



**Mobile Bay National Estuary Program
Science Advisory Committee Meeting
10 am – 12:00 pm August 23rd, 2017
Killian Room, International Trade Center
250 N. Water Street Mobile, AL 36602**

Agenda

Welcome - review and approval of minutes from previous meeting

Fred Leslie, Alabama Department of Environmental Management

Updates and Presentations

My Mobile Bay Stations – Turbidity Sampling

Renee Collini, Coordinator Northern Gulf of Mexico Sentinel Site Cooperative

Fowl River Marsh Health and Recovery Study

Alex Beebe, USA; Ruth Carmichael, DISL; Just Cebrian, DISL; Marlon Cook, Cook Hydrogeology; Brian Dzwonkowski, DISL; John Lehrter, DISL; Tim Thibaut, Barry Vittor and Associates

Other Business

Next SAC meeting – January 2018?

Adjourn



**Mobile Bay National Estuary Program
Science Advisory Committee Meeting
Killian Room, International Trade Center, Mobile AL
August 24th, 2017**



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 the MBNEP activities will be conducted in a scientifically relevant and rigorous manner.

In attendance:

SAC Voting Members Present: Alex Beebe, Don Blancher, Kevin Calci, Ruth Carmichael, Just Cebrian, Renee Collini, Marlon Cook, Mike Dardeau, Stephen Jones, John Lehrter, Fred Leslie, John Mareska, Tim Thibaut, Bret Webb, Byron Webb

Phone-in Voting Members: none

Proxy Voting Members: Dottie Byron for Ken Heck

Other Attendees: Mark Ornelas, Amy Hunter, Rich Fulford, Scott Phipps, Evan Reid, Amy Newbold, Sam St. John, Chris Warn, Dave Tomasko, Farnaz Bayat, Scott Jackson

MBENP Staff: Jason Kudulis, Roberta Swann, Tom Herder, Christian Miller, Bethany Dickey

Takeaways

- Turbidity sampling will be added to four My Mobile Bay sites. The SAC recommended to install them at Cedar Point, Dauphin Island, Middle Bay and Bon Secour.
- Please send Tom Herder any information regarding on-the-ground habitat protection and restoration projects that were completed in the past year. therder@mobilebaynep.com
- For anyone wishing to comment on the proposed Fowl River Marsh Study, please submit them to Jason Kudulis (jkudulis@mobilebaynep.com) by Friday, September 8. After comments are evaluated and/or incorporated, SAC voting members will be asked to green light the proposal. Votes will be cast using surveymonkey or a similar platform.
- The next SAC meeting will be January 24th, 2018. The MBNEP Annual Breakfast Meeting will be December 8, 2017. Save the Dates will go out soon.
- Stay tuned for more information about a possible joint PIC/SAC meeting in November to discuss having uniform/consistent monitoring requirement for future restoration projects.

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Fred Leslie called the meeting to order at 10:00 CDT.

Minutes from May 24th, 2017 were distributed prior to the meeting. A motion was made by Dr. Blancher and seconded by Renee Collini to approve the minutes. No objections to the motion.

Jason Kudulis asked SAC members to provide MBNEP with any information and/or description of any ***"on-the-ground habitat protection and restoration projects that were completed in the past year"***.

- The habitat work will be included in a NEPORT report.
- In cases where the habitat work was done via a grant or contract to an NEP partner, please report the acreage only after the habitat work has been completed, not at the time of award issuance.
- Completed means on the ground restoration work was done, or the closing process was concluded/easement recorded, etc., in the case of land acquisitions and easements.
- Non-point source reduction/water quality related projects can be submitted only if there is a documented measurable link to habitat.

Renee Collini received a RESTORE grant for the My Mobile Bay stations. The funding will allow her to add turbidity sampling to four sites. She asked SAC members' opinions on which stations make the most sense in Mobile Bay to have the turbidity sampling. Several members spoke about Dauphin Island, Cedar Point, Bon Secour, and Middle Bay. Middle Bay is the only site that samples at half meter intervals as opposed to the bottom. Fred Leslie suggested Perdido Pass be included in the future if more funding becomes available. Renee then asked the group how TSS should be presented? All data is continuously collected right now, so having discrete data will be a new thing. Compared observations of TSS and NTU for conversion to mg/L and displayed as graphs and text were recommended.

