



Science and Technical Advisory Committee

Partnership for the Delaware Estuary: A National Estuary Program
www.DelawareEstuary.org

36th STAC Meeting Minutes

Wednesday, May 20, 2015

9:30 A.M. to 2:30 P.M.

Partnership for the Delaware Estuary - Wilmington, DE

STAC Attendees

Thomas Fikslin, DRBC
Jeff Fischer, USGS
Dorina Frizzera, NJDEP
Heather Jensen, ACOE*
Moses Katkowski, TNC
Gerald Kauffman, UDel
Susan Kilham, Drexel
Kristin Koroncai, EPA R3
Danielle Kreeger, PDE
Alison Rogerson, DNREC
Peter Rowe, NJ Sea Grant*
Kelly Somers, EPA R3
Kenneth Strait, PSE&G
David Wolanski, DNREC

Non-STAC Attendees

Cynthia Stahl, EPA R3
Beth Watson, ANS-DU
Allison Ostertag, PDE
Sarah Bouboulis, PDE
Josh Moody, PDE
Angela Padeletti, PDE
LeeAnn Haaf, PDE
Priscilla Cole, PDE
Dee Durham, PDE
Elizabeth Horsey, PDE
Jennifer Adkins, PDE

* *phone*

I. Call to Order– Chair Sue Kilham, Chair

- Chair Kilham called the meeting to order at 9:40am.

II. STAC Business – Chair Kilham

- The agenda was briefly reviewed and the draft minutes from the February 24, 2015 joint meeting of the STAC and MACC were passed around for any final edits (to be voted on later in the meeting).
- Chair Kilham and Danielle Kreeger mentioned that the minutes were longer than normal because it was a joint meeting of the STAC and MACC. The STAC and MACC meet annually. The minutes need to capture monitoring activities and plans for reporting to EPA and the EIC; hence they need to be thorough.
- The group introduced themselves, as well as a few attendees on the conference line.

- Elections Update: Only 5 incumbents are up for reelection and they are on equal standing with 2 new nominees: Chris Kriegner from OBrien and Gere, and Beth Watson from The Academy of Natural Sciences of Drexel University. Following the meeting, an email vote will go out. The vote will be for 6 of the seven people on the ballot.

III. NEP Task Orientation – Danielle Kreeger

- For the benefit of new members and as a reminder for everyone, Danielle gave an overview of the major NEP tasks with which the STAC is asked to assist with. She noted that the next few years will be a time of change and opportunity. This will be a time where the STAC can help craft the focus of the program.
- Danielle discussed how the “Delaware Estuary Program” includes PDE plus all of our partners. PDE is simply the entity that coordinates DELEP. Two thirds of what PDE does is not directly part of the DELEP grant for operations, but everything PDE does must be consistent with implementation of the CCMP for DELEP.
- Danielle discussed nine DELEP activities that the STAC is responsible for assisting with:
 - CCMP
 - We exist to implement the CCMP, it must be updated every 5 years and revised fully every 10 years. This is new, and the current CCMP has been the same for almost 20 years. We will be revising the CCMP over the next 2 years
 - The new CCMP will be targeted towards our measurable goals, rather than fully comprehensive
 - Measureable Goals
 - Our first ever Measureable Goals were finalized in 2013, including Steering Committee approval of 21 short term goals. Being our first attempt at this, we expect the need to revise these as we test whether they are able to be tracked and addressed
 - Point people were identified to help reach track progress and address each of these goals. They are asked to provide a report out each year at the annual STAC-EIC fall meeting
 - Because the CCMP revision process will be onerous, we may need to step back from some goals activities (e.g. writing grant proposals to gather new data). But the goals will definitely be useful for guiding the CCMP
 - State of the Estuary (SOE)
 - PDE and partners such as DRBC prepare a SOE at least every 5 years
 - The SOE has been improving each time (2002, 2008, 2012). In 2008 it was just a newsletter version but the STAC was involved for the first time, helping to strengthen data for the indicators that were selected.
 - In 2012, the STAC prepared a data-rich Technical Report for the Estuary and River Basin (TREB) with 50 indicators, prior to a public-friendly SOE

