High Rock Lake Nutrient Rules Process
Wastewater TAG Meeting 5

August 17, 2023 / 9:30 am – 11:30 am / *via Zoom*

Meeting Goals

For Wastewater TAG members to achieve consensus on a final proposal to be presented to the Steering Committee.

Participants

TAG Members: Bill Brewer, Kevin Hayes, Danica Heflin, Bill Kreutzberger, Doug Lassiter, Kristin Litzenberger, Matthew Nevills, David Saunders & Andy Smith

DWR Representatives: Pam Behm, Sylvia Chen, Rich Gannon, Joey Hester, Michael Montebello, Matthew Nevills, & Ellie Rauh

DSC Facilitation Team: Maggie Chotas, Paura Heo & Laura Swartz

Observer: Judy Stalder, Steering Committee

Meeting Summary

Agenda Overview

- Welcome
- Working together & review of agenda
- Revised Proposal #2
- Call to Question
- Proposal Discussion
- Final Repolling
- Next Steps
- Closing

What's Next / Action Items from the meeting

1. Joey Hester will draft a TAG recommendation report based on consensus votes including majority/minority opinions for components that did not achieve consensus.
    - Members will be able to review and approve the report by email.

2. Wastewater TAG report will be present at 9/27/23 Steering Committee.

3. Rules will be drafted based on Steering Committees report (winter 2023/spring 2024).

4. Stakeholders will be invited to review the draft before they process to EMC.

Key Links

- Division of Water Resources PPT for this meeting from Joey Hester
- Video recording of the meeting

Detailed Summary of Meeting

Welcome

Joey Hester of DWR and Laura Swartz of DSC welcomed participants to the final Wastewater TAG meeting.

In addition to TAG members, Judy Stalder of the Steering Committee was present as an observer.

Pam Behm, Sylvia Chen, Michael Montebello, Matthew Nevills, and Ellie Rauh attended the meeting as representatives of their respective departments in NCDEQ.

Working Together & Review of Agenda

Bill Kreutzberger and the TAG shared their recommendations in an initial proposal to DWR. DWR developed a counter proposal incorporating many items from the initial proposal.

- Laura Swartz reviewed the agenda and the ground rules, sharing that the primary objective of the meeting is to reach final consensus for a proposal.
- Laura Swartz reviewed the definition of consensus per HRL Engagement Process Charter
  - Consensus is being defined as at a minimum, "I can live with and support the decision."
  - When someone disagrees, the goal of the group shall be to discover the reason for the objection and to find a way to work toward meeting that need in a revised agreement.
  - If consensus is not reached, majority and minority opinions are recorded in a report that accompanies the final proposal.
- In this final meeting, the facilitation team decided to use simple polling to identify parts of the proposal that require further discussion.
- Ms. Swartz noted that the group would be polled on the revised proposal itself, then on various components of the proposal, as needed.

Presentation of Revised Proposal

Joey Hester shares DWR's counterproposal, Point Source Management Proposal #2, in several parts (listed below).

Members of the TAG did not reach consensus approval for the revised proposal as a whole with 1/5 voting individuals indicating major concerns, and not able to support to or approve of the proposal.

Part 1 – Point Source Management Proposal #2

Key Points

- At 1st permit renewal after rule effective date:
  - 0.75 mg/L phosphorus limit at permitted flow for facilities larger than 1 MGD
  - 1.0 mg/L phosphorus limit at permitted flow for facilities larger than 0.1 MGD but smaller than 1 MGD
- At 2nd permit renewal after rule effective date:
  - 0.5 mg/L phosphorus limit at permitted flow for facilities larger than 8 MGD
  - 6.0 mg/L nitrogen limit at permitted flow for facilities larger than 5 MGD
  - 10 mg/L nitrogen limit at permitted flow for facilities larger than 5 MGD but smaller than 1 MGD

Key Consideration

- "At 1st / 2nd " permit renewal markers used rather than specific time periods (i.e., ~5 yr and ~10 yrs) according to TAG members' feedback, encouraging a more flexible timeline.

