



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

Meeting of the

Science and Technical Advisory Committee

Thursday, January 7th, 2010 - 9:30 A.M. to 3:00 P.M.

Cusano Center at the Heinz National Wildlife Refuge, Philadelphia, PA

Notes: *acronym definitions are provided at the end of these minutes
action items are shown in bold italics font*

Attendees:

Jen Adkins – PDE	John Kennel- DNREC
Gregory Breese- USFWS	Susan Kilham – Drexel University
Gerald Bright- PWD	John Kraeuter – Rutgers University
David Burke– PADEP	Danielle Kreeger – PDE
Lance H. Butler – PWD	Jerre Mohler- USFWS
Priscilla Cole – PDE	Ken Najjar - DRBC
Tom Fikslin – DRBC	Jessica Sanchez - DRBC
Jack Gallagher- UDEL	David Sayers - DRBC
Jeff Gebert – ACOE	Ken Strait- PSEG
Mike Hoffman – EPA R3	Bob Tudor- DRBC
Bob Hoke - DuPont	David Velinsky – ANSP
Andrew Homsey – UDEL -WRA	Eric Vowinkel - USGS
Desmond Kahn- DNREC	Anne Witt- NJ DEP
Jerry Kauffman – UD WRA	John Yagecic - DRBC

Minutes:

- 1) Call to Order & Introductions – Sue Kilham** **9:30 – 9:35**
- 2) STAC Updates, Review Agenda – S. Kilham, J. Adkins, D. Kreeger** **9:35 – 9:50**
 - Wednesday January 13th, meeting Union of Concerned Scientist- to raise issue with the public, from 9:30-noon
 - Bob Tudor- The Council on Environmental Quality, Bob is willing to be a vector for this group to that group, Group agreed
 - Climate Adaptation Workgroup, Climate Ready Report

- Ray Najjar has updated models, focusing on SLR, gave presentation in Dec at workgroup, aim is to turn into report by March, there will be a peer review request for the STAC later
- Mid Atlantic climate change workshop in mid march, federal agencies, Greg B. says it's the second phase; the dates are March 23-25th.
- Regional Restoration Workgroup, Project Elevation by ACES
 - The RRI Project Registry is now set up as a one-stop-shop to be used by any potential funding entity; website to be developed soon. ACES represents first potential funding body for projects in the Registry.
 - ACES Timeline- projects have been requested that specifically address ACES priorities by December 31. An expert panel will be formed from the RRWG, which will review and rank those by mid-February. These will then be shared with the STAC in February to get concurrence and comments on the RRWG ranking.
 - This "ACES elevation" process is expected to be conducted annually in the winter. The Registry is also expected to be helpful for other funders at any time (e.g., mitigations). The 12/31 project deadline is just for the ACES application, and there is no cut off for project submissions to the Registry – they should be contributed at any time.
 - PDE is working on marketing tools for the Registry.
 - John K. noted that the Registry needs to also track outcomes, particularly any original data! A repository of data from restoration projects is needed.
 - STAC should eventually revisit data management, archiving, comparability issues.
 - The Registry is a service not for just PDE to fund, if others use PDE service of a Registry then we should ask that they share data and outcomes. That data is important for NEPORT (NEP reporting to EPA) at a minimum.

3) Plans for the January 2011 Science Conference – J. Adkins

9:50 – 10:15

- PDE Plans So Far – Cape May, January 30- Feb 2, 2011
 - If conflicts with dates let PDE know by 1/31/10
 - i. UD has winter session
 - PDE is looking into options for webinars, if you know of any technology please let us know.
 - Theme: "Connections: Land to sea, shore to shore, education to science".
 - Would like to do live polling again, like in 2009.
 - Posters were very important and it was good to associate the posters with the sessions
 - One suggestion was to consider having some mixed sessions that are not thematic, facilitating cross-learning.
- Ideas for Speakers, Session Topics
 - Speakers: Any more suggestions get to PDE by 1/31/10
 - i. John Kraeuter: Danny Cohen of Atlantic Cape Shore Fisheries. **John to follow up.**
 - ii. Andrew Homsey: someone with an economic view, e.g., Russ Peterson on the long view and keep economics front and center
 - iii. Possibly a Maryland Fisheries Administration person?
 - iv. Lance Butler: Howard Newkrug as a speaker?
 - v. Lisa Jackson? Need to ask Region 3. **Jen Adkins to follow up.**
 - vi. Sue Kilham: Jane Lubchenko? She is a friend of Sue's. **Sue will ask her.**

- Possible Session Ideas:
 - i. Energy, storm water, natural capital, carbon sequestration, ocean policy, connections, social networking
 - ii. *Connecting* hydrology with fisheries, land use with fisheries, water use and fisheries, water use and water quality, water use and energy needs
 - iii. Re-greening and grey structure and stream infrastructure, Sustaining the estuary.