- newsletter style report (15 indicators). This 2-part SOE approach was widely viewed as being very useful, allowing the STAC to invest as much time and include as much data as they wanted, thus improving the credibility of the public SOE report. We plan on sticking with this approach in the future.
- Without the CCMP revision, PDE would want to do the next TREB/SOE effort to finish in 2017, which would require starting this year. However, it's uncertain whether this will be possible, to be discussed at our next STAC/EIC meeting in the fall. One option might be to simply update the indicators for which new data exist, following the same TREB format as 2012. Danielle will send out a poll to gauge prior TREB authors and STAC members as to whether new data exist, etc.
 - Monitoring Coordination
 - All National Estuary Programs are responsible for helping to coordinate environmental monitoring. This is so that an ecosystem-based SOE report can be prepared and to help track CCMP and Goals progress, among other reasons. But coordination of monitoring is challenging, especially for large estuaries. And other groups (e.g. MACC) exist for this purpose.
 - PDE and DRBC led an effort in 2008 to inventory current monitoring programs and identify data gaps and costs for improving the monitoring. This effort resulted in a 2008 report, the Delaware Estuary Watershed to Ocean Observing System, one of 3 national pilots for envisioning a comprehensive monitoring system from headwaters to ocean. Ideally, this effort would be repeated periodically, but it took 2 years.
 - The STAC and MACC agreed to coordinate monitoring via their annual joint meeting, focusing in reporting out on the many organic efforts to fill data gaps, and to share info on emerging needs.
 - In addition, a Monitoring Conference has been discussed, and the resulting proceedings report might be used to prepare a more formal Monitoring Plan.
 - In the future we can hopefully link our goals with our monitoring efforts and our indicators
 - Discussion of monitoring has continued at meetings and minutes have been used as means of reporting to EPA
 - Priority Setting
 - The STAC was recreated in 2006 (having existed during the first years of DELEP) to help with the first regional Science Conference. One charge for the new STAC was to use the conference proceedings to construct a white paper on the top needs for Delaware Estuary science and management. The white paper was then used to generate support and funding to address the top needs, such as via the 2007 PDE Strategic Plan. Many needs in that white paper have been directly addressed. A

