



**COASTAL RESILIENCE PARTNERSHIP**  
SOUTHEAST PALM BEACH COUNTY

November 10, 2020

# **City of Delray Beach City Commission Update**



# Coastal Resilience Partnership

The Coastal Resilience Partnership, or CRP, was organized to take a united and collaborative approach towards building long-term resilience and climate adaptation among these eight coastal municipalities located in Southeast Palm Beach County, Florida.

The Coastal Resilience Partnership consists of:

- Delray Beach
- Palm Beach County
- Boca Raton
- Boynton Beach
- Highland Beach
- Lake Worth Beach
- Lantana
- Ocean Ridge



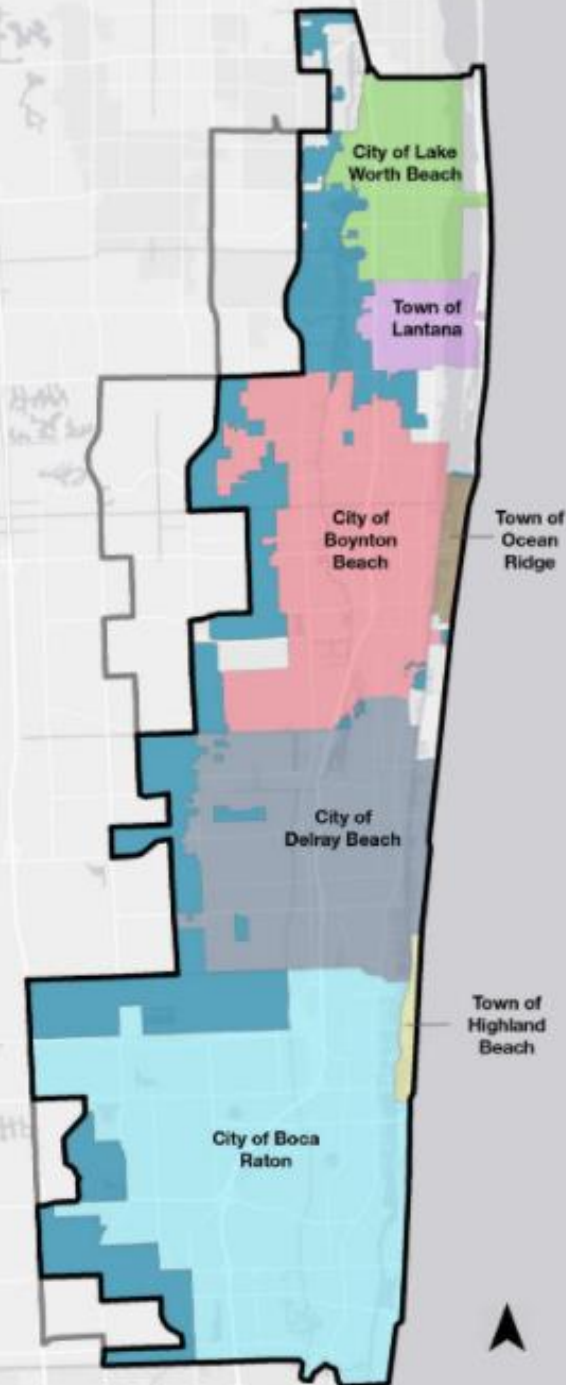
## Study Area

This map shows the study area for the Climate Change Vulnerability Assessment (CCVA). The study area is inclusive of the utility service areas for every jurisdiction.

