

# Albemarle Sound: Nutrient Criteria Development Progress

## Nutrient Criteria Workgroup Meeting

### Draft Notes

10:00am-11:30am  
November 10, 2015  
WebEx Meeting

**Meeting Attendees:** Jim Hawhee (DWR), Steve Kroeger (DWR), Jing Lin (DWR), Anne Coan (NCFB), Clifton Bell (Brown & Caldwell), Keith Larick (NCFB), Lauren Petter (EPA), Marty Lebo (AquAeTer), Rhonda Evans (EPA), Sharon Fitzgerald (USGS), Tim Spruill (USGS-retired), Jamie McNees (DWR)

#### *Introductions*

Jim Hawhee convened the meeting and welcomed everyone who joined via WebEx. He updated the workgroup on his position change from APNEP to DWR. Presently, he plans to continue facilitating the workgroup through Phase I of the Albemarle Sound portion of the N.C. Nutrient Criteria Development Plan (NCDP).

#### *Summary of progress to date*

Jim provided an update to the group regarding progress to date for the workgroup and for projects informing the development of Albemarle Sound nutrient criteria. A series of maps were reviewed, including maps indicating designated uses, salinity, and monitoring stations.

Jim briefly reviewed potential nutrient impacts for the Albemarle Sound. He noted the importance of protecting its designated uses: fishable and swimmable, as well as aesthetic and toxic concerns. He also noted the presence of a bloom in the Chowan River this summer (distinguished from Albemarle Sound but draining to it) dominated by *Anabaena* and *Microcystis*. Microcystin toxins were also identified.

#### *2016 timeline discussion*

Jim showed a timeline for the NCDP in terms of Albemarle Sound Phase I. He reminded everyone that there was an original commitment to quarterly meetings and the hope was to have Phase I completed by March 2016. Steady progress has been made but phase I will likely extend until summer 2016. Jim noted that all workgroup projects are scheduled to conclude by December.

Jim showed another timeline for Phase II for Albemarle Sound in the NCDP. He noted that there are roughly two years reserved for future data acquisition or analysis if necessary, then in phase

If the group would make final recommendations. Jim also reminded the group that in his new position, he doesn't presently have plans to lead the workgroup beyond Phase I.

Jim then mentioned EPA's three generally recognized nutrient criteria development approaches (reference condition, stressor-response, and modeling). Jim stated that the initial focus for Phase I recommendations would likely be based on reference condition or stressor-response approaches, as no model for Albemarle Sound presently exists.

Jim discussed the status of various projects underway to inform the workgroup. They were as follows:

*NASA DEVELOP Project.* Complete but inconclusive results. He said that although using remote sensing for Chlorophyll-*a* monitoring was interesting, nothing definitive could be determined from this approach because it correlated poorly with *in situ* monitoring.

*USGS Albemarle Sound Initiatives.* Jim noted that these projects are nearly complete and the Duke MEM project analysis on nutrient variables can be found on the Google Drive Share Site. Sharon added that the Currituck Sound project is in final review and the Albemarle Sound project is in data review that will go for approval soon. She also shared that the Currituck report should be out by the end of the month and Albemarle report might be out by the end of next month.

Jim asked Sharon if they will be finished by the end of the year. She could not say definitively but had high hopes the reports will be concluded before the proposed data workshop in February (based on the draft 2016 timeline sent prior to the meeting, which was adjusted during the meeting).

*Literature Review.* Jim informed the group that the literature review for Tetra Tech is complete. Jim said he went through and created a text document for each keyword. Mike Paul provided an Excel Spreadsheet that is searchable. This will be sent out after the meeting.

*Data Review and Analysis.* Jim stated that the second NSTEPS project is underway and that they have some preliminary results. The project is scheduled to conclude in December. He continued saying that there would be a couple months between the release of the report and the data workshop, where DWR staff can potentially assist in providing additional information if there are remaining data gaps.

*Nutrient Criteria Law and Policy Review.* Jim stated that this project is nearly complete and that he sent edits to the policy fellow at Sea Grant yesterday. He explained that the case study findings were a helpful starting point for future investigation. The project also provides an overview of national litigation relating to nutrient criteria development, primarily in Florida. Jim then opened the floor for questions.

Anne expressed concern about the usability of the literature review. She stated that she was able to find titles of studies but not information on what the study accomplished. She also explained that there was a fee associated with accessing the articles online. Jim noted that due to copyright considerations full access couldn't be provided, but that those with access might provide hard copies of specific citations if used as the basis for criteria.

Anne and Sharon both mentioned difficulties accessing the literature review. Jim suggested she try again using the Excel database, which will be sent out after the meeting.

*Assignment of case study reviews for January meeting: Jim Hawhee*

Jim then discussed the proposed timeline (sent to the group before the meeting) that consists of three workshops. Jim suggested each person adopt a case study and provide a written analysis and verbal presentation about the study to the rest of the workgroup. These overviews and presentations would not be discussed until the January meeting which gives the workgroup two months to complete the task. Things to highlight in the analysis might include likes and dislikes about the process and what local stakeholders thought. It would be a chance to highlight or strike out case studies and synthesize the information.

