

## Puget Sound Nutrient General Permit Advisory Committee (PSNGP AC)

### Meeting #3 Summary: June 10, 2020

This meeting was held by webinar on a GoToMeeting platform  
A list of acronyms used is provided at the end of the meeting summary

#### ATTENDEES

##### Advisory Committee members in attendance, and the organizations and interest groups they represent:

**Chip Anderson** (Lummi Tribe Sewer District), tribal facilities; **Jeff Clarke** (WASWD), small-medium treatment plants; **Joseph Grogan** (Coupeville), small treatment plants; **Patrick Kongslie** (Pierce County), all treatment plant sizes; **Eleanor Ott** (Ecology), state agencies; **Mindy Roberts** (WEC), PSNGP AC environmental groups caucus lead; **Mark Sadler** (Everett), large treatment plants; **Rebecca Singer** (King Co), large treatment plants, PSNGP AC Chair, and PSNGP AC local utility caucus lead; **Valerie Smith** (Dept of Commerce), PSNGP AC state agencies caucus lead; **Wendy Steffensen** (LOTT), treatment plant with nutrient removal; **Dan Thompson** (Tacoma), large treatment plants; **Bruce Wishart** (Puget Soundkeeper), environmental groups; **Jenny Wu** (USEPA), PSNGP AC federal agencies caucus lead.

##### Advisory Committee members not in attendance:

**Pete Tjemsland** (Sequim), small treatment plants.

##### Advisory Committee alternates in attendance, and the AC member each is designated to represent:

**Katherine Brooks** (Patrick Kongslie), **Judi Gladstone** (Jeff Clarke), **John Raebenow** (Mark Sadler), **Teresa Peterson** (Dan Thompson).

##### Advisory Committee alternates not in attendance:

**Abby Barnes** (Valerie Smith), **Lisa Dennis-Perez** (Wendy Steffensen), **Kai Shum** (Jenny Wu).

##### Ecology's AC support staff in attendance:

**Karen Dinicola** (facilitator), **Kelly Ferron** (coordinator and liaison to PSNF)

Other individuals that registered for the webinar are listed at the end of this document.

#### ***Purpose of this 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's goals for the first PSNGP***

*The first permit should stop the water quality problem from getting worse and require plants to take meaningful steps towards making future reductions that meet water quality standards. At the same time, the PSNGP needs to somehow accommodate approved capacity commitments identified in comprehensive and general sewer plans to support smart growth. Additional goals include flexibility for communities to collectively address nutrients and consistent monitoring requirements for all permittees.*

#### **AC caucus leads share constituent input**

Each AC caucus staff lead reported input from discussions on the cap calculation approach. The written summary of input provided from each caucus is included at the end of this meeting summary.

AC caucus leads were also asked to describe what, from their discussions, seems to be the biggest

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challenge this committee faces in making recommendations to Ecology for a PSNGP that will make meaningful progress towards reducing nutrient loadings. During the remainder of the meeting, AC members continued to bring up challenges the committee faces in making recommendations:

- Utilities: understanding the goal and the challenges facilities are facing. We need more clarity about Ecology's goal for this permit: to halt nutrients or reduce them? What about other sources? What does improvement look like over time? If my annual load is 100, does that mean my cap is 99? Or 100? Or 100 plus my reserve capacity of 20 for growth? This process seems unnecessarily rushed. Want to get utilities working together collaboratively. Utilities brought up San Francisco Bay as an example of a better process and slower pace for achieving nutrient reductions [but there is no DO impairment driving nutrient reduction there]. What is the flexibility for learning and adaptive management? What will water quality improvements look like across the entire watershed?
- State agencies: we need an open discussion because there isn't just one hurdle. We need data for adaptive management and requirements that are implementable and make progress.
- Federal agencies: it's important to address the long term DO issues with this permit. We need a better understanding of where all plants are in plans for upgrades. Want to construct a permit for the wide variation in facility types and sizes without making it overcomplicated. We also believe it's important to move forward with issuing the permit.
- Environmental groups: millions of people are coming to Puget Sound. Now is the time to plan, truly optimize, and find innovative solutions. Concern about the slow pace of our conversation. Want to understand utilities' concerns and help make a strong case for financial assistance.
- Tribal facilities: concern about tradeoffs between periodic loading and other sources of nutrients and the lack of better alternatives. Can the permit provide exceptions for culturally based events? Can we do a cost benefit analysis of where we'll get the most benefit? Tribes are resource strapped. Making continuous upgrades would be a challenge. For some watersheds and treatment facilities, it may make more sense to invest the money that would go into nutrient removal technology into addressing nonpoint nutrient sources instead.

