

Planning for Coastal Change in Levy County

A project funded by the **Florida Sea Grant**: Feb 2012-Jan 2014

Principal Investigator: **Dr. Kathryn Frank**, Department of Urban and Regional Planning, **University of Florida**

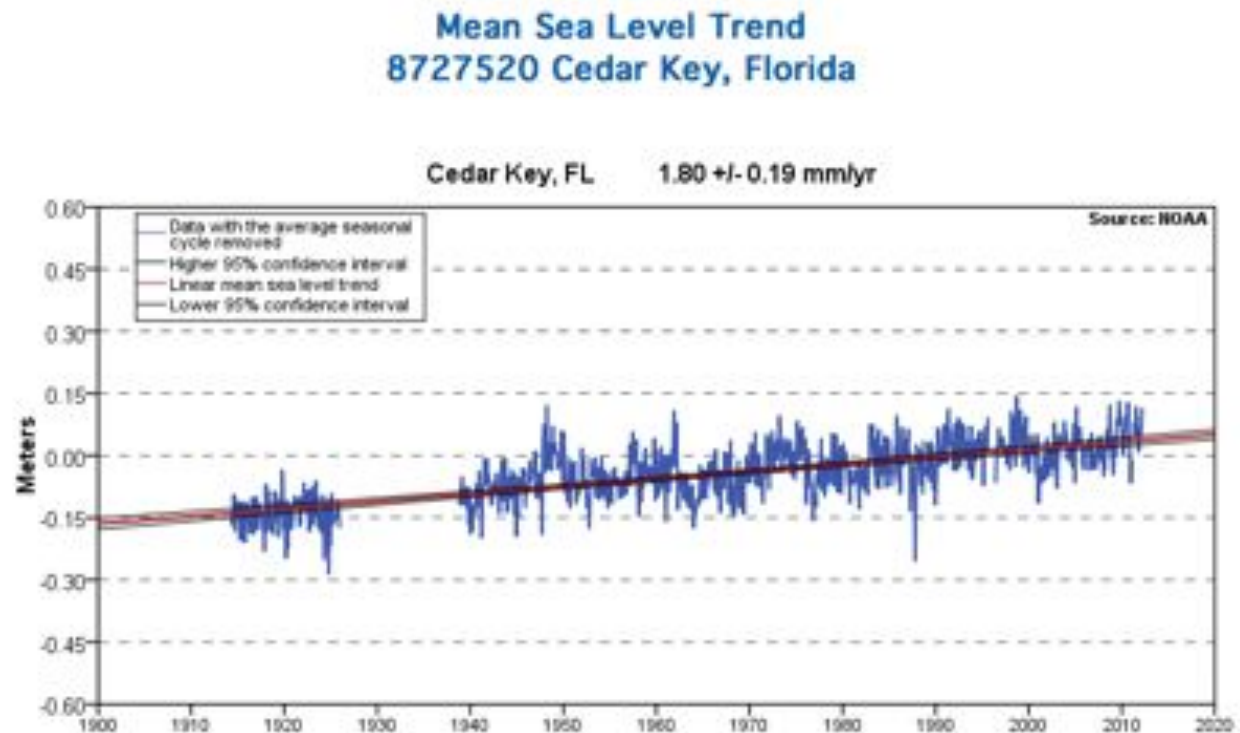
Presentation to the **Inglis Town Commission**

September 11, 2012

Sea Level Rise Is a Concern

- “Sea Level Rise Seen as Threat to 3.7 Million”, front page of the **New York Times**, March 14, 2012
- **U.S. Army Corps of Engineers** guidance document, December 2011: “Potential relative sea-level change must be considered in every USACE coastal activity as far inland as the extent of estimated tidal influence.”
- “The Tampa Bay region’s vulnerability relating to urban flooding, storm surge and sea level rise must be addressed now in order to be prepared for the future”, from the **Tampa Bay Estuary Program** website.

