

# NC Nutrient Criteria Development Plan – Criteria Implementation Committee

3/25/2019

## Attendees

### CIC members in attendance:

Andy McDaniel  
Anne Coan  
John Fear  
Douglas Durbin

T.J. Lynch  
Bill Kreuzberger

### SAC members online:

Lauren Petter

### CIC meeting facilitator:

Maya Cough-Schultz

### NCDEQ DWR staff in attendance:

Brian Wrenn  
Connie Brower  
Pam Behm (online)  
Christopher Ventaloro

David Huffman  
Nora Deamer  
Rich Gannon

**Meeting materials** can be found on the Division of Water Resources Nutrient Criteria Development Plan Scientific Advisory Council webpage. Click [here](#) for a direct link.

## Meeting notes

\*\*\*All questions, comments and answers are paraphrased\*\*\*

This meeting was held as a conference call/WebEx meeting

1. **Convene** (Jenny Halsey)
  - a. CIC members, DWR staff and audience attendees provide names and affiliations.
  - b. Desired outcomes:
    - i. Shared understanding of SAC's decisions on High Rock Lake (HRL).
    - ii. Shared understanding of the considerations DWR should use when determining N/P reductions for nutrient strategy.
  - c. No comments on the previous meeting minutes.
2. **SAC update** (Brian Wrenn)
  - a. Updated CIC on the February SAC meeting
    - i. Discussions focused on:
      1. Chlorophyll-a document
      2. Response variables for HRL

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3. Nitrogen (N) and Phosphorous (P) criteria for HRL
  - ii. Chlorophyll-a document
    1. The chlorophyll-a document will be worked on by all members of the SAC.
    2. Members will be assigned to contribute to chapters and each chapter will be assigned a lead that will be responsible for integrating the contributions from the other members.
    3. Goal is to have a final document to send to the CIC in August or October.
  - iii. HRL response variables
    1. During the discussion of HRL the SAC decided to hold off on determining criteria for most response variables until after they discussed chlorophyll-a.
    2. The tabled variables included: dissolved oxygen (DO), turbidity, clarity and cyanotoxins.
    3. Following post chlorophyll-a criteria discussion the SAC decided to:
      - Maintain the existing 15A NCAC 02B .0211 standards for DO and turbidity, and
      - Not recommend criteria for water clarity and cyanotoxins.
  - iv. N & P Criteria for HRL
    1. The SAC has decided to not make recommendations for N & P criteria for HRL. They considered both N & P concentrations and loadings as criteria but ultimately decided that these criteria would be more appropriate for stream and river systems.
    2. DWR will consider N & P controls for HRL as part of a nutrient management strategy.
  - v. SAC going forward
    1. We are approaching the end of the criteria recommendation process for HRL. The SAC chlorophyll-a criteria recommendation document should be completed by October of this year.
    2. SAC has decided to move forward with the Albemarle Sound as the next water body for criteria recommendations. DWR staff are gearing up for this shift and are reviewing the work done previously by the Albemarle-Pamlico National Estuary Partnership (APNEP) to help guide process.
    3. There will be no April SAC meeting and discussion of the Albemarle system will pick up again in the June SAC meeting.
3. **Nitrogen & Phosphorous Considerations** (Brian Wrenn)
  - a. What should DWR consider when developing N & P criteria as part of a nutrient management strategy for HRL? Some topics of interest include loading, reductions, and engaging stakeholders. What might be some other considerations?
  - b. Comments:
    - i. Bill K.: The Yadkin/Pee Dee River Basin Association (YPDRBA) is working on a white paper regarding nutrients and chlorophyll-a in HRL. It is about to be sent to

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- YPDRBA members for review. The white paper looks at targets for P loading and a process for N reductions. The goal is to have stakeholders lead this process.
- ii. Anne C.: The NC Farm Bureau has supported the collective compliance approach for agriculture in the past and would support this type of effort for agriculture going forward.
  - iii. Andy M.: The stormwater components of the Falls Lake and Jordan Lake nutrient management plans have been controversial. Prior to DWR digging into reductions of N & P, recommend taking a step back to determine where we are going with nutrient criteria. It is premature to consider N & P reductions for HRL, better to wait for the YPDRBA white paper to be released and to also understand the agriculture considerations. DWR will need to do this to be able to understand potential costs associated with a nutrient management plan. The overall strategy needs to be understood before reductions can be considered.
  - iv. Brian W.: DWR is not prepared to begin on a nutrient management plan for HRL soon. We voiced support for the YPDRBA to work with us to develop a strategy. Important to remember however that the YPDRBA is not the only group that will have concerns. We want to hear what other things we need to consider.
  - v. Andy M.: Need to see the scope of the YPDRBA white paper.
  - vi. Anne C.: Agriculture concerns will vary depending on the contents of the nutrient management plan.
  - vii. T. J. L.: Agrees with what has been discussed so far.
  - viii. John F.: The implementation concerns will vary depending on what N & P reductions DWR decides on.
  - ix. Doug D.: Does EPA have a different perspective on establishing N & P criteria?
    1. Lauren P.: The SAC has started to draft its reasoning for not providing recommendations for N & P criteria. Think DWR is going to provide comments for why they believe it is not appropriate to use N & P criteria for NPDES permitting purposes in HRL?
    2. Brian W.: We can provide our thoughts on this.
    3. Doug D.: EPA has been persistent in wanting states to develop N & P criteria. If we don't end up with N & P criteria for HRL will EPA reject?
    4. Lauren P.: SAC members were not comfortable with the technical support for N & P criteria for HRL. EPA should be ok with not establishing N & P criteria if there is no technical basis. Regarding the selection of a point on a modeled curve, this was discussed during the SAC process. We found no basis for selecting a point.
    5. Andy M.: I can talk about the curve and where to land on it, but it would be better to first see what the YPDRBA recommended.
    6. Brian W.: The intent of this discussion is not where to land on the curve but rather what we should take into consideration for making that decision.