### AC members discuss optimization concepts

At our last meeting there was emerging agreement that optimization should be a primary focus for the first term of the PSNGP, but at the same time, there was not a common understanding of what the term means. Because there are so many plants with so many technologies, optimization won't look the same everywhere. There are techniques and technologies that have successfully been applied in this state and around the nation which may serve as models for treatment plants in the Puget Sound region. AC members spent much of this discussion exploring various goals for optimization, what operational changes are possible to reduce nitrogen in various settings, and how a permit requirement to optimize could be implemented.

The goal Ecology's permit writer explained the intent for optimization is a tool for the first PSNGP to help plants reduce nutrient loads as much as possible and stay below the cap. Environmental groups and federal agencies underscored that the long term goal is to meet water quality standards, and optimization alone won't get us there; keeping the problem from getting worse is a first step. The progress made in Chesapeake Bay started 20 years ago, and LOTT has made the necessary investments in upgraded technology. AC members recognize the challenges utilities face, and that progress is

achievable.

Ecology's permit writer suggested that optimization plans should be based on facility-based knowledge but could be contracted out if that seems more feasible than using in-house capacity; utilities indicated it is most likely that outside expertise will be brought in. AC members agreed that operators, specialized staff, supervisors, engineers, and outside perspectives each play an important role in optimization. Those roles will vary from plant to plant and should not be prescribed in PSNGP. Ecology needs to carefully lay out a framework for what is expected in the plan: creating a baseline, documenting optimization activities, tracking annual loadings and trends achieved by making adjustments, making small (yet to be defined) investments in minor retrofits. Guidance would be very helpful, especially for smaller plants. Perhaps a checklist could be developed to help plants fully examine techniques and technologies that have proven successful in optimizing plant performance elsewhere. EPA has some guidance that may help.

Plants must document and monitor the changes they implement. It might take weeks or months to evaluate a change. Plants that don't know what their current nutrient loadings are will have a hard time evaluating the impact of operational changes. The monitoring will need to be robust enough to support adaptive management. AC members are interested in learning more about the Suquamish optimization plan as an example of a possible approach; it is similar to what is described in today's agenda.

Tribal facilities see optimization as a critical ongoing process that often leads to innovation, but are concerned about the term being an overused buzzword. Utilities expressed that plants should be given flexibility to make adjustments and experiment with new approaches without fear of penalty for noncompliance if the changes don't work as hoped or expected. Utilities asked what level of review and approval by Ecology is appropriate prior to trying out new approaches? For what types of adjustments would advance notification be adequate?

Plants that were not designed to remove nitrogen have optimized in other ways to reduce greenhouse gases and energy costs. Nutrient reduction will require investments, even to optimize, and might be at cross purposes to these other optimization goals. What happens when a plant utilizes their unused capacity to optimize for nutrient reduction and then loses the benefit as the capacity is used? We need to be careful about unintended long-term implications of optimization. This is where planning comes in.

LOTT's approach will not work, or be cost effective, everywhere. The plant continuously monitors and makes adjustments that maintain dosing for their nutrient reduction process. Aeration is 25% of their electric bill. Facilities will need to evaluate these types of cost increases, along with their plant footprints. Pierce County has been optimizing for three years at Chambers Bay and continues to learn.

Ecology's permit writer would like the committee to discuss the affordability threshold for "minor" investments. The Commerce representative explained the role of capital facilities and capital improvement plans in addressing resource needs and accommodating growth while utilities remain in operation. Optimizing one of many plants is a different approach than focusing on a single plant in this GMA framework, which allows a balance using creativity to find solutions and make improvements over time.

The PSNGP should craft incentives for and give rewards to plants that make meaningful efforts to optimize and plan, and disincentivize a "business as usual" approach that does nothing to address the

problem. Make this a level playing field. Incentives might include a preferential path to funding. Plants should share information along the way so that everyone can learn from both successes and failures.