Part 2 – Point Source Management Proposal #2

Key Points

- Individual annual mass allocations will be assigned to facilities smaller than 0.1 MGD
  - Rules will include an adaptative management provision if small facility allocations are exceeded.
  - No individual permit limits for facilities smaller than 0.1 MGD
  - Large dischargers can regionalize smaller facilities and acquire their individual allocation to allow for future growth.
- Annual mass limit allocations
  - Will be made in total at rule effective date to existing facilities (i.e., 100% allocated, growth allowable only via trading.
  - New facilities will be expected to meet specified performance AND purchase allocation
- Group permits will be voluntary
  - Dischargers must formally join
  - Joining members add their allocation to the group sum
  - Departing members take their allocation with them
  - Group exceedance trigger NPDES Branch enforcement of individual permits which includes options for offsetting the exceedance.

Part 3 – Point Source Management Proposal #2

Key Points

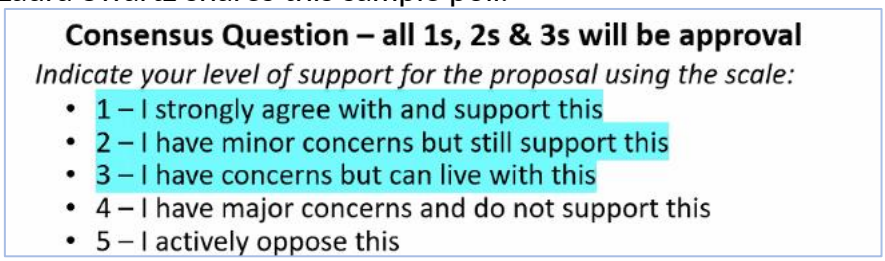
- Facilities will be allowed to trade allocation:
  - Permits will be modified accordingly
- Facilities will be allowed to buy allocation:
  - To acquire a new discharger permit
  - To expand an existing facility
- Facilities will be allowed to buy nitrogen or phosphorus offsets:
  - To offset a group of individual permit exceedance
  - To add allowable load to permitted allocation

- Facilities will be allowed to buy nitrogen or phosphorus offsets:
  - To any existing discharger
  - To any new discharger
  - To another regulated NPS entity for rule compliance

Consensus Items & Discussion

The counterproposal was divided into various parts, and those parts would be called into question to help navigate discussion.

- Laura Swartz reviewed the polling procedure for reaching consensus.
  - The part of the proposal in question would appear on the screen.
  - Official members of the Wastewater TAG would enter their vote into the poll.
- Joey Hester shared this list of official members: Andy Smith, Bill Brewer, Bill Kreutzberger, Kevin Hayes, Danica Heflin, and Doug Lassiter.
  - Doug Lassiter decided to abstain from voting.
  - There was a total of **5** voting members, less Mr. Lassiter.
- Laura Swartz shares this sample poll:



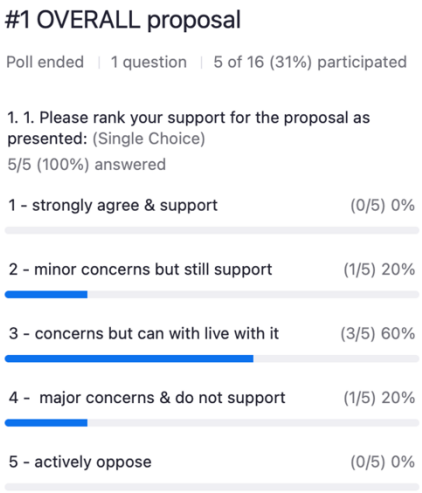
  - Responses of "1's," "2's" and '3's'' signify approval.
  - Responses of "4's" and "5's'' indicate that there are issues the group must address.
- Ms. Swartz goes on to explain that the first poll calls to question support for the overall revised proposal.
  - Op if consensus is reached here, then there would be no need to continue polling.
  - If there are any 4's or 5's then the polling would continue.
- Subsequent polls call to question various parts of the revised proposal.
- Discussion of items occurred after completion of all polling. (For the sake of continuity, discussion summaries were included inline).

