



38th STAC Meeting Minutes

Monday, December 14, 2015

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

Partnership for the Delaware Estuary - Wilmington, DE

STAC Attendees

Gregory Breese, USFWS
Dave Bushek, Rutgers HSRL*
Laura Craig, American Rivers
Dorina Frizzera, NJDEP*
Heather Jensen, ACOE*
Moses Katkowski, TNC
Gerald Kauffman, UDel
Desmond Kahn, DNREC *retired*
Susan Kilham, Drexel
Danielle Kreeger, PDE
Hoss Liaghat, PADEP*
Kristin Regan, EPA R3
Alison Rogerson, DNREC
Kelly Somers, EPA R3
Kenneth Strait, PSEG
John Yagecic, DRBC

Non-STAC Attendees

Sarah Bouboulis, PDE
Kurt Cheng, PDE
Doug Janiec, PDE Board
Megan Mackey, EPA R3*
Irene Purdy, EPA R2*
John Kennel, DNREC

* *phone*

[9:30AM Sue Kilham (STAC Chair) calls meeting to order]

1) Call to Order & Introductions

[Room introduces themselves]

- PADEP has replaced their standing representative (formerly David Burke) on the STAC. The new rep will be Hoss Liaghat. (DK)
- Also, Jen Adkins had asked the PDE Board of Directors for volunteers to attend STAC meetings, and Doug Janiec and Kim Long agreed to do so. Both have science backgrounds, and this will facilitate interactions and awareness of Board-STAC activities. (DK)

[Doug Janiec introduces himself as board rep to STAC]

2) STAC Business

[Sue sends around old STAC minutes for review and edits. Draft minutes from the September STAC-EIC meeting were also circulated by email previously]

3) CCMP Revision

Danielle thanked the STAC members and others who have been participating on CCMP monthly calls, such as Sue, Greg, John K., and Kelly.

[DK discusses CCMP expert list]

- There are over 700 experts listed.
- Participation is being strategically targeted.

[Danielle/Ken Strait sends updated expert list around]

- Steering Committee members had agreed to look at the expert list and give direction to staff within their organizations, but this is only 8 entities out of dozens on the expert list. Can the STAC help with entities not represented, such as academic, non-profit, industry sectors? (DK)
- **Action Item:** STAC members will review expert list and send Sarah information on who should be deleted/replaced/added, with guidance on expertise where available.
- The other next step for expert list is to get feedback from Steering committee. (DK)

[Sarah reviews the current CCMP revision progress, including the Table of Contents]

- The process is still the same and we are still on schedule.
- The Table of Contents is available for review on Share Point
- No updates since October 2015.

- To prepare a first draft of actual CCMP text, PDE will first tee up a straw version, working within small groups of partners as possible. This was preferred by the EIC over the model of building a first draft through consensus with partner meetings. So we expect this rough draft to then undergo significant changes. (DK)
- To obtain raw material for this first draft, Sarah and the CCMP working group are developing a survey. The first step will be to contact all of the experts on the list to ask if and how they will participate. (Sarah)
- How do you want Steering group to go through the expert list? (Dorina)
- The Steering Committee agreed to share the list with their staff and ask them to look at names and see if they are current and able to provide expertise. The Steering Committee also agreed to coax staff to take part in process. We hope that all STAC and EIC members (and others) will want to be involved (bottom-up participation), but it also helps of course to have some support from heads of agencies (top down approach). For example, NJDEP staff should talk with Jay Springer (EIC rep) to find out how NJDEP will handle that process. (DK)
- We need support to assist PDE. Workgroups will be forming, and these will be tailored to specific expertise areas. Please try to participate in the monthly CCMP calls/meetings, which occur every second Thursday of each month at 10:00 AM. Sarah will post them to the STAC calendar, and they are already on the Share Point calendar. Everyone should already have logged into Share Point - if you aren't familiar, let me know. All CCMP documents will be on Share Point. (Sarah)
- Just to recap, the CCMP revision process is everyone's opportunity to put your fingerprint on the future focal areas for the Delaware Estuary Program, of which you all are part of. We'll need to temporarily take a step back from normal STAC business to do this. We aim for 100% STAC participation. (DK)
- Along the same timeline (next 2 years), we'll also need to update datasets for some key indicators that relate to CCMP priorities and Measureable Goals, which is another NEP need. This is why the agenda for today's meeting is NEP focused, and this will be what we're going to focus on for the next few years. (DK)
- We have to write it this coming year. (Sue)