### **AC members discuss cap calculation concepts**

Utilities asked Ecology to clarify if a cap will be considered a target or a limit; utilities prefer a target. Capping seems counterintuitive to optimization. Ecology's permit writer answered that the cap is an interim limit in advance of WQBELs. The cap is intended to "hold the load" and prevent the problem from getting worse, i.e., to allow no increase in nutrient loading during the permit term. A combination of PSNGP narrative and numeric limits should work together. Environment groups indicated that a cap must be enforceable in order to provide a meaningful incentive for adaptive management.

Related to the committee's optimization discussion, the cap requirement needs to be implemented in a way that does not punish innovation, but rather allows and encourages experimentation to optimize in pursuit of near term reductions.

#### How can a hard cap accommodate growth?

Variability in growth is addressed at the city/county level under the GMA "duty to serve" statute. Local GMA comprehensive plans were most recently updated in 2015 or 2016, and are required to have an inventory of facilities, and capacity calculations. . If a city/county cannot accommodate existing populations and OFM growth projections for expected growth then they must reconsider their land use patterns and capital facilities plans and make six- and 20-year plans to identify funding sources for new facilities and O&M to improve the system to provide the required services. Reassessments are required every eight years.

Comp plans also address capacity targets for services beyond WWTPs including transportation, schools, etc. Buildable Lands Reports are due prior to updates. Communities are currently working on these reports, so plant managers should be communicating with their planning departments now about future capacity concerns.

Collaboration among plants is needed. Utilities are concerned that they have been telling developers that capacity is available, but PSNGP will put a new restriction on capacity. The PSNGP is not yet a law or regulation, but it will force cities and counties to rework their numbers and look for other ways to provide the service. The cap won't stop growth. Utilities would prefer a cap that includes an allocation for expected growth. Otherwise, plants may not have a lot of options: either limit connections or optimize.

Ecology appreciates the committee's frank discussions about seemingly competing regulatory requirements and emphasized that this is not stopping growth; this is the first step in a long process of limiting nutrient loadings while allowing growth and making plans to reduce loadings in the future. The goals of these statutes are not mutually exclusive. Next comp plan updates are due in 2024 or 2025, and this conversation is already happening. Utilities should make sure these concerns are discussed prior to the next updates, and consider putting people in smarter places (i.e., in areas where plants can make needed modifications or have excess capacity). The intent is to put people where their impacts are smaller.

#### Calculation approach:

Ecology's permit writer asked if AC members can reach agreement on a fundamental averaging strategy.

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Environmental groups: leaning toward 99% non-parametric bootstrapping option. Should use same approach for all plants, maybe allow a waiver for a different approach if a compelling reason is provided. Plants should provide relevant data they have collected that was not permit-required, and therefore is not in PARIS. Equitably distribute reserve capacity to accommodate growth. No additional targets should be established for plants that are already operating nutrient removal technologies. Make it a hard cap and use it as an interim limit until achievement of water quality standards is required. Need this incentive to make progress toward meeting standards as soon as possible.

Federal agencies: recommend using the approach in the permit writers' manual or calculating the 12-month rolling average and taking the peak of the 12-month rolling average. Look at categories of sizes of facilities to build permit requirements.

State agencies: option 2 [non-parametric bootstrapping approach] seems to make the most sense considering the large number of plants lacking data. The permit should anticipate tweaks as more data become available.

Utilities: main concern is lack of data. Make sure the load calculation doesn't lead to foreseeable violations or unintended consequences without sufficient baseline information. There is not enough data for the non-parametric bootstrapping method. Concern about variance and skew. Shouldn't use data that wasn't collected under a QAPP or a SAP. The first permit should collect more data: three years is needed. Give subsidies to smaller plants to collect this data. For this permit, targets make more sense than a cap to get water quality improvements. Provide flexibility with a bubble or offsets. Discuss implications of quarterly/annual caps or targets.

### Seasonal versus annual averaging period:

Environmental groups: annual averaging is appropriate for far-field effects. There should be a check to look at near-field seasonal effects. Investigate two phases of seasonality: critical June-August versus May-October.

State agencies: no increase in average annual load sounds appropriate. The modeling results show fewer noncompliant days with annual loading decreases than is achieved by only making seasonal reductions. Seasonal load matches the near-field problem and could be a reasonable first step for this permit term. Annual reductions will be needed in the long term.

