

Florida Coastal Resilience Forum Quarterly Meeting

November 15, 2018 Notes

Friends – We had a lot of trouble on this call with background noise. Please be respectful of your colleagues who are giving their time to tell you about their programs and projects. Be mindful of what is going on in the background of your location. If you take a call, step away from the phone you dialed in on. Background noise is much more audible than you think it is and is very distracting for all of us. Please mute the phone line you are calling into the meeting on.

- I. Welcome and Introductions – Presented by Whitney Gray
- II. Northern Gulf of Mexico Sentinel Site Cooperative (NGOM SSC)– Presented by Renee Collini
 - Provided a presentation on the products that the NGOM SSC has produced to help communities plan for more resilience, including the GulfTREE decision support tool, a template for a 2-page sea level rise report customizable for various Gulf coast locations, and upcoming videos about sea level rise impacts on Gulf communities. There are SSCs on the Atlantic coast, but not in Florida. The NGOM SSC is funded by contributions from numerous agencies and sections within NOAA. (Presentation attached.)
 - Contact information for Renee Collini
 - Program Coordinator, NGOM SSC
 - Main Phone Number: (228) 546-1044
 - Email: r.collini@msstate.edu
 - Website: www.ngomssc.org
- III. FDOT Resilience Update – Presented by Carl Spirio
 - Provided a presentation on resilience challenges in the transportation sphere and FDOT’s efforts to incorporate resilience into planning, production, and mitigation. FDOT uses sea level rise projections from the IPCC in planning, but the state drainage manual does not yet reflect that. (Presentation attached.)
 - Contact information for Carl Spirio with FDOT
 - State Drainage Engineer
 - Main Phone Number: (850) 414-4351
 - Mailing Address: Roadway Design Office, 605 Suwannee St., MS 32 Tallahassee, FL 32399-0450
 - Email: Carlton.Spirio@dot.state.fl.us
- IV. Florida Climate Assessment – Presented by Jayantha Obeysekera

- Spoke about the potential to expand on the recent book from the Florida Climate Institute, “Florida’s Climate: Changes, Variations & Impacts,” into an assessment of the impacts of climate change on Florida. The assessment would especially consider compound flooding, the combination of sea level rise with storm surge and/or rainfall. The Institute is interested in developing a unifying sea level rise projection methodology for the state, and improving rainfall models. They hope to host a workshop in the spring to bring researchers together to begin discussions. (Funding is needed.)
- Contact information for Jayantha “Obey” Obeysekera
 - Director, Sea Level Solutions Center
 - Florida International University
 - 11200 SW 8th St., Miami, FL. 33199
 - 305-919-4119
 - Email: jobeysek@fiu.edu

V. Southeast Florida Climate Change Leadership Summit Update – Presented by Katie Wallace

- Reviewed the 10th annual Summit as a first-time attendee. Impressed with the level of buy-in from partner communities and attendees, as well as evident willingness to institute taxes and fees to upgrade infrastructure.
- Media partnership is helping raise awareness locally in southeast Florida and statewide: <https://www.theinvadingsea.com/>
- Contact information for Katie Wallace with Florida Resilient Coastlines Program
 - Program Assistant
 - Main Phone Number: (850) 245-2099
 - Mailing Address: 3900 Commonwealth Blvd., MS 35 Tallahassee, FL 32399
 - Email: Katherine.M.Wallace@FloridaDEP.gov
 - Website: <https://FloridaDEP.gov/resilience>

VI. Florida Resilient Coastlines Program Update – Presented by FRCP Staff

- Whitney provided a list of recently funded projects, including the special projects announced by Secretary Valenstein at the Summit and the 2018-2019 RPGs. (See below)