- Yes, we will need at least a year for review so really by 2017, need a decent draft (DK)

[Discussion of expert list]

- I whittled the expert list for just USFWS down from 15 to 2 people. (Greg)
- Perfect - we just want the most current list of people who will be willing and able to be involved. Some experts moved away, retired, but others have come into the area. Once we get names, we want to cull through and cover any gaps. (DK)
- Have you merged/compared list with other PDE lists (e.g. constant contact)? (Gerald)
 - No, good idea (DK)

[Discussion of Share Point]

- Share Point has certain rules and such. It would be good to have one person in charge of each section. (Doug)
- Correct – we will make sure that when different versions get updated that there will be little confusion and redundancy. I will be in charge of monitoring and maintaining docs. (Sarah)
- The Sharepoint webinar was really useful (Greg)
- What is the next step for the STAC to look at expert list? (DK)
 - The Steering Committee deadline for sending list updates is the end of year 2015. I suggest that we wait to incorporate input from the Steering Committee and then I will send an updated expert list out. The STAC should review that list and provide updates to me. (Sarah)
 - I like the idea of January 15th deadline, asking STAC to check list and give updated information to Sarah. (DK)
 - **Action Item:** Sarah will circulate an updated expert list to the STAC as soon as Steering Committee input is received and incorporated (e.g., January), and specify a deadline date for STAC input.
- One of primary uses of the expert list is to figure out who we want to participate in the workgroups. So instead of general list of expertise, would be better to categorize names by expertise or by workshop topic? We may have trouble getting people to participate in workshops, so better targeting might promote better participation. (Ken)
 - Similar to the Steering Committee, we may also want to send the list to key people in other entities and ask them to engage their people. (Greg)
 - The Table of Contents and author subgroups approach from TREB was useful. (Jerry K)
 - It may be more work to put checkboxes for expertise, but some of the expertise is very general and spending time now to checkbox expertise will be most helpful. (Dorina)
 - Currently, the expert list has columns (to the right) to checkbox expertise areas, but what I'm hearing is that it might also be useful to insert columns to checkbox workshop participation topics. We could insert these just to the right of the names/entities, and then retain the existing expertise to the far right. So this would be a 2-tier expertise checking; e.g., living resources -> blue crabs. Would this be a way to move forward? (DK).
 - Yes, by first checking the theme followed by the specific expertise will allow us to pin point expertise better. (Dorina)
 - Those columns already exist, but we just need to move some columns around and set up check boxes. (Sarah)

- **Action Item:** Sarah will modify the expert list architecture to insert workshop theme columns immediately to the right of names/entities.
- Some experts will have a stronger depth of knowledge/expertise than others. At some point we might want to bold font names of key individuals, such as core authors. (DK).

[Sarah explains making a Microsoft account and accessing Share Point.]

[Group discusses how to resolve difficulties logging into Share Point and use of Google Chrome vs. Internet Explorer]

- Filtering is very important to organize documents. Alerts can be set for libraries or documents but we can figure that out. Not sure if you can make alerts by topic. (Sarah)

[Discussion on use of Microsoft Word Online]

- Desmond asked about original documents, versions, and saving online.
- We use a list of people editing documents so each person knows when they can change things. (Laura)
- I will put the expert list up on Share Point to allow STAC members to edit over holidays, since it will be a down time. (Sarah).
- To be clear, we are adding/deleting experts as appropriate? (Greg)
- To be clear, for the large agencies (Steering Committee members), there is already someone who will review the list and send updates? (Desmond)
 - Yes - to both questions. (DK)
- Are other NEPs updating their CCMPs as well? (Jerry K)
 - Yes, CCMPs have been, are being, or will be updated for all NEPs, which was a major topic at the recent NEP conference. (DK)
 - Other NEPs also recently participated in a webinar and discussed CCMP updates from those NEPs that had already completed theirs. I will upload their presentations to Share Point. (Sarah)
 - It will be useful to look at what they are doing (e.g. Long Island Sounds Study, Puget Sound Estuary Program). (DK)

4) Measureable Goals

[DK presents on Measureable goals.]