Federal agencies: annual loading, okay using the non-parametric bootstrapping 95% level, but could consider 12-month rolling average peak nitrogen loading value as cap.

Tribal facilities: for seasonal loading, consider the photo period versus temperature.

### What constitutes a representative load:

Environmental groups: use the best available data, preferably going back a year. Data for the previous permit is still relevant.

Utilities: three years of data are needed.

### Compliance:

Will compliance be phased? What are appropriate actions if the cap is exceeded? How to encourage optimization? Will trial activities related to the optimization plan be exempt from cap compliance?

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Would a violation be considered a violation for just the day of monitoring or for every day the cap is exceeded (likely the latter)?

The committee needs to discuss how to structure adjustments and what period of data should be used. Utilities suggest the entire year; there will be data issues in evaluating monthly versus quarterly samples. Adaptive management and incentivizing are crucial.

### **Other principles/themes discussed**

Utilities might prefer a performance goal (percent removal) to a cap as a way to meet the goal more quickly. This requires influent data as well as effluent data, but will support plants in planning reductions. Environmental groups countered that there would still be an increase in loading under this scenario as flows increase, so this approach does not meet the goal of keeping the problem from getting worse and making progress toward future reductions and compliance with water quality standards. The PSNGP needs to express both a cap and the compliance assessment process. It might be possible to explore a trigger that requires additional actions such as initiating a formal planning to reduce nutrients. The AC should look at creative optimization approaches like inflow and infiltration investments.

Small utilities emphasized that 30 plants discharge under 0.5 MGD, while 40 plants discharge a total of over 750 MGD. Ecology should consider creating specific guidance for small plants. The total impact of a small plant over an entire year is smaller than that of a large plant in a single day. It could be reasonable to focus the first permit on the larger plants and learning from them. For larger utilities it may be more difficult for their plants to achieve meaningful improvements without significant capital investments.

Is there a chance that any jurisdiction would be required to build a new plant? Not in the first PSNGP. That evaluation will be part of the long term planning process and implemented in future permit cycles.

Suggest plants evaluate new investments for their nutrient impact, similar to how purchases are currently evaluated for carbon footprint, energy efficiency, and greenhouse gas emissions.

Monitoring needs might be similar to those involved in a re-rating process. Lab personnel are also part of this process – involve them in determining parameters, location, frequency, and instrumentation.

### **Public comments**

- Corrin Hamburg (Anacortes) had questions from the lab perspective: for a plant that doesn't understand current nutrient loading or efficiency, what testing is needed to get a better grasp on this? What will help plants and Puget Sound?
- John Conway (King Co) stressed that optimization is challenging across the diverse region with different plants. Why is Ecology stressing this? Why don't we have more time to accomplish the goals?
- Eleanor Hines (ReSources, located in Bellingham) expressed appreciation for the value in this process; she is eager to see progress.
- Judi Gladstone (WASWD) emphasized the importance of looking at carbon footprints and affordability. Increases in energy use should be considered in future evaluations. As for the role of incentives in lieu of or in addition to penalties: funding is obvious, relief from other permit requirements and compliance schedules should be considered. Updating growth plans takes time. Utilities also need the means to accommodate the growth. Consider targets instead of

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caps this first permit term. Get more information and learn/adapt.

### **Ecology announces three individual permits are out for 45-day public comment**

Renewed individual permits for three plants in Ecology's Northwest Region are being released for public comment for a 45-day public comment period beginning today. The permits are for Birch Bay, Skagit County Sewer District No. 2-Big Lake, and Warm Beach WWTPs. All three permits include nutrient control requirements. AC members should follow the links in the PSNGP listserv announcement going out this afternoon to get more information and view the permits. Questions about the individual permits should be addressed to the Ecology regional permit manager assigned to each WWTP.

The AC can discuss the permits' three approaches to nutrient control in future meetings if committee members feel there is a need. Ecology will continue to issue individual permits during the PSNGP development process. All individual permits with nutrient controls will be modified once the PSNGP becomes effective and places nutrient requirements in one permit.

