

3rd Annual Florida Mangrove Workshop Agenda

Fish and Wildlife Research Institute

100 8th Ave SE, St. Petersburg, FL 33701

10-12 January 2017

Hosted by the U.S. Fish and Wildlife Service and
FWC Coastal Habitat Integrated Mapping and Monitoring Program (CHIMMP)

Goals:

The goals of this workshop include the following:

- Update attendees on progress made on priority projects identified in previous mangrove working group workshops, with emphasis on mangrove vulnerability and carbon sequestration
- Provide information on mapping, monitoring, and restoration programs for salt marshes and mangroves within Florida
- Facilitate communication between members of CHIMMP and the USFWS mangrove working groups

Tuesday, January 10th

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
9:00	Jeremy Conrad	USFWS	Welcome & Introductions Summary of previous mangrove workshops.
9:30	Kara Radabaugh, Ryan Moyer	FWC, FWRI	Overview and updates from the Coastal Habitat Integrated Mapping and Monitoring Program (CHIMMP)
10:00	Matt McCarthy	University of South Florida, FWRI	Semi-automated wetland mapping using high-resolution satellite imagery in Tampa Bay

10:30 – 10:45 am *Refreshment break*

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
10:45	Joshua Breithaupt	University of South Florida St. Petersburg	Partitioning the relative contributions of organic matter and mineral sediment to mangrove accretion rates in southwest Florida and the Yucatan Peninsula, Mexico
11:15	Jeremy Conrad	USFWS	Effects of eutrophication on vertical land movement
11:45	Rebecca Howard	USGS	Soil elevation change in the mangrove marsh ecotone at the Ten Thousand Islands NWR

12:15 – 1:15 pm *Lunch on site (catered, self-pay)*

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
1:15	Elitsa Peneva-Reed	USGS	Estimating mangrove above ground carbon stocks in Ding Darling NWR
1:45	Randall Parkinson	Florida International University	Should RSET-MH data be used to forecast the effects of sea-level rise on wetland resilience and carbon sequestration?
2:15	Nicole Khan	USGS	Sea-level reconstructions in Florida mangrove peats

2:45 – 3:00 pm *Refreshment break*

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
3:00	Ryan Moyer	FWC, FWRI	Climate, sea level, and blue carbon in Tampa Bay Coastal Wetlands.
3:30	Brandt Henningsen	Southwest Florida Water Management District	Coastal wetland restoration in Tampa Bay
4:00	Ken Krauss	USGS	Introduction to coastal wetland restoration field sites

4:30 – 5:00 pm Conclusion, field trip carpooling arrangements

6:00 – 7:30 pm *Social at the Hollander Hotel (421 4th Ave N, St. Petersburg, FL 33701)*

Wednesday, January 11th

8:00 am Leave St. Petersburg to carpool to TECO site

9:00 am – 11:30 am TECO wetland site visits. Meet at TECO Amphitheater (6739 Noonan Branch Road, Apollo Beach, FL 33572)

11:30 – 1:00 pm *Lunch independently in Apollo Beach/Ruskin, drive to Cockroach Bay*

1:00 – 3:30 pm Cockroach Bay restoration site visits. Meet at Cockroach Bay Aquatic Preserve (3839 Gulf City Road, Ruskin, FL 33570), then travel to Rock Ponds restoration site (4221 Lavender Road, Ruskin, FL 33570)

3:30 – 4:30 pm Carpool back to St. Petersburg

5:30 – 7:00 pm *Social at 3 Daughters Brewing (222 22nd St S, St. Petersburg, FL 33712)*

Thursday, January 12th

Attendees who applied for travel reimbursement, please bring hotel receipts to complete travel paperwork during break.

8:30 – 8:45 am Introduction, Overview of day 3

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
8:45	Kara Radabaugh	FWC, FWRI	Critical Coastal Habitat Assessment: Long-term monitoring in Tampa Bay

9:15 – 10:30 am Breakout session and discussion

10:30 – 10:45 am *Refreshment break*

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>
10:45	Jeremy Conrad	USFWS	Florida's SET network – long term SLR monitoring

11:15 – 11:45 am Breakout session and discussion

11:45 am – 12:00 pm Summary and Conclusion

Resources:

Coastal Habitats Integrated Mapping and Monitoring Program:

<http://ocean.floridamarine.org/CHIMMP/>

Seagrass Independent Mapping and Monitoring Program:

<http://myfwc.com/research/habitat/seagrasses/projects/active/simm/>

Southeast U.S. coastal wetland monitoring programs report and data catalog:

<http://southatlanticalliance.org/coastal-wetlands-monitoring-report-and-database/>

Breakout results

1. Management concerns for Florida coastal wetlands include sea-level rise, a lack of landward buffer zones, continued urban development, invasive species, habitat fragmentation, and altered hydrology. What approaches have proved successful (or not) for the protection of coastal wetlands? What are realistic approaches for long-term management of coastal wetlands?

- Preservation of coastal wetlands relies on acquisition of land for conservation. Land acquisition relies on support and buy-in of the public and government officials. This support can be brought about by promoting the ecosystem services and monetary value provided by coastal wetlands.
- Public outreach, especially to children, is important to ensure future willingness to dedicate tax dollars to conservation efforts. Scientists need to engage with policy makers and be trained for successful communication with both the public and lawmakers. Keep the message simple. Social scientists, economists, and communication specialists need to be part of the conversation for planning and communication.
- Models that project the loss of ecosystem services (and associated value) add urgency to the need for public buy-in. Monitoring is necessary to develop these models. Monitoring must be on the appropriate scale, comparability, and flexibility for the region and provide sufficient duration and durability. There is a need to make monitoring data more available to other scientists and the results need to be communicated to the public.
- Money will be the driving factor for all stages of this process. Because money is often the limiting factor, there should be a balance between monitoring and acquisition efforts to ensure that acquisition has priority.
- Conservation easements and private land owners deserve more attention as possibilities for public land purchases become limited.
- The planning process for conservation efforts needs to be improved and streamlined. There is a need for proactive management (i.e. taking action to address problems)
- Disaster recovery funding should be directed towards acquisition and conservation areas rather than short-sighted disaster recovery plans
- Other successful approaches include regulations about mangrove trimming and land planning, although strict enforcement is needed.
- Unsuccessful approaches include land management policies that do not take sea-level rise and climate change into consideration. Competing priorities make management

difficult (e.g. managing mosquito control impoundments for coastal wetlands vs. waterfowl habitat)

2. How can the use of SETs and other accretion indicators be improved for forecasting effects of sea-level rise?

- An integrative approach is needed that includes data from sediment cores, SETs, aboveground analysis of vegetation, and remote sensing. Stream gauge data (flow rate, sediment load, water qualities) can also provide valuable abiotic information. There is a need to separately examine contributions of organic and inorganic matter to sediment, but also to understand how these contributions interact with each other and result in accretion or compression. There is a need for further study of the comparability of the metrics used to study accretion (SETs, C-14, Pb-210, Cs-137).