- As we have discussed before, the new CCMP will be leaner than the original, focusing on actions that address our Measureable Goals. So the Goals will be the framework for the CCMP, as reflected by the Table of Contents.
- At the fall Steering Committee meeting, we presented on first year goals progress, focusing on our short term goals.
- To facilitate this report out, Sarah had simplified our complex earlier goals tracking spreadsheet. She prepared goal tracking forms that were completed by our STAC/EIC goals point people. Each form was one page.
- Here is a summary of the reports:
Healthy Waters
- 7 of 8 short term goals are on track.

- Highlights include 71% PCB point source reduction, research on dissolved oxygen in progress, flow models continuously monitored.
- There are some needs, such as STAC briefs of a few topics. These goals are pretty ambitious in the short term.
 - Flow and salinity for natural resources are big issues. (Sue)
 - Is dissolved oxygen research underway in regards to Atlantic sturgeon? (Desmond)
 - Experiments are being done in Sandy Hook. (John Y)
 - I'm familiar with the stuff. But the question to be answered is are low oxygen levels dangerous to sturgeon? Is the research actually answering the question? (Desmond)
 - Thank you Des and to the STAC for helping to push for this research via our earlier STAC Brief. (DK)

Healthy Communities

- Progress is being made on most short term goals. The public engagement goals are on track.
- One issue has been engaging with forestry groups, since that is not our expertise. We do not want to be redundant with what other entities are doing. So we still need to identify and engage with forestry entities, especially in the upper basin. Everyone has been too busy to progress on this.

Healthy Habitats

- We are on track for 6 of 8 goals. Some progress has been made on wetlands and fish passage. Heather Jensen and Dave Bushek are progressing on oysters.
- We still have needs for STAC briefs.
- Some short-term goals will require new research and mapping efforts, but funding and capacity remain a challenge. For example, mapping mussel beds with sonar would require new work and new resources.
- In summary, we may need new partners, new grants, and more time to address some short-term goals. Funding is a challenge (e.g. oyster shellplanting goal). Hence, some short-term goals will need to be modified or missed. On the other hand, some new opportunities/actions may be arising to facilitate goals progress. (DK)
 - Opportunities
 - The Nature Conservancy
 - Urban Waters Federal Partnership
 - Listing of Atlantic Sturgeon
 - Delaware River Watershed Initiative
- After hearing our report on Measureable Goals progress, the Steering Committee discussed improving the alignment of the goals and timelines with new CCMP actions. They agreed to permit short-term goals to be revised to align with the new timing of the next projected CCMP update (2023) and revision (2028); i.e. 5 and 10 years after expected completion of the current CCMP revision (2018).
- The Steering Committee also challenged us to develop goal "talking points" for the public.
- The Steering Committee asked for the next mid-year call (spring 2016) to include further discussion of revised Measureable Goals, asking for PDE (with STAC/EIC) to propose draft revisions.

[Discussion of Measureable Goals]

- Listing of Atlantic sturgeon critical habitat has been delayed by 6 months (end of May). (Ken)

- New form for goal reporting seems to work pretty well. (DK)
 - Update form once a year? (Ken)
 - Yes, initial step. Eventually maybe be more aggressive and form workgroups. (DK)
 - This is basically the outline for the CCMP. (Sue)
- A big part of the CCMP is to develop tracking systems and measures to gauge progress. Making some goals into action items of CCMP might be prudent, but we need to figure out how to track/measure. (Megan)
- Some of our goals are more measureable than others. When they were developed, there was pressure to greatly simplify some goals. (DK)
- Some of the current short term goals may be better framed as CCMP actions, and since the Steering Committee agreed for us to revise the goals we should take a hard look at which should stay, which should get modified (e.g. synced to new timeline) and which should be deleted as goals but reframed as CCMP actions. And the goals that are left should be as measureable as possible. (DK)
- The public version of tracking (e.g. thermometer) is what we really want. (Sue)
- **Action Item:** All STAC members should review the Measureable Goals and begin to think about revisions to sync with CCMP and improve measurability. Input will be requested in early 2016 to help PDE prepare for the spring Steering Committee call.