Jim continued on to the February data review meeting. He mentioned a presentation from Mike Paul might be helpful regarding analysis on parameters in Albemarle Sound. The Tetra Tech data report would be reviewed, and potentially other data from DWR if necessary.

Jim concluded with discussing the March meeting. He would like to see the group have the final meeting in Edenton to adopt a proposal or negotiate a compromise. He would like to see a draft Phase I report summarizing proceedings and recommendations in April for workgroup and NCDP Scientific Advisory Committee comment. The goal would be to finalize in May or June and DWR would then decide whether to take it to the rule making process.

Jim then asked for comments on the draft approach for concluding Phase I.

Anne thought proposing criteria by March was ambitious. She suggested looking at the High Rock Lake model and noted the utility of modeling for criteria development. She also expressed concern that the Albemarle Sound recommendations could potentially go to rulemaking rather than being solely used to inform statewide estuarine criteria development.

Jim responded that we don't have an Albemarle Sound model at this time and that Phase I was designed to provide recommendations (for criteria or further investigation) with the information we presently have. Modeling is one of three nutrient criteria development approaches that has been approved by EPA. However, a conclusion by the group that presently available information is insufficient to propose criteria at the end of Phase I is a reasonable possibility. With regard to rulemaking, he mentioned that recommendations would be provided to the department, but further review would likely take place before rulemaking commenced.

Sharon Fitzgerald inquired whether EPA would accept North Carolina's proposal. Jim noted that EPA is represented on the workgroup and can note concerns if warranted.

Lauren also noted that after the Tetra Tech report and USGS report it's worth seeing what data is available and determining whether it is sufficient to support criteria. She noted the utility of causal criteria in the permitting process.

Marty thought the goals for the January and February meetings were reasonable but was concerned that coming up with a recommendation in March was ambitious.

Keith reminded the group that the NCDP EPA signed off on is projecting criteria being set by 2019. He agreed that March seems ambitious, that there is still plenty of time left.

Jim responded noted the difference between adopting estuarine criteria and concluding Phase I. Phase I does not need to conclude with criteria recommendations, but could. Jim asked if there were objections to slowing down the decision making process for phase I. There were none.

Sharon Fitzgerald asked Jim when he would be stepping away. Jim noted that in his new role he has new duties but will try to facilitate through the end of Phase I.

Anne mentioned the January case study review and asked for more details on the responsibilities of the workgroup members. Jim asked workgroup members to volunteer to complete an approximately 2-page case study review. Anne noted that the holidays were coming up, which might pose a problem for some of the members.

Jim then showed a preliminary template using Hawaii's nutrient criteria as an example of the case study process. Clifton informed the group that he had worked in Hawaii on nutrient criteria and that it has since become problematic. The group had some preliminary discussion on the topic, and Jim noted that this is the purpose of the January meetings.

Anne suggested that instead of each member doing a case study, experts from various jurisdictions can discuss their experiences. Sharon also supported that suggestion.

Jim said links could be provided for presentations made in Florida and Chesapeake Bay. He agreed that it would be helpful to hear from locals but it might also be helpful to have findings on paper. He asked the group if he should arrange speakers for the upcoming meetings.

Tim noted he would like to hear perspectives from the people involved in the workgroup.

Jim then suggested each person contact jurisdictional experts and then follow up with a presentation on what was discussed.

Marty noted he was hesitant to condense too much information into short summaries for discussion. We may need more than 1 meeting for case studies.

Clifton Bell added that in the James River Estuary in Virginia they were linking chlorophyll-*a* to harmful algal blooms. Jim agreed that the Virginia case study should be reviewed.

Anne asked if you had to support the case study you choose. Jim said no endorsement is implied. This process is to educate everyone on alternate criteria development approaches.

Jim then attempted to combine some of the considerations voiced by the workgroup to construct a final plan for the meetings. He suggested that the group take on case studies and prepare three to four page summaries for the January meeting, arrange speakers for the February meeting to further explore discussion points via WebEx, and push the data review to March. Then the group would discuss future steps at the March meeting.

There were no objections to this proposal among the workgroup.

Jim showed a list of examples of case studies and asked people to volunteer for a case study they would be interested in. Assignments were as follows:

- Clifton Bell, Brown and Caldwell: Chesapeake Bay/James River Estuary
- Lauren Petter, EPA: Florida
- Tim Spruill, USGS retired: Delaware Inland Bays, Chesapeake Bay
- Marty Lebo, AquAeTer: Massachusetts Back Bays and Great Bay (NH)
- Marygrace Knight, APNEP: Puget Sound
- Jim Hawhee, DWR: Hawaii and California

Anne asked if Jim could provide a template for the case study write-ups. Jim said he would do that.

Marty inquired about what questions to ask investigators and what questions need to be answered about the cases. Jim suggested that the workgroup members decide what information they would like to hear from the case studies and to let him know. Jim said he would send out a draft template for review by the group.

Anne asked when the meeting will be held in January. Jim stated it would be held later in the month but that he would send out a Doodle poll later with specific dates.

### *Conclusion*

Jim informed the group that he would be sending out a follow-up soon. Anne asked if Jim could send the PowerPoint presentation to the workgroup. Jim said he would do that after the meeting. Jim asked for people to speak their names if they were present on the phone and did not contribute to the conversation. No one responded.

The meeting adjourned at 11:30am.