Grantee	Project	Amount
City of Miami Beach	Lake Pancoast Living Shoreline	\$34,965
City of Sarasota	Resilient Shoreline	\$174,337
RBNERR	Fruit Farm Creek Mangrove Restoration	\$276,948
City of Hollywood	Marina Boat Ramp Improvements	\$400,000
City of Sanibel	Vulnerability Assessment (Peril of Flood)	\$53,500
Atlantic Beach	Vulnerability Assessment	\$40,000
University of Florida	Permitting Living Shorelines/Cedar Key	\$41,024
Nassau County	Nassau County Vulnerability Assessment	\$40,000
City of Rockledge	Resilient Planning for the Future of Rockledge (Peril of Flood)	\$55,000
City of Carrabelle	Carabelle Targeted Resilience Assistance	\$23,000
SFRPC	Peril of Flood Updates/ Dania Beach & Palmetto Bay	\$36,885
City of Punta Gorda	Climate Adaptation Plan Update & Living Shoreline Element	\$74,968
Dixie County	Coastal Resilience Adaptation Plan	\$52,000
City of Marathon	Resilient Marathon (Peril of Flood)	\$55,000
City of Boynton Beach	Palm Beach County Resilience Partnership (Peril of Flood)	\$72,000
Pasco County	Comprehensive Plan Update and PDRP (Peril of Flood)	\$70,000
		\$1,499,627.00

- Angel discussed the grant reimbursement webinar, which will be helpful for current grantees getting ready to submit reimbursement requests. The next RPG grant cycle will be announced in January so that our process can line up better with the fiscal year, and grantees will have a whole year to complete projects. A webinar about applying for that cycle will be held January 4, 2019 from 1-2 pm Eastern. Registration information will be sent out soon.
- In early June, we hope to co-host a Resilience 101 2-day workshop in conjunction with the University of Florida. Watch for more information soon!
- Hard copies of the Florida Adaptation Planning Guidebook have been sent out to planning departments in every Florida city and county that are required to have Coastal Management Elements in their comprehensive plans. If you would like an additional copy, or are with some other organization, please email Whitney or Angel. A downloadable PDF is available here: <https://floridadep.gov/fco/florida-resilient-coastlines-program/documents/adaptation-planning-guidebook>

VII. Announcements

- Representative Kristin Jacobs, the Executive Director of Resiliency Florida, announced that Broward County passed a local ordinance setting a consistent elevation for seawalls through 2017. More information can be found here: http://cragenda.broward.org/agenda_publish.cfm?id=&mt=ALL&get_month=11&get_year=

[2018&dsp=agm&seq=27713&rev=0&ag=569&ln=105038&nseq=27748&nrev=0&pseq=&prev=#ReturnTo105038](#)

- Laura Waterman with the Department of Emergency Management announced the next Mitigate Florida meeting for December 11 at 1 pm Eastern. Contact Laura for more information: Laura.Waterman@em.myflorida.com (850) 815-4512
- Kelli Levy with Pinellas County announced that the county has, for the first time in many years of resident surveying, included questions about climate change and sea level rise. Contact Kelli for more information klevy@co.pinellas.fl.us

Florida Resilient Coastlines Program Staff Contact Information

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COASTAL STRATEGIES FOR DRAINAGE RESILIENCE

FDOT'S APPROACH AND VISION

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TODAY'S TOPICS

- ✓ Current Concerns and Trends
- ✓ Risk Tolerance and Design Criteria
- ✓ Long-Term Coastal Planning

