

## **Updates from March 11<sup>th</sup> Meeting**

### *The Effects of Climate Change on Ocean and Coastal Resources*

Dr. Estevez reviewed an updated outline for the report updates (Attachment A). It was agreed that the leaders for each section would contact potential contributors directly. The draft letter suggested by Dr. Estevez will be modified by each member for corresponding with the contributing authors; however, the goals of the updates outlined in the third paragraph were agreed upon (Below). The references should be numbered per individual section at this time.

Dr. Estevez brought up the discussion of including the ocean acidification section since there had never been agreement by the Council to update this section. Dr. Robbins was concerned that not enough published science was available to update this section, but there was agreement that some portions could be updated. The Council agreed to review an additional outline for an update in ocean acidification which will be drafted by Dr. Causey by March 11, 2010.

The drafts of the updated sections are due by the end of May. A time has been set aside at the March 11<sup>th</sup> Council meeting for updates and discussion.

#### Timeline:

January: Identify sections requiring updates; agree on methods and process

Feb. 1<sup>st</sup>: Deadline to submit SLR investigators or publications or links to pertinent information for updates

Feb. – April 15: Leader of the section will put together the update in cooperation with subject matter experts

April 15 – June: Council finalizes draft for reviewers

June: Council will identify and send out to outside reviewers

July: Reviewers comments considered and incorporate as needed

August: Obtain necessary member agency review and finalize

## **February Report on Sea Level Revisions to FOCC Climate Report**

(Adding details to content and process; draft letter to potential collaborators)

### I. PREFACE

- A. Introduction—Why the update to pages 21-24 of the 2009 report
- B. Authors and Contributors
- C. Reviewers
- D. Acknowledgments (including photo and figure credits)
- E. How to cite

### II. SEA-LEVEL RISE AS A RESPONSE TO CLIMATE CHANGE

- A. Introduction—Recognizing sea-level changes in Earth's and Florida's history

#### **B. Global Sea Level (Ortner)**

- 1. What is Known, Probable, Possible respecting...

*Historic tide gages (all italicized text describes content examples, not prescriptions)*

*Satellite measurements*

*Evidence for acceleration*

*Projections by IPCC and others*

*Updates reflecting newer deglaciation and other processes*

2. Research needed to improve Florida's understanding and capacity to respond
3. References

### **C. Florida Sea Level (Ortner & Estevez)**

1. What is Known, Probable, Possible respecting...
  - Geological and proxy evidence*
  - Historic tide gages*
  - Satellite measurements*
  - Evidence for acceleration*
  - Projections by state & local governments, and others*
  - Updates reflecting newer deglaciation and other processes*
2. Research needed to improve Florida's understanding and capacity to respond
3. References

## III. EFFECTS OF SEA-LEVEL RISE ON FLORIDA'S COASTAL & OCEAN RESOURCES

### A. Introduction—Florida's low nature, importance of sea level, coastal resources and populations

### B. Tidal Wetlands and Coastal Forests (Estevez)

1. What is Known, Probable, Possible respecting...
  - Wetlands keeping pace*
  - Others dissecting and/or drowning*
  - Coastal forest responses*
  - Tropical hammocks at risk*
  - Everglades projections by state & local governments, and others*
  - Mitigation and adaptation strategies in play*
2. Research needed to improve Florida's understanding and capacity to respond
3. References

### **Contributing Authors**

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### **C. Barrier Islands, Beaches, and Inlets (Robbins)**

1. What is Known, Probable, Possible respecting...
  - Geological and proxy evidence*
  - Types of barrier island, beach, and inlet responses to modern rates*
  - Current status of beaches and inlets*
  - Effects on sea turtles, avifauna, and other beach-dependent biota*
  - Projections by state & local governments, and others*
  - Mitigation and adaptation strategies in play (perhaps move to another/separate section)*
  - Mud banks (suggested at March meeting)*
2. Research needed to improve Florida's understanding and capacity to respond
3. References

D. Bays, Estuaries, and Tidal Rivers (Greening) Ernie and Peter have some references to share

1. What is Known, Probable, Possible respecting...

**Drainage/inland flooding**

*Geomorphic responses (deepening, etc.)*

*Effects on tide ranges and harmonics*

*Circulation effects, salinity, turbidity, other water quality*

*Consequences for seagrasses, oysters, avifauna. etc*

*Salterns and other habitat effects*

*Projections by state & local governments, and others (Corps of Engineers-get memo to distribute)*

*Mitigation and adaptation strategies in play*

2. Research needed to improve Florida's understanding and capacity to respond

3. References

**Contributing Authors**

Dr. Aswani Voley, Florida Gulf Coast University- oysters

Dr. Michael Savarese, same- oysters

Dr. Marty Kelly, Southwest Florida Water Management District- tidal rivers

Dr. Dave Tomasko, PBS&J- seagrasses

Dr. Tom Lee, UM (retired)- estuarine circulation

I have also requested, but not yet heard back, from the following:

Avera Wynn, Tampa Bay Regional Planning Council- local govt SLR projections

Dr. Lisa Beever, Charlotte Harbor NEP- mitigation and adaptation strategies

Jim Beever, South Florida Regional Planning Council- same

E. Coastal Communities (Havens)

1. What is Known, Probable, Possible respecting...

*Structures on coasts and tidal shorelines*

*Transportation*

*Water supply (and storm water)*

*Energy*

*Public lands (managed areas, historic/archaeological sites, etc.)*

*Projections by state & local governments, and others (Corps of Engineers)*

*Mitigation and adaptation strategies in play*

*Navigation and Ports (added in March)*

*Look at the CORPS document*

2. Research needed to improve Florida's understanding and capacity to respond

3. References

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**Add Ocean Acid – Billy Causey will be updating this section.** (This was under the driver for increasing greenhouse gases. Once we have the draft, the Council needs to decide where to place this in the formats for the updates.)

#### IV. SUMMARY AND CONCLUSIONS *(Is this appropriate for a single section?)*

- A. Sea-level rise is one part of climate change*
- B. Florida's risk is considerable*
- C. Much is known and being done*
- D. There is more to learn, and do*
- E. "The Long-Term Solution" (from 2009 report...)*

*Perhaps something to tie back to the main report. May want to add at the top or bottom of the report.*

#### V. LINKS TO ADDITIONAL RESOURCES?

## DRAFT LETTER TO PROSPECTIVE COLLABORATORS

February 5, 2010

Prepared by E.D. Estevez for Council discussion on February 8.

Dear \_\_\_\_\_,

In 2009 the Florida Oceans and Coastal Council released a report, “The Effects of Climate Change on Florida’s Ocean & Coastal Resources,” available at [www.floridaoceanscouncil.org](http://www.floridaoceanscouncil.org). At its September 2009 meeting the Council decided to update sections of the report. The revised sections will appear on the Council’s web site. Your assistance is respectfully requested in the revision of the section concerning sea level, sea-level rise, and the effects of sea-level rise on the state’s ocean and coastal resources.

The section on sea-level rise is being revised under the overall coordination of Dr. E.D. Estevez, a member of the Council. Other members have taken lead roles in revising sub-sections, as named in the attached working draft. Your expertise is sought during the writing stage of the revision and should you agree to collaborate the revised section will acknowledge you as a contributing author.

The revisions will conserve the aims of the 2009 report-- to address a general audience; to convey information about or transferable to Florida; to provide succinct statements that recognize differing levels of scientific certainty by categorizing each as “known”, “probable”, or “possible”; to rely on peer-reviewed professional publications; to document sources, and to seek independent review by subject matter experts not involved in writing. The revision will add text, where appropriate, on projections by state and local governments, mitigation and adaptation strategies in play, and research needed to improve Florida’s understanding and capacity to respond to climate change, in this case, sea-level rise.

The Council seeks your assistance during the revision of the report but understands if you are unable or unwilling to participate. You may also prefer to serve as an external reviewer of the report rather than as a contributing author. You may find it useful to know that the present schedule for this endeavor calls for the updates to be completed by the end of May; for outside reviews to be collected during June, and for reviewers’ comments to be considered and incorporated as needed, in July.

State law governs the conduct of the Council. Should you agree to assist this effort you will be free to communicate with volunteer collaborators and with the individual Council member(s) leading the section(s) you are helping, but you would not be able to communicate with other Council members working on the revision, or the Council at large, without first conveying your communications through me or other authorized agency staff. You may also participate in official meetings of the Council including publicly-noticed conference calls, as a member of the public. The Council will next meet in person on March 11 in Tallahassee and will be working on revisions then.

Please reply at your earliest convenience regarding your willingness to participate in the forthcoming revision, indicating the sub-section(s) of the attached outline your contributions would most benefit. We may also be able to suggest a section for you in order to distribute subject-matter experts as evenly as possible. Once assigned, the Council member serving as the leader for your section will contact you to arrange for discussions among that group of collaborating authors.

The Florida Climate Report has been well received throughout the state and nation. The report, which is being used by colleges, regional and local governments, and the Florida Sea Grant Program, is being emulated by Hawaii and Delaware. We look forward to producing the next cycle of topical updates and hope you will agree to join us in this timely and important undertaking.

Sincerely

Co-Chairs? B. Prado?

Attachment: February Report on Sea Level Revisions to FOCC Climate Report Updated February 5, 2010 and revised as needed on February 8.