

## **Tampa Bay Climate Science Advisory Panel (TBCSAP)**

**Convened by UF/IFAS Extension, Florida Sea Grant**

**Location: Weedon Island Preserve, 1800 Weedon Drive, St. Petersburg, FL 33702**

**Meeting Date: August 19, 2014**

The Tampa Bay Climate Science Advisory Panel is a scientific advisory board convening to support local governments in their efforts to plan for a changing climate.

### **Agenda Item #1. Other Local/Regional Efforts**

#### ***One Bay Resilient Communities Working Group\****

Tampa Bay Regional Planning Council

- October 3, 2014 10 a.m.
- \*Maya Burke was pleased to share that the Tampa Bay Regional Planning Council has been awarded the NOAA Coastal Resilience Networks Grant (applied May 2014) to engage Tampa Bay communities in resilience planning. Thanks to all who supported them on this application.

#### ***Hillsborough County Board of County Commissioners to Address Climate Change***

Charlie Paxton, NOAA National Weather Service and Margaret Rush, Environmental Protection Commission of Hillsborough County presented.

- Available online, <http://65.49.32.144/ppportal/agenda/search.aspx>.
- Go in the drop down box for meeting type and enter *Environmental Protection Commission, August 2*. First is public comment, then the gentleman who addresses the Governor's Sterling Award, then the Climate presentation.

#### ***6th Annual Southeast Florida Regional Climate Leadership Summit***

- <http://southeastfloridaclimatecompact.org/the-summit/>
- October 1<sup>st</sup> & 2<sup>nd</sup>, 2014, Miami Beach, FL

#### ***2014 Rising Seas Summit***

- *Developing Resources to Inform Decision Making and Planning for Resilience*
- <http://www.risingseassummit.org/>
- September 24-26, 2014, New York, NY

#### ***Heart of Florida Climate Change Workshop***

Sponsored by Florida American Planning Association

- More information and registration to follow, contact Dr. Mark Hafen, [mhafen@usf.edu](mailto:mhafen@usf.edu)
- Thursday, October 9<sup>th</sup> 1-5 p.m., Bartow, FL

#### ***Coastal Community Planning Course***

Sponsored by Charlotte Harbor, Tampa Bay, and Sarasota National Estuary Programs

- Presented by NOAA Coastal Services Center
- Register By Nov. 14, \$40 registration fee, [www.ccpt.eventbrite.com](http://www.ccpt.eventbrite.com)

- Wednesday-Thursday, Dec. 3-4, 2014
- Venice Community Center, 326 Nokomis Ave S, Venice

## **Agenda Item #2. Sea Level Change and Long Range Planning for Florida\***

### **Glenn Landers, PE, Planning and Policy Division, US Army Corps of Engineers**

#### ***\*See Mr. Landers PDF presentation (attached) for more detailed notes***

- Mr. Landers serves as a technical advisor for sea-level rise planning around Florida. He traveled from Jacksonville, FL to join us this month and offer his expertise based on his experiences. The US Army Corps of Engineers (USACE) sea level change scenarios are based on guidance from the National Research Council of the National Academies of Science. Project planning studies have traditionally looked at a 50-year planning horizon and investment decisions have been based on appropriate economic and environmental considerations. Recent guidance recognizes the need to consider a 100-year planning horizon to evaluate the adaptation needs of alternative designs for a range of future sea level rise scenarios.
- USACE Civil Works efforts are mostly limited to cost-shared water resources projects authorized and funded by Congress. These include projects for flood damage reduction, navigation, coastal storm damage reduction, ecosystem restoration, hurricane recovery, etc. The USACE can undertake regional or watershed scale planning studies if supported by a cost-sharing local sponsor and authorized by Congress.

### **New USACE Guidance for Climate Change Publications**

- ER 1100-2-8162: Incorporating Sea-Level Change in Civil Works Programs, 31 Dec. 2013.
  - For all Civil Works projects subject to tidal influence; consider 3 future scenarios per National Research Council (NRC) guidance.
- ETL 1100-2-1: Procedures To Evaluate Sea-Level Change: Impacts, Responses and Adaptation, 30 June 2014 to 31 March 2019.
  - Planning horizon extended to 100 years
- ECB 2014-10: Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects, 2 May 2014 to 2 May 2016.
  - NRC Report: Reducing Coastal Risk on the East and Gulf Coasts, 23 July 2014.