[More Discussion on Short Term Goals]

Goal HW 2.1

- There are changes in Delaware Bay, but not sure what it's related to. Bio-available portion of seston is changing. Eroding marshes may be outwelling detritus. (DK)
- Dredging upriver can also change seston. (Laura)
- We need new studies to help track and understand this. (DK)
- We would likely move this goal to 2023. (Sue)
- We should note which goals we have capacity to do / already ongoing versus those that we do not have current capacity/funding to perform. (Moses)

Goal HW 2.2

- States will discuss progress on this at the next TAC meeting. (John Y)
- Goal 2.2 is not really measurable (DK). More like a checkbox. Should we take it out, or move to the CCMP revision as an action or as a narrative?
- That could be driver behind action item that can be tracked. As you write each action item, you can track and clearly mark progress. It is a checkbox whereas measuring impacts. (Megan)

How do we define measurability? Is it a quantitative/numerical target or can it be a checkbox/action?

- Need to track needle moving is best. (DK)
- Some goals will simply be answered yes or no whether they are done or not. (Sue)
- There is a danger in getting caught up in semantic/linguistics. Short term goals can be tasks. (Greg)
- CCMP is 10 year timeframe and it needs to be track-able. (Megan)
- Short term goals can be objectives that can be addressed in order to reach long term goal. (Dorina)
- The point is how we are going to measure/track progress in order to report out on 10 year timeframe? (Megan)

- Some of the short goals are really actions that are needed if you're going to hit the numerical benchmarks. So are they really goals? Should 2.1 become a CCMP action and taken off the goals list? (DK)
 - I would see it as a step to achieve the long term goal. (Des)
 - We can reframe or recognize that many short term goals are actions. (Laura)
 - HH1.1 is an example of one that is not measurable. (DK)
 - You can make it measurable by defining "robust", e.g. having SSIM stations in a number of areas. (Dorina)
 - Yes, agreed, but this is the sort of specificity that was removed earlier in the interests of simplification of goals. Maybe we can put it back in. (DK)
 - It's worth asking: Am I measuring how well I am monitoring, versus how is the ecosystem responding? (Greg)
 - Good point. (DK , Sue)
 - There is a difference between monitoring the ecosystem (e.g. TREB) and monitoring our implementation of a program. (DK)
 - Is no net loss of wetlands by 2040 feasible? If it's not based in reality, why is it a goal? (Des)
- [After clarification, all in agreement that non-tidal wetland no net loss is possible]*
- Measurability is written into some goals. Where do the numbers come from? (Laura / Doug)
 - If you said by 2040 to limit acreage loss, this hard number needs to be put into perspective. We have a continuing challenge with just tracking wetland loss, which is not well funded. (DK)
 - Where do the numbers come from? (Laura)
 - Those wetland loss numbers were based on SLAMM model projections, showing greater loss rates are most likely. So to limit losses in such as way would be a stretch goal contingent on interventions. (DK)
 - Good, wanted to make sure numbers had justification. (Laura)
- We will have to look into our ability to track/monitor to be able to track progress on goals. (Hoss)
 - We have looked into this and the goals have been approved by the highest level. The Steering Committee recognized that some sustained/new monitoring and research would be needed. (Sue)
 - Great, I was unaware of the history. (Hoss)
- By spring, we should have an idea of which goals need revising to sync with CCMP, (e.g. out of 27, we have 12 to change). Everyone should do their homework. (DK / Sue)
 - I think it makes sense to add to the form if the goal is doable under current capacity. (Laura)
 - For some goals, changing dates easier than changing verbiage for "measurability". (Greg).
 - Please add me to HH 3.3. (Laura)
 - Others can participate, if not on STAC, so long as they can attend STAC/EIC e.g. ask others at TNC. (DK)
 - The last paragraph of each section being written will include the capacity to finish goal. (Sue)
 - If we slide some goals back (e.g., to 2023), this will also give us more time to write proposals, form workgroups and deal with capacity issues. (DK)
 - EIC needs to think about capacity building. (Sue)

- Not all goals may be realistic. If you go for funding, you may hit a brick wall. They may need to be reworked. (Greg)
- Yes, but we always agreed that the goals should be somewhat of a stretch.

5) Science & Environmental Summit 2017

- In 2004, we had a summit planning steering committee that evolved into the STAC. We've had a summit every 2 years, which has gotten bigger and better each year. The STAC has always served as the starting point for planning of the summit. We always start this planning a year ahead. So, now is a good time to look ahead to January 2017 and suggest themes, speakers and session topics. (DK)
- To facilitate brainstorming, Danielle showed Powerpoint slides summarizing themes of past Summits, past keynote speaker names, as well as special session topics for the last 2 Summits.

