



# ADAPTATION ACTION AREAS IN FLORIDA

## THE STATE OF PLAY

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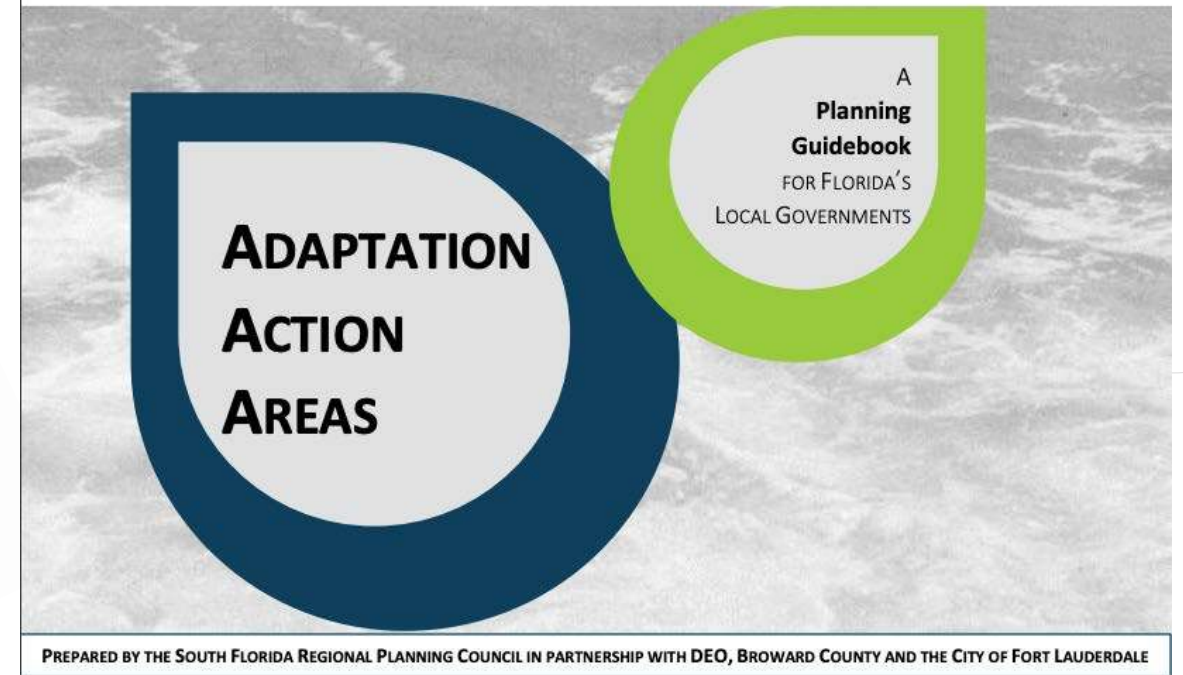
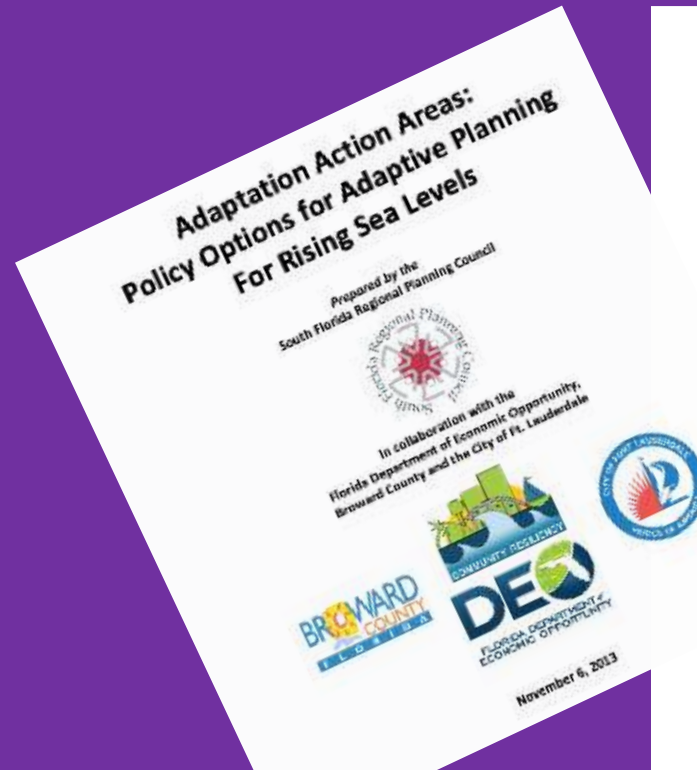
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# INTRODUCTION & OVERVIEW

- Florida's Adaptation Action Area (AAA) law: What it says; What it does
- Methods
- Policy history
- Spatial Explicitness
- Themes
- Conclusions



# WHAT IT SAYS AND WHAT IT DOES



At the option of the local government, develop an adaptation action area designation for those low-lying coastal zones that are experiencing coastal flooding due to extreme high tides and storm surge and are vulnerable to the impacts of rising sea level.

...areas including, but not limited to, those areas for which the land elevations are below, at, or near mean higher high water, which have a hydrologic connection to coastal waters, or which are designated as evacuation zones for storm surge.”

Fla. Stat. § 163.3177(6)(g)(10) (2019)

Home Rule – LG’s likely not preempted from using their own tools

Upon this optional designation, funding and other resources for improved infrastructure and planning within the AAA can be prioritized.

Fla. Stat. § 163.3164(1) (2019)





# POLICY HISTORY



- South Florida Climate Compact 2010 federal legislative agenda – federally designated regional AAA
  - Compact counties would serve as a federal pilot project endorsed by Florida legislature
  - Federal funds would flow
- Proposed complementary state legislation that would provide technical assistance and funding for local governments to review and revise their comprehensive plans and LDRs to incorporate climate change mitigation and adaptation planning strategies.”
- Federal effort failed but the policy construct found its way into Florida law

# COASTAL COMMUNITIES

LOCAL GOVT	COUNT	SECTION	REGION	RPC	WMD	DOT_DIST	CME
ANNA MARIA	MANATEE	1 07	Tampa Bay	Southwest Flo	1	YES	
APALACHICOLA	FRANKLIN	1 02	Apalachee	Northwest Flo	3	YES	
ATLANTIC BCH	DUVAL	1 04	North East Fl	St Johns Rive	2	YES	
BAL HARBOUR	MIAMI-DA	2 10	South Florid	South Florida	6	YES	
BAY CO	BAY	1 01	Emerald Coa	Northwest Flo	3	YES	
BAY HARBOR IS	MIAMI-DA	2 10	South Florid	South Florida	6	YES	
BELLEAIR	PINELLAS	1 07	Tampa Bay	Southwest Flo	7	YES	
BELLEAIR BCH	PINELLAS	1 07	Tampa Bay	Southwest Flo	7	YES	
BELLEAIR BLUFFS	PINELLAS	1 07	Tampa Bay	Southwest Flo	7	YES	
BELLEAIR SH	PINELLAS	1 07	Tampa Bay	Southwest Flo	7	YES	
BEVERLY BCH	FLAGLER	1 04	North East Fl	St Johns Rive	5	YES	
BOCA RATON	PALM BEA	2 09	Treasure Coa	South Florida	4	YES	
BONITA SPRGS	LEE	2 08	Southwest Fl	South Florida	1	YES	
BOYNTON BCH	PALM BEA	2 09	Treasure Coa	South Florida	4	YES	
