CCMP Implementation Committee

Meeting Agenda & Notes

DATE & TIME: *19 Aug, 2019 9-11AM*
LOCATION: CIB Conference Room
39375 Inlet Road Rehoboth Beach, DE 19971
Meeting called by: Chris Bason, Chair

AGENDA ITEMS

I. Call to order — C. Bason

II. Meeting agenda review — C. Bason

III. Review of Committee purpose and objectives — C. Bason

Chris Bason provides an overview of the purpose and objectives of CCMP Implementation Committee. It is a standing committee of the BOD composed of CCMP Signatory representatives and others that work together in support of our CCMP. Primary objectives are to implement, track and report progress on CCMP implementation. Committee is also responsible for identifying barriers and finding solutions to implementation. Implementation Committees are traditional committees of NEPs.

Chris asked if anyone has any questions. Hans asked if others have it, what does that look like? Megan commented that all programs she works with have some sort of analogous committee at a working level but that they are each different.

IV. Review of June 17th meeting minutes — M. Schmidt

Michelle runs through the highlights of the last meeting. Meeting minutes can be requested if needed. No requested changes.

V. Update on the status of the CCMP Revision process — M. Schmidt

Michelle provided update on CCMP Revision. Reported that it was moving along well but running behind on the most recent timeline. CIB was working with RK&K to update the draft document after some EPA comments and are also working on the narrative sections (introduction, etc). Draft will go out to partners for their review in a couple weeks which puts us into September. No questions on process.

III. STAC Monitoring Subcommittee Report — M. Walch

Marianne provided report: STAC has been working for the last year and a half on a plan to develop new models for the Inland Bays. This is a large component of the CCMP and a high priority for the Inland Bays Monitoring Plan. Previously there were watershed loading and water quality models developed in the late 90's that were used to develop the TMDLs. Those models are no longer functional and have drawbacks: they were developed using data from the 90s and we have a better understanding of the water quality issues in the Bays and the watershed loading that is occurring in the Bays. There was an analysis done of the model and it was determined that bay hydrodynamics have changed since the model was developed - more water is coming in through the inlet which is having a major impact. The

model that was developed is not very effective at modeling daily oxygen cycling that goes on in the tributaries in the Bays. Model also didn't capture exchange between water column and sediment, nutrients, and oxygen. Consensus is a new model or set of models that includes a watershed loading model is very desirable to help predict changes in water quality in response to changes in nutrient loading and to help predict impact of BMPs that are put into the watershed so we can apply our limited dollars most effectively. We should have a model that really understands the impacts of the water coming in from the Inlet and how that is going to change in the future. It would be great to have a model that predicts some of the impacts of climate change in the future. STAC has been focusing meetings on issues of models for the Inland Bays - have brought in experts who have developed models for other estuaries or have worked within the Inland Bays to share their work and what they think the priorities are. STAC working through a subcommittee has been developing a white paper to bring together all of the information and conclusions that STAC has come to. They have a draft white paper that is going through review of STAC. Overall STAC subcommittee has recommended that we put out an RFI to see what kinds of tools and practitioners are out there and to see what can be offered and an approximate cost. STAC leadership and subcommittee will review comments on draft and vote on it to conclude the revisions to the white paper. After which it will go to the CIB Board of Directors. One component we know will come is a new watershed loading model.

Jenn explained that they had a very inclusive process of people on the subcommittee and STAC was updated at every single meeting on the progress of the subcommittee.

Chris asked if anyone else had any questions. Hans had a question on hydrodynamic side: Did we discuss getting new bathymetry data or just use whatever is available? Marianne said they want to collect new data on bathymetry on the Inlet. They have been having discussions with USACE to do that work. Last time that was done is 2004. Estimated maybe $50-60k to do that work. Hans said some of the upper tributaries have large swings in oxygen levels - are we not proposing new bathymetry data for those? Answer is that we are unsure at this time. Chris said that if you look at the current bathymetry data, we could extrapolate upstream. Hans said some have been modeled by FEMA.