### **Key Takeaways from Today's Discussion**

- Utilities would prefer that the cap include an allocation for expected growth.
- Keeping the problem from getting worse and not achieving water quality standards during the first PSNGP is considered a significant compromise by other caucuses.
- We still need to define optimization, and
  - Explore the tradeoffs of optimization for nutrient removal versus optimization for energy savings, carbon footprint, air quality,
  - Understand how a cap and optimization will work together, and
  - Provide guidance to support optimization, particularly for smaller plants.

### **Summary of Action Items for Ecology staff**

- Invite planners to the July and August AC meetings; include a south Sound planner if possible
- Update the "emerging recommendations" document and consider retitling it
- Create a central location for AC members to share additional data and references
- Investigate a platform for central editing of the "evolving recommendations" document

### **Summary of Action Items for AC members**

- Review this meeting summary and provide timely feedback for its approval by email
- Add your thoughts to the "emerging recommendations" document and send them to Ecology's facilitator within a week of receipt
- Gather feedback from constituents to bring to the July AC meeting. Caucus leads:
  - Share this meeting summary along with the optimization questions listed in the agenda
  - Prepare a written summary report out to include in the meeting summary
- Contact the chair and facilitator with questions, concerns, and/or suggestions about process.

### **Future meetings**

AC members agreed that our future meetings will be longer, from 9:30-3:00 with a 1-hour lunch break. AWC has identified a group of planners to take part in our next discussion; Ecology's facilitator is concerned that there is not a South Sound planner on AWC's list and will work to identify one.

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- Thursday, July 16: introduce short and long-term planning; continue with cap and optimization
- Thursday, August 20: introduce monitoring and compliance; continue with cap, optimization, and planning
- Wednesday, September 30: finalize draft recommendations
- Wednesday, October 21: adopt final recommendations

### List of acronyms used in this meeting summary

AC – Advisory Committee

AWC – Association of Washington Cities

CSO – Combined Sewer Overflow

GMA – Growth Management Act

LOTT – LOTT Clean Water Alliance (a wastewater utility in Olympia, serving the urbanized areas of Lacey, Olympia, and Tumwater in Thurston County)

MGD – million gallons per day

O&M – Operations and maintenance

PARIS – Permitting and Reporting Information System

PSNF – Puget Sound Nutrient Forum

PSNGP – Puget Sound Nutrient General Permit

PSNGP AC – Puget Sound Nutrient General Permit Advisory Committee

QA/QC – Quality Assurance and Quality Control

QAPP – Quality Assurance Project Plan

SAP – Sampling and Analysis Plan

TSS – Total suspended solids

WASWD – Washington Association of Sewer and Water Districts

WEC – Washington Environmental Council

WWWD – Water and Wastewater District

USEPA – U.S. Environmental Protection Agency

### Individuals that registered for the webinar, and the organizations they represent:

Name	Agency or Organization
Allegra A. Abramo	
Amanda McInnis	HDR
Amanda Tobin	Pierce County
Angie Silva	Kitsap County Department of Community Development
Asa Reyes-Chavez	Parametrix, Inc.
Bill Davis	City of Bremerton
Brian Funk	City of Sultan WWTP
Bruce Wishart	Puget Soundkeeper
Cassandra Moore	Pierce County Planning and Public Works - Sewer Division
Catherine H Gowan	King County Wastewater Treatment Division
Chris Giesting	ESWD
Chris Sheridan	Kitsap County

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Chris Thomas	The Freshwater Trust
Christina Lorella	City of Tacoma
Corrin Hamburg	City of Anacortes WWTP
Dan Mahlum	RH2
David L Clark	HDR
Donald A. Seeberger	coalition for clean water
Douglas Navetski	King County
Eleanor Hines	RE Sources
Eric Burris	City of Bremerton WWTP
Eron Jacobson	King County
Hanna Lintukorpi	
Heather Earnheart	Alderwood Water & WW District
Heather Stephens	Stantec
Jacque Klug	King County WTD
James Tupper	Tupper Mack Wells
Jane Vandenberg	Pierce County Sewer Division
Jason Flowers	Murraysmith
Jeff Lafer	King County Wastewater Treatment Division
Jeff Langhelm	City of Gig Harbor
Jim Bolger	King County
Jim Voetberg	Mukilteo Water and Wastewater District
John Conway	King County Wastewater Treatment Division
John Ewell	City of Lynnwood
Josiah Hartom	Alderwood Water & Wastewater
Judi Gladstone	Washington Association of Sewer & Water Districts
Judy Scott	City of Tacoma
Kevin Patching	Thurston County Public Works
kirk elliott	City of Tacoma
Laura Fricke	ECY NWRO
Laurie Plerce	Pierce County
Leslie Brandt	City of Everett
Lincoln Loehr	City of Everett
M. W. McCarthy	Mac McCarthy, Inc.
Mark Sadler	City of Everett
Michael Martinez	NWIFC
MKS	COT
Ned Lever	City of Bremerton
Nina Bell	Northwest Environmental Advocates
Pamela randolph	City of Edmonds
Patrick Kongslie	Pierce County
Paul Marrinan	City of Puyallup
Peg Wendling	City of Bellingham
Rebecca Singer	King County Wastewater Treatment Division
River Wan	Pierce County