<u>Poll 1: Overall Proposal</u>

Polling

Voting members are asked to rank their overall support of DWR's counterproposal, or Proposal 2. This includes all parts (1-3) of the proposal.

- Poll results shown in the figure.
  - **Yea**: 1/5 member supports, 3/5 members can live the proposal as presented
  - **Nay:** 1/5 member expresses major concerns
- Consensus **was not** reached for overall support of Proposal 2.



Poll 2a: Phosphorus Limits and Timeline

Polling

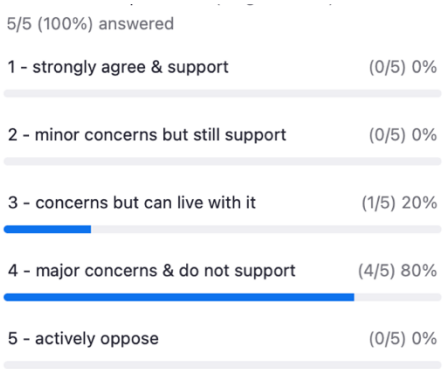
Voting members are asked to rank their support for phosphorus limits and the timeline.

1a – Phosphorus limits and timeline

At 1st permit renewal after rule effective date:
- 0.75 mg/L phosphorus limit at permitted flow for facilities larger than 1 MGD
- 1.0 mg/L phosphorus limit at permitted flow for facilities larger than 0.1 MGD but smaller than 1 MGD

At 2nd permit renewal after rule effective date:
- 0.5 mg/L phosphorus limit at permitted flow for facilities larger than 8 MGD

- Poll results shown in the below figure.
  - **Yea**: 1/5 can live with the items as presented
  - **Nay:** 4/5 express major concerns.
- Consensus **was not** reached on phosphorus limits at this time.



Discussion

- Joey Hester indicated that the limits expressed at first permit renewal are consistent with Bill Kreutzberger's proposal.
- He shared that DWR added another 0.5 mg/L at permitted flow for facilities larger than 8 MGD. This would apply to the top five largest dischargers:
  - Statesville, High Point, Salisbury

    - 2 facilities in Winston-Salem
- Bill Kreutzberger confirms he is in agreement with the phosphorus limits at first permit renewal cycle, with the caveat that the Steering Committee would be setting the goal targets (which would affect the mg/L limits).
- Mr. Kreutzberger does not agree with the limits at 2nd permit renewal, noting that targets should be attained within 1st permitting.
- Limits at first permit renewal would lead to a phosphorus load reduction of ~57% which is well within range of an overall 40% reduction goal.
- Mr. Kreutzberger shared this perspective; while DWR has set a ceiling, his approach aims to set a floor in order to create nutrient credits.
- Mr. Kreutzberger uses this sample scenario to share his approach.
    - "Let's say the target for WW based on what the Steering Committee adopts is 650 tons/year. The limits you have outlined represent 685 ton/year. I would like for us to reach our target and have 35 tons available for sale to other sectors."
    - He referenced a comment from Rich Gannon that point sources have the most cost-effective nutrient reductions available. With that in mind and noting that point source dischargers in HRL are not at the limits of technology, Mr. Kreutzberger, shared that he sees this rulemaking strategy as a unique way for the Yadkin Pee-Dee River Basin to provide, not purchase, credits.
    - Regarding the 0.5mg/L limit at 2nd permit renewal; Mr. Kreutzberger think this limit is unnecessary. He envisioned having a surfeit of nutrient credits and having the market drive to greater nutrient removal.
- Andy Smith expressed full support for Bill Kreutzberger.
- Bill Brewer of Winston-Salem utilities also expressed strong support for Bill's approach. He stated, "wastewater has quantifiable ways to reduce the load and so we bear the burden." He went on to say that high quality nutrient credits would provide flexibility for the expected expansion, Forsyth County would expect to see by 2035.
- Kevin Hayes shared very specific numbers with the group that created a robust back-and-forth about concentration levels and annual mass limits.
    - Rich Gannon stated that DWR would need to further consider industrial point source dischargers.
    - DWR noted that they would follow up with Kevin Hayes directly after the meeting.
- Kevin Hayes shared that he represents a rendering facility in Harmony, NC which has very different phosphorus and nitrogen levels than municipal facilities.
- Bill Kreutzberger noted that there are at least two other industrial point source dischargers in HRL watershed as well: Tyson, Wayne Farm, LLC.