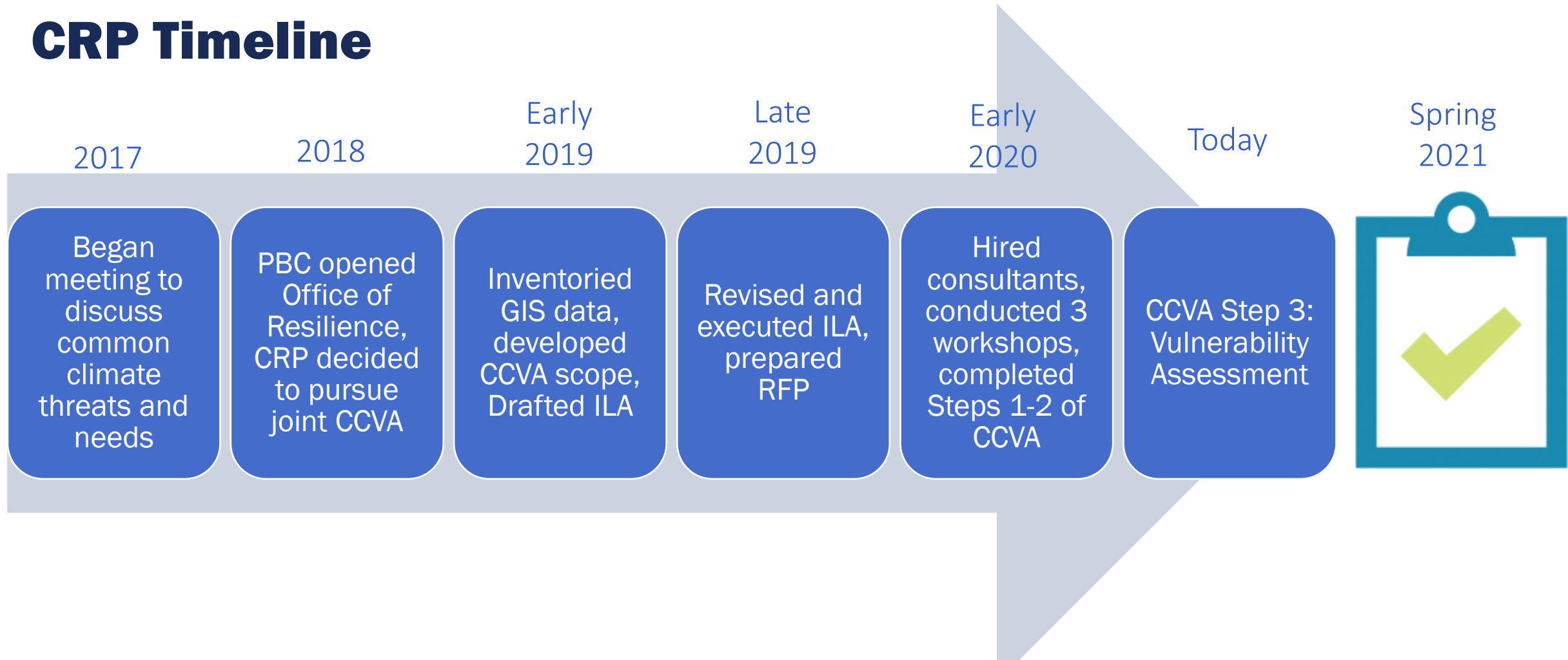


Note: Only assets belonging to a participating entity will be analyzed, including utility assets inside the service areas but outside the entity boundaries; assets of non-participating entities within the service area will not be analyzed

Eri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community; Municipal boundaries accessed from Palm Beach County GIS



# CRP Timeline



# What is a Vulnerability Assessment?

A vulnerability *assessment* provides a baseline understanding of the risks a certain community, place, or asset faces pertinent to *specific threats*, and in this assessment, threats associated with climate change.

1. Explore Climate Threats

2. Assemble Data on Community Systems

3. Assess Vulnerabilities and Risks

4. Investigate Potential Adaptation Strategies

5. Reporting and Tool Deployment

**Process**



# Step 1: Explore Climate Threats



Major hazard events or chronic disruptions that negatively impact community assets (e.g. people, infrastructure, services, resources)



Can have the potential to be influenced by changing conditions, resulting in increased frequency or severity in the future



Influenced by stressors – Climate threats are influenced by both climate and non-climate related stressors



