

Meeting Notes

July 24, 2020, 9:00 am to 12:00 pm

Virtual meeting held via Zoom

Attendees:

STAC MEMBERS

Jenn Volk, Chair

Doug Janiec, Vice-Chair, new

Judy Denver, Secretary, new

Scott Andres

Susie Ball

Chris Brosch

Kathryn Coyne

Robert Gano

Miling Li

Tom McKenna

Ram Mohan

Tyler Monteith

Ashley Norton

Bhanu Paudel

Jack Puleo

Roger Shepherd

Steven Smailer

Kelly Somers

Kari St.Laurent

Bill Ullman

Richard Watson

Ed Whereat

Andrew Wozniak

CIB STAFF

Marianne Walch

Zach Garmoe

Andrew McGowen

Michelle Schmit

OTHER

Doug Austin

Kate Fleming

Charlie Garlow

Aaron Givens

Eul Lee

Ron MacArthur

Amanda Pappas

Katherine Phillips

A.G. Robbins

Alison Rogerson DE DNREC

Thomas Roth

Andrew Timmis

Katherine Warner

Amanda Williams

Copies of meeting agenda, notes, and presentations can be found on the CIB website (<https://www.inlandbays.org/about/committees/stac/>).

Meeting was called to order by Jenn Volk. Jenn welcomed participants, indicated that the meeting would be recorded for the purpose of note taking. STAC roll was called, and other attendees introduced themselves.

Jenn Volk announced that Doug Janiec, Sovereign Consulting Inc., was nominated for Vice Chair; the nomination was approved by STAC members. She also announced that Judy Denver, USGS Emeritus, was the new STAC Secretary.

Announcements

Happy retirement Bill Ullman! Jenn Volk congratulated Bill on his retirement from UD and commemorated his research and contributions to the science of the Inland Bays, especially with respect to monitoring and nutrient processing. He has been an important member, a very active participant of the STAC, and two-time Chair since the beginning. He plans to keep working in Delaware as long as he can!

Marianne Walch provided an update on project work being led by the CIB. Even with current conditions, they have been very busy with the horseshoe crab and terrapin surveys, work on SAV survey, oyster reefs, living shorelines and other projects. They did not get to do the shorezone fish and blue crab survey this year.

Old Business

Jenn Volk provided an update on the Request for Information for the coupled hydrodynamic/water-quality modeling of the Inland Bays that was issued on June 1, 2020. There were eight responses by June 30th. A subcommittee meeting was held in July to evaluate the pros and cons of the submissions and look at potential costs. The committee determined that they need to be more articulate on the purpose of the modeling and define the RFP clearly. It is estimated that at least \$500K to one million dollars is needed. The next step is to develop a funding strategy to locate grants, interested agencies, other opportunities. Any suggestions are welcome. They could be ready to pursue funds in next few months. Jenn has a summary page of the responses.

Marianne Walch provided an update on the State of the Bays effort. They have made some progress on developing indicators and will be issuing an RFP for some of the GIS work needed. Two interns working with UD WRA will develop some of the watershed indicators. Marianne expressed that the subcommittee needs to meet soon.

New Business

Presentation: *USACE ERDC Guidance on Thin Layer Placement of Dredged Materials to Restore Wetlands*; Dr. Ram Mohan, Adjunct Professor of Coastal Engineering, Texas A&M University

Dr. Mohan shared information being compiled in a National guidance document by the USACE on Thin Layer Placement (TLP) of dredged material in coastal wetlands, which they hope to publish soon.

- Two methods: **marsh construction** (difficult and sensitive to design) and **marsh enhancement** (flexible and uses natural processes, improves existing systems)
- To succeed there is a need to marry two processes: wetlands that need sediment and close-by dredging projects. Considerations of BMPs are also needed for success. Different types of containment may be needed for different size projects.
- No one size project fits all! Generally, 6-12 inches of added material works best, which results in a 2-5 year natural recovery period for new marsh surface with that depth.
- Adaptive management is key to success—may need to re-nourish, control invasives, remove upland barriers, and conserve potential migration pathways. Fine sediments w
- A local example of this method that was performed successfully at Blackwater National Wildlife Area in Maryland.

Discussion followed. Doug Janiec was concerned about carefully defining “thin layer” as it has been used differently for other projects and about managing containment. Andrew Timmis commented on the need for very careful project planning.

Presentation: *DNREC’s Beneficial Use Wetland Improvement Projects*; Alison Rogerson, DE DNREC.