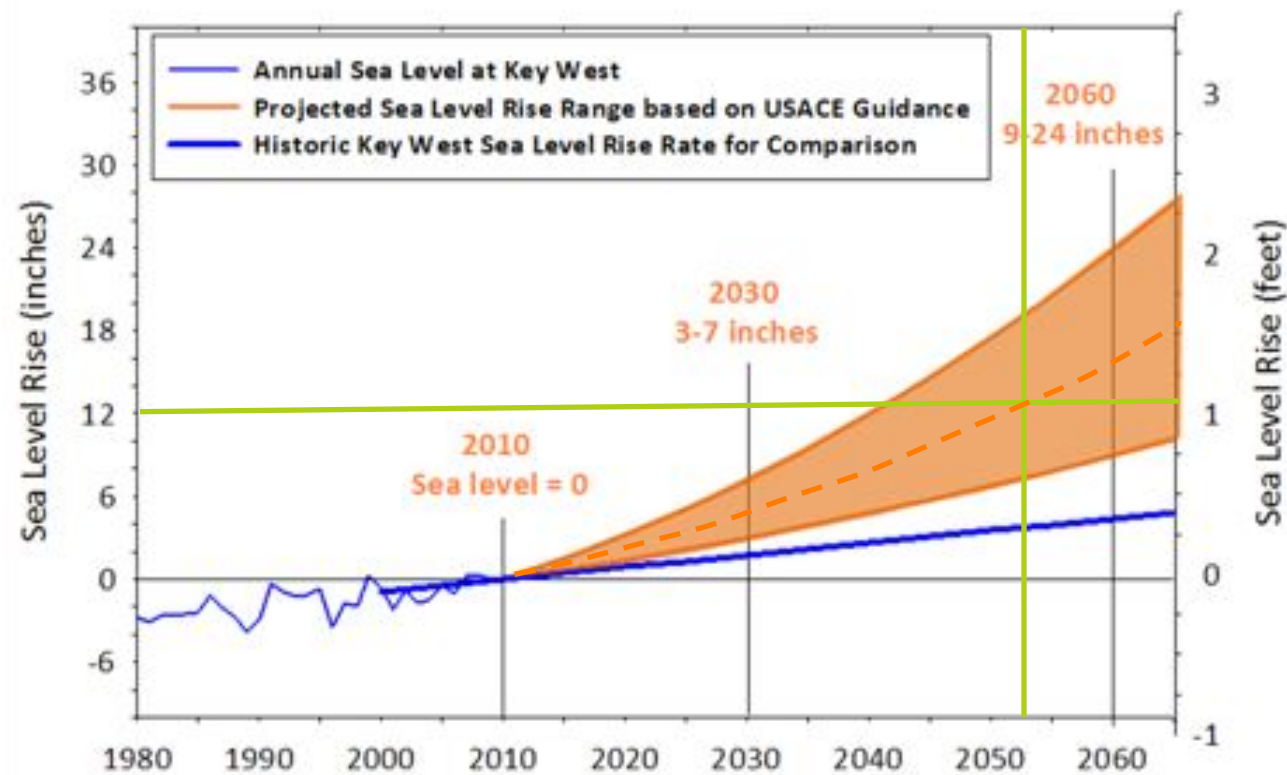
Tide Station Readings in Cedar Key



The mean sea level trend is 1.80 millimeters/year with a 95% confidence interval of +/- 0.19 mm/yr based on monthly mean sea level data from 1914 to 2006 which is equivalent to a change of 0.59 feet in 100 years.