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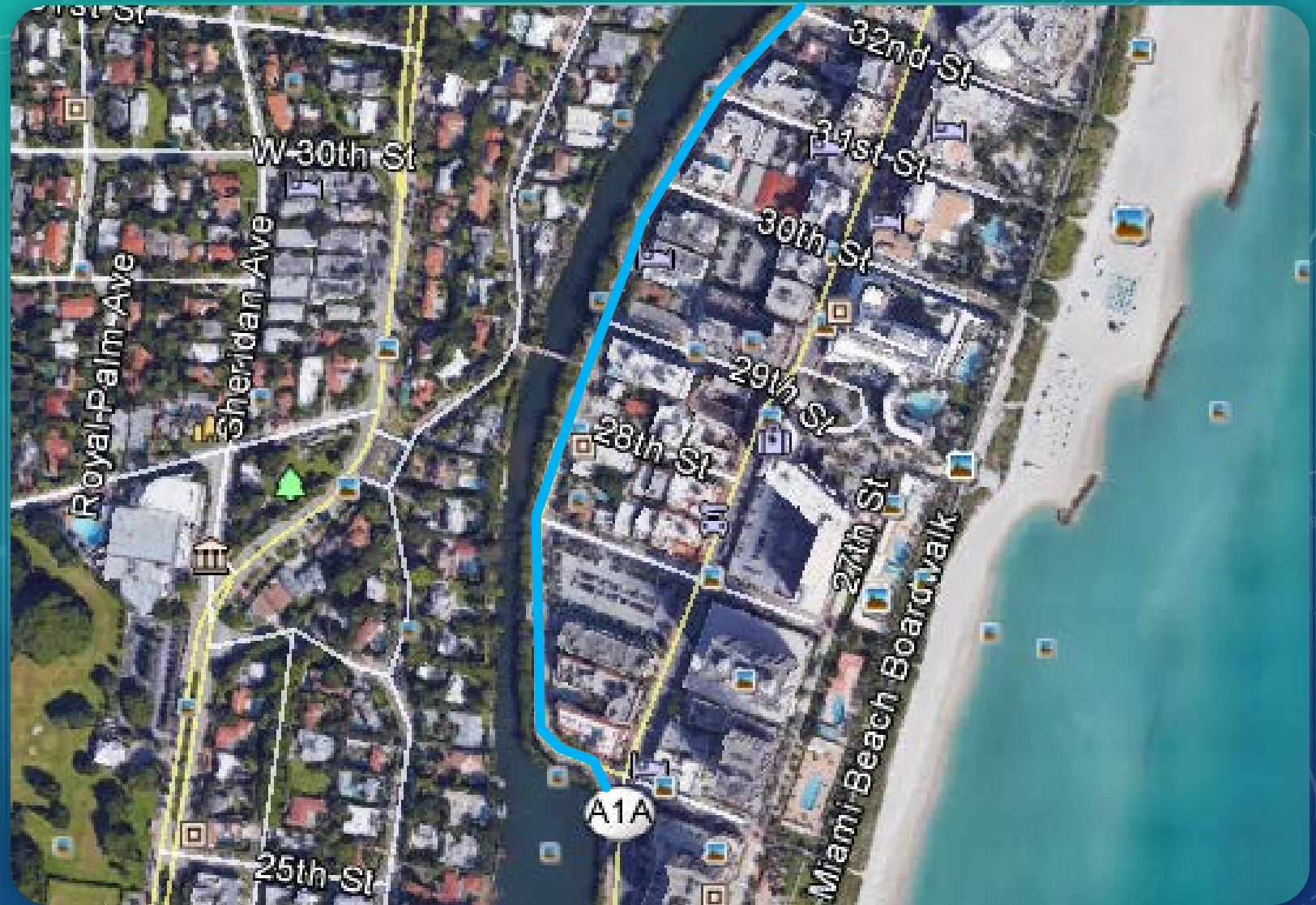




Vicinity Map of Miami Beach

S.R. A1A - INDIAN CREEK DRIVE/COLLINS AVENUE, MIAMI BEACH

- ✓ Indian Creek Drive serves as the Southbound Lanes for S.R. A1A
- ✓ Between 24th Street and 39th Street
- ✓ Existing Intra-Coastal Area is connected to Biscayne Bay
- ✓ Existing channel is lined with Seawall and Mangroves
- ✓ Existing roadway elevation for Indian Creek Drive varies between 1 and 3-feet, NAVD





