



Science and Technical Advisory Committee
Partnership for the Delaware Estuary:
A National Estuary Program
www.DelawareEstuary.org

Meeting minutes of the STAC
Partnership for the Delaware Estuary, Wilmington, DE
April 23, 2008

Note: acronym definitions are provided at the end of these minutes

STAC Members Attending:

Gregory Breese- USFWS
Gary Buchanan- NJDEP
Lance H. Butler- PWD
Alan Everett- PADEP
Tom Fikslin- DRBC
Bob Hoke- DuPont
Desmond Kahn- DNREC
John Kraeuter- Rutgers University
Danielle Kreeger- PDE
Dave Russell- EPA Region III
Jonathan Sharp- University of Delaware

Dan Soeder- USGS

Also Attending:

Jen Adkins- PDE
Mike Haberland- NJ DEP
Amie Howell- US EPA Region III
John Kennel- DNREC
Martha Maxwell-Doyle- PDE
Angela Padeletti- PDE
Laura Whalen-PDE

I. Welcome & Introductions (Dan Soeder, STAC Chair)

1. Dan reviewed the agenda, which was rearranged to accommodate a need to discuss PDE updates before some members needed to leave.
2. Introductions of new PDE staff.
3. No comments or edits made to minutes from 1/16/08 STAC meeting. Motion accepted to approve minutes.

II. PDE Updates - Executive Director's Report (Jen Adkins)

1. Jen Adkins announced that Martha Maxwell-Doyle has accepted a position at the Barnegat Bay NEP in NJ, and the going away party is on May 13th following the EIC meeting.

III. State of the Estuary Report 2008- Danielle Kreeger

1. Danielle reported that the 'State of the Estuary Report' (SOE) must be completed every 3- 5 years as part of NEP responsibilities, and this year's report is being done in conjunction with the 'State of the Basin Report' produced by the Delaware River Basin Commission (DRBC).
2. Danielle suggested that we start recording problems that have arisen while developing this report and what we can do for the next SOE report in 3+ years as well as lessons learned from this SOE report. For instance, some suggestions for future reports included:
 - allow more time to collect data, perform analyses, and write the report,
 - incorporate more recent data,
 - perform more thorough analyses by the STAC,
 - set timetable to allow for finishing in a timely manner for NEP evaluation,
 - strengthen monitoring for important indicators that are currently difficult to report on,
 - the SOE document should serve as a driver for better monitoring and scientific research.
3. Currently, there are 25+ indicators that were cut down from 40+ initially. A goal of this meeting is to weed out any indicators that are weak to provide the strongest possible final SOE Report for public. The current framework and use of excel sheets forces us to consistently configure the information into a one page synthesis for each indicator with status bar, photos, fast facts, and data.
4. Tom Fikslin from DRBC commented that we need to identify as a STAC what the appropriate indicators are, before cutting any more out of the document.
5. There are two purposes of an indicator:
 - a. For the public to know whether or not they can eat the fish or swim in the waters, for example,
 - b. A more scientific purpose for the public to know what the contaminants are in fish, for example.
6. Amie Howell suggested the need to connect indicators and monitoring, and that we should be ahead of the game in regards to monitoring so that we're not catching up for the next SOE report.
7. Dan suggested that the STAC should figure out the appropriate indicators now for next SOE report so we can start monitoring now
8. John Kraeuter commented that there are a lot of inappropriate indicators in this draft of the report. He asked what time frame the current indicators are referring to in this SOE Report because it is not clear in this SOE report right now.
9. Desmond Kahn gave an example of one of the indicators, the weakfish fishery, which has decreased numbers along the entire coast, but Desmond suggested that we be careful in including this as an indicator in the SOE report because the studies are inclusive as to why the decrease has occurred.
10. Jonathan Sharp referred to the NOAA National Eutrophication Report and suggested that we need to be careful with indicators that are national indicators, and we should not be afraid of using them in different ways. For example, during a 10 estuary comparison that Sharp recently worked on with the EPA, local information was needed as well as uniform quantitative criteria.

11. Jonathan Sharp also mentioned that Randy Olsen, who produced a ‘mocumentary’ on documentaries about climate change, was recently hired by Puget Sound NEP to get their message to the public more effectively. Sharp suggested that the STAC and the Partnership for the Delaware Estuary look into hiring Randy Olsen in the future for the same purpose because there should be a positive outlook portrayed to the public when the indicators are reported. Sharp pointed out that we need to get the right message across to the public because we need the stakeholders of the Delaware Estuary to be committed and understand the concerns, like the citizens of the Chesapeake Bay Estuary are concerned. Other STAC members asked if Randy Olsen would be a good speaker for the Science Conference.
12. Jen Adkins noted that the Partnership has staff that focuses on education and outreach so we can pull them in to help the STAC.