8 inches

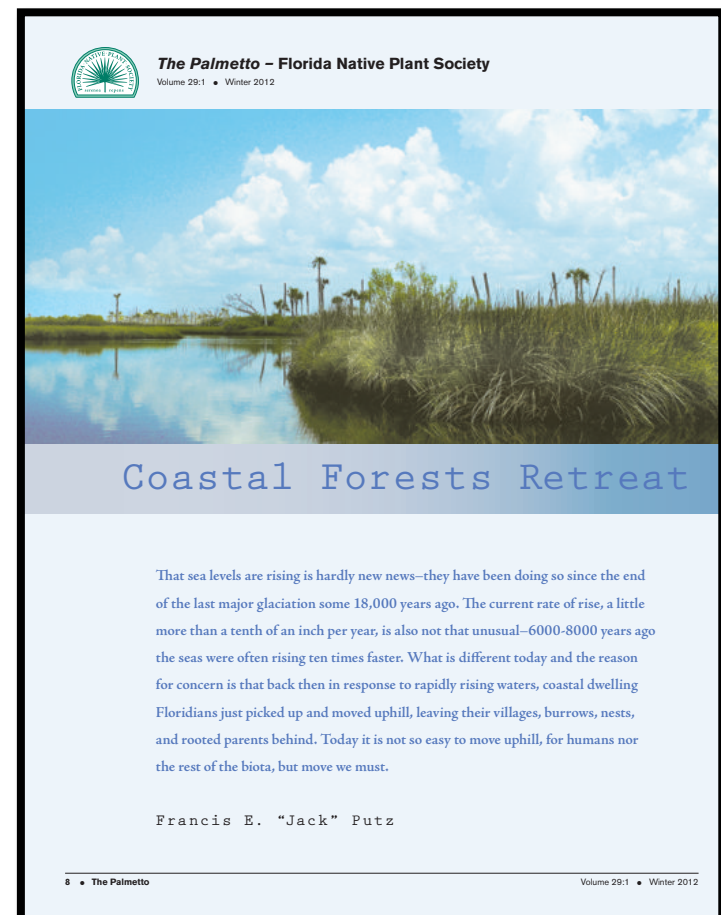
South Florida Sea Level Projections



Southeast Florida Regional Climate Change Compact, 2011

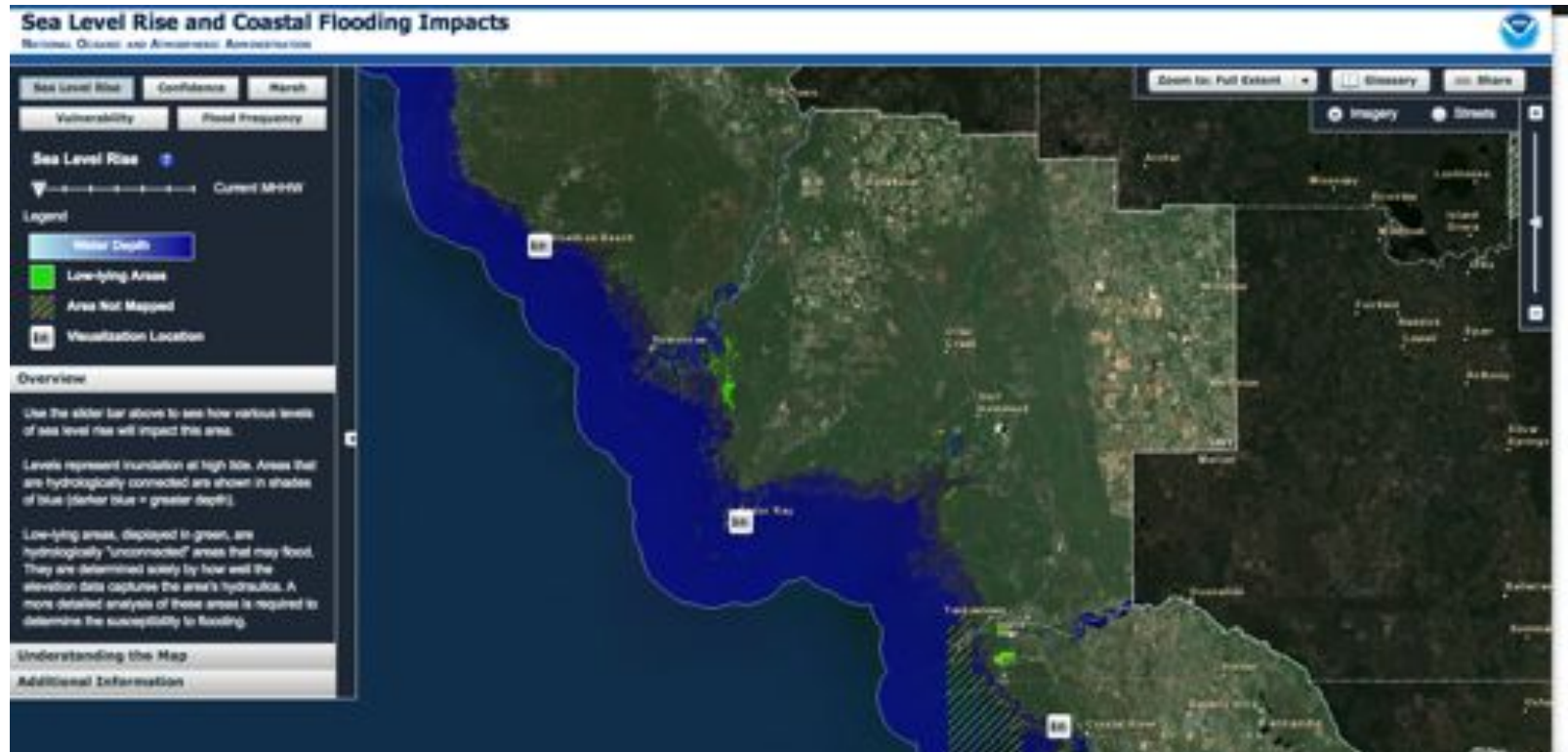
Impacts of Sea Level Rise

- Greater coastal **erosion**
- Saltwater intrusion into **aquifers**
- Release of **pollutants**
- **Storm surges** farther inland
- **Habitat** and species changes