Indian Creek Drive at 32nd Street – Miami Beach, September 2015

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KING TIDE FLOODING

Indian Creek Drive at 34th Street
Miami Beach, September 2015

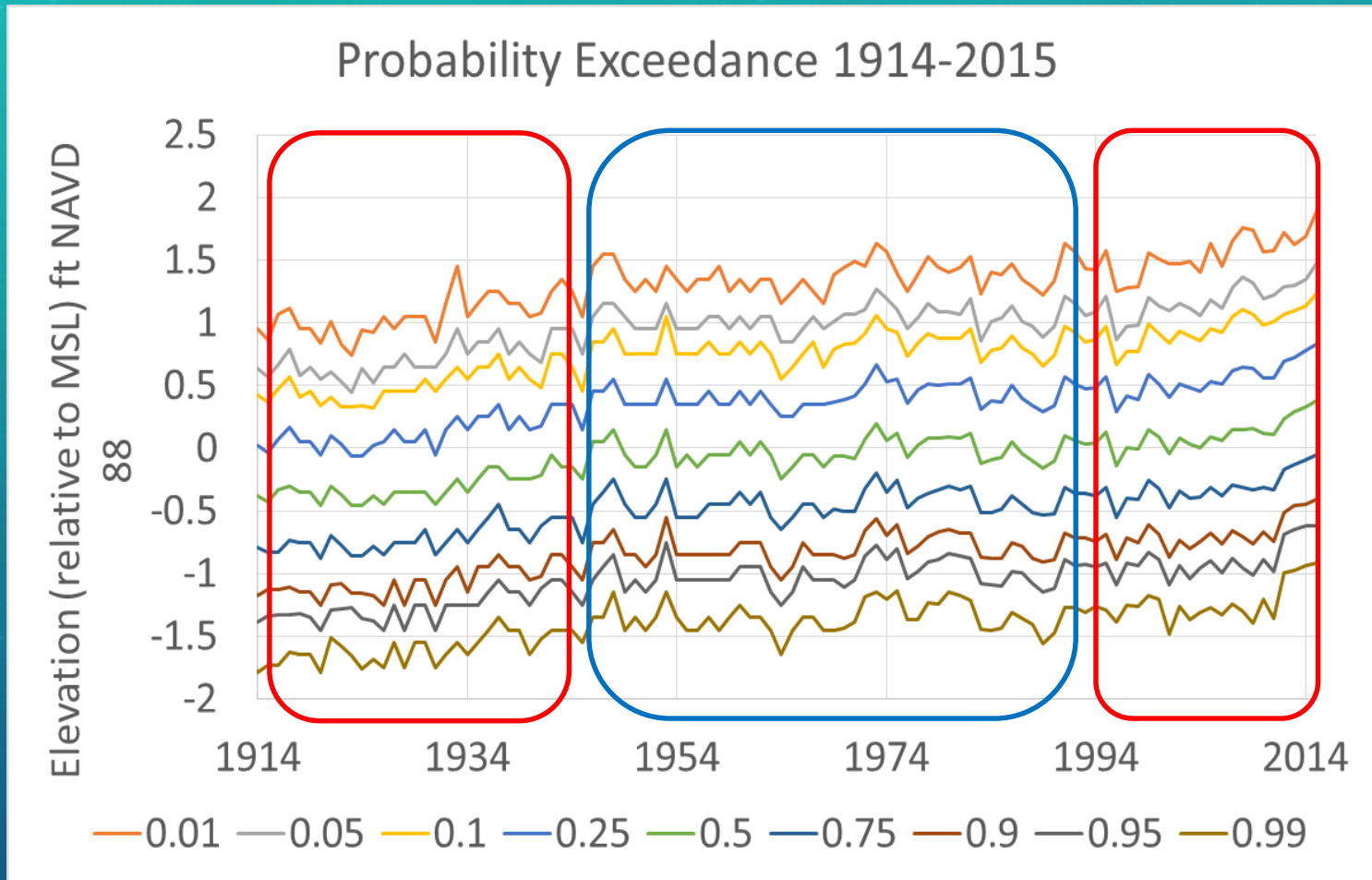
- ✓ Infra-Structure Impacts
- ✓ Traffic Impacts
- ✓ First Responder Coordination
- ✓ Maintenance & Cleanup
- ✓ Damage Assessment



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PROBABILITY EXCEEDANCE 1914-2015



Three regions can be observed:

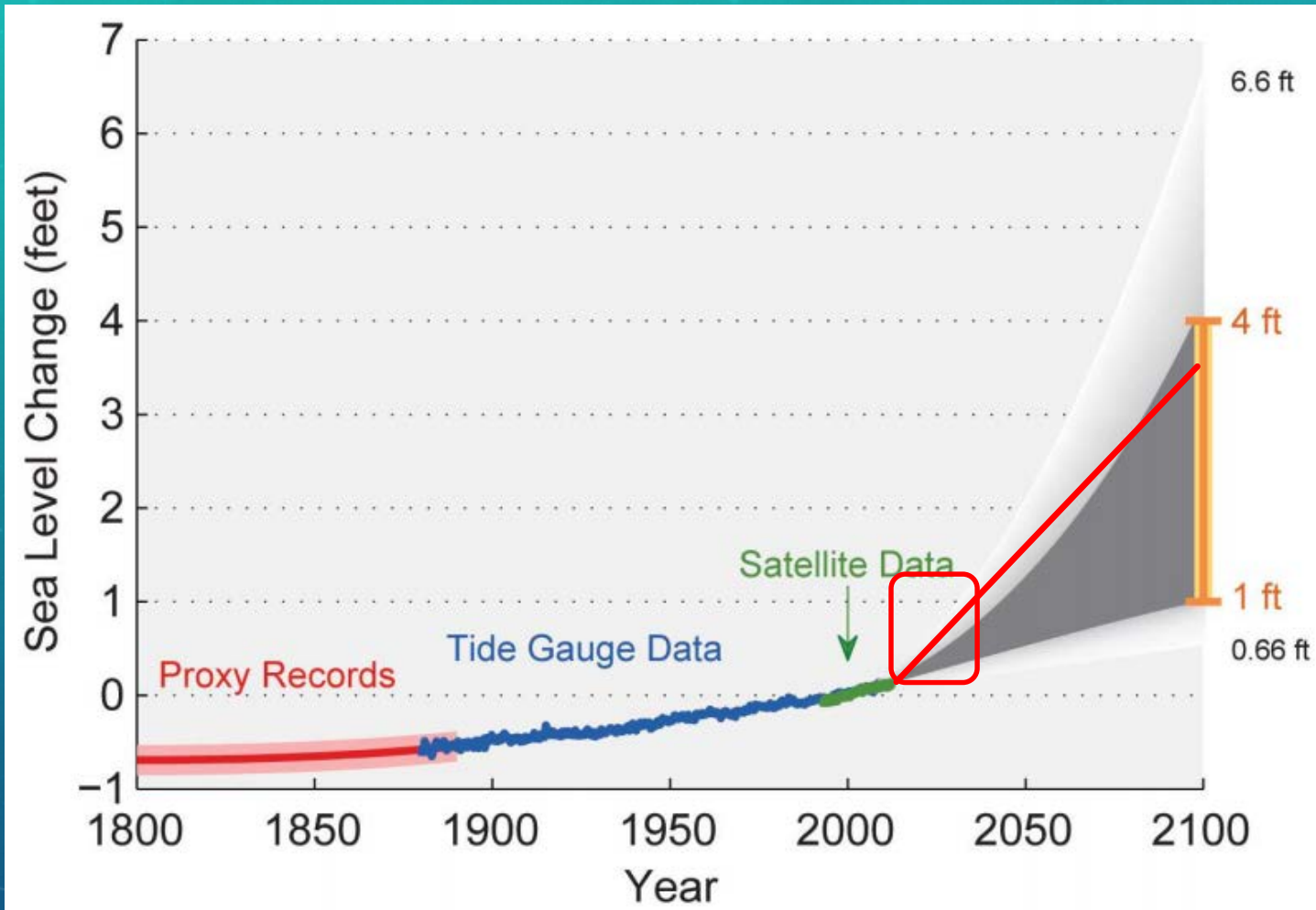
- 1914-1954 – 0.8 ft/100 yr
- 1954-1994 – 0.05 ft/100 yr
- 1994-2014 – 1.5 ft/100 yr

In the last 10 year there is acceleration

- 2004-2014 – 3.3 ft/100 year

If only 2013-2014 year is considered the trend is 4 ft/100 years

FORECASTS AND CONCLUSION



- The analysis of the PE data indicates that the rate of increase in the **last 20 years was 1.45 ft/100 years** however only in the last 10 years the rate more than doubled to **3.0 ft in 100 years**
- The observed rate of increase is greater than the predicted for this period which is a scenario of 4 ft/100 years and corresponds to 6.6 ft/100 years if the exponential trend holds
- **Next 10 years will be critical to determine if the increase continues to be exponential or will linearize**

From The Third National Climate Assessment. U.S. Global Change Research Program, 841 pp. doi:10.7930/J0Z31WJ2

RISK ALLOWANCE

- ✓ Site Specific
- ✓ Extent of Inundation
- ✓ Temporary Utility Impacts
- ✓ Importance of Protection versus Environmental Impacts
- ✓ Business/Tourism Impacts
- ✓ Agricultural Impacts
- ✓ Estimated Costs to Upgrade the Infra-structure, which includes roadways, utilities, right-of-way, etc.