13. Science Content of SOE Report- STAC discussion on details of each individual SOE Indicator:

- a. Currently, the SOE Report has about 26 sheets available and about 32 indicators, so the STAC needs to combine or cut out about 6 indicators. Desmond suggested combining all the finfish indicators into one indicator sheet.
- b. John Kraeuter pointed out that the ‘Desired Condition’ sections read like extreme actions that should take place. He also noted that we’re trying to set a goal without quantitative goals yet for the indicators. We should put the ‘Desired Condition’ into the ‘Information’ section on the indicator sheets.
- c. The Executive Summary is far too wordy for what we need. Instead, take the table of contents list and put the thermometers next to them along with a small description about each and not just one long summary.
- d. Amie Howell put together some language about how people can use this report for the Executive Summary section.
- e. Danielle noted that the Executive summary still needs a short description about the changes that are occurring in the indicators and the new indicators that have not been studied yet.
- f. Desmond suggested that brook trout should not be in SOE report.
- g. A decision was made to discuss the difference about the term ‘estuary’ versus ‘watershed’ at the next summer meeting in July 08. Desmond suggested that we do not put either term in the title but put prominently that this is the estuary and the Schuylkill watershed. For example, the title could be “State of the Estuary Report and its Watershed.” However, Danielle reminded the STAC that the NEP study area includes more than 50% of the entire watershed. Amie and Desmond suggested that the SOE Report give a summary explaining the NEP study area of the Delaware Estuary, describing the land area that it includes, and to separate indicators that are in the watershed from the indicators in the estuary (meaning the indicators that are part of the tidal system).
- h. Dan suggested putting brook trout and other freshwater indicators into the Watershed Trends section and keep the Living Resources section just for tidal indicators and then add Non-Tidal to Watershed Trends title. Danielle changed the Table of Contents version 8 and added brook trout, freshwater macroinvertebrates and mussels, dams and fish passages (above or at head of tide), and eagles to Watershed Indicators.
- i. Suggestions for the Future: ospreys should be included as an indicator in addition to eagles because there is a lot of research and monitoring on ospreys.

Action Item: At the summer STAC meeting in July 08, discuss which timeframe would be best suited to use for indicator trends reporting. (For example, one suggestion about what timeframe (5, 10, 30, 100 years...). Perhaps explain under each thermometer what timeframe was used for that indicator because each is different for different indicators.

- j. Visuals- The maps, etc. need to be consistent with map areas. For example, do not include the corner of MD that is in watershed because not all maps include it.
- k. Jonathan Sharp suggested that macroinvertebrates should not be included in this SOE report because there is not consistent recording among states. The SOE should report that this indicator will be included in the future once better data is collected and trends are determined.
- l. The question came up whether indicators should measure progress for CCMP implementation, and the STAC decided that the decision should be made at a higher level, such as the EIC or Steering Committee.
- m. Discussion continued about the content of each indicator sheet in the SOE Report, and Danielle brought up that oysters are affected largely by diseases in the bay, some of which didn't originate here. Oysters are an indicator under "Living Resources" in the Estuary section. Danielle moved shad to the Living Resources of Watershed section with Freshwater Mussels, etc.
- n. Dams and Fish Passage Indicator:
 - i. Change the thermometer so that the dot is in the negative orange section with arrow moving up to green because of all the activity going on right now.
 - ii. Get rid of dams in the title and just keep Fish Passage so that it is not confusing that the number of dams is increasing, but that the habitat is being improved.
 - iii. Need a legend for the thermometer because it is not clear what the thermometer is measuring. Therefore, the thermometers should be tagged to explain exactly what the thermometer is indicating. For example, "fish passage is increasing" could be the tag for the Fish Passage Indicator page. However, does the public know what "Fish Passage" means?

Action Item: River miles of fish passage opened up would be the easiest data to collect in GIS and should be use for the next SOE report.