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Rob Feller	City Of Port Angeles
Robert Knapp	Jamestown S'Klallam Tribe
RUSS SHIPLET	Kitsap Building Association
Scott Weirich	Parametrix
Stella Vakarcs	Kitsap County
Steve Lindstrom	Sno-King Water District Coalition
Teresa Peterson	City of Tacoma
Thomas Knuckey	City of Bremerton
Tim Berge	Southwest Suburban Sewer District
Tom Coleman	RH2 Engineering
Tom McBride	McBride Public Affairs LLC
Tom Swartout	Parametrix
Tonya Lane	Washington Dept. of Ecology
Tyler White	City of Port Angeles

### PSNGP AC Caucus report out summaries

#### Federal agencies:

##### Questions for Ecology:

1. Is Ecology considering a year-round or seasonal DIN limit? What does past modeling say about whether off-season (winter) nitrogen discharges affects DO and HAB levels during the critical period?
2. Are there nutrient data for all point sources that will be covered by the GP? If so, how much does the frequency (e.g., weekly, monthly, quarterly, annually) and total number of samples to date vary?
3. Can Ecology include a data set example for a combined WWTP to see if there is a stronger seasonal pattern than the example provided in the XL spreadsheet?
4. Does Ecology envision a GP with calculated permit limits for each facility, or simply an equation to calculate limits?

##### Main takeaways

Caps:

1. Suggest using approach from Ecology's permit writer's handbook for performance-based limits; or
2. Use a peak of a 12-month rolling average period (assuming year-round limits) in case certain years in the WWTP dataset may have been an unrepresentative low nutrient discharge year that could cause a limit that the facility would not be able to achieve.
3. Ensure that the limit metric matches the data averaging period (aka annual averaging limits should be calculated over an annual period).
4. Consider creating different categories of facilities to calculate and establish DIN limits, depending on data set frequency and seasonality.
5. Consider establishing different requirements for optimization and monitoring frequency depending on what a facility has already done.

Facilities that have already completed upgrades:

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1. Ideas include to have a concentration threshold that if a facility is discharging beneath a certain threshold, the facility should not have to further reduce their DIN discharges in the 2<sup>nd</sup> permit round; and/or
2. Do not require optimization.
3. Adjust monitoring frequency to ensure the plant is operating properly. Data may not need to be collected as frequently compared to characterizing a WWTP discharge.

### "Thinking Ahead" Ideas:

1. For water quality trading in the future, the PS model should be able to show impacts from moving nutrient discharges to different locations to inform how trades could work, including between freshwater tributaries and direct marine discharges.

### **State agencies:**

- Caucus members agree that an approach similar to "option 2" for cap calculation makes the most sense, particularly considering the number of plants with very small existing data sets for Ecology to use
  - The non-parametric bootstrapping resamples the data taking the upper and lower bounds using random number generation to increase the sample size and better understand the data by generating a normal distribution.
  - Tweaks to the method based on # of compliance samples
  - This approach is about keeping the average load from increasing.
- Ecology also needs advice on what is a representative load. Caucus members suggested that "no increase in average load" sounds appropriate for the cap.
  - Facilities would be able to average across a month
  - They would have to report all samples taken during a monthly reporting period if they elect to take more samples than the permit requires – it will be important to structure the monitoring to support the calculation and provide a feedback loop
- Caucus members generally thought a seasonal approach would best match the nature of the problem, but appreciate Ecology's dilemma of potential importance of shoulder season and annual far field impacts on the seasonal problem, particularly with climate change. Seasonal (without shoulder season) might need to do for this first PSNGP.