- Bill Brewer requested further clarification around the limits. He asked if the limit was based on a rolling limit?
- Rich Gannon stated that the assignment of the annual mass load is based on a concentration. It is not a rolling average. It is based on the calendar mass limit.
- Joey Hester summed up and stated the concentration limits outlined in the proposal would be used to calculate an annual mass load.
    - Throughout the year, the concentrations could fluctuate as long as the annual mass load is not exceeded.
- Joey Hester returned to address Bill Kreutzberger's approach to nutrient credits since Mr. Kreutzberger cited it as the justification for not needing additional limits at second permit renewal.
    - Mr. Hester shared that while selling credits is possible, it is unprecedented in NC.
    - Mr. Kreutzberger responded by sharing an instance of a discharger in Apex selling to a discharger in Raleigh; and Mr. Hester notes that that instance was one of point source to point source trading, not point source to non-point source selling.
    - Mr. Hester further noted that selling credits to an NPS would permanently reduce that discharger's allocation. In the future, if the discharger needed capacity to grow it would not have that allocation.
    - Mr. Kreutzberger emphasized that municipalities are not at their limits of technology, so high levels of treatment are very achievable. He emphasized that having a framework would offer flexibility if dischargers wanted to sell credits.
    - Bill Kreutzberger provided this final statement. "We are not at the limits of technology in terms of our municipal facilities. This is a unique opportunity where we can achieve our target reductions and provide the space to sell allocations. It probably will not happen in my lifetime, but even the prospect is exciting."
- Joey Hester expressed conceptual understanding of Mr. Kreutzberger's approach. However, he noted that selling allocations may not be advisable since allocations are awarded for perpetuity, not annually; emphasizing again that once an allocation is sold, it is not retrievable.
- At this point, Bill Kreutzberger asked Rich Gannon directly if it would be possible to lease credits for an "x-" year period.
- David Saunders commented that if the Wastewater TAG could build a business case if a lease could be structured accordingly. Mr. Saunders went on to say that the wastewater facility managers and representatives do not know the cost of

this nutrient management strategy, indicating that there very well could be interest in selling or leasing nutrient credits.

- Rich Gannon expressed appreciation for the group's insights and visions. He summed up the reasoning behind the additional limits set at second permit renewal.
  - Other strategies in NC have shown that the fair share idea has not produced its fair share of results. Nonpoint sources have not been able to come close to the reductions seen from point sources.
  - These NPS's have made the case that there is no possible way for them to achieve their "fair share" of nutrient load reductions.
    - Agriculture estimates show reductions from edge of field but have not seen the reductions stream.
    - Stormwater reductions have been difficult because new development loads continue to increase. This destabilizes streams making them a nutrient source, as well. While we are working to put post-construction control measures in place that will address loading, it will be very difficult to see meaningful reductions.
  - Point sources are the most easily controlled, the most quantifiable. Rich Gannon states, "we are coming from the reality that we need to get to the most reductions that we can from point sources. We are very consciously upping our game."
  - Rich Gannon shares that nationwide, NC has been a rare case applying a fair share approach to NMS.
- Bill Kreutzberger held his ground. He stated that he did not believe NC is a rare case in applying a fair-share approach to stakeholder groups in NMS's.
  - He would like to see the market driving nutrient credit trading, and cited that his recommendation falls in line with a One Water Approach
- Bill Brewer notes that what weighs heavily on his mind is the cost of implementation.
  - He expressed that he doesn't want to shoot for one target then have to achieve another. He shared that this could be We don't want shoot for one target and then have to achieve another target adding capital costs on top of capital costs. Are any improvements enough to meet the second
  - Bill Kreutzberger agrees with Mr. Breweur that there need not be two phases/two targets.
- Joey Hester noted that the limits at the second permit renewal are primarily limits of nitrogen. The additional phosphorus limit was set since upgrades to facilities that reduce nitrogen loads may reduce phosphorus loads, as well.