The rest of the meeting focused on the Fowl River Marsh Health and Recovery Study. Just Cebrian provided the overarching purpose and project goals. The specific goals for the study are:

- characterize the status and health of the wetlands;
- understand the causes of wetland decline; and
- inform best-practice engineering designs for wetland restoration and protection.

Three regions of East Fowl River will be examined.

Region 2 (intermediate area) contains the decaying marsh spits and will be the focus. Three probable causes of the decaying spits: sea level rise (salt intrusion and higher flooding), sediment starvation, and boat wakes/wave energy. To tackle these hypotheses, the study will be split into three components: hydrology, sediments, and vegetation.

Hydrology

John Lehrter presented the hydrology component. The first sign of marsh stress is typically the loss of vegetation on the marsh edge, often due to salinity intrusion, sediment starvation, or boat wakes/wave energy. The main objectives of the hydrology component are:

- provide a baseline characterization of the physics of the system;
- do a high frequency evaluation of the system; determine the relationship between salinity dynamics and transport of nutrients; and
- assess the magnitude and frequency of boat wakes. Continuous measurements will be collected in one eight-week deployment in addition to monthly discrete sampling.

Sediments

Alex Beebe discussed the sediments component. Alex used maps to highlight the geomorphic variability of Fowl River dating back to 1852. Sediment questions to address are:

- What is the current sediment supply, fate, and transport in the river? – Dynamic Sediment

Transport and Water Quality Assessment (Marlon Cook)

- What is the current sediment accretion/erosion rate in the marshes? – Marsh feldspar horizon and sediment marking pins
- How do current sediment conditions compare to the past? – Deep sediment core analysis

Marlon Cook then discussed his 2015 Fowl River study that examined the main stem and tributaries to determine sediment loads. The results of this assessment were that most of the sites were at or slightly below the geologic erosion rate due to the watershed being dominated by wetlands. Marlon will be doing a continuation of the 2015 study at three sites.

Alex Beebe then discussed how the current conditions compare to the past. Duplicate deep piston cores will be taken from the channel and marshes. Discretized measurements from each core will show how lithology and deposition have changed over time.

Vegetation

Tim Thibaut discussed the vegetation component. A number of measurements will be collected in Summer and Spring and Fall, including:

- Plant species diversity, % cover, distribution
- Plant community zonation
- Existing habitat quality indices – Tidal Marsh Hydrogeomorphic Model (HGM) and Floristic Quality Index (FQI)
- Plant morphology and productivity (in spring and fall) – stem density, number of leaves per stem, and leaf length and width
- Marsh elevation – Trimble Real Time Kinematic (RTK) GPS
- Sediment erosion/accrual on the marsh
- Marsh porewater measurements
 - Monthly measurements of salinity, oxygen, and sulfide
 - Continuous records of salinity and water level

Just Cebrian concluded by discussing the sites for the study, with a focus on Region 2: - four spits prioritized in the Fowl River WMP, two additional healthy spits, and a healthy marsh along the main channel shoreline. Each site will have sampling stations on transects.

The Fowl River Marsh Study presentation used today will be found on the MBNEP website alongside these minutes.

For anyone wishing to comment on the proposed Fowl River Marsh Study, please submit them to Jason Kudulis by Friday, September 8. After comments are evaluated and/or incorporated, SAC voting members will be asked to green light the proposal. Votes will be cast using surveymonkey or a similar platform.

Stay tuned for more information about a possible joint PIC/SAC meeting in November to discuss having uniform/consistent monitoring requirement for future restoration projects.

At 11:33 Fred asked for a motion to adjourn. Renee Collini made the motion and Tim Thibaut seconded it.

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2017. Save the Dates will go out soon.