



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

Meeting minutes of the STAC & EIC
Partnership for the Delaware Estuary, Wilmington, DE
September 16, 2008
9:30 A.M. to 3:00 P.M.
104 Cannon Lab, University of Delaware - Lewes, DE

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

Participants:

Jennifer Adkins - PDE (EIC)	Desmond Kahn - DNREC (STAC)
Allison Allen – NOAA (STAC)	John Kennel – DNREC
Ed Ambrogio – EPA Region 3 (EIC)	Kerry Kirk Pflough – NJDEP (EIC)
Gregory Breese - USFWS (EIC & STAC)	Sue Kilham – Drexel Univ. (STAC)
Priscilla Cole - PDE	Danielle Kreeger - PDE (STAC)
Jeff Dewey – PADEP	John Kraeuter – Rutgers Univ. (STAC)
Kathy Bunting-Howarth – DNREC (EIC)	Doug Miller – UDel (STAC)
Allen Everett – PADEP (STAC)	Angela Padeletti - PDE
Jim Faulk – DE Sea Grant, (PDE Board)	Irene Purdy – EPA Region 2 (EIC)
Tom Fikslin – DRBC (STAC)	Jonathan Sharp – UDel (STAC)
Jack Gallagher - UDel (STAC)	Dan Soeder – USGS (STAC & EIC)
Jeff Gebert – USACE (STAC)	Bob Tudor - DRBC (EIC)
Bob Hoke - Dupont (STAC)	Eric Vowinkel – USGS
Amie Howell – EPA Region 3 (EIC)	Laura Whalen - PDE
Amy Jacobs – DNREC (STAC)	Andy Zemba – PADEP (EIC)

I. Call to Order & Introductions (Jen Adkins, PDE)

1. Welcome and introductions

II. Review, Revise and Adopt Meeting Agenda (Danielle Kreeger, PDE)

1. Brief overview of agenda
2. Agenda change to move up Benthic Inventory presentation
3. Review of previous minutes and approval of amendments (some names spelled incorrectly, and a change to reflect that there will be meetings with the Steering Committee which had not happened yet)

III. Executive Director's Report – Adkins

1. Gus Wolfe hired as Director of Finance and Operations
2. Shaun Bailey promoted to Coordinator level
3. Update from Laura Whalen about NEPORT
 - a) this process should be cleaned up to prevent double reporting, and information from NEPORT should be more easily accessible - pivot
 - b) **template should be developed**
 - c) **should have a conference call to discuss**
4. ACES was explained – a framework to develop priorities
 - a) Mike McCabe hired to facilitate
 - b) ACES is a committee like the STAC
 - c) **STAC should be looking at priorities** – White Paper, etc.
 - d) tools developed by the STAC will be used in ACES decision making
 - e) STAC's role is to make sure that the science doesn't get left behind
 - f) STAC has been thinking about priorities in a few different categories: restoration, data gaps, indicators & monitoring
 - g) although restoration has been on the forefront of popularity & funding, the others shouldn't get lost
 - h) **discussion needs to happen about how to incorporate management and monitoring in with restoration**
 - i) DE Bay Pilot report is a good model

Lunch

IV. STAC Chair Update:– (Dan Soeder, USGS)

Current STAC Discussions on Science Priorities

1. Characterizing the DE Estuary natural system remains a priority
 - a) many processes still poorly understood
 - b) funding remains difficult for high value studies
2. Indicators
 - a) need to be more strategic & less opportunistic
 - b) should be defined by management goals
 - c) should drive monitoring needs
 - d) should go further upstream into larger basin
 - e) State of the Estuary only hit 5/10 of indicators identified as priorities in White Paper
 - f) **Set up meeting/workshop to review indicators and develop next generation list**
 - g) **Vet at Science Conference and solicit additional input**
 - h) **Set up timeline with milestones**
 - i) Need comprehensive and centralized data clearinghouse & coordination among existing data collection efforts and indicator data sources

Update on PDE STAC Science Projects

1. Past & Existing Projects
 - a) Tidal wetlands: restoration, dieback, sea level rise, buffer status
 - b) Toxicity testing and emerging pollutant studies
 - c) DEBI project: historical sample recovery, bathymetry, substrates, new bio sampling
 - d) Deepening: review of current science on potential effects, list of questions

