



# Mobile Bay National Estuary Program Science Advisory Committee Meeting

August 12, 2020, 10:00 am - 12:00 pm  
Zoom Virtual Meeting



## Agenda

### Meeting Objectives:

- a) Management Conference Committee Status Review
- b) Updates on D'Olive WCF, Fowl River Marsh Study, Stressor Matrix, and NOAA RESTORE Resilience project
- c) EPA-NEP Program Evaluation Team Q & A

### 1. Welcome and Introductions

#### SAC Co-Chairs:

- Dr. John Lehrter, Dauphin Island Sea Lab  
Dr. Amy Hunter, ADCNR-RESTORE

### 2. Review and Approval of Minutes

### 3. Old Business

- a) Management Conference Committee Status Review
- b) D'Olive Watershed Condition Framework Update  
Jason Kudulis, Mobile Bay National Estuary Program
- c) Fowl River Marsh Study Update  
Dr. Amy Hunter, Alabama Department of Conservation and Natural Resources
- d) Stressor Matrix – Update and Continued Discussion  
Dr. Missy Partyka, MS-AL Sea Grant (invited)
- e) Building Resilience for Oysters, Blue crabs, and Spotted seatrout to Environmental Trends and Variability in the Gulf of Mexico  
John Lehrter, Dauphin Island Sea Lab/University of South Alabama

### 4. New Business

- a) EPA-NEP Program Evaluation Team Q & A
- b) Schedule next meeting

### 5. Adjourn

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Science Advisory Committee Meeting  
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*The Mobile Bay National Estuary Program Science Advisory Committee was established to bring area experts together to provide advice, guidance, and recommendations to ensure that MBNEP activities will be conducted in a scientifically relevant and rigorous manner.*

In attendance:

Mohammad Al-Hamdan, Chris Anderson, Becky Allee, Steve Ashby, Katie Baltzer, Alex Beebe, Don Blancher, Mary Kate Brown, Dottie Byron, Renee Collini, Newton Cromer, Dennis DeVries, Natasha Dimova, Rich Fulford, Patric Harper, Steve Heath, Kathy Hill, Amy Hunter, Latif Kalin, Jeanette Kelson, Cade Kistler, Jerome Langlinalis, Julien Lartigue, John Lehrter, Fred Leslie, Matthew Love, Behzad Mortazavi, Romell Nandi, Missy Partyka, Scott Phipps, Greg Pierce, Chris Plymale, Melissa Pringle, Evan Reid, Steve Sempier, Eric Sparks, Judy Stout, LaDon Swann, Susan Summerlin, Tim Thibaut, Chris Warn, Byron Webb

MBENP Staff: Jason Kudulis, Roberta Swann, Christian Miller, Bethany Hudson, Tom Herder, Katie Dylewski

*This meeting was held remotely due to the COVID-19 pandemic.*

Dr. John Lehrter called the meeting to order at 10:02 CST. Minutes from the May 22nd meeting were shared via email. Dr. John Lehrter made a motion to accept the minutes. Dr. Missy Partyka seconded.

After an overview of the meeting agenda, Jason Kudulis shared a brief update of activities the other MBNEP Management Conference committees are currently working on. Management Conference committee agendas, minutes, and presentations are always available to view on the MBNEP website.

Following the committee status review, Mr. Kudulis shared a **Watershed Condition Framework update**.

Key take-aways from the presentation include:

- The framework was developed by Barry Vittor and Associates and presented by Mr. Tim Thibaut at the January 2020 SAC meeting. The report and Tim's presentation be found on the MBNEP website.
- Though habitat condition and function at the restoration sites is trending up, results of the assessment indicate we need to accelerate canopy cover and improve invasive species management.
- MBNEP met with partners to determine long term monitoring needs in the D'Olive Watershed and to gather input for expanding the framework.
- MBNEP is pursuing funding to supplement existing restoration planting with more mature fast-growing native species to improve canopy cover, conduct more invasive removal activities, and to expand the framework to include human influences in the larger watershed including regulatory and stormwater runoff.