Impact communities in spatially explicit areas, or impact communities as a whole



Can be assessed spatially where data is available

# Top Twelve Threats

*THREATS, broadly defined, are things likely to cause damage or danger.*



High Winds



Rainfall-Induced  
Flooding



Harmful Algal  
Blooms



Pest & Disease  
Outbreaks



Extreme Heat



Drought



Wildfire



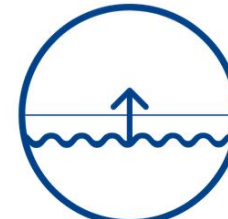
Shoreline  
Recession



Tidal Flooding



Storm Surge



Groundwater  
Inundation



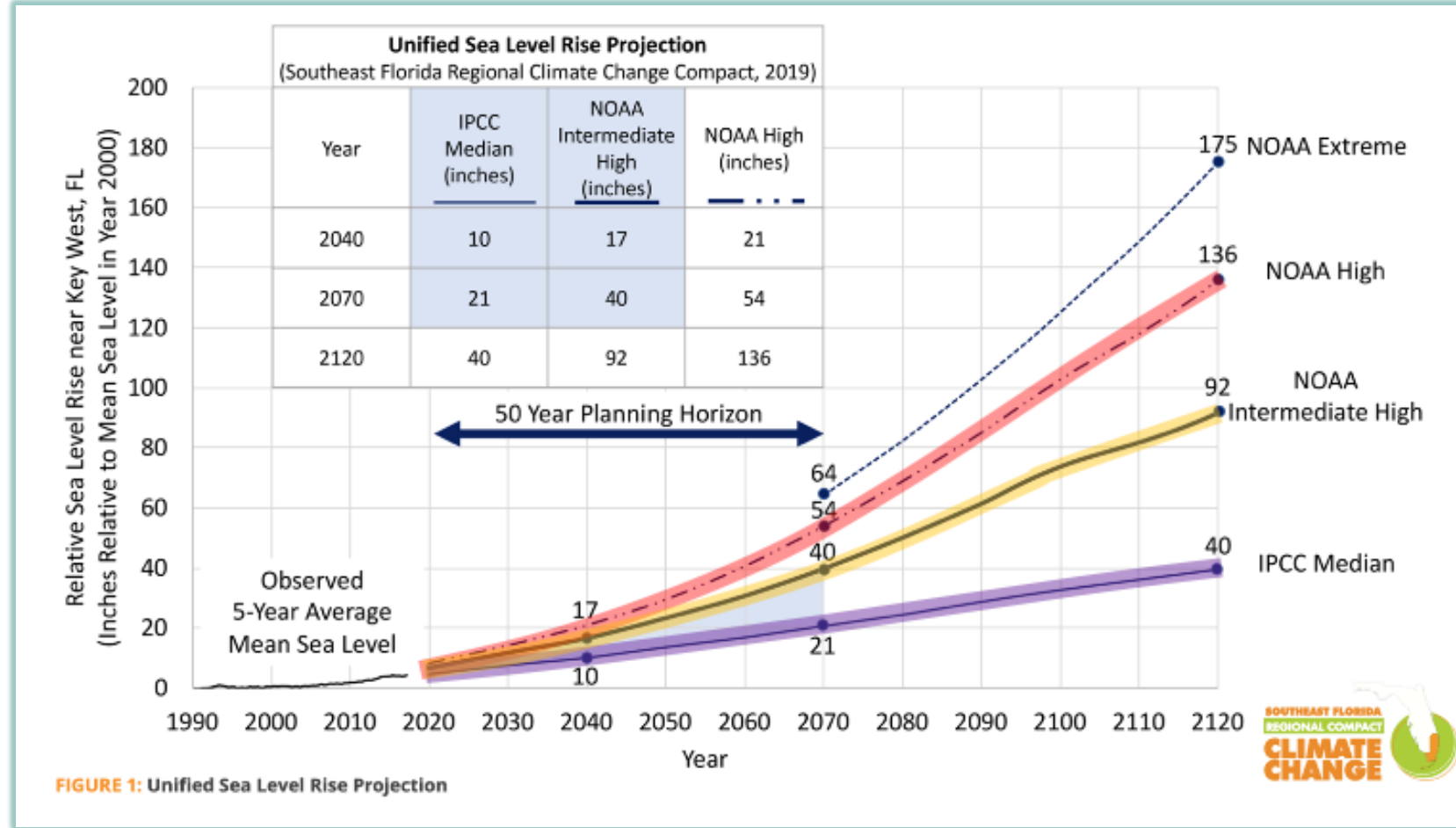
Saltwater  
Intrusion

## What about Sea Level Rise?

# Sea Level Rise is a Threat Multiplier

It is not a threat on its own.

- **Storm Surge:** SLR is a component that increases risk
- **Tidal Flooding:** SLR will increase frequency and severity until a threshold of persistent inundation could be reached
- **Groundwater/Saltwater Intrusion:** SLR is the primary cause of these threats
- **Rainfall-Induced Flooding:** SLR interacts as a compounding event in coastal areas
- **Shoreline Recession:** SLR accelerates the movement of shoreline



## NOAA High

Recommended for Sensitive and Critical Infrastructure

## NOAA Intermediate High

Recommended for Assets with Adaptive Capacity

## IPCC Median

Recommended for Assets with Short Life Cycle

## **Step 2: Assemble Data on Community Systems**

**“The Climate Change Vulnerability Assessment’s primary goal is to determine vulnerabilities in a data driven way.”**





# Community Systems (assets)

- Critical Facilities
- Water Infrastructure
- Economic
- Natural Resources
- People
- Property
- Transportation & Mobility

## **Step 3: Assess Vulnerabilities and Risk**

“The central task of the vulnerability assessment is to evaluate the vulnerability to climate threats across each asset category and estimate the likelihood and magnitude of potential losses.”

# Once the Vulnerability Assessment (Step 3) is Done, We Will Explore Adaptation Strategies.

Some principles for identifying actions:

- Equitable
- Actions with multiple benefits
- Flexible and adaptive actions
- Built-in monitoring and evaluation
- Investments should not increase vulnerability
- Advocacy and partnerships with state and federal government and agencies and academic institutions

Land Use

Infrastructure

Capacity Building

Public Outreach

Funding and Finance

Planning, Policy and  
Management



# COASTAL RESILIENCE PARTNERSHIP

## SOUTHEAST PALM BEACH COUNTY

QUESTIONS?

SURVEY & NOVEMBER 19<sup>TH</sup>  
MEETING INFORMATION  
AVAILABLE BY SCANNING THIS  
QR CODE WITH YOUR PHONE  
CAMERA



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