[Discuss Themes]

- Theme idea: Steps to the future. (Sue)
- CCMP should be integrated to summit. (Greg)
- Coastal Resilience? A lot of projects have been put on the ground e.g. post Sandy but others as well, this would extend the progression of past themes. (Doug)
- Issue of Scale is really important. Especially with wetland loss. (Moses)
- Maybe it's about scale and context. (Laura)
- Was the 2013 theme about Climate Change? (Jerry K)
 - In 2010, we did climate as a theme, adaptation. (DK)
- Climate related would be good since it's in the news. (Jerry)
- Importantly, from winter 2016 to the Summit, we'll be celebrating our 20th anniversary. (DK)
- Theme: Looking back and ahead, forget the past, look ahead. (Alison)
- Theme: Reflecting on Our Past, Planning for Our Future? (DK)

[Discuss Speakers]

- A high caliber speaker is really important, always a good starting point for marketing the Summit. Before 2015, the STAC had always teed up at least one keynote, usually via a personal connection. I challenge the STAC to come up with a science keynote for 2017. (DK)
- We should be mindful of elections in 2016. Are we going to have resources to implement goals? Looking forward to implementation of CCMP, should think about session about funding, maybe someone who has been around and weathered changing conditions? (Dorina)
- Margaret Davidson was a great keynote at CERF and would be a match for that. I'll ask around about her possible availability. (DK)
- Any other thoughts on speakers – please contact me or Sue. I'll work with Lisa Wool (Summit organizer) to put together a draft program over the next 4 months. (DK)

[Discuss Sessions]

- We always provide regular sessions and special sessions. The regular sessions cover the basics and allow for anyone to present on their work. Special sessions address emerging issues. (DK)
- There will be new big projects accomplished by 2017, so a session on post-Sandy projects finished or resiliency projects in general. (Greg)
- Lessons from Sandy? (Desmond)
- Idea of Scale mentioned earlier is interesting. (Laura)
- Perhaps CCMP session. (Alison)

- Need some context for CCMP since many won't know much about it (Moses)
- DK will convey these session ideas to EIC and Summit organizers, thanks!

Sue called for a motion to accept minutes from previous STAC meeting

- There are a few minor edits e.g. typos (Ken).
- Greg Breese moved to accept the draft minutes, contingent on minor edits being corrected
- Doug Janiec seconded the motion

[Break for Lunch 12:10PM]

6) STAC Member Update

[Sue calls for any program/research updates to report]

- Des Kahn: I conducted some new research on American eels. We have a commercial fishery for eels in Mid-Atlantic (it is the center for eels). Last year, IUCN red-listed American eels. I decided to test the hypothesis that eels are becoming endangered. Main two things are that we have ongoing commercial fisheries that are targeted for eels, and the fishery is not suffering. We have had 1 million pound landings consistently. I developed an index of relative abundance (catch per trip), without targeting eels fisherman still catch. The catch per trip has been increasing recently. This may run counter to current media myths about the fishery. For example, a headline was that the American eel is in danger of extinction, and based on my analysis I contested that claim. If anyone is interested, the article is located at <http://cfooduw.org/iucn-red-lists-the-american-eel> (Desmond)
 - Are certain areas declining? (DK)
 - In Ontario, yes, but numbers are coming back there too. (Desmond)
 - They are stable in estuary, but not so much in tributaries (Laura)
 - Rich Horwitz at ANSDU did studies where eels make up 30-40% of biomass where they are not restricted. (Desmond)
 - They can get past some dams but not all. (Desmond)
- Do eels boom and bust? What is their life history? (DK)
 - Some oceanic indices (perhaps NAO) may affect their abundance (Desmond)
- John Yagecic: DRBC is working with NOAA to install/maintain continuous salinity monitors. A co-op agreement is under review currently. These will hopefully be available in 2016. The goal is to quantify salinity flux in and out of estuary. Stations will be at Lewes, Cape May and the C&D Canal. Some parameters have been discontinued, but salinity monitoring should be sustained.
- Tritium levels at Hope Creek were also investigated. Bottom line, everything is below EPA standards. Outside buildings, there are some high levels of tritium. (John Y)
- We are part of the local Coast Guard committee, helping address questions of what happens after oil spills. As part of monitoring for the Boat Run program, most parameters were not detected. We provided a 1-pager on this to the Coast Guard and states. (John Y)
- Real time data is now on the DRBC website, updated daily (automated). This includes data on discharge, watershed water yield, and water surface elevation. (John Y)
 - Anything to report on modeling if mean higher high water lines are changing? (DK)