- o. Protected Lands Indicator should be combined with the Forests Indicator or removed and only have the Forests Indicator.
- p. Striped Bass and Weakfish indicators should be combined as well. Weakfish thermometer- dot in orange, arrow going from green to orange; Striped Bass thermometer- dot high on green and arrow going orange to green. Weakfish are low because water quality and because natural mortality has increased, probably because of predation, but striped bass is a huge success story. Therefore, change the arrows of each indicator to reflect current and recent trends, not future trends, or get rid of the arrows. Desmond will send Laura data for both finfish to make new graphs. This indicator needs to be flagged as not a baywide indicator.
- q. Horseshoe crabs- The juvenile plot is too variable. Another important aspect is shoreline changes and the impact that has on horseshoe crab populations. One problem is that DE records that but NJ does not.

Action Item- Greg and John K. will finalize graphs for horseshoe crabs.

- r. Oysters- Danielle suggested taking the arrow out of the thermometer because the trend has been decreasing for 100 years until recently when there has been an increase. However, we are not sure where the numbers will go in the future so we should not have an arrow on the thermometer, just a dot.
- s. Blue crabs- Desmond suggested that there has been increased numbers of blue crabs recently probably because of less severe winters the past few years. Desmond will send Laura a better graph of stock instead of landings, adult index data. Contamination accumulation by blue crabs has been monitored and not shown to pose a threat for human consumption. Therefore, that sentence should be removed from the action and needs section because it is not looked an issue anymore.
- t. Sturgeon- Martha will look up photo of caviar/sturgeon industry.
- u. Shorebirds- Body weight would be a better graph than peak count. Suggested to strike shorebirds as an indicator and put Red Knot as a feature box instead on the horseshoe crab indicator page.
- v. Water Quality Indicators:
 - i. Fish Consumption Advisory- put links to different states' websites about advisory because each state is different.
 - ii. Take out map and show trends in fish tissue in the next report.
 - iii. Dissolved Oxygen- cannot use a single number as criteria because of temperature changes between winter and summer where DO is supposed to decrease during the summer. Therefore, we have to be very clear that impairments may not match up with state criteria. Take out specific tributaries from status paragraph because this could happen in any tributary.
 - iv. Nitrogen and Phosphorus- long term trend analysis should be finished by Monday, April 28th and water quality by Friday, May 2nd.

NOTE: Minnesota is coming out with a toxicology report about emerging contaminants and consumption.

- w. Water supply- Revisit for the future SOE report and State of the Basin report, and drop this indicator for now. Include some of the information about water supply in the salinity section.
- x. Climate and Sea level rise indicators- we don't have enough data to make this an indicator for impact on natural resources, so do not include thermometer in the final report. Write that sea level rise is an important possible indicator that we need to study in the future. Therefore, explain what is going on right now, but not as an indicator. Keep salinity trends as an indicator (move this salinity indicator to the Water Quality section 6.4), but all the other indicators under the Climate section should be changed to a narrative and the 'actions and needs' section should address what we are going to do in the future instead of as an indicator. Climate should still be section 7 but just a narrative.

NOTE- Danielle reminded the STAC that the SOE needs more pictures of each indicator. STAC members asked to send any pictures they have and they will get proper credit. We can also look in the Partnership stockpile of pictures but cannot use Google pictures.

IV. Science Priorities – Biennial Needs List & Annual Project List

Danielle presented the “Progress on Science Blueprint” slide to the STAC.

Action Item: Need to develop a more rigid timeline and budget. Dan suggests that this should be done at the next summer meeting, and that the STAC needs to develop reasons why this workgroup is so important so we can get people’s interest because no one has extra time to commit to a workgroup unless they are really invested in the cause.

V. STAC Project Funding for FY 2009 – Dan Soeder

1. Fund \$20K to a project
2. STAC needs to elevate projects to EIC
3. Options for \$20K:
 - a. Fund DEBI workgroup
 - b. Fund Wetland monitoring group, marsh dieback monitoring stations would be one part
 - c. Combination of all 3 above

Action Item: At the next STAC meeting, talk about how to have a better process for recruiting projects.