Levy County Topography

NOAA Sea Level Rise Viewer <http://www.csc.noaa.gov/slr/viewer/#>



Levy County Topography

With 1 foot sea level rise

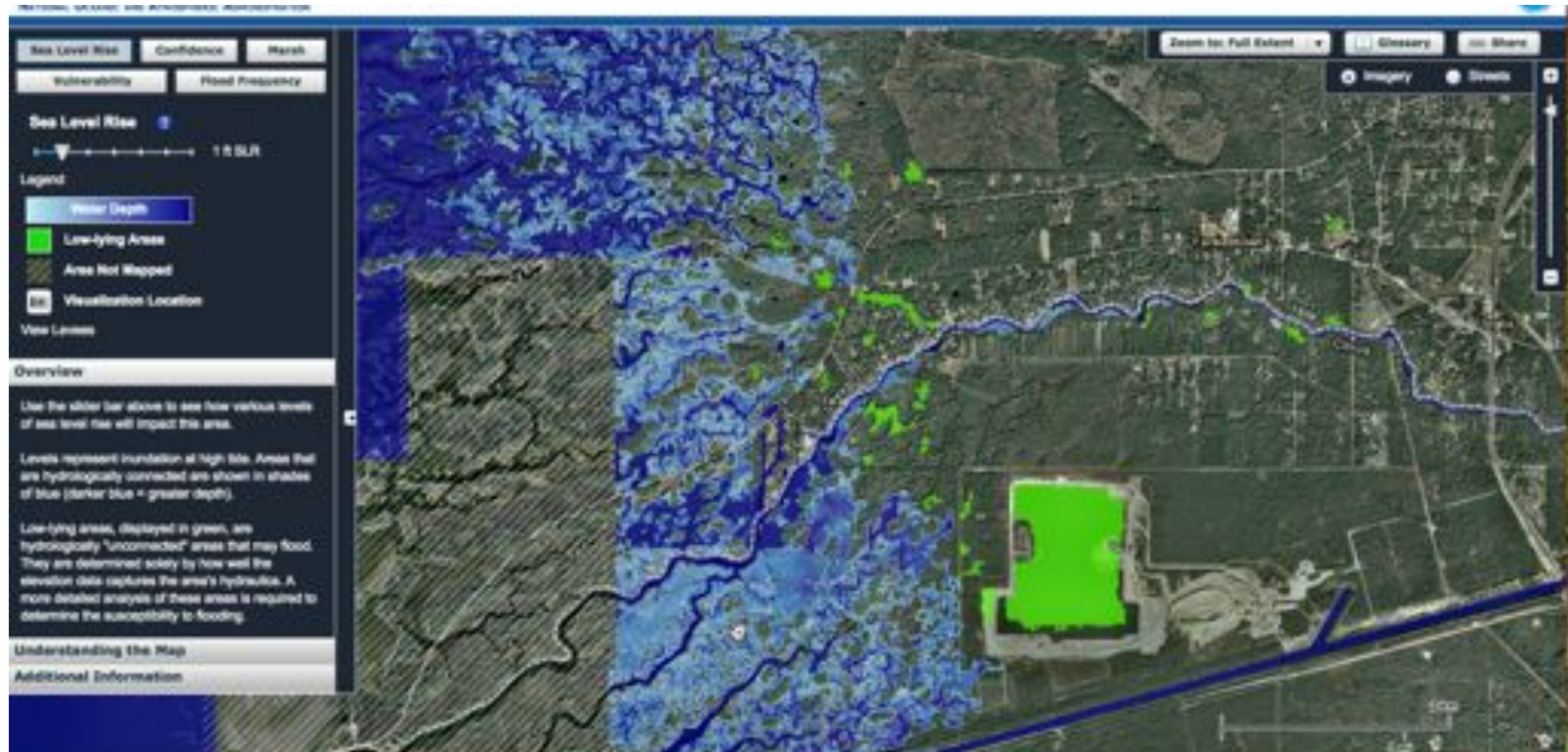


Yankeetown and Inglis Topography



Yankeetown and Inglis Topography

With 1 foot sea level rise



Near Term: Understanding current changes

- Water supply
- Water quality
- Stormwater management
- Emergency preparedness
- Natural resources



Long Term: How today's decisions affect tomorrow's options

- ▣ **Historic and cultural** preservation
- ▣ **Infrastructure** repair, replacement, and new construction
- ▣ **Development** patterns
- ▣ **Economic** development
- ▣ **Habitat** and species migration
- ▣ **Fiscal** and **insurance** policies



Archeologists at Shell Mound

Purposes of This Project

- Support **rural and small town** planning for sea level rise
 - **University service**
 - **Community-driven**
 - Provide locally relevant information about potential impacts of sea level rise
 - Work with decision makers and citizens to identify strategies and opportunities for adaptation
-

Dr. Kathryn Frank
Principal Investigator



UF Project Team



Dr. Dawn Jourdan
Co-PI and Community Outreach



Dr. Paul Zwick
Geospatial Analyses



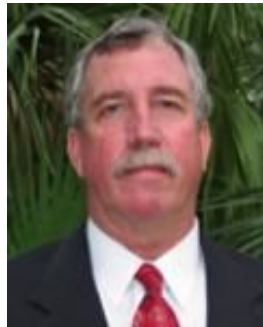
Dr. Greg Kiker
Habitat Modeling



Dr. Thomas Hctor
Habitat Migration Corridors



Ms. Gail Easley
Community Outreach



Prof. Robert Grist
Visualization & Communications



Dr. Ferdinand Lewis
Community Outreach



Thomas Ruppert, Esq.
Outreach and Adaptation Strategies

Local Partners and Supporters

- ▣ Levy County and region
- ▣ Coastal communities
 - ▣ Cedar Key
