading versus effluent loading? Can this committee propose a percent removal approach similar to the 85% removal requirement for TSS/BOD in current permits?

Comment from WS: Curious if this would be adequate for a first permit round, while data is being gathered and water quality limits being determined by model? It could be argued that it is not adequate because it could allow increase in nutrient loading. Could an approach like this be used in combination with a somewhat lenient cap for the first round? This only makes sense if a second permit is timely, and the first permit does not become administratively extended ad infinitum.

How to assess compliance with the cap

Plants that accommodate growth without increasing concentrations should not be penalized. That will be measured **how**

Comment from PK: Ecology needs to address whether a failure to meet compliance will result in an exceedance or a violation, what data sets will be used (e.g. seasonal or year-round), and how they will address moratoriums. These are important discussions to have prior to exploring any capping options.

Compliance should be assessed **how**. Adaptive management will be used **how**. These penalties and enforcement strategies will keep plants accountable: **examples**

How to require optimization of plant operations to help achieve the cap and reduce nutrients

Optimization should be a primary focus of the PSNGP. Each plant should use existing resources to address nutrients to the extent possible. The PSNGP should allow plants to use their own ingenuity to meet nutrient reduction goals.

Comment from PK: "Each plant should use existing resources to address nutrients to the extent possible" is Ecology's stated goal and doesn't necessarily reflect an emerging area of group agreement.

Many plants have already reduced concentrations by a combination of improved technology, design efficiencies, and utilization of reclaimed water systems. The PSNGP needs to identify what all plants are currently capable of and fully incentivize these types of optimization, but not penalize plants who have already gone above and beyond to reduce their nutrient loadings and/or are geographically situated to have minimal impacts.

Comments from PK: Agreed. Am I correct in assuming this is part of the "planning" commitment made by Ecology to NWEA. I have also heard some operators express that they don't believe their plants can "optimize". It will be interesting to see if the Salish Sea Model, i.e. the model runs that will be released this year – and/or future runs – indicate that some plants do not have far-field impacts. What will be Ecology's approach to address this if this occurs?

Comment from WS: It seems that plants have far-field impacts, regardless, and that those should be addressed.

Limitations posed by current treatment technologies at each facility and as well as commitments to accommodate growth should be addressed **how**.

Optimization provides the most realistic means of improving water quality over the current conditions during this permit period and should be the means for many plants to comply with a cap. Some members expressed that optimization should be primary and caps secondary. The question is not either/or cap versus optimization, but how to make them complementary. The PSNGP also needs to connect optimization with short- and long-term planning appropriate for each plant.

How to conduct monitoring to provide consistent data needed for future permit decisions

The AC understands that the PSNGP will have new monitoring requirements overlaid on individual permit requirements to address the wide variety of and variability in the available data, and the paucity of data in PARIS for many plants.

Comment from MR: Note that the 2006-07 wastewater treatment plant effluent monitoring data are in EIM and not in PARIS because those data were not required for compliance. And a reminder that while this conversation did focus on the needs of small plants, based on the 2006-07 data, the small plants have both small flows and lower concentrations than the bigger plants. Let's clarify at the next meeting, but I thought the larger plants have had to do quarterly nutrient monitoring per the Permit Writers Manual going back to the late 2000s? I vaguely recall this change but am not sure how it was implemented. In addition, plants have once-in-5-years data that I understand are also not stored in PARIS because they are scans that permit writers look at.

Comment from WS: Ecology should look into funding some of this data collection, especially for small plants.

The PSNGP should require plants to gather consistent data that all plants can reasonably incorporate into their operations and improves calculations for the next PSNGP. These data are needed: **constituents. Number of samples over what period of time** will be sufficient for most plants/approaches.

PUGET SOUND NUTRIENT GENERAL PERMIT ADVISORY COMMITTEE

The PSNGP should include a QA/QC plan for monitoring during the first permit term, or even earlier, for widespread, long term, consistent data collection.

Comment from PK: This General Permit for Nutrient Reduction is unlike any other permitting process. Typically, a process would start with monitoring, go to planning, and begin implementation. This evolution would be incorporated in the individual NPDES permit requirements and take place over a few permit cycles. This has not occurred during this nutrient reduction process.

Comment from PK: Agree with Wendy Steffensen's notes on this – perhaps Ecology should look at ways to assist with funding additional testing – especially for smaller plants.

Smaller plant operators agree that better data are needed but they are also concerned about capacity for greatly expanded monitoring requirements.

How to approach short- and long-term planning requirements for facilities

Keep plants accountable for both making improvements during the first permit term and taking steps toward making necessary improvements in future permit terms

Manage septage intakes [how](#)

Weave in timing/plans to address CSO events [how](#)

Outstanding questions or concerns to address in parallel with PSNGP issuance

Get more science to address near versus far field contributions and seasonality

Apply emerging science during the first PSNGP term

Match new PSNGP monitoring with individual permit requirements

Improve Ecology's schedule and priorities for updating permits that are overdue for reissuance

Comment from PK: Ecology has many zombie NPDES permits (approximately 30). This needs to be addressed prior to moving forward with implementation of a General Permit. By issuing these permits now, Ecology can put monitoring and planning requirements in the permit and focus on optimization efforts.