Hans commented that the data we have been collecting is not regulatory data - probably more like trend data. Marianne responded that water quality monitoring collects data through UDel and Citizen Science. We are trying to get continuous water quality sondes set up in the Bays but we are still working on that. The UDel WICCED program may have some funding. CIB has put a couple of sondes in the Indian River the past couple summers.

Hans made a comment that it really comes down to can the model be used for regulatory purposes?

Marianne responded that the intent of this model is not for regulatory purposes.

Hans responded that for any update to the TMDLs you would have to have a regulatory tool to support the changes.

Stephen Williams commented that that was not the intent when Chris met with Sec. Garvin to discuss. That type of stuff was never put on the table. If the model showed dramatic changes in our needs to reduce nutrients then everyone would jump on board.

Chris Bason responded that the reason it wasn't put on the table is because there wasn't support from the Department (DNREC). Other estuary programs have very sophisticated monitoring programs and it's just in DE that whether it is a cost issue or other that we don't compare to other estuaries in terms of modeling. It would be great to expand on our work in the Indian River.

Hans commented that monitoring at the Indian River Inlet that measures several parameters would be ideal - depending on what you can afford.

No other questions or concerns.

IV. Presentation on watershed nutrient loading models - Center for Watershed Protection
Deb Caraco, Senior Watershed Engineer with the Center for Watershed Protection, will share her knowledge and expertise on watershed nutrient loading models including an overview of the types of models used today, the cost to create nutrient loading models, and how the Center and partners can use an updated model to achieve TMDLs.

[Presentation can be provided on request] Deb provided a general overview of basics of modeling and some examples of models that the CWP have worked on. Some highlights are to discuss tools that look at how well BMPs function as well as examine land use loading. Models can be simple or very complex. Huge benefit of models is that they help to understand where do we get the best bang for our buck, where is the best impact for our work on BMPs.

Chris asked about the Neuse area map - delivery factor of 1.0 does that mean that nothing is retained in those areas? Answer: no, basically the nitrogen is not being trapped in those areas in the stream networks or impoundments. Those are considered direct contributions.

Second question on land use loading associated with Sparrow model: Was that an instance that he LUL was determined using the percentage of each land cover type in a subwatershed that had water quality measurements with a stream or how was that done? Answer: They used a combo of monitoring data they had and regional Sparrow model and combined with land cover data, then ran that model to estimate for each land use what is the load per acre. Then they added up the land cover data, so for each type of land cover they have an estimate of the number of pounds of nitrogen delivered to the watershed. Chris asked if this is typical for how Sparrow works. Answer: Sparrow uses different land covers and so it is a statistically based model. Uses land cover combined with monitoring data to develop.

Deb: At the CWP they focus on smaller scales. They use a couple of tools to show other side of modeling which is an application tool. There is a model you develop based on whatever data you have available and then there is a suite of tools that help to crack how much benefit we get from BMPs. [see presentation for examples]

Chris: Spreadsheet models that track. One thing we would value is something that has some ongoing energy behind it so there is more assurance that the elements of the model are continually updated so we don't have to do all that work ourselves and there is some sort of central support for a model. Given my thoughts, do you have any experience with those models that have the support behind them? Answer: With spreadsheet models - there are others that are a little different (gave an EPA example). There are some that are updated by bigger organizations. There is a large suite of ones that are the "next step up" - SWAM model as an example. The one she showed has been around for a while and a lot of times the spreadsheet tools are adapted by those who are using them. An advantage to spreadsheet tool is that they are more adaptable by yourself as opposed to an HSPF model that can't be changed as easily.

Chris asks to hear from group on their perspectives what utility they see from this approach.

Stephen commented that he would defer to the modelers because he doesn't have that expertise. DNREC uses CAST model and they are trying to secure additional funds to create something they are calling DAST that they can apply to other drainage basins within the State.

Chris Brosch commented that the DAST would be limited for the IB because the calibration between the main channel loadings would have to be added on. If you want a targeting tool you need something that has a calibration with regards to the hydrodynamics within the system.