- For most of NOAA port stations, the earliest observations are 1996. It's not clear if data goes back long enough to see differences over time. (John Y)
- This is a question we often ask because it hypothetically could change as a result of changing system volume (e.g. deepening plus sea level rise) and might affect flooding in some areas. (DK)
 - Only way to answer that question is through modeling. What would storm surge be? (John Y)
 - ACOE has their own model for looking at changes due to channel deepening. (Ken)
 - ACOE looked at other parameters but not storm surge, (John Y)
 - I would love to see something about this whole problem/question in the CCMP. (Sue)
 - Not a lot of estuaries are concerned about salinity or tidal range; we may have unique vulnerabilities. (DK)
- Real time water quality data is also up on DRBC website, including 24 hour means of DO, temperature, TDS (inferred from specific conductance). We just deactivated Ben Franklin and Chester monitors. This is normal for preventing ice damage. (John Y).
- Dorina Frizzera. The NJDEP Division of Water Monitoring is trying to capture changes and adjust head of tide since it is important for a number of reasons. Also interested in capturing new wetlands upper boundary lines. In 1970s, these were mapped, delineating the interface between wetlands and uplands. With subsidence, sea level rise and wetlands migration, we're currently looking to see if the boundary is starting to change. We're looking for areas with changing vegetation. Just getting it started.
 - There should be huge changes, considering all the dead forests in south Jersey. (DK)
 - Saline to brackish to freshwater are the areas where we will start to see changes. Maybe see freshwater systems being pushed up. Shouldn't wait to see where wetlands are migrating in saline marshes. Start looking at head of tide and move monitoring further up river. (Dorina)
- Danielle Kreeger: PDE has developed a monitoring framework for living shoreline projects, working with DNREC in Delaware, and now with The Nature Conservancy in New Jersey. This is being applied to all of our projects now, and is being tested with many other post-Sandy (e.g. NFWF-funded) municipality projects. Although some projects are not what we would consider to be a "living shoreline", the framework appears robust enough to be used for many types of projects. (DK)
 - I think your framework does go beyond living shorelines, and it helps to standardize monitoring protocols and ID parameters needed to monitor up front. The framework is very helpful. (Dorina)
 - I saw on PBS program about south Jersey and I was thinking PDE may want to feature a living shoreline workgroup in a PBS series. (Sue)
 - In Delaware, that would be easy. But in NJ, the current living shoreline workgroup is internal within NJDEP, so we're currently not involved directly. This may change in future. (DK)

7) TREB Update

- As we have discussed in the past, we will not be able to do a full revision of TREB and State of the Estuary in the next few years due to the CCMP and Goals work. Based on the STAC poll from the fall, the current plan is to try to update data only for those indicators that are directly part of CCMP actions and for which new and useful data exist. (DK)
 - Jerry K. agreed that we can do this (in reference to poll) at last STAC meeting. (Sarah)
 - Ray Najjar said he can update climate indicators pretty easily. (DK)

[DK reviewed which chapter sections are best matched with goals and have new data to update]

- The Steering Committee agreed with this approach at the fall meeting, suggesting we simply do a TREB update or addendum that focuses only on indicators in TREB that will support goals and CCMP. There's no pressure to do a full update. (DK)
- To do the CCMP, we will need the new data for some indicators. (Sue)

[DK reviews NEP products and new ways to better sync priority-setting, goals, CCMP plans, monitoring, and indicator reportings, iteratively, over 5/10 year cycles with periodic updates/revisions of key products]

- So we have to do a partial update over the next 1-2 years, but it does not appear that this will be a huge job. Obligated to update whatever we can. (Sue)
- We have some NEP budget set aside for the STAC to do this, and we'll need to decide how best to use the limited resources.