- e) Flow Management Plan: eco flows for estuary resources, floods, drinking water
 - f) State of the Estuary Report
2. Project Ideas
- a) tidal wetland monitoring, services, shoreline surveys
 - b) nutrient standards
 - c) fish projects
 - d) sturgeon Restoration research
 - e) storm water monitoring
 - f) chemical and physical monitoring
 - g) biocriteria development
 - h) database building
4. Project Funding
- a) \$20,000 annually spent on STAC science (conservative estimate)
 - b) PDE NEP support is 1/40 of Chesapeake budget
 - c) per capita, DE Estuary is the largest NEP, so that budget doesn't stretch very far
 - d) need more coordinated efforts
 - e) more diverse funding sources means more reliable funding
 - f) need to generate more stakeholder buy in – continue to build profile nationally
 - g) Challenges: not as much public access, more 'wilderness' is barrier to contact, no Congress sailing in DE Bay, people turned their back and because of its reputation for being hopelessly polluted, OR, why study it if it has had such a tremendous improvement
 - h) Marketing ideas: Experience This Wilderness, more signage, seafood haven, promote sources of local seafood
 - i) promote PDE as getting tremendous bang for your buck
 - j) set sights higher - design projects as though funding is not limited – use for marketing & leveraging
 - k) **put together a list of projects that didn't get funded** to have quick turn around if budgets need to be drained quickly at end-of-year cycles
 - l) fight perception that projects never get funded in the Delaware
 - m) build more relationships with South Jersey's NGO's – get more attention to the southern part of the state
 - n) engage industry through science conference
5. Meeting Goals Discussion
- a) **STAC to hold workshop on indicators before the science conference**
 - i. indicators should be guided by management and used to drive monitoring
 - ii. need a much better coordinated effort – not PDE one report, DRBC another
 - iii. summarize the December workshop outcomes at the conference**
 - b) In preparation, **need to identify what the management questions are**
 - c) Also, what are the current goals of DE Estuary Program?
 - i. identify what parts of CCMP haven't been addressed by present monitoring?
 - ii. determine where STAC needs EIC help
 - iii. everyone needs to refresh themselves with key PDE documents**
 - iv. missing ingredient – are there indicators that weave everything together?
 - v. managers need to be clear as to what we're managing as a system?
 - vi. who is managing the ecosystem???
 - vii. management is not interconnected
 - viii. this is where science can guide

- ix. change indicators to look at response of ecosystem
- x. ultimately, indicators need to also be useful to inform the public as well as managers
- xi. SOE could be split into 2 documents: Public & Technical – following the Puget Sound model
- xii. Revisit the CCMP since it has management goals
 - we already have some of these tools available – just need to create a synthesis
 - **Bob Tudor volunteered to compile a list of management questions to use for indicator (and monitoring) discussions**
- d) Challenge: are we limited to the estuary study area or should we cover the basin?
 - i. what geographical area should be the management goals cover?
 - ii. larger the scale = more conflicts
 - iii. some issues lend themselves to estuary and others more to basin
 - iv. must consider the whole basin where needed, but not duplicate work by others like DRBC
 - v. we will take a holistic view, but maintain an estuary study area focus
 - vi. **at the workshop, decide which indicators require a basin scale and which require estuary focus**
 - vii. what about other end: Atlantic Ocean???

V. Benthic Inventory Project – Dave Russell & Doug Miller

1. Power point presentations are available
2. Funding: 2 RARE grants from EPA ORD
3. Recap of what was sampled, where & how; 10 week cruise, EPA & PDE staff mainly
4. Dave discussed the larger soft bottom sampling program and Doug reviewed findings from the hard bottom survey during summer
5. Next Steps: sample analysis, develop benthic index, video analysis, more hard bottom surveys in 2009, funding permitting

VI. Science Director's Report – Kreeger

1. Update on the Delaware Estuary Living Shoreline Initiative
 - a) Goal: to stabilize marsh erosion by establishing natural soft armoring and reefs
 - b) experimental, not yet proven in the area, targeting mussels
 - c) all coconut logs, mats and other treatments were deployed in summer
 - d) now in monitoring phase
 - e) seeking more funding to put in more logs, possibly seed the treatments, and expand to other study areas in the estuary
2. Update on the Freshwater Mussel Recovery Project
 - a) freshwater mussels are a useful “common denominator” taxa for ecosystem-based restoration, helping with water quality, turbidity, contaminants, erosion, fish habitat, etc.
 - b) Phase 1: Transplanted adults in cages, monitor fitness to gauge which streams have the greatest restoration potential; will finish in October, followed by lab analyses
 - c) Phase 2: Develop techniques to propagate animals; solved technical challenges and have a plan for 2009 hatchery production of seed using American eels as preferred fish hosts for the larvae