### **Climate Change concerns for Florida include (but are not limited to):**

- Saltwater intrusion – Impacts on shallow water supply wells such as in SE Florida
- Flood risk – increasing flood frequency in low elevation areas
- Storm surge risk
- Sea-level rise – Shoreline retreat and habitat shifts particularly in natural areas
  - Hydrologic pattern changes
  - Increase in tropical storms intensity or frequency
  - Less frequent, more intense rain events
- Warmer temp
  - Evaporation losses up, water supply down

- Stresses on the environment due to these factors

**New Technology:** Mobile LIDAR trucks are now available for enhanced mapping of coastal road and building elevations. Two-to-three firms are using these around the state. The Florida Department of Emergency Management recently signed an agreement with the State of North Carolina to store and analyze this type of elevation data for flood risk and sea level rise vulnerability assessments.

#### **Army Corps of Engineers Methodology for Sea Level Rise Projections**

- Look at local, historic tide gauges
- St. Petersburg has a historic tidal record of 2.62 mm/year
- Looks at historic levels to a maximum of 2 meter projection, but generally a 1.5 meter high projection.

#### **Other Reference Documents to Note**

- NOAA Technical Report NOS CO-OPS 065, Estimating Vertical Land Motion from Long-Term Tide Gauge Records, May 2013.

#### **Take Away Points**

- Leading indicators of sea-level rise, such as the reduction in polar ice caps, and the recent rapid increases in the rate of glacier melting worldwide forecast significant SLR rate increases, and continuation of accelerated SLR well past 2100. The Dutch North Sea Dike project is already planning for anticipated SLR through 2200 because of the very long lead time required for cash flow to implement appropriate adaptation measures.
- Long-term sea-level rise adaptation strategies are needed at project, community, watershed, and national scales.
- Coordinated interagency regional planning is needed

#### **Agenda Item #3. Inundation Mapping and Sea Level Rise Scenarios**

- Mr. Landers will provide USACE and NOAA sea-level change projections for Tampa Bay Region for discussion at the September meeting.
- Mapping discussion will be continued at the September meeting.

#### **Agenda #4. Future Meetings**

- Wednesday, September 17<sup>th</sup>, 2pm-4pm, Location TBD
- Tuesday, October 21<sup>st</sup>, 10am-12pm, Location TBD
- Wednesday, November 19<sup>th</sup>, 2pm-4pm, Location TBD (*subject to cancellation*)
- Tuesday, December 16<sup>th</sup>, 10am-12pm, Location TBD

#### **For additional information:**

Libby Carnahan  
Sea Grant Agent

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**TBCSAP Member Attendees on 8/19/14:**

<b>Organization</b>	<b>Name</b>
Facilitator - UF/IFAS Extension, Florida Sea Grant	Libby Carnahan
Hillsborough County	Margaret Rush
NOAA National Atmospheric and Oceanic Administration	Kristen Laursen
NOAA National Atmospheric and Oceanic Administration	Heidi Stiller
Pasco County	Melissa Charbonneau
Pinellas County	Andy Squires
Southwest Florida Water Management District	David DeWitt
Tampa Bay Estuary Program	Lindsay Cross
Tampa Bay Regional Planning Council	Maya Burke
Tampa Bay Regional Planning Council	Brady Smith
The National Weather Service, Tampa Bay	Dr. Charlie Paxton
University of South Florida, College of Marine Science	Dr. Steve Myers
University of South Florida, Dept. of Geosciences	Dr. Mark Hafen
US Army Corps of Engineers	Glen Landers

**Guest Attendees on 8/19/14**

<b>Organization</b>	<b>Name</b>
City of St. Petersburg Engineering Department	Thomas Gibson
City of St. Petersburg Planning Department	Derek Kilborn
FL Sea Grant UF/IFAS Extension Intern	Anisha Russell
FL Sea Grant UF/IFAS Extension	Mary Campbell, Pinellas County Director

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Pinellas County Planning Department	Rodney Chatman
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