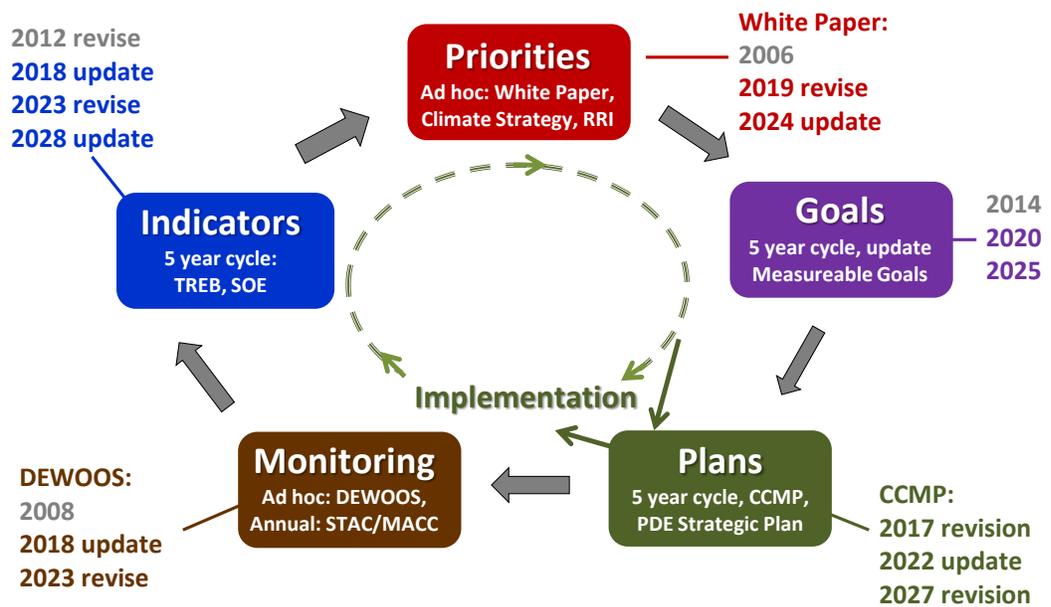
- future reprise of the white paper efforts has been discussed, and in the meantime the STAC helps identify emerging needs and priorities for DELEP.
- Science and Environmental Summit
 - The first Delaware Estuary Science Conference in 2005 brought together more than 250 scientists and managers to share information and network.
 - The meeting was so successful that it has since been held every two years (2007, 2009, 2011, 2013, 2015), growing a bit in size and quality. In 2011, the program was expanded to include outreach, restoration, etc, being renamed the “Summit”
 - The STAC serves as the technical Steering Committee for the Summit, helping to choose session themes and speakers, recruit sponsors, moderate, and assist with proceedings.
 - The next Summit is planned for January 2017, and so initial planning will commence in January 2016.
 - PDE Strategic Plan
 - As the coordinator for DELEP, PDE is responsible for implementing the CCMP. In many cases, PDE works indirectly to facilitate or support actions that are being led by other entities, such as the states and DRBC. In other cases, PDE directly implements CCMP actions, such as leading monitoring and tracking of wetlands, outreach, etc.
 - To delineate focal areas for PDE to work on, a strategic plan is prepared every 5 years (2007, 2012).
 - In addition to assisting with drafting the CCMP, Measureable Goals, and other priority-setting activities, the STAC is invited to help contribute to and review the PDE Strategic Plan that governs what PDE will focus on.
 - Focal Work Groups
 - Numerous technical work groups exist that attend to various DELEP needs and CCMP actions.
 - Some of these workgroups are operated by DELEP partners (e.g. MACC, TAC), and some have been created by the STAC (e.g. Climate, Regional Restoration, Wetlands, Benthics)
 - The STAC-affiliated work groups are ad hoc, being operational when funding and needs arise.
 - These work groups are typically comprised of non-STAC specialists and at least one STAC member who can report out at STAC meetings.
 - STAC Briefs
 - Emerging topics can arise for which the EIC or others might request that the STAC to take a look at.
 - PDE never takes a position on contentious issues, instead playing an information sharing and problem-solving role. To supply managers and

decision-makers with facts, the STAC sometimes gets asked to summarize what we know and don't know (the state of the science).

- Past briefs are here: <http://delawareestuary.org/node/201>

- The final slide discussed how many of these linked projects/products could ideally connect via an iterative loop process. This is for initial discussion purposes, and the dates and sequence can be modified.
- To date, these various products and activities have generally not been coordinated. Working to sequence the various products so that they build on each other should strengthen the products and improve efficiency. They could evolve into an environmental management system.

Next 10 Years - Balance and Link NEP Tasks ?



- Discussion. Chair Kilham said it seemed that everything had a 2018 deadline and asked how this would be possible? Dave Wolanski said it was like herding cats, and even though the plan looked alright, nothing would be as easy as it looks.
- The group agreed that working on more than one product per year would be a challenge, and the feasibility of many future products is still in question due to increasingly tight capacity and no new funding.
- However, Tom Fikslin noted that using the Measureable Goals as a framework for the new CCMP would make that part easier.
- Danielle Kreeger discussed that the top next need will be the CCMP revision, followed probably by the SOE and then the monitoring needs assessment. Ongoing monitoring

coordination (via the current STAC/MACC dialogue) is pretty flexible and happens organically. We and EPA realize (as a group) that because we are such a large NEP it is harder to coordinate these efforts.