4. Martha suggested that the STAC not limit this listing to small projects if there are larger projects that can be elevated.
5. With all the discussion today about need for more data on indicators, John asked if we should give the funds to the wetland monitoring group.
6. Another suggestion was to split the funds between the two workgroups (DEBI and Wetland Monitoring) if they can do a project for \$10K. Or would giving all the money to one group be more effective than splitting it?
7. Two voted to have all \$20K go to DEBI workgroup
8. Another suggestion was brought up to give \$15K to DEBI workgroup and \$5K to workshop for wetland group. Therefore, the four options include:
 1. Split money equally to each group- 0 votes
 2. DEBI- 4 votes
 3. 15K to DEBI and 5K to Wetlands workshop- 5
 4. Other proposals
9. The STAC voted again and the final decision was to award \$15K to DEBI workgroup and \$5K to Wetlands workshop

VI. STAC Business – Dan Soeder

1. Elections- We need to have voting done before summer meeting because that’s when new people will first come to the meeting. Dan suggested voting by e-mail in a couple of weeks, so if anyone wants to nominate

someone, send info to Dan and Danielle by May 13th. (7 seats coming open, 5 are staying on and need 2 nominations)

- a. Should have one more call out for nominations for someone with technical expertise.
- b. STAC members have to come to at least two meetings per year.

Action Item: Send nominations to Dan and vote before next STAC meeting in July 08.

Current Nomination: Doug Miller

2. Schedule June or July Meeting- Thursday, July 17th is tentative date
3. Science Conference Ideas:
 - a. Theme- 'Planning for the Future'
 - b. Speakers-
 - Greg Breese will be coordinating a horseshoe crab special session with Mark Botton
 - Dan will talk to Tom Armstrong at USGS about giving a climate change talk
 - Randy Olsen- film producer, Jonathan Sharp will contact

VII. PDE Updates

1. Channel Deepening:
 - Dan volunteering to put together questions and send around to STAC before sending to the EIC.
2. A discussion ensued about the Army Corp and not having a dialogue about dredging. Jonathan Sharp thought it was not going to make a difference to bring questions to the Corp because they've been swept under the table in the past. However, Danielle noted that we need to come back to the EIC with comments on dredging because the Estuary Program was tasked with taking a look at this issue and needs to fulfill that obligation.
3. Desmond Khan asked if the STAC should include answers to the three questions or just the questions. The STAC agreed that the answers should not be included. Not all of the impacts of dredging are well known, so the STAC should present information and recommendations.

VIII. Meeting Adjourned by Dan at 4:30pm

IX. Post-Meeting Discussion: Long-Term Vision for the STAC- Jonathan Sharp and Jen Adkins

1. Hopefully this will be an open discussion to be continued, and what we talk about today can also be discussed later with the STAC or joint STAC/EIC meeting
2. The STAC has historically accomplished a lot and was looked on as one of the premier national NEPs
3. Jonathan gave a brief history of the "partnership"- originally there was no formal structure, then formed as a outreach "non-profit", then the Partnership was combined and the STAC was reformed approximately two years ago

4. The STAC, as an advisory committee, should have no statutory authority
 5. What we need is a better focus within the STAC and a commitment from the EIC that they will listen and take suggestions from the STAC.
 6. We need to convince the regulators from all the different states that the STAC is essential to make decisions for the whole estuary and watershed.
 7. The Partnership was started to be a coordinator, not a new regulator or management agency to reinvent or take away regulatory authority of the states.
 8. Do the states see the value in the coordination through the Partnership for collecting data and using the same methods, etc. between states?
Everyone agreed that yes, the state agencies see the value in having the Partnership coordinating for them.
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Acronym List and Definitions

ACES: Alliance for Comprehensive Ecosystem Solutions
CCMP: Comprehensive Conservation Management Plan
CMES: College of Marine and Earth Sciences (University of Delaware)
DEBI: Delaware Estuary Benthic Inventory
DEWOOS: Delaware Estuary Watershed to Ocean Observing System
DEWWG: Delaware Estuary Wetland Work Group
DNREC: Department of Natural Resources and Environmental Control (Delaware)
DRBC: Delaware River Basin Commission
EPA: Environmental Protection Agency (US)
EIC; Estuary Implementation Committee
NEP: National Estuary Program
NJDEP: New Jersey Department of the Environment
NOAA: National Oceanic and Atmospheric Administration
NPS: National Park Service
NVCS: Natural Vegetation Classification System
NWQMN: National Water Quality Monitoring Network
PADEP: Pennsylvania Department of the Environment
PA CZM: Pennsylvania Coastal Zone Management program
PDE: Partnership for the Delaware Estuary
PSEG: Public Service Electric & Gas (New Jersey)
PWD: Philadelphia Water Department
RARE: Regional Applied Research Effort
RRI: Regional Restoration Initiative
RRWG: Regional Restoration Work Group
SOE: State of the Estuary
STAC: Scientific and Technical Advisory Committee
USFWS: U.S. Fish and Wildlife Service
USGS: U.S. Geological Survey
