

Draft Agenda for AC Meeting #2

Wednesday, May 13, 2020 from 9:30 a.m. to 12:00 p.m.

Digital Platform TBD

ROLE OF ADVISORY COMMITTEE:

To advise Ecology's permit writer as to which **conceptual approaches** are preferred for reducing nutrient loads from WWTPs discharging directly to Puget Sound through a general permit, and the reasons why.

- This committee will not be drafting permit language; that is the job of the permit writer.
- Ecology envisions a continuing role for this committee in providing a venue and voice for input during the active permit term.

THE MEETING'S GOALS:

1. Continue to get to know each other, settle into our process, and make progress towards our shared goals as a committee
2. Begin to discuss the cap requirement and gather feedback and ideas about various approaches to its calculation
3. Begin to formulate draft recommendations for further discussion
4. Discuss our future meeting schedule and agree on next steps

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9:20 Log onto meeting platform and troubleshoot any technical issues

9:30 Welcome and introductions; review the meeting's agenda, goals (chair)

- Each member will introduce themselves and share what they think might be the biggest challenge this committee faces in developing recommendations for a PSNGP that will make meaningful progress towards reducing nutrient loadings.
- We have a compressed timeline for delivering our recommendations to Ecology for writing new general permit conditions regarding (1) a cap, (2) optimization, (3) short- and long-term planning, and (4) monitoring. All of these topics are related, but we are going to introduce and continue to add them one at a time before looking at all of them together.
- Our goal today is to begin having robust discussions among AC members about approach for the cap calculation and begin to identify areas where we can come to agreement.
- Do members have any questions or concerns about today's agenda?

9:45 Discuss concerns about Purpose and Goals of the Advisory Committee (facilitator)

- In the AC Roles and Responsibilities document, this is the stated Purpose and goals of the committee: To advise Ecology in drafting general permit requirements for domestic wastewater treatment plants discharging directly to Puget Sound that will lead towards reducing nutrient loads. Ecology has convened the committee to:
 - Short-Term (2020) Goal: Deliver permit requirement recommendations that ensure progress towards nutrient reduction during the first permit term
 - Mid-Term (2021-2025) Goal: Consider how progress toward reducing other (i.e., "watershed") sources of nutrients will be tracked and considered in reissuance for the second general permit term (2026-2031)

- Long-Term (2026-on) Goal: Set dischargers and Ecology on a path towards success in eventual achievement of nutrient reduction targets and to meet numeric water quality criteria
- Do we all understand Ecology's stated purpose in convening this committee to focus on how to address treatment plant inputs as part of a bigger picture?
- Are AC members concerned that their ideas for alternative approaches cannot be proposed, discussed, and potentially captured in a recommendations document?
- Do members have any remaining questions or concerns about the purpose and goals of the committee?

9:55 Discuss remaining concerns about process/timeline/roles and responsibilities (facilitator)

- *Some AC members expressed concerns that should be discussed by the entire group:*
 - Overall need for more time to discuss topics, for sharing and reviewing meeting materials, and to support overextended plant operators to be able to fully assist Ecology in developing a best solution.
 - Request to add additional stakeholders to AC and counter-proposal to invite planners and business groups to particular meetings. Process to keep planners and stormwater managers abreast of AC progress/decisions.
 - Definition of "majority agreement"
 - Request for 3rd party facilitation
- Do members have any remaining questions or concerns about the revised R&R document?

10:10 Begin our discussion about the cap (permit writer)

– Note that we aim to have a 10-minute break midway through this agenda topic

- *The goal for this portion of the agenda is to further discussions about representative loads and averaging periods, and begin to determine how to best achieve nutrient load reduction while continuing to support smart growth in this first permit cycle.*
 - *Implementation of a nutrient cap is Ecology's primary purpose for the PSNGP. To do this successfully, Ecology is asking the AC to determine recommendations for the appropriate averaging period, the calculation method, and the best approach for Ecology to assess compliance. Therefore, it we will discuss the cap and its different components at nearly every meeting.*
 - *The first component we need to focus on is the calculation method. To support this discussion we will review the 3 calculation methods presented during the last AC meeting using an example data set with increasing nutrient loads due to growth.*
- *Ecology's permit writer will lead us through the following supporting information and discussion questions.*
 - *Ecology must cap nutrient load at current levels to prevent an increase in anthropogenic nutrient loading while modeling continues to work towards development of water quality based effluent limits (WQBELs).*
 - *There is no standard calculation method for determining the historical and current nutrient load discharged by a WWTP.*
 - *Almost all WWTPs have monitored and reported effluent ammonia and nitrate-nitrite concentrations for several years (some for up to 10 years). However, these frequencies vary from plant to plant (e.g., monthly, quarterly, annual, or less frequent data collection).*
 - *40 CFR 122.45(d) requires that all permit limits for POTWs be expressed as weekly average weekly and average monthly limits, unless impracticable. The EPA [Memo](#) from the Director of Wastewater Management provides scientific and policy rationale for developing permit limits for nutrients in a way that differs from setting limits for toxic pollutants. Reasons for this approach:*
 - *The exposure period of concern for nutrients is longer than one month and can even be on the order of years.*
 - *The average exposure rather than the maximum exposure is of concern.*
 - *Approximately 5 domestic treatment plants in the Puget Sound area have been intentionally designed for nitrogen removal or with a goal of nitrogen removal in the near future. These facilities are subject to the cap requirement. However, we would like to acknowledge their proactive efforts.*