- Bill Kreutzberger added that biological nutrient removal processes that would be used to meet their phosphorus reduction may end up significantly reducing nitrogen loads, which he stated would further obviate the need for limits at second permit renewal.

Poll 3a: Nitrogen Limits

Polling

Voting members are asked to rank their support for nitrogen limits.

3a – Nitrogen limits
At 2nd permit renewal after rule effective date: - 6 mg/l limit at permitted flow for facilities larger than 5MGD - 10 mg/l limit at permitted flow for facilities larger .1 MGD but smaller than 5MGD

- Poll results shown in the below figure on the right.
  - **Yea**: 2/5 can live with the items as presented
  - **Nay:** 3/5 express major concerns.
- Consensus **was not** reached on nitrogen limits at this time.

Discussion

- Joey Hester importantly noted that the nitrogen limits outlined as presented are consistent with Bill Kreutzberger's proposal. He directly asks the voting members about their objections to nitrogen limits.
- Bill Kreutzberger shared that his support of the nitrogen limits as outlined is contingent upon the Steering Committee's agreement of those limits.
- Bill Brewer shared that until we know what capacity expansions will look like and if there will be a need to purchase credits, he would not be able to provide full support of the limits.
- Andy Smith echoed Bill Brewer's point on the risk of agreeing to limits without knowing the cost of expansion. He further noted that he did not see a reason to have another phosphorus limit at the second permitting renewal.

- Joey Hester responded to each of Mr. Smith's points.
  - He noted that expansion and future-planning would be necessary regardless of the NMS.
  - Mr. Hester asked directly if it would be better to call for the 0.5mg/l nitrogen limit at first permitting renewal.
- Bill Brewer shared that typically when regulations like this come along, there is an engineering evaluation that provides a cost analysis and facility requirements to meet that regulation. Mr. Breweur is reluctant to approve these limits without any official cost analysis.
- Rich Gannon noted that DWR has proposed these limits based on the gross cost analysis from Bill Kreutzberger's white paper. Moreover, the 0.5mg/l limit is one that has been provided in national conversations around what is feasible regarding nitrogen reductions within typical technological constraints.
- Kevin Hayes spoke up to share that his support is contingent on questions and concerns specific to industrial point sources which have very different nitrogen and phosphorus loading measurements compared to municipal facilities.
  - Joey Hester shared that they could add a clause that address industrial point source dischargers.
  - DWR will follow up with Mr. Haynes after further internal consideration for this specific point source.
- Joey Hester explained that the objective of this meeting is to reach consensus on a final proposal to share with the Steering Committee.
  - He stated that the Steering Committee is expecting phosphorus and nitrogen limit recommendations to come from this Wastewater TAG.
  - He emphasized that they need to move forward with something at the present time and asked the group for revisions to the existing proposal language/ or new recommendations.
- Bill Kreutzberger recommends moving forward with a version of this proposal acknowledging that the Wastewater group will have the ability to make changes based on new information that arises from evaluations and analyses that will take place later down the line.
- Joey Hester emphatically noted that ongoing feedback, input, and proposal revisions are part of the process.
  - He validated Bill Brewer's position, assuring him that Mr. Breweur and others in the group would have more opportunities to weigh in on how the proposal would take shape before its final submission to EMC/S.
  - He stated, Bill [Brewer], we want you to come back next year after assessments and evaluations and say, 'we had an engineering cost analysis

completed and actually this is not feasible.' " Or, say, ' Actually, [costs are not as high as we thought. We can do this]!"