Two case studies on the use of dredge material for wetland restoration in Delaware using different approaches were presented. These studies were action items for the 2015 Delaware Wetland Management Plan

--2 approaches: spread thin layers of dredge material (Piney Point Tract of Little Assawoman Wildlife Area), or re-creation using a thick layer. Want to feed wetland habitats for beneficial use, rather than remove them to dredge containment areas. 2 baseline examples:

--Site 1: Piney Point Tract of Little Assawoman Wildlife Area--thin-layer application and replanting on 21 acres of low-elevation wetland that has been completed; located on Pepper Creek in Dagsboro adjacent to dredge channels; project began in 2013 and is consider successful 5 years after completion. Good growth and good elevation shown with monitoring. Learned many lessons that can be used in future projects.

Question: Amanda Pappas asked if microbial populations are being monitored? Alison: no, but that is interesting.

--Site 2: Millsboro Public Works—proposed project to restore 15 areas of wetlands on town property through wetland recreation and invasive Phragmites treatment. Underway with a timeline from 2019-2022.

--Example of marsh migration with sea-level rise—retreating shoreline and forest; marsh left except fringe of Phragmites.

- First phase: 8 acres of Phragmites treatment and recreation of native high marsh species
- Second phase: Build new marsh platform on 7 acres to recreate the submerged low marsh.

Questions and discussion: Jenn: do you need volunteers for social distancing in the field? Allison: difficult site to work in, let will let you know—thanks!

Kari St Laurent—are you interested in use of burned (charcoal) materials? Allison: let's talk.

Doug Janiec: may be opportunity to bury woody debris to create wildlife habitat. Nice project. Allison: may hold sediment, too. Andrew Timmis: debris in water may clog nozzles, but debris is useful.

Presentation: *Long-term Salt Marsh Monitoring in the Inland Bays;* Andrew McGowen, CIB

--Project started in response to concerns about the effects of sea-level rise on local marshes, and in response to the sudden wetland dieback in 2006. Issue becomes important when sea-level rise outpaces marsh sediment accretion.

- Three “representative sites” are being monitored with respect to elevation using 3 sets of sediment elevation tables (SETs) on each location: Angola Neck, Piney Point (not in restoration area), and Slough's Gut. Current period of data collection began in 2016.
- At the current rate, most SET platforms are keeping pace with historic rates but not with recent LSLR. General high accretion rates could mean elevation capital may be low. Need to determine elevation capital.
- Next: project to map landward migration pathways to see future of salt marshes in this area.
- Discussion: Jenn interested in new project funded by NRCS. Should be done by 2021. Conservation districts will determine locations for potential future salt marshes.

Presentation: *Environmental Monitoring Plan updates;* Marianne Walch.

--Component of CCMP. First finalized in 2018. Requires review and update every two years. Will ask subcommittee to review and update existing plan and synthesize progress and next steps. Marianne requested any updates from the STAC for each component:

- --Surface water: Some updates in chat box.
- Copper Impairment TMDLs? Don't know plan.
- Ground water: long-term programs
- Waste water: don't know changes

- Atmospheric deposition of nutrients: Cape Henlopen Station discontinued. Important -- component—will have to figure out how to capture those loads in the future. Follow up with Andrew.
- DNREC Wetlands monitoring and assessment program: follow up with Allison
- Long-term Inland Bays Salt Marsh monitoring: ongoing
- Living resources: many, need to update.

Input on Plan recommendations was also requested and discussed briefly:

1. Predictive, coupled hydrodynamic model—discussed earlier. Next step: funding strategy, RFP
2. Online availability of CMP data. 2019 data (for DO?) now publicly available through WQ Portal and Delaware WQ Portal; will continue in the future. In the future want to include other parameters and address legacy data. Bill Ullman suggest we need to address smaller data sets from dissertations, reports, studies, etc. that are not documented or archived.
3. Deploy a continuous QW monitoring network in the Bays. Data collected at several sites; need plan to fund long-term network continuous WQ monitoring network to prioritize stations. Also, some grant proposals in for additional monitoring.
4. SAV monitoring—Andrew has funding to collect new data.
5. Local indicators of sea-level rise and flood potential
6. Measurement of IR inlet tidal flushing. Last data point in 2004. Important key driver, but unsuccessful in finding now-fed match for Army Corp match to calculate tidal prism volume.
7. Monitoring of oyster recruitment and growth in the Bays—project-specific monitoring only so far, but a lot of interest with new shellfish farming
8. Monitoring of shoreline condition and modification—CIB workplan being developed to use desktop update all three bays with filed verification
9. Continue tidal marsh acreage/condition as an indicator. Good progress with Sea Grant intern—will be updated by end of 2020
10. Monitoring of estuary acidification
11. Develop a recreational blue crab and clam harvest survey—don't know about progress.
12. Maintain a list of and promote monitoring activities for emerging contaminants.
Recommendation that STAC keeps a record of these. (microplastics, PFAS, fish contaminants)

Comment by Bill Ullman: What about collecting data from other research projects that aren't in here—Kathy Coyne? Will follow up.

Next meeting data October 16th from 9:00 am to noon.