### **Utilities/plant operators:**

1. *Does one of ECY's proposed CAP calculations seem better than the other?*
  - a. What does a cap mean and how do we favor one over the other?
  - b. Will caps lend themselves to violations?
  - c. Bootstrapping: Should not start with bootstrapping – we don't have the data to support it at this time.
  - d. The 95% confidence interval puts facilities in jeopardy 5% of the time by design. It makes no sense to impose an effluent limit that is designed to violate the permittee. It would make more sense to do the optimization studies first to determine what the treatment plants can do. I think we must also be clear that a performance-based limit under Ecology's permit writer's manual (Chapter 6.3.3.11) cannot be adjusted for growth

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2. *What is missing in the calculation considerations?*
  - a. Data is missing. Variances in data sets skew the data. We need to narrow this variance by collecting more data points over a longer period of time.
  - b. Need to also consider combined systems and systems that are already removing N.
  - c. We would also like to recommend considerations for % reduction goals vs. a cap (may help with seasonality).
    - i. WS: I think a cap is still necessary to get actual reductions in place
3. *What concepts/principles do advisory members agree with/why?*
  - a. Nutrient targets make more sense. Targets are the basic framework for optimization.
  - b. We all want to improve WQ in the PS.
  - c. The concept that a general permit can establish the structure under which a bubble permit and/or water quality trading can occur is encouraging. There seems to be interest among, in a BACWA type effort for dischargers to work out a viable proposal for nutrient reduction, and a bubble permit seems to be consistent with that
4. *What concepts/principles do advisory members disagree with/why?*
  - a. We cannot ignore financial impacts.
  - b. Not all utilities agree with the science (this is not settled even among the utilities)
  - c. Objectives of goal for a GP are unclear

Additional questions that ECY added to the final draft agenda

1. *What averaging period is most appropriate for a cap on nutrient loads?*

3 years, probably weekly. This however will be a burden to some facilities. We need to consider subsidized sampling costs. Maybe have 2 levels of testing dependent upon size (>100,000gpd). Would be good to know what percentage of the facilities represent this size.
2. *What constitutes a representative load?*

Multiple years of data needed, with the ability to account and give extra load allowances for septic loads, CSO events, and excess rainfall. Per plant staff.
3. *What do caucus members think might be the biggest challenge this committee faces in developing recommendations for a PSNGP that will make meaningful progress towards reducing nutrient loadings?*

Trust. How are we making decisions? Does ECY have resources and staff to review O&M changes? The questions asked often lack clarity and there is too little time to confer w/ other utilities.
4. *Do caucus leads think it would be feasible to provide written summaries of their discussions in advance of future meetings?*

No. It would be great to have these before each meeting but given the limited time between meetings it will be difficult to provide in advance.

**Environmental groups:** (no written report provided; this is from the facilitator's notes)

- Nothing is missing from the calculation, but the same application should be used.
- For the averaging period, an annual value is most appropriate for far-field effects and for looking at all of the plants. There should also be a check to look at near-field effects. The caucus discussed what might be the appropriate seasonality: is it two-phased? Do we have a May to October season or the warmer summer months of June, July, August? The AC should explore this more.
- What constitutes a representative load

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- We are leaning toward calculating the 99<sup>th</sup> percentile of the distribution calculated using the non-parametric bootstrapping approach discussed at the previous meeting.
- How many years of historical data should be used is a matter of the best available data, so if there is some historical data for individual plants then maybe the data for the previous permit period is still relevant. The caucus would like to see a preferably a year's worth data, or at least 10 or 12 data points by going back further.
- The calculations methodology should be the same for all facilities. However if there is a particularly compelling reason that a facility would like to diverge from the method, we think Ecology should consider a waiver.
- Also, scenarios would be different for facilities that have already adopted nutrient reduction technologies. The caucus doesn't think that they should have additional nutrient reduction targets at this time.
- The cap should represent today's flows, but we need to figure out how to equitably distribute any reserved capacity along those lines.

**Tribes/tribal facilities:** no report out for this meeting