- The group reaches consensus based on the emphasis of the iterative rulemaking engagement strategy.

Poll 4a: Allocation and permitting

Polling

Voting members are asked to rank their support for allocation and permitting proposals as presented.

4a - Allocation and permitting

Individual annual mass allocations will be assigned to facilities smaller than 0.1 MGD

- Rules will include an adaptive management provision if small facility allocations are exceeded
- No individual permit limits for facilities smaller than 0.1 MGD
- Large dischargers can regionalize smaller facilities and acquire their individual allocation to allow for future growth

Annual mass limit allocations:

- Will be made in total at rule effective date to existing facilities (i.e. 100% allocated, growth allowable only via trading)
- New facilities will be expected to meet specified performance standards AND purchase allocation

Group permits will be voluntary:

- Dischargers must formally join
- Members will be deemed compliant with regulations as long as group permit obligations are met
- Group permit will reflect sum of individual allocations
- Joining members add their allocation to the group sum
- Departing members take allocation with them
- Group exceedance triggers NPDES Branch enforcement of individual permits, which includes options for offsetting the exceedance

- Poll results shown in the below figure on the right.
  - **Yea**: 4/5 can live with the items as presented
  - **Nay:** 1/5 express major concerns.
- Consensus **was not** reached on allocations and permitting at this time.

Discussion

Discussion around these provisions of the proposal were brief because most voting members expressed that they could live with proposal as presented.

- Kevin Hayes was the only voting member who expressed major concerns.
  - Those concerns deal with the atypical nature of industrial point source dischargers .
  - DWR restated that they would follow up with Mr. Hayes concerning, directly, after the meeting.
- Joey Hester highlighted a major point in the allocation and permitting provisions;
  - Individual, small dischargers would be given an annual mass allocation.
  - Rich Gannon clarified that this would act as a collective allocation, based on chosen equivalent concentration (not yet resolved).
    - The facilities are not assigned a limit;
    - Nothing is permitted unless they exceed their allocation over time.
- Bill Kreutzberger asked for further detail around individual to group allocations.
- Rich Gannon shared that if a larger facility absorbed or acquired a smaller facility, then that larger facility would also gain the small discharger's allocation.
- Given Mr. Hayes' unique situation, he abstained from further voting and expressed his support provided additional consideration from DWR regarding industrial point sources.
- Consensus is reached for allocations.

Poll 5a: Trading

Polling

Voting members are asked to rank their support for the trading proposal as presented. Kevin Hayes abstains from voting due to this representation of an industrial point source whose provisions would require further review from DWR. The total number of voting members changes to four.

5a - Trading

Facilities will be allowed to buy allocation:

- To acquire a new discharger permit
- To expand an existing facility

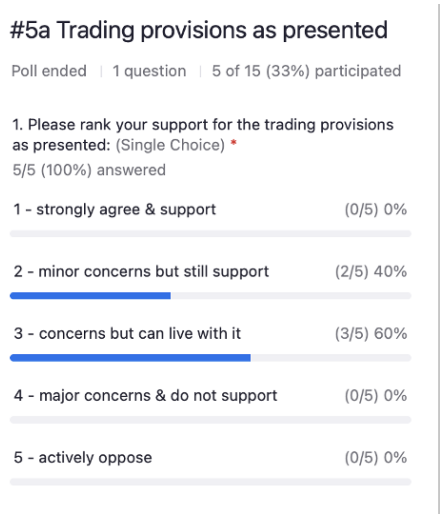
Facilities will be allowed to buy nitrogen or phosphorus offsets:

- To offset a group or individual permit exceedance
- To add allowable load to permitted allocation

Facilities will be allowed to sell allocation:

- To any existing discharger
- To any new discharger
- To another regulated PS or NPS entity for rule compliance

- Poll results shown in the below figure on the right.
  - **Yea**: 5/5 can live with the items as presented
  - **Nay:** 0/5 express major concerns.
- Consensus **was successfully** reached on trading provisions.