[Discussion on TREB update and what is an "update". All agree to provide up to date datasets]

- We don't need to make a decision today. We'll talk to lead authors for the pertinent chapters and ask their advice/participation, get cost estimates etc. (DK)
- Once we have a look at data and get deeper into CCMP process, we can see how best to convey updated TREB datasets, via either a supplemental addendum to TREB, via the website, etc. (DK)
- For TREB chapter leads, who is responsible for data revisions? Some TREB authors may not be involved with CCMP revisions. (Laura)
 - We can start fresh and accept volunteers. Hopefully we can get small groups of people together, have mid-year meeting and go from there. (DK)
- May need to wait a little to get further into CCMP revisions before we can clarify which data updates are really needed. (Greg)
- The current funding earmarked for STAC data updating is \$10,000. EPA already blessed this in our 2016 work plan. (DK)
- In the CCMP revisions, there will be no technical write up. (Ken)
 - Correct, but there is likely to be an addendum to the CCMP with references and citations. We can have a reference list for each chapter. (Sarah)
 - The TREB is the narrative piece that puts goals in context, e.g. SLAMM model was in TREB. The goals and CCMP actions are nebulous without the TREB backup. But in the CCMP addendum we can perhaps cite the 2012 TREB and a 2017 TREB Supplement, or something like that. (DK)
- From the DRBC perspective, there are more than just new data points. New methods are more sensitive to certain continuous time series data. This would cut across new indicators. So a full new TREB will be warranted at some point. For now, a supplement could still be small but meaningful for us too. (John Y)
- So to confirm, there will not be a new SOE report for the CCMP? (Ken)
 - No. (DK)
- And not a new State of the Basin Report from DRBC? (Ken)
 - Not really. (John Y)

[Generally agree upon highlighted chapter sections to update]

8) STAC Briefs

- Many of our Measureable Goals would require new STAC Briefs, but due to CCMP revisions and other capacity constraints (e.g. TREB updates), it is unclear whether and how we will be able to pursue new briefs in the immediate future. (DK)
- For example, a literature review on nutrient impacts is needed. The issue of the salt Line / ETM may be better for DRBC to take on. Dave Bushek expressed some interest in tackling an oyster brief. If we try to proceed at on a nutrient impact lit review, are there any volunteers to help? This could end up being two briefs (one on wetlands, one on shellfish). (DK)
 - I can help author this Brief: Ken, Kelly, Sue, Danielle
 - I can review a nutrient brief: Laura
 - I am interested in the brief: Alison
- There are other earlier briefs that were requested but never completed as well, such as water withdrawals and impingement/entrainment. (Des)
- It may be premature to move on a shellfish aquaculture brief because there are a lot of moving parts at the moment. We'll defer to Dave Bushek.

9) Workgroup Updates

- Water Quality Advisory Committee is meeting will be in January. Toxics meeting is set for Jan 6th, where they will talk with the states about ammonia criteria. The next Monitoring Advisory Coordinating Committee (MACC) will be January 14th, with the standard roundtable. The MACC will also be interested in again meeting with the STAC, possibly in March. (John Y)
- The Delaware Living Shoreline Committee will be meeting in Dover in January to discuss recent findings and projects. (Alison)
- The wetland workgroup (MACWA) usually meets in February-March, but we're not sure yet. There is some interest in skipping this year due to many groups being very busy plus the planned Delaware Wetland Conference will be happening in early February. (DK)
 - The National Coastal Wetlands Assessment Report was just released, fyi. (Dorina)
- The Regional Sediment Management Implementation Workgroup met last week and should be meeting every other month in 2016. Since PDE has had to miss some of these meetings, we encourage other STAC members to try to attend to promote broader NEP representation. (DK)
 - Since Bob Tudor retired, DRBC has not really attended either. (John Y)
 - Sherilyn Morgan is replacing Renee Searfoss as lead organizer for these meetings. (Kelly)
- No report is available from the Fish and Wildlife Co-Op. (DK)
- Oyster Recovery Task Force has not met recently. Currently there is concern over new regulations associated with red knot and horseshoe crab protection. (Dave B)
 - There have always been seasonal restrictions due to HSC and red knots. NJ has always been conservative. (Dorina)
 - The current restrictions are during mid-April to mid-June, but the proposed restrictions are April 15 – Sep 1. The longer season is to protect juvenile HSC. (Dave B)
 - These restrictions may impact restoration projects as well, such as living shoreline installations and monitoring. (DK)
 - There needs to be a certain amount of balance (in reference to aquaculture/restoration and HSC/red knot). (Desmond)

- Oyster aquaculture acreage is less than 15 acres including all spaces and access points. (Dave B)
- A STAC brief on oyster aquaculture challenges/opportunities was discussed again, and Dave B agreed to start work on that, with support from Greg.