- d) beginning to make the connection to water quality TMDLs, fish passage, and ecoservices
 - e) **need to reach out to the Christina Basin Restoration committee**
3. Projects starting October 1st:
- a) Regional Restoration Initiative
 - i. **STAC needs to think about work group participation**
 - ii. will develop restoration matrices, form subgroups for case studies
 - b) Climate Ready Pilot Project
 - i. one of 6 national pilots to look at climate vulnerabilities and adaptation options
 - ii. up to 4 case studies: tidal wetlands, shellfish, urban waterfront, drinking water
 - iii. **need to form STAC Climate Work Group and subgroups for case studies - funding is available for contract work**
 - iv. there will be Climate Ready sessions at RAE and NEP meetings
4. Other Activities
- a) DRBC and Rutgers applied for an EPA STAR grant to incorporate climate modeling in local and regional planning
 - b) EPA is working with Industrial Economics on an ecosystem service study
 - building on the NJ Natural Capital Project
 - looking at tidal and FW wetlands related to sea level rise
 - c) Natural WQ Monitoring Pilot Project
 - i. 3 areas selected as pilots: DE Basin, San Francisco Bay, Lake Michigan
 - ii. Goals: improve real time and discrete monitoring of main system components
- 5) Review of action items from last year's STAC-EIC meeting - call for projects
- **STAC should still give a list of unfunded projects to the EIC, never know when they might get elevated through PDE or some other entity**
 - i. coastal program grant open now for projects
 - ii. **make inventory of small and large grants**
 - iii. could use to put together management framework
 - iv. concerns expressed:
 - if too formal, this list might be perceived as cutting off broader community, need to open up to other scientists
 - some felt that we should focus on finding funding for larger programs rather than small projects
 - problem with perception of too small, so not worth the effort
 - **consensus was that a list of small projects is always useful, but we should also list larger needs – why limit it?**
 - **consider including a call for projects in the science conference package**

VI. Science Conference – Adkins/Kreeger

1. Call for abstracts & agenda has been released
2. **PDE will assign moderators**
3. **University people: Please push for students to come**

VII. Oyster Project Update and Chesapeake Asian Oysters – Adkins/Kreeger

1. Update on DE Bay Oyster Restoration Project
 - a) reached our cap in the appropriation funding
 - b) outreach will continue with materials left over
 - c) **looking for new source of funding**
 - d) **opportunity to educate in Washington**
 - i. project has seen real success; every dollar = recruitment; 40 to 1 return
 - ii. some new connections and sit down sessions are possible
2. Draft EIS for Chesapeake oyster relocation project will be released soon
 - a) **opportunity for the STAC to comment**
 - b) DE River Fish and Wildlife Coop
 - c) pick up where the Co-op left off (with there letter in 2005)?
 - i. asked for a seat on the table
 - ii. folks in the DE bay area wish to have a say in what happens in the Chesapeake because of the C & D canal, larva transfers, etc
 - iii. Do you feel this is an issue that warrants a new letter and effort to participate?
 - iv. **EIC should raise to commissioner & Governors**
 - d) Would this group support PDE asking for a seat at the table???
 - i. **Would be better to work with the Co-op**

[Follow-up note: The Co-op is deferring to the Atlantic State Marine Fisheries Commission to oversee a technical review of the EIS, and PDE and the STAC are unlikely to be able to participate with them. No STAC members have offered to assist in reviewing the lengthy EIS. PDE may still submit brief comments if time permits.]

VIII. PA Buffers 100 Initiative – Adkins

1. PDE was asked to sign on: Should we?
2. PDE staff gets approached fairly regularly to sign onto stuff like this
3. broad coalition already (PWD signed already)
4. looking for broad changes in regulations in PA
 - a) lots of scientific backing
5. PDE Board feedback
 - a) don't want to sign on as endorser, but may want to craft something of our own on this issue
 - b) Board committee forming to look at advocacy issues
6. **volunteers from EIC or STAC needed to join committee** – Kathy had interest
7. PDE was criticized for not signing onto similar HSC and shorebird campaign
8. as a policy, PDE comments should address how matters relate to the CCMP
 - a) take the position that the CCMP is why we exist
 - b) advocate for science where ever possible
9. EIC should be able to come to the STAC to ask for science analysis and backing if the data support it
10. Appropriate Stance: We can release our own education pieces to tackle issues without necessarily signing on if there is any question about appropriateness; then, other NGO's can use our products

IX. Upcoming Events

1. DE and PA Coast Days
2. Science Conference

X. *Wrap-up*

1. Approval of STAC minutes
 - a) Changes include misspelling of names
 - b) Motion to approve as amended by Sue Kilham
 - c) 2nd by Jonathan Sharp
 - d) Minutes were approved
2. Adjourn

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