Next, Dr. Amy Hunter provided an update on the **Fowl River Marsh Study technical report**.

Key take-aways from the marsh study update include:

- Completed in 2019, the marsh study is being used to inform ongoing Fowl River restoration engineering and design.
- MBNEP staff worked with study PIs to synthesize the major study components (vegetation, sediment, hydrology) into a single technical report.
- Dr. Hunter asked for volunteers to serve on a review committee. After review, the document can be broadly distributed, including external publications.

Next, Dr. Missy Partyka provided an update on continued efforts to develop a **stressor evaluation matrix**. The matrix has been a focus of the SAC in 2020. The matrix is envisioned to be a tool this committee and others can use to gauge impacts and priorities when considering emerging issues.

Key take-aways from the update include:

- The Stressor Matrix Subcommittee has multiple times since organizing in January 2020.
- The SAC participated in a walkthrough of the draft matrix at the May meeting. Outputs of that effort were used to continue refining the framework.
- The draft matrix shared with the committee was intended to be a rapid response tool when quick turnaround for new or growing issues is needed to organize/prioritize/evaluate potential interactions of stressors/habitat/ecosystem service combinations.
  - The rapid response version will be finalized soon.
- The subcommittee realized a need for two approaches moving forward, with the second being a more robust mental model structured decision-making approach to determine linkages.
- Next steps are to determine next steps to begin development of the mental model approach.

Dr. John Lehrter gave the final presentation, an overview of the NOAA RESTORE Science Program grant: **Building Resilience for Oysters, Blue crabs, and Spotted seatrout (OyBcSt) to Environmental Trends and Variability in the Gulf of Mexico**.

Key take-aways from the overview include:

- Potentially a decade long interdisciplinary project involving scientists, economists, and resource managers and community partners.
- Target species are oysters, blue crabs, and speckled trout. Important from both ecosystem and ecosystem services provided. Data shows all three are in decline. To increase resilience, researchers need to identify stressors and manage both stressors and populations. Improved management of target species expected to increase resilience of other estuary species.
- Two scientific premise driving research questions
  - Variations and trends in river discharge drive temporal and spatial patterns of primary producers and upper trophic levels.
  - Multiple stressors are increasing and are overlaid with natural environmental variability that may negatively impact estuarine organisms.
- Five major research themes
  - Environmental change – resilience changes as ecosystems change
  - Thresholds for OyBcSt population – environmental variability and trends impact habitat

- quantity and quality, impacting reproduction, growth, and mortality of target species.
- Ecosystem services and resource utilization – changes in OyBcSt populations affect the provisioning of ecosystem services.
- Environmental scenarios and prediction – there are numerous anthropogenic and climate-related trends impacting the GOM.
- Outreach and transfer of research products – research outputs directed towards needs of partners. MBNEP CCMP goals and objectives, ADCNR fisheries questions, and TNC habitat quantity of quality.
- Specifically, CCMP Ecosystem Status and Trends related:
  - EST-1 Increase availability and use of data related to how coastal ecosystems and their services respond to man-made stresses
  - EST-3 Model and predict connections between ecosystem condition and the ecosystem services people value.
- The research team is currently cataloging existing datasets, collecting their own data (eight surveys since May), and analyzing this information to understand the mechanisms driving environmental trends in Mobile Bay.

#### New Business

Members of an EPA-National Estuary Program evaluation team (Romell Nandi EPA, Chris Plymale EPA, Dr. Duane De Freese Indian River Lagoon NEP, and Kathy Hill Indian River Lagoon NEP) were invited to the SAC meeting and presented the committee with a series of questions about the committee, the Management Conference, and the MBNEP. All NEPs have a Program Evaluation every five years, typically in-person, but due to COVID-19 in-person was not an option.

Next meeting TBD. Hopefully, we can hold the MBNEP Annual Meeting in December but that is also TBD.

At 12:03 pm, Dr. Lehrter asked for a motion to adjourn. Dr. Alex Bebee made the motion, Dr. Dennis DeVries seconded.