4) Review Plan for State of the Estuary Technical Report- D. Kreeger 10:15 – 11:00

- Puget sound provides a model for doing two reports (tech vs public)
- Our report will serve diverse purposes: PDE State of the Estuary, DRBC State of the Basin, monitoring report
- A title that encompass the services of the report will be worked on later
[Note: Working title is “*Technical Report for the State of the Delaware Estuary and River Basin*” or T-DERB if you must have an acronym]
- Need to eventually decide on time series steps for trends; as a starting point, look for short term trends (since last reports, last 5 years) and long term trends (as far back as data allow, on a 5 year moving average.)
- Need to decide on a style of reporting; consensus was to continue with PDE thermometers and avoid report card approaches; tech report should be less concerned with the public friendly displays, but should come up with some form of take home message like a thermometer to be translatable for other products.
- PDE has \$20K of NEP support for indicators this year. Need to determine what to allocate in NEP FY2011 budget (soon), and the EIC can be approached if more funds are needed for 2010. ***The EIC meeting will be February 11, and so this group should summarize support needs before then.***
- Technical report will not be printed, but be electronic, the public report will be 2012 and will be in the 2012 budget. There will be some \$ needed in the 2011 budget for limited production costs (design, graphics, etc).
- PDE and DRBC will work SOON give each group guidance on the format. Need to discuss format further.
- ALL groups need to keep track of their references throughout this project. Be sure to give appropriate credit to original sources and not secondary sources.
- Each section should follow a similar format for subsections, being sure to include key topics such as 1) general orientation to the indicator suite and major interactions/overlap with other sections of the report; 2) indicator by indicator analyses with short and long term trend info; 3) actions and needs to boost future reporting, including next gen indicators and data gaps or comparability recommendations; and 4) full scientific referencing.
- Since the product will be electronic, there is no page cap or limit on the depth if technical material to be included; however, some guidelines will be developed to maintain style and balance. Extraneous analyses and supporting materials that exceed these guidelines can be included as appendices.
- PDE will work to track in-kind costs.

5) Section 1- Watershed & Landscape – J. Sanchez 11:00 – 12:00

- Indicators:
 - Primary (definite): Land use 2006, land use change, protected land, impervious

cover, population, developed land per capita, natural capital value.

- Land acquisition: Danielle and Jessica will look into getting a student. Greg says it's very time consuming, it's a LARGE amount of data. USFW has some data but private and county lands is another story. William Penn did some protective. Jessica: if we can find a dataset for the whole basin then DRBC will investigate, but if the dataset is just for the estuary region, PDE would need to do that. Danielle: there may be some indicators in the whole report that are sufficient for the NEP study area but insufficient for the whole basin – in those cases, we still want to include the data and we hope that section leads will rely on STAC or PDE on their teams for the analyses. [Note: Priscilla Cole was added to watershed team to help]
- Land acquisition could also be put under restoration section.
- Secondary (potential): Development pattern, public access points
 - Add :CSO's as an indicator, Lance has maps
- Next Gen (future): contaminated sites, land acquisition/preserved land, economic indicators, demographic indicators, natural capital
 - Economic indicators might be ready for this report but Jessica is working on them in the long term
 - Natural capital to be captured under function section (Priscilla Cole)
- Timeline : All evaluations to be done by Dec 1, 2011
- Participants: Andrew Homsey and Jerry Kaufman, Anne Witt will give Jessica a name of someone to contact in NJ, DNREC water resources. David Burke will also be in touch and Chris Linn.
- Budget (basic + any options, 2010 versus 2011): UD could use 2 students= 25-30K. DRBC and UD/WRA will provide in-kind labor resources.
 - Jerry is giving in-kind, if the group wants to provide one student or one half they'd take anything.
 - Jessica: Will look into a more detailed budget

Lunch (provided, donations welcome) 12:00 – 12:40

6) Section 2- Water Quantity & Hydrology – D. Sayers

1:00 – 2:00

- Indicators:
 - Primary (definite): consumptive use, per capita water use, groundwater availability and use, water supply and demand/withdrawals, salt line, surface water flows, USGS gaging stations
 - Secondary (potential): storm water (municipal separate storm water system)- may use, may not
 - Suggest moving sediment quantity, sediment organic carbon and sediment grain size to new section: Sediments. [Note: Sediment section to be created, led by Jeff Gebert, assisted by Laura Whalen, will fall as new Section IV and other sections will be renumbered accordingly]
 - Next Gen (future) – not discussed
- Timeline: end of 2010, could have primary indicators, unless use 2010 census data
- Participants: USGS, TNC, ACOE, WMAC; David Burke, Jerry K, Eric V, Jessica S. will talk with David S. Should get EPA involved - ask Irene or Ed Ambrogio.
- Budget (basic + any options, 2010 versus 2011): DRBC will contribute in-kind, plus 5k for

USGS support.