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Also, there are no guarantees that what the YPDRBA comes up with will be accepted.

- x. Bill K.: The draft of the white paper will be provided at the YPDRBA meeting in April. Hope to get it to the CIC a week or two after that.
- xi. Doug D.: It's hard for the CIC to address the cost of chlorophyll-a reduction absent information on the control parameters.
- xii. Andy M.: Jordan Lake is going through this process right now. Would be good to review that.
- xiii. Rich G.: DWR is open to different approaches as there are differences between systems. Regarding stormwater sources of nutrients in HRL:
  1. Only two sizeable municipalities
  2. Roadways
  3. Agriculture, growth in poultry operations
    - Anne C.: Regarding poultry, we take this into consideration now as part of the fertilization rates for the land. The waste nutrients are taking the place of the fertilizer that was applied before.
    - Brian W.: Also need to get a better idea of all of the sources for all parts of the process.
- xiv. Andy M.: Can DWR layout the CIC's work on chlorophyll-a going forward? Concerned that chlorophyll-a is a huge permitting driver. CIC work will get more complex. Need to understand what regulatory options are available before we can do this and need to brainstorm what these options are.
  1. Brian W.: What is meant by regulatory options?
  2. Andy M.: The set of standards/criteria that the CIC will be available to consider.
  3. Brian W.: The role of the SAC is to provide a package to the CIC with criteria recommendations for causal and response variables (with help from DWR). The role of the CIC is to consider the social and fiscal impacts.
  4. Andy M.: If the SAC comes out with a chlorophyll-a criterion there is not much that the CIC can do unless we know what the implementation options are as that will affect how we determine potential costs. What will implementation look like? Can't determine cost until we know what the implementation will involve. This will take a lot of work.
  5. Bill K.: We will have to make assumptions to estimate costs. The white paper will help with this.
- xv. Doug D.: What will be our work product? CIC could look at the cost for HRL to comply with the current chlorophyll-a standard and then compare to the cost to comply with the SAC recommended criteria. If there are no details in the strategy for cost, we can't do anything quantitative.
  1. Brian W.: Criteria development and the nutrient management strategy will occur at different times. There may be little impact to the regulated

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community for the proposing new criteria, but the nutrient strategy will be something separate.

2. Andy M.: Is that really the intent of the CIC?
  3. Brian W.: The charter is clear that it talks about implementation of criteria.
  4. Rich G.: You can't really determine the cost of criteria. The CIC role would be limited to qualitative costs. CIC will need to make assumptions.
  5. Doug D.: Regarding Rich's comment about qualitative input, we can't know what the costs will be to the regulated community until the nutrient management plan is developed.
- xvi. Brian W.: I'm hearing that the CIC members don't feel there is much to comment on without a nutrient strategy. We need something similar to what was done for the pH document: types of things to consider, etc.
- xvii. Anne C.: Does there need to be a fiscal note for establishment of water quality standards? Do we need to comment on that?
1. Connie B.: When criteria are established, costs are estimated based on assumptions. This does not need to be exact and can be a narrative explanation of potential costs.
- xviii. Bill K.: That's why we need to make assumptions. Need to think about how the criteria can be structured to give flexibility to reduce costs without losing the benefits of the criteria.
- xix. Anne C.: We need to see the SAC chlorophyll-a document.
- xx. Andy M.: We will need to figure out what the universe of assumption are.
1. Brian W.: Do you want to brainstorm that now or work on it offline?
  2. Bill K.: Should do this offline and have a conference call in May to discuss.
  3. Anne C.: Bill can you give some examples?
  4. Bill K.: How will the switch from an instantaneous standard to a geomean affect implementation? Using a geomean can change the complexity of any models used. This can result in an increase in the cost to create the model.
- xxi. Andy M.: Need to try to figure out the scope of the work for chlorophyll-a. Need to discuss that everyone is in agreement. We can do this in May.
- xxii. Anne C.: Concerned about doing this prior to seeing the SAC chlorophyll-a document.
- xxiii. Brian W.: Prep work can be done. We will try to get a draft out as soon as the SAC feels confident in the chlorophyll-a criteria recommendation document.

### c. **Closing** (Brian Wrenn)

- i. Based on discussion today, we will consider holding the next CIC meeting in May.
  1. Brian W.: Asks CIC members to send him any comments they have for next steps and for any information DWR can provide.