DESIGN CRITERIA CONSIDERATIONS

- ✓ Desired Service Life
- ✓ Appropriate Design Frequency, i.e. 10, 15 or 25-Year
- ✓ Tailwater Considerations, i.e. MHHW, MHW
- ✓ Consistency (LOS) for Shared Outfall Systems
- ✓ Tropical Systems and Storm Surge
- ✓ Coastal FEMA Floodplain Map Updates
- ✓ Criteria for Pressurized Storm Sewer Systems



RESILIENCE PLANNING – Living Shorelines and Permitting



U.S. 98 along the Gulf of Mexico in Franklin County

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LONG-TERM PLANNING STRATEGIES

- ✓ Collaborative Regional Coastal Planning to address Protection Areas, Vulnerable Areas and Mitigation
- ✓ Planning for Registered Estuaries
- ✓ Seawall Protection
- ✓ Back-flow Prevention Devices
- ✓ Dikes/Levees



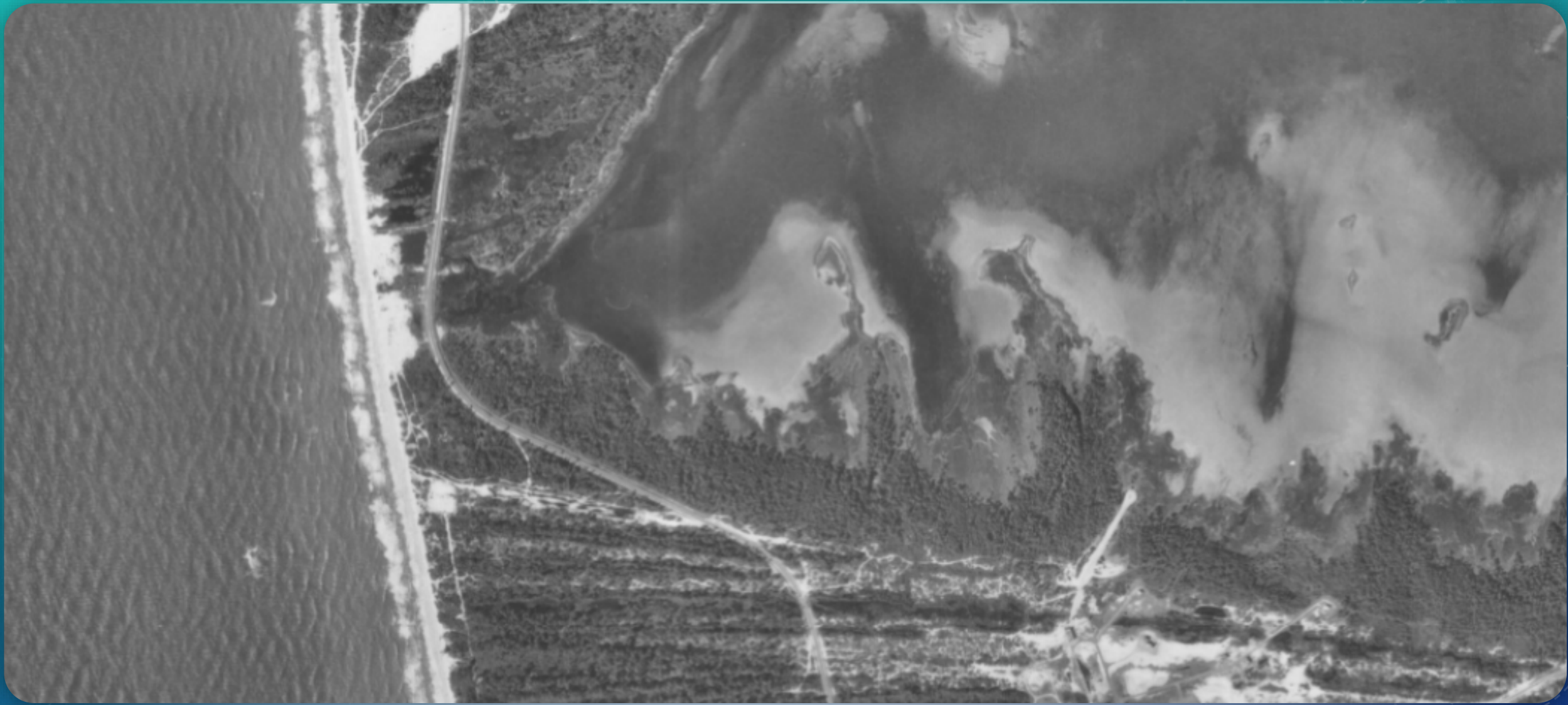
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LONG-TERM PLANNING STRATEGIES

- ✓ Stormwater Management Designs to Protect Against Landward Saltwater Intrusion
- ✓ Multi-purpose designs, i.e. Parks and Recreation Areas
- ✓ Phased Designs to allow for adjustments in response to the localized Sea Level Rise
- ✓ Restore Coastal Inlets and Relief Passes