7) Section 3- Water Quality- J. Yagecic

12:40 – 1:20

- Indicators:
 - Primary (definite):
 - (i) Tidal: DO, Nutrients, contaminants, fish contaminates, salinity, pH, temp
 - (ii) Non-Tidal: DO, nutrients, contaminates, fish contaminates, pH, temp
 - Secondary (potential):
 - (i) Tidal: chl-a, organics, bacteria, emerging contaminates, chloride, TDS, Shellfish bed management. Group noted that “shellfish mgt” overlaps with habitat and restoration, so may need to focus on water quality aspects.
 - ◇ Move TSS/Turbidity to new sediments section IV - DRBC will provide support to that section
 - (ii) Non-Tidal: organics, bacteria, emerging contaminates, chloride, TDS, spec. conductivity
 - Next Gen (future) – not discussed
- Timeline: Partial report by 2010, over 2011 add new data and updating assessments with a final report done December 1, 2011
- Participants: DRBC staff, Eric V, Larry Merrill, WQAC, TAC, MAC
- Budget (basic + any options, 2010 versus 2011): \$5K for Water quality, \$5k for water quantity

8) Section 5- Living Resources- G. Breese (Tidal) & G. Bright (Non-tidal)

1:20 – 2:00

- Indicators:

Followed multi-tier guidance from PDE to denote which indicators are estuary-centric, as promoted prior to expansion of report to catch some whole-basin indicators. Discussion reiterated that PDE and STAC energies and investments should continue to follow the multi-tier approach, and we will defer to others to bring in upper basin indicators (e.g., Tier 3).
- Primary (definite),
 - (i) Tidal: American Shad (will incorporate tidal and non-tidal)
 - ◇ **TIER 1** :horseshoe crab, American oyster, blue crab, striped bass
 - ◇ **TIER 2**: Atlantic sturgeon, weakfish, American eel
 - ◇ **TIER 3**: American shad
 - (ii) Non-Tidal: Benthic macro inverts
- Secondary (potential),
 - (i) Tidal: Brook Trout (needs to be further discussed, Des will get group data)
 - ◇ **TIER 1**: osprey
 - (ii) Non-Tidal:periphyton
- Next Gen (future)
 - (i) Tidal:
 - ◇ **TIER 1**: willet, northern diamondback terrapin, muskrat, Macroinvertebrates. Invasives
 - ◇ **TIER 2**: Bald eagle, Sharks
 - ◇ **TIER 3**: Fish Passage
 - Feature Boxes: do these on “fuzzy” creatures that appeal to public; mussels, dolphins, red knots, invasives, terrapins. Note: this goes for all sections – look for

feature creature opportunities or stories, particularly for resources that are interesting or important but make for poor indicators due to data gaps, life histories, etc.

- Timeline – not reported
- Participants: Gerald Bright, Lance Butler, David Burke, Jerre Mohler, Desmond Kahn, John Kraeuter, Thomas Belton, Alan Everett
- Budget (basic + any options, 2010 versus 2011): Macroinverts may take a summer intern, will be looking into it

9) Sediment Section- **ADD**

- Indicators: Primary (definite), - TBD
- Secondary (potential), - TBD
- Next Gen (future) - TBD
- Timeline - TBD
- Participants: Jeff Gebert lead, see if Chris Somerfield will help, maybe also Bob Chant; Laura Whalen from PDE
- Budget (basic + any options, 2010 versus 2011) – TBD
- **? Jeff to summarize this section for February meeting?**

10) Preliminary SOETR Budget - D. Kreeger

2:00 – 2:40

- Summarize Budget Needs and Options for 2010 & 2011 for Sections 1-3, 5
 - All groups need to refine their budgets by 2/9
 - PDE will take all input and craft a 2010 and 2011 budget (base needs + options) on 2/10 just before the 2/11 EIC meeting. ***Please send Danielle any budget needs prior to 2/9, as they become apparent, to help with these preparations.***
- FY10 NEP STAC funds earmarked for this report are \$20K. Will defer discussion of how to use these until the overall budget becomes more clear next month.

9) STAC Business – S. Kilham

2:40 – 3:00

- Approve 9/30/09 minutes
 - Changes: minor edits were discussed.
 - Motion to accepted by Greg B., seconded by John K. – STAC approved.
- Review Action Items
 - See italicized bold above.
 - Main item is that sections leads for Sections 4, 6, 7, 8 and new sediments section should send input to PDE by 2/2. All groups need to refine their budgets asap and send input to Danielle; final input by 2/9.
- New business
 - MARCH 30th, PDE-ACOE led Regional Sediment Workshop, at Heinz Tinicum refuge
 - FEBRUARY 17th, PDE-BBNEP led Wetland Monitoring and Assessment Workshop, Cumberland County College, Vineland, NJ

Adjourn

3:00

NOTE: Next STAC meeting Tuesday FEBRUARY 9th at the Delaware River Basin Commission

List of Acronyms

ACES: Alliance for Comprehensive Ecosystem Solutions
CCMP: Comprehensive Conservation Management Plan
STAC – MAC Meeting Minutes – 4/2/09 8
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