- Chair Kilham asked whether the MACC should take the lead on some of these, such as monitoring coordination? Danielle noted that the MACC was originally created for DELEP to do this, but it's focus had evolved over the years. Discussion followed, noting that different groups sometimes have monitored the same metrics at the same times and locations, which is not efficient. Therefore, researchers need to be talking to each other on a consistent basis, especially wetland and water people.
- Discussion also followed concerning the need to be more inclusive of people outside of the immediate group, with respect to monitoring coordination. A broader based engagement would help to minimize overlaps in data collection and encourage more data sharing.
- A monitoring conference would probably be helpful soon after the CCMP is released to examine where gaps in monitoring still remain. Call it DEWOOS reprised or something else, but the first step would be the conference, which could be handled like the 2005 Science Conference (a needs assessment format).

IV. **CCMP Revision** – Jen Adkins, Priscilla Cole

- Priscilla Cole presented the plan for revising the CCMP. This was the same presentation shown to and approved by the Steering Committee earlier in the month.
- The general overview of the plan is as follows (please see Priscilla's presentation for a more thorough explanation):
 - Step 1: After all necessary approvals of "the plan," expert work groups will be formed into the three major areas of the CCMP (following the Measureable Goals format): healthy waters, healthy communities, and healthy habitats.
 - Step 2: Interview/survey these experts and determine what actions will need to go into the CCMP
 - Step 3: Create a very rough strawman of these actions based on collected information
 - Step 4: Receive input from the experts on the initial outline, then redraft based on their input—this will be conducted via workshops
 - Step 5: Re-examine this second draft of the CCMP with an eye for the effects of climate change and associated vulnerabilities. Will our actions stand up to the expected effects of climate change?
 - Step 6: Redraft based on the outcomes of the climate change vulnerability assessment, as well as getting input from broader partner input.
 - Step 7: Once an acceptable draft is devised, get input from an even larger base, including the public.
 - Step 8: Finalize, and get approval from the Steering Committee

○ Step 9: Conduct outreach

- The process is in line with a completion date of late 2017, with an actual “due date” of September 2018. There may also be some money to hire a contractor to do some of the writing.
- The CCMP revision will require significant investment from the STAC. The process will include up to 8 additional CCMP workgroups and 10 expert workshops; however, all STAC members will not need to attend all of these meetings. These meetings will be in addition to regular quarterly STAC meetings.
- The plan is to not entirely re-create the wheel. A lot of NEPs have already finished their CCMPs. We have looked into their processes, and we think we have a good understanding of what worked for them.
- There has also been significant work on climate vulnerability in a variety of areas (wetlands, water supply, carbon-off sets, forests, agriculture, brownfields, etc.) and we do not plan to re-create things that have been done already, assuming the information is still current. PA and DE may also have significant vulnerability assessments completed.
- Discussion. Dave Wolanski expressed concerned about the number of workshops. Jen Adkins mentioned that not everyone will need to attend every meeting. Chair Kilham suggested that two workshops will likely be needed per “area:” one with the experts and one to assess climate change vulnerability.
- Danielle Kreeger noted that once we can see a schedule, it might help ease concerns. Jen said that there will be a joint meeting in the fall where we will kick off the writing phase, and by then the schedule should be set. Before that, we first need to identify the experts.
- Danielle also noted that some STAC members have trouble travelling. Jen Adkins stressed that missing one meeting did not exclude people from participating in the process.
- Danielle stressed that we want as much STAC participation as possible, since this is an opportunity for the STAC to have a say in how DELEP moves forward.
- Jen also mentioned that PADEP suggested there could be grants available to help with this process. STAC reps said they are willing to look into such opportunities, but that fundraising and proposal effort could also be a big time draw.
- Ken Strait commented that a large hurdle might be finding language that all participants will find acceptable. Jen agreed, and mentioned that a lot of grouping will need to be done, and another difficult part will be deciding what gets left out. We do not need “a whole lot” of background information about everything since we can reference the TREB or measurable goals instead.
- Danielle went on to discuss that after the CCMP is completed that it would be a good time to have a monitoring conference, perhaps in the off-years of Science Summit. Jen mentioned, however, that the CCMP needs a monitoring plan included but perhaps it can point to something else. Danielle Kreeger stated that the monitoring conference might also be helpful for tracking CCMP progress.