- *Questions for the AC to Answer over a series of discussions beginning today:*
 - *What averaging period is most appropriate for a cap on nutrient loads?*
 - *What constitutes a representative load? How many years of historical and current effluent data should be used to establish a TIN load cap to prevent an increase in nutrient loading, above existing discharge levels, into Puget Sound?*
 - *Should the calculation method be the same for those facilities with discernable near field impacts as well as for those that have far field impacts?*
 - *Should the same method be used to calculate representative loads for all facilities? What are ways to eliminate the issue associated with small data sets?*
 - *How can facilities who have nutrient removal technology avoid being penalized for their proactive efforts when they are subject to the same cap requirement?*
 - *Once loads are calculated, what percentile should be used in determining the load cap? Common percentiles used in effluent limit development are 90, 95 and 99.*
 - *What are the primary considerations for including reserved capacities not currently reflected in reported data?*
 - *Together we will discuss different flow statistics and which reported flows to use when calculating a representative load. In the following chart, what flow statistic would you use with monthly, quarterly or weekly concentration data?*

| Concentration Data (Sampling Frequency) | | Flow Data |
|--|---|------------------|
| Monthly | Pair with → | |
| Quarterly | Pair with → | |
| Weekly | How would you first average these concentrations? → | |
| Mass Load = Concentration (mg/L)*flow*Conversion Factor | | |

- *Proposed Calculation Options*
 - *Included in the meeting materials is the excel spreadsheet “PSNGP_AC_Example_Data_Set_2020_05_13.xlsx” containing 5 years of flow and concentration data. A graph is included to show the difference of the range of values from the different calculation alternatives presented at the last meeting. Two trendlines for a 6 month rolling average and a 12 month rolling average are shown on the graph in addition to the percentiles and the upper 95% confidence level. See the “Graphed Load Comparison” tab within the supplemental spreadsheet.*
 - *Following calculation of a facility’s representative load, sort data and use a straight, ranked percentile (e.g., 95th) for the cap.*
 - *Percentiles will fall within the minimum and maximum of the tabulated data.*
 - *Percentiles are an indicator of how one value compares to other values in a population- essentially they provide a relative standing to the other values. As an example, the 50th percentile is the median which splits the data set in half. Half of the values are below the median, half are above.*
 - *A multiplication factor will be needed for any long term averaging period.*
 - *This calculation can be easily executed using standard functions in Excel.*
 - *Data sets have different distributions and sizes which may skew results. Ideally, you need at least 10 data points although 20+ are better.*
 - *Following calculation of a facility’s representative load over a specified timeframe, use a non-parametric method to generate an upper confidence level that would become the cap.*
 - *Randomly resampled data sets increases sample size and eliminates problems associated with limited data sets and distribution.*

- *Ranks means or medians of resampled data for development of the UCL. Note: a 95% UCL around the mean says that there's a 95% probability that the mean will be at or below that value.*
 - *A multiplication factor will be needed for any long term averaging period.*
 - *At least 10 or more data points are needed for this calculation method.*
 - *This calculation requires special functions in Excel or an R-script.*
 - *Find the highest TIN load reported for each WWTP and multiply by number of days in the cap averaging period.*
 - *Is this "representative" of current load?*
 - *This approach neglects to take in seasonality.*
 - *Difficult to justify but does result in a higher facility load.*
- *For Each Calculation Method:*
 - *Does one of Ecology's proposals seem better than the other? What is missing in the calculation consideration?*
 - *What concepts/principles do advisory group members agree with, and why?*
 - *What concepts/principles do advisory group members disagree with, and why?*

10:50-11:00 Approximate time for a break in our discussion

11:30 Open Public Comment (facilitator)

- *Is there any feedback from others?*
 - *Please limit your comment/question to about 30 seconds*

11:40 Future AC meetings and expected discussion topics (chair and facilitator)

- *We now have meetings scheduled on **June 10, July 16, August 20, September 30, and October 21**. Please mark your calendars!*
- *While we are meeting online, meetings will be held from 9:30-noon. When we are able to meet in person, meetings will be held from 9-3 at rotating locations around Puget Sound.*
- *Here are the proposed discussion topics for those meetings:*
 - June 10: introduce optimization; continue with cap
 - July 16: introduce short and long-term planning; continue with cap and optimization
 - *We hope to include local planners in this discussion, and the following discussion*
 - August 20: introduce monitoring and compliance; continue with cap, optimization, and planning
 - September 30: finalize draft recommendations
 - October 21: adopt final recommendations
- *Who else should be invited to help inform our discussions on specific meeting dates?*
- *Process reminder: We will discuss each topic during at least two meetings, so that we can discuss evolving recommendations with our colleagues before finalizing our draft recommendations. At our last meeting prior to Ecology issuing draft permit language for an informal public review, we will review the entire package and finalize our recommendations.*
 - *Check in: each group member should now have a process established for getting feedback from the parties they represent*

11:50 Recap of today's meeting (chair and facilitator)

- *Summarize emerging agreements, decisions, action items, and next steps from today's meeting*
 - *Key themes in discussion for making progress toward cap recommendations*
- *Any requests of fellow AC members – or Ecology – between now and next meeting?*
- *Any more thoughts about AC process?*

12:00 Adjourn