Hans made a comment that timeline matters - anything with DO then spreadsheets are worthless. That has to be an early question discussed. Does the Center want to be the diurnal DO expert or the annual phosphorus loading expert. What kind of variation does the Committee want to predict - daily, annual, etc?

Chris Bason replied that certainly we have a tracking function need and a planning function need. So it sounds like we would need some level of calibrated model to support a spreadsheet tracking model. He has the same questions as Hans which is what are the linkages between loading model and hydrodynamic and nutrient model?

Hans commented that if you link them it can be done, and if you calibrate it you can choose your timeline, and then fill in the blanks. You can end up with thousands of data points. Need to decide what is your mission and what kind of data fits into that mission?

Chris Brosch commented that It seems like the CCMP is designed to whack away at the nutrient problem. Tools like CAST give you an annual accounting of what an increase in BMPs are going to lead to in a reduction in nutrients. Thinks it would be fair to rely on a tool like that that is planned to be available soon statewide.

Chris Bason asked if DDA is involved in the development process [of DAST]?

Stephen Williams commented that the DAST is called a big idea right now - funding may or may not happen - it is a big competition for the leftover funds.

Chris Brosch commented that DDA doesn't have a financial interest in DAST. CAST can already do what they need to do.

Chris Bason asks for Jenn's perspective: She agrees that CAST can be used for a lot of the scenarios but there is some work that has to be done to apply it to the IB. Thinks that we do need to find the investment to do the indepth hydrodynamic modeling. If we want to look at how BMP implementation affects the watershed then that can be done at the spreadsheet model level. The RFP would list questions we have and needs we have to see what can be done and what the best use of funds is.

Marianne confirmed that we are lined up to send out an RFI as a result of the whitepaper.

Chris comments that eventually we will have MS4 permits in the IB. Should we be thinking in terms of a model that can be adapted for individual towns? Should that be considered as a want or a need?

Jenn commented that she doesn't know that any towns are doing any modeling because of MS4 permits likely due to lack of technical expertise on staff. Does not think this is unique to Delaware.

Chris Brosh offered that we would have to think about what would a model do for a town. It would tell them the best place to put a BMP but the permits are mostly for new development, not retrofit, so those models are not useful.

V. Surface Water Matching Planning Grant: Rapid Assessment Project Plan M. Schmidt
Overview of the Center's SWMPG application to complete a Rapid Assessment Project Plan

Michelle provided an overview of the RAPP project. Decided to change track a little bit from the Pollution Control Project Plan. The RAPP will be similar to the Watershed Reforestation Plan in that this project will look at multiple BMPs including reforestation, wetland creation, stream restoration, etc., primarily focused in the Ag landscape. Projects will be conceptualized: will locate sites for practices, work out with landowners, come up with design and cost, etc. The idea is that the concept designs can be easily used to write grant proposals when funding becomes available. Will partner with USACE using their Planning Assistance to the State funding. Will work with the Conservation District to include 21st Century RC&D projects into the RAPP as well. Some opportunity for our CCMP Implementation Committee to be involved in this project.

Announcements:

Chris Bason: We have been invited to share a project list to Sen Carper's office in regards to the WRDA for 2020. This is the time that their office is looking for your wish list of projects that could be completed in DE and could be authorized by USACE. Projects can be big or small. The Center will be putting together a wish list and we would like to run it by the Committee and if there is alignment we can work together on that. This authorizes funds that can then be appropriated for those projects. Can span from estuary restoration, to hydrodynamic modeling, to surface water protection and restoration. Hans recommends continuous volume monitoring or others (not nutrients) for the Inlet.

Megan: From EPA Region III, the formal seat at the Committee should be the Section Chief - there has been a series of acting persons but they now have a formal Chief (Cathy Magliocchetti) who will be attending the meetings in the future.

No other announcements.

VI. Schedule next meeting All

Next meeting scheduled for October 28th.

VIII. Adjourn