- Priscilla Cole mentioned that currently, there is little detail with regard to the CCMP monitoring plan, and also the financing plan. For other NEPs, the CCMPs can be very general, simply noting that there is a “plan” to develop future monitoring and financial plans---such as having regular meetings to discuss monitoring.
- Tom Fikslin suggested that rather than a comprehensive monitoring plan that covers everything being done by DELEP and others, perhaps the CCMP should focus instead on only those monitoring programs that we would like to see continue or expanded.
- Alison Rogerson said that perhaps the monitoring conference could be grouped with other regular conferences, such as the biennial DelMarVa Wetland Conference (planned for 2016, 2018).

ACTION ITEM: Chair Sue Kilham asked that the CCMP climate vulnerability checklist be sent to the STAC. Jen Adkins said she would send.

- There was additional discussion on the climate vulnerability assessment portion. Jen stressed that we do not need to duplicate effort. Some states have already done a significant portion of this. The CCMP just needs to make sure our goals are achievable given climate change expectations.
- Dorina Frizzera suggested that the climate vulnerability not just focus on sea level rise, but should include other factors, such as invasives, water withdrawals, etc. Jen agreed, but also noted that the CCMP needs to be revised every 10 years, so we really only have to think in the 10 year frame of reference.
- There was discussion on what role the EPA can play in the CCMP writing process, particularly for members of the STAC. Kelly Somers is under the impression that they can participate, but cannot be lead authors. But as DELEP partners, EPA should have more than just an overseeing role. The EPA will help and offer resources in whatever way they can, often we just have to ask.
- All STAC members were polled to get their consent for participating in the CCMP revision process, including some commitment of time.
 - All members that were present agreed to participate in the process, as much as their schedules and travel restrictions would allow.
- Danielle came back to the discussion of how the SOE and CCMP processes can fit together. There might be some money for data gathering. Jen suggested that if we agree to pursue a TREB update, that it should come out a little before or at the same time as the CCMP (not after). There likely will not be resources to do a public SOE version or press type events, and the TREB update would serve mainly as information needed to support CCMP actions. The TREB might also serve as a place to put information that can't go in the CCMP.
- Danielle mentioned that since the CCMP will be a full revision while the TREB would be just an update; in 5 more years, TREB could be a full revision and the

CCMP just an update, then repeat the flip every 5 years thereafter. This way, not as much work every cycle.

- Jen also discussed how we hope to frame the CCMP in a way that makes it easy for updates and tracking on progress in implementing CCMP actions and reaching Measureable Goals. Dorina Frizzera suggested a streamlined, but targeted approach.