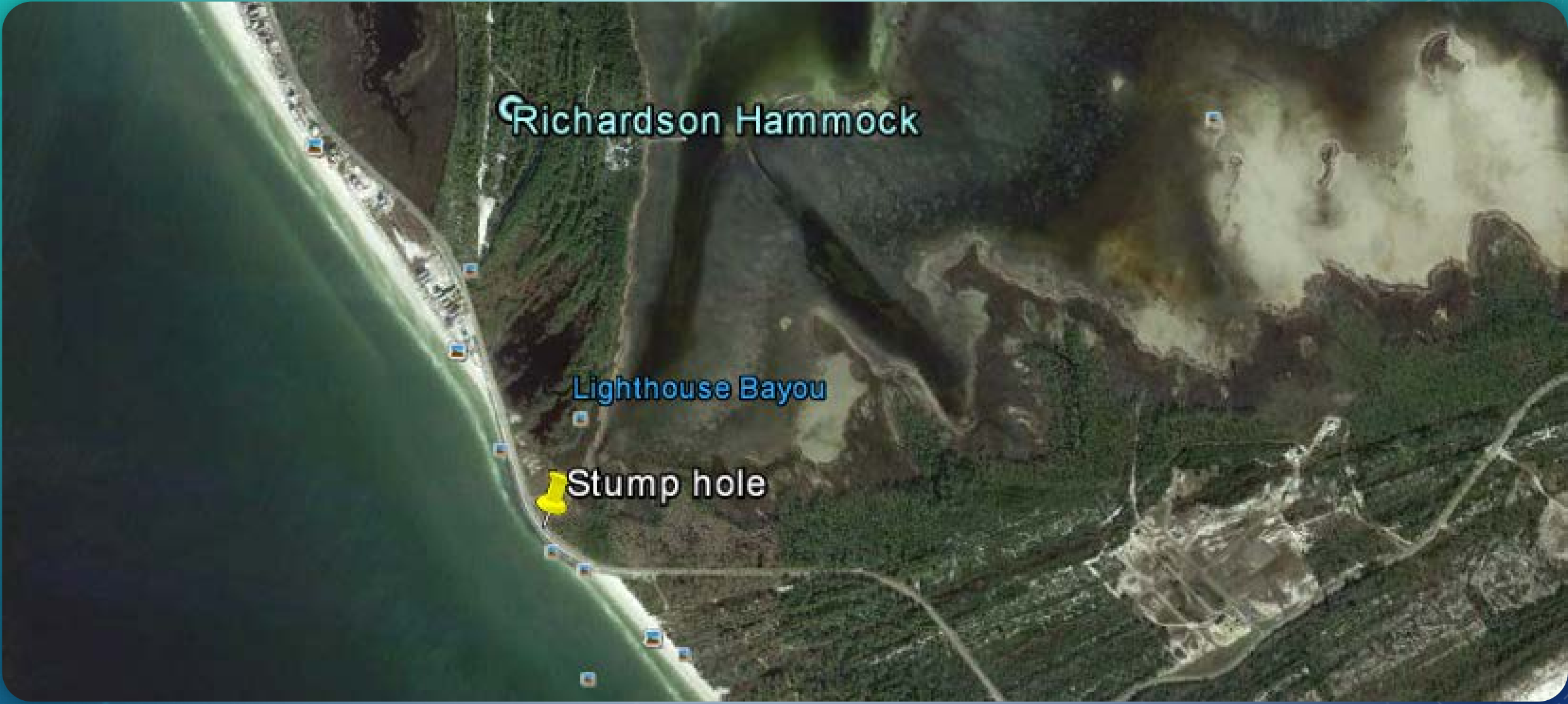




Long-Term Coastal Planning Considerations

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LONG-TERM PLANNING STRATEGIES

- ✓ Utility Relocations
- ✓ Infra-Structure Improvements and Relocations
- ✓ More Robust Land Development Codes (LDC)
- ✓ Consistency Amongst the Regulatory Agencies
- ✓ Greater Stakeholder Engagement



Wastewater Plant on Virginia Key, Miami

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FURTHER CONSIDERATION FOR LIVING SHORELINE PROTECTION?????

Thanks!!!!!!

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