 - ▣ Yankeetown
 - ▣ Inglis



Withlacoochee Gulf Preserve, Yankeetown

Information to Be Provided

- ▣ **Mean high water** changes
- ▣ **Storm surge** changes
- ▣ Affected development, infrastructure, and cultural **assets**
- ▣ **Habitat** and species impacts
- ▣ **Future development** patterns
- ▣ Potential **adaptation strategies**



Community Outreach

Year 1

- ▣ **Spring 2012**
 - ▣ Outreach planning
 - ▣ Initial community contacts
- ▣ **Summer 2012**
 - ▣ Youth summer camp
 - ▣ Website launch
- ▣ **Fall 2012**
 - ▣ Community meetings
 - ▣ Festivals

Year 2

- ▣ **Spring 2013**
 - ▣ Arts and watermen
 - ▣ Town and regional design
 - ▣ Festival
- ▣ **Summer 2013**
 - ▣ Plan future planning
 - ▣ Regional workshop
- ▣ **Fall 2013**
 - ▣ Finalize guidebook
 - ▣ Share with others

Summer Camp

- ▣ July 9 – August 17, 2012
- ▣ Held by the City of Cedar Key
- ▣ 100 kids, K-12
- ▣ We offered curriculum
 - ▣ Coastal change
 - ▣ Community planning
 - ▣ Geospatial analysis
 - ▣ Learning from the past
 - ▣ Communicating values
 - ▣ Envisioning the future
- ▣ Youth input for festival and planning



Box City activity

Community Meetings

- Fall 2012
- UF studio course
- Now developing presentations and scheduling venues
- Citizen input for festivals and planning



Inglis and Yankeetown
Chamber of Commerce

How Can We Work Together?

- What is important to you?
- What information would you like to have?
- How can we help facilitate public discussion?
- How would you like to stay involved?



Waccasassa River

For More Information

- **Project website**
 - ChangingLevyCoast.org
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