10) Upcoming Events and Notices

- There is a new funding opportunity. Delaware Watershed Research Fund, \$4 million. Specific questions, mostly water quality issues. Also, science to policy. Letter of intent due Mid-February. (Laura)
- 2016 Delaware Wetlands Conference registration is open. Draft agenda is online. This will be the first time that it spans 2 days. (Alison)
- The Atlantic Estuarine Research Society's Spring 2016 will be near Virginia Beach, VA. Hopefully, PDE will host an AERS meeting, probably in fall 2017. (DK)

11) STAC Business

- The next meeting is the annual joint STAC/MACC. Tentative date was set for March 8th 2016. Tentative location: Cusano Center at the USFWS Heinz Tinicum Refuge, Philadelphia.

[2:38PM Sue adjourns meeting]

ACES	Alliance for Comprehensive Ecosystem Solutions
ACOE RSM	Army Corp of Engineers Regional Sediment Management
AERS	Atlantic Estuarine Research Society
ANEP	Association of National Estuary Programs
ANJEC	Association of New Jersey Environmental Commissions
ANS/ANSP	Academy of Natural Sciences
AWRA	American Water Resource Association
BMP	Best Management Practices
CBCWP	Christina Basin Clean Water Partnership
CBTF	Christina Basin Task Force
CCMP	Comprehensive Conservation and Management Plan
CDRW	Coalition for the Delaware River Watershed
CERF	Coastal and Estuarine Research Foundation
CESP	Corporate and Community Environmental Stewardship Program
CIB	Center for the Inland Bays
CWA	Clean Water Act
CWAC	Clean Water Advisory Council
DAEE	Delaware Association for Environmental Education
DeIDOT	Delaware Department of Transportation
DELEP	Delaware Estuary Program
DELSI	Delaware Estuary Living Shoreline Initiative
DNREC	Delaware Department of Natural Resources
DPA	Delaware Press Association
DRBC	Delaware River and Basin Commission
DRPA	Delaware River Port Authority
DVRPC	Delaware Valley Regional Planning Commission
EIC	Estuary Implementation Committee
ELS	Environmental Laboratory Section
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FMCS	Freshwater Mollusk Conservation Society
FMRP	Freshwater Mussel Recovery Program
FT	Full-time
FWWIC	Fairmount Water Works Interpretive Center
HSC	Horseshoe Crab
IT	Information Technology
IUCN	International Union for Conservation of Nature
JCNERR	Jacques Cousteau National Estuarine Research Reserve
MAC	Monitoring Advisory Committee
MACWA	Mid-Atlantic Coastal Wetlands Assessment
MARACOOS	Mid-Atlantic Regional Association Coastal Ocean Observing System
MOU	Memorandum of Understanding
NEP	National Estuary Program
NEPORT	National Estuary Program On-Line Reporting Tool
NFWF	National Fish and Wildlife Foundation
NGO	Non-government organization
NJDEP	New Jersey Department of Environmental Protection
NOAA	National Oceanic & Atmospheric Administration
NSA	National Shellfisheries Association
NVSC	National Vegetation Classification System

PACZM	Pennsylvania Coastal Zone Management Program
PADEP	Pennsylvania Department of Environmental Protection
PADEP DWSRF	PADEP Drinking Water State Revolving Fund
PDE	Partnership for the Delaware Estuary
PEC	Pennsylvania Environmental Council
PT	Part-time
PWD	Philadelphia Water Department
RAE	Restore Americas Estuaries
RSMP	Regional Sediment Management Plan
SAN	Schuylkill Action Network
SAN ESC	Schuylkill Action Network Executive Steering Committee
SJBC	South Jersey Bayshore Coalition
SP	Strategic Plan
SRRF	Schuylkill River Restoration Fund
SSIM	Site Specific Intensive Monitoring
STAC	Science Technical Advisory Committee
SWS	Society of Wetland Scientists
TAC	Technical Advisory Committee
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TREB	Technical Report for the Estuary and Basin
USACE	U. S. Army Corps of Engineers
USFS	U. S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAS	World Aquaculture Society
WQAC	Water Quality Advisory Committee
WREN	Water Resource Education Network