V. **Delaware Estuary Restoration Potential Feasibility Study** – Heather Jensen

Goal: Informational, regarding potential support for estuary restoration

- Heather reported on an ACOE FY2017 opportunity to participate in a feasibility study regarding ecosystem restoration opportunities. The ACOE needs a letter stating that PDE is interested and able to provide cost sharing if ACOE receives federal funds. Opportunities for evaluation include watershed management, nutrients, living shorelines, thin-layer placement, oyster restoration and ground water.
- First step is a feasibility study to be completed in 3 years for up to \$3 million, shared 50-50 with a partner. As this opportunity is on the heels of the CCMP, it can possibly pick up where the CCMP leaves off to help identify future needs.
- Danielle spoke on PDE history of discussions with Philly ACOE Estuary Restoration Grant Program and that as there are lots of needs and project ideas, so we are happy to do whatever we can to support. As of now it is not exactly clear where cost share funds will come from.
- Dorina stated that NJDEP will supply any support that would be helpful including a letter
- Heather stated that PDE would serve as cost share non-federal partner if money is granted and that cost share allows for funds to be used as non-federal match
- Sue Kilham asked if states can provide money to PDE?
- Jen put forth the idea that PDE could be the entity that packaged monies from multiple groups together as match. PDE would be the official partner, but inclusive of other agencies/groups interested in contributing funds and being involved.
- Sue stated that if the EIC is supportive, that should also go into the letter.
- Jen stated that if the funds are granted, we can piece it out to supportive agencies and the cost share can be in-kind
- Danielle agreed, noting that this is a proper role for the Estuary Program, and we have done similar things before.

Adjourned for Lunch

VI. **Revision of Minutes**

- Chair Kilham asked if everyone had put their edits on the draft minutes? Only minor edits were contributed.

- A motion to accept the STAC minutes from the February STAC-MACC meeting, contingent on including minor revisions, was offered, seconded, and passed unanimously.

VII. State of Estuary and River Basin Report – Danielle Kreeger

Goal: Review the past, plan for the future, craft TREB 2017 task timeline

- Danielle started the discussion by introducing the PDE science staff that were present, as they will be assisting the STAC and partners in updating the TREB, if a decision is made to do that.
- A TREB update would be concurrent with CCMP revision, as noted earlier.
- As a first step to gauge how much work will be needed if the TREB were to simply be updated, Danielle suggested that we poll previous TREB authors and STAC members to find out which indicators are in need of updates (e.g. new data exist, etc), and also to ask how much time/resources would be needed to do suggested updates.
- Some indicators may not warrant an update yet. Which indicators have new data?
- After the poll, results could be summarized at the STAC/EIC meeting for further discussion on whether to proceed, and if so, how?
- Discussion. What would an update consist of? Some members noted that some areas definitely needed an update, such as wetlands. Is it possible to simply freshen datasets and review/update conclusions, keeping overall chapters, sections, style the same?
- The STAC felt that there is still value in putting it out every 5 years as a standalone TREB document. People will be more comfortable using the report if it's not considered outdated. Since the TREB was a pdf with little fanfare, it would not cost a lot to do a simple update, at least from a production standpoint.
- Since the TREB will also act as an appendix/companion to the CCMP, an update might need to be done anyway.
- Dave Wolanski suggested that the TREB could be adapted to be more "goal" or action focused. The group agreed that we needed to better mesh Measureable Goals with the TREB, as well as CCMP actions.

ACTION ITEM: Cross Walk TREB with Measurable Goals (CCMP and TREB has already been done by Priscilla Cole. Sarah Bouboulis and Priscilla will attempt this.

- TREB Discussion. If an update is pursued concurrent with CCMP revision, then we will want to stick with the current chapter layout of the TREB. Perhaps at the end of each chapter we'll have a brief synopsis of how the "Actions and Needs" relate to CCMP Actions and our Measureable Goals. For many indicators, we could even reference specific goals and CCMP sections (assuming they are ready).

- Discussion on brownfields. With regard to the Measureable Goals on brownfield reclamation, there seems to be a difference between how the different states track their brownfields. No one is completely sure where they are. After a brownfield gets restored, it may or may not get removed from the database based on the state or agency handling the data. Those who are looking into this goal are noting that the goal might not be feasible as currently written.

ACTION ITEM: Josh Moody agreed to work with others to look into brownfields datasets (which could be a goal of the CCMP), and he'll start by contacting folks with the Urban Waters Federal Partnership

VIII. STAC Briefs – All

- Over the past 1-2 years, there have been several topics suggested as focal areas for possible future STAC briefs, some of which relate to Measureable Goals. However, with the amount of time needed for work on the CCMP and SOE, it is uncertain whether the STAC will have time to also pursue new *ad hoc* briefs. Nevertheless, as a wish list, what topics are currently of greatest interest?
 - Nutrient Impacts on Estuarine Biota (wetlands, shellfish)
 - Danielle discussed how this is a Measureable Goal, and the need for more analysis of what is/isn't known.
 - Salt Line and Estuary Turbidity Maximum (status and trends monitoring)
 - We need to take a harder look at how the salt line affects the ecology of the area, especially rare fauna and flora of the upper estuary.
 - Tom Fikslin added that the salt line is regulated; we need to better investigate the effect these regulations have on organisms. There are competing uses. We need scientific basis of what the organisms need. Not much is being studied here. A focus on biological endpoints is definitely needed.
 - Danielle brought up the topic of an ecological reservoir? Tom thought that there are already reservoirs, and to add capacity we just need a basis for changing the flow. Need more research on this.
 - Sue and Danielle also brought up the effects from estuary volume changes, such as from channel deepening and sea level rise, which affects the tidal range. What will the future Mean Higher High Water line be when you combine various changes to volume?
 - Tom brought up that for the non-tidal sections of the Delaware River ecological requirements are going to be proactively protected; it is more so the tidal part of the estuary where we need to study the effects of salinity changes, along with these other changes.
 - Marine Debris and Breakdown Products (trash)
 - Danielle discussed how marine debris and trash is a big problem that no one is really studying. PDE applied for a grant, but it did not get

funded. Plastics are a special area of concern because of the ecological effects of plastic breakdown products as well as the physical smothering by larger flotsam. What should we be focusing on, is this a STAC issue?

- Dee Durham and Elizabeth Horsey (PDE staff) discussed how they have been approached by partners about writing grants that would research topics related to marine debris that could eventually lead to policy changes. They want to take this from a high level first, what does the science say?
- Danielle, Kristin Koroncai and others discussed the presence of microplastics and that the EPA is starting to look at this as a real threat. Ken Strait also noted that this is a problem for industry as well, such as the trash that gets sucked into the PSEG power plant.
- The STAC seemed interested in pursuing this issue, with the first need to be really defining the issue/focus better and figuring out where research needs are best placed.
- It was agreed that we should continue to look for opportunities to move forward with these topics as STAC Briefs, but no one readily volunteered and it is uncertain when they can be done.

ACTION ITEM: Sarah Bouboulis will start gathering information about the effects of changes in salinity on some key species, such as oysters and freshwater mussels.

- It was also suggested that one of the workgroups could better handle examining the writing of a brief for nutrients. We should continue to talk with partners about options.

IX. Workgroup Updates - All

- Regional Sediment Management Work Group
 - Danielle Kreeger said that Sherilyn Morgan (EPA) is assuming chair duties from Renee Searfoss because Renee has been promoted at EPA. The RSM Implementation Workgroup will continue to meet, and a next focus will be looking for pilot projects to implement that demonstrate sediment management practices consistent with the RSMP.
- Water Quality Advisory Committee, Toxics, Monitoring Advisory Committees
 - Tom Fikslin said that the group had met in February –regarding fish propagation. They discussed partial propagation of estuary fish species, and discussed how best to proceed. They recommended that DRBC conduct an assessment of what is attainable-highest attainable use. They want to assess DO levels before changing use.
 - NYU is now working with DRBC on researching the dissolved oxygen

- requirements of Atlantic Sturgeon. They are going to look at tolerances of sturgeon eggs and larvae in new experiments, as a way to identify their DO requirements and PCB tolerance, as well as the interaction of the two.
- For Toxics: ammonia criteria work is now driven by freshwater mussels. The states and DRBC are considering adopting ammonia criteria. There was discussion amongst the group about what these criteria are and how the absence/presence of mussels sometimes determines what ammonia levels are adequate in a given stretch. But perhaps this needs to be re-examined if they wish protect the growth of mussel populations.
 - Danielle Kreeger mentioned that the Freshwater Mussel Recovery Program led by PDE focuses on finding streams that can support mussels before significant investment. Data on ammonia are helpful in making such decisions.
 - Chair Kilham asked whether the Toxics group is looking at the latest research on Pharmaceuticals-flame retardants, C9 –in drinking water supply, as it is a big emerging contaminant. It was acknowledged that this is a problem, but no new information is available for our area.
 - Tom mentioned a finding that he presented at the summit where he reported a 71% reduction in PCBs, which would be a big finding for the next TREB.
- Regional Restoration Work Group
 - Josh Moody is now chair of this group, but because of the increased work associated with the CCMP, the NEP focus on regional restoration coordination is being pushed aside for the time being. The project registry is being taken down from the website because there are no resources to keep it fresh and maintain the software/database.
 - However, the urban waterfront subgroup of the RRWG might be engaged again to focus on brownfield goals (or something akin).
 - MACWA Wetland Group
 - MACWA partners are looking for new grant opportunities, such as blue carbon studies, to help sustain ongoing monitoring and research efforts.
 - Despite some funding challenges, lots of new data gathering and field studies are underway for 2015.
 - DE Living Shoreline Committee
 - Alison Rogerson discussed recent contractor/engineer training sessions on living shorelines, hosted by DNREC, PDE and Center for Inland Bays. They had 20 attendees. They also have several projects throughout DE, and they are being monitored. DE outreach folks are also working on a story map project.
 - More committee meetings are planned for this year, and anyone interested is welcome to attend.
 - Chair Kilham brought up the fact that by the end of the fall we will have significant data on living shorelines, and this is a section that will need to be added to the TREB

- Oyster castles are also continuing to be monitored and recruitment success assessed at new sites (PDE).
- USFWS leads a fish co-op where they are monitoring fish runs of diadromous fish passage. Ensuring that fish populations are sustainable. It is a mix group of folks, mostly agencies, it is a closed group concerning meeting attendance.
- Chair Kilham also reminded the group that with all the workgroups, they should be looking at how their ideas and activities help achieve the Measureable Goals, and what needs updating in the TREB.

X. STAC Member Updates - All

- No additional updates were submitted.

XI. Upcoming Events and Notices - All

- Oil spill workshop series in June.
- Ecological Society of America-Aug 10-13th Baltimore
- Algae meeting-Aug 10-13th in Philadelphia
- International meeting on freshwater mussels in Buffalo in October
- Coastal and Estuarine Research Federation – Portland, OR in November
- Delmarva Wetlands Conference -Wilmington-first week of February next year (2016)
- Send any announcements to Danielle/Sarah to send to the group.
- See below for list of additional events that were listed on the Agenda

XII. STAC Business – S. Kilham

- Discussion of when the next meeting will be? It will be a joint STAC-EIC meeting, TBD
- Watch your e-mail for STAC elections ballot!

XIII. Adjourn

- Chair Kilham called for a motion to adjourn. It was offered by Danielle Kreeger and seconded by Dorina Frizzera.
- Meeting Adjourned at 2:30pm.

Events:

May 31-June 4 – Society of Wetland Scientists, Providence, RI

June 6 – Bay Days, Bivalve, NJ

June 9-10, 24-25 - Workshop by Invitation: “USCG Sector Delaware Bay Environmental Risk Assessment Workshop for Bakken and Dilbit Crude Oil Spill”

October 4-8 - 2nd International Meeting on Biology and Conservation of Freshwater Bivalves, Buffalo, NY

October 15 – PDE Dinner and Experience the Estuary Celebration, in NJ

November 8-12 – Coastal and Estuarine Research Federation, Portland, OR

Attachments/Appendices:

Danielle's Presentation: Delaware Estuary Program, NEP Task Orientation

Priscilla's Presentation: Revising the CCMP for the Delaware Estuary

Climate Change Vulnerability Checklist for CCMP revisions