Discussion

Though consensus was reached on these provisions, DWR wanted to provide additional context for the trading provisions given the new information shared from the meeting's preceding discussion and because of the role trading plays in Bill Kreutzberger's proposed approach to Wastewater nutrient credits.

- Joey Hester incorporates Mr. Kreutzberger's trading components into the trading provisions.

- Mr. Hester and Rich Gannon briefly confer on the language to use to best represent Mr. Kreutzberger's approach.
  - Rich Gannon shared that "leasing" occurs from point source to point source.
    - This is often seen in the Neuse rules though leasing is done through bylaws and not through permitting.
  - Mr. Gannon stated that "term credit" would be the phrase to use to describe the annual [allocation] reductions for some period of time.
- Rich Gannon went on to state that he has seen the potential for this approach in other strategies.
- Joey Hester makes the following changes to the provisions. (Revisions to provision language bolded in blue text).
  - From point source to point source,

> Facilities will be allowed to sell**/lease** allocation:
> - To any existing discharger
> - To any new discharger
>
> Facilities will be allowed to sell allocation, term, or permanent credits:
> - To another regulated NPS entity for rule compliance

  - From point source to non-point source

> Facilities will be allowed to sell allocation, term, or permanent credits:
> - To another regulated NPS entity for rule compliance

The group is repolled to determine consensus on the revised language of the trading provisions. Kevin Hayes abstains from voting due his representation

5b – Trading

Facilities will be allowed to trade allocation:
- Permits will be modified accordingly

Facilities will be allowed to buy allocation:
- To acquire a new discharger permit
- To expand an existing facility

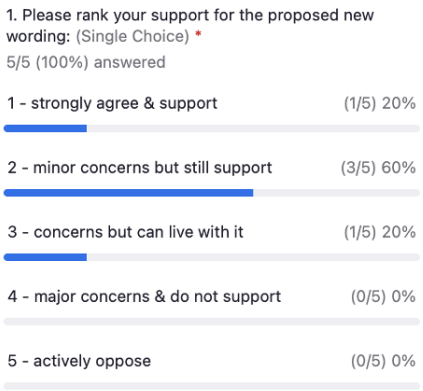
Facilities will be allowed to buy nitrogen or phosphorus offsets:
- To offset a group or individual permit exceedance
- To add allowable load to permitted allocation

Facilities will be allowed to sell/lease allocation:
- To any existing discharger
- To any new discharger

Facilities will be allowed to sell allocation, term, or permanent credits:

- To another regulated NPS entity for rule compliance

- Re-poll results shown in the below figure on the right.
  - **Yea**: 5/5 express support
  - **Nay:** 0/5 express major concerns
- Consensus **was successfully** reached on (5b) trading provisions with new wording.



Re-polling of remaining non-consensus item

With consensus reached on allocations and trading provisions, the group revisits the items where consensus was not reached: phosphorus limits.

Voting was completed for the 1b - phosphorus limits, and consensus was reached.

1b – Phosphorus limits and timeline (revised)

At 1st permit renewal after rule effective date:
- 0.75 mg/L phosphorus limit at permitted flow for facilities larger than 1 MGD
- 1.0 mg/L phosphorus limit at permitted flow for facilities larger than 0.1 MGD but smaller than 1 MGD

~~At 2nd permit renewal after rule effective date:~~
- ~~0.5 mg/L phosphorus limit at permitted flow for facilities larger than 8 MGD~~

Voting was completed for the 1c - phosphorus limits.

1c – Phosphorus limits and timeline (revised)

At 2nd permit renewal after rule effective date:
- 0.5 mg/L phosphorus limit at permitted flow for facilities larger than 8 MGD

- There was major opposition to this provision in the proposal.
- Final consensus **was not** reached, resulting in a split decision.
- DWR will draft a report including the TAG decision and an adjacent DWR recommentation.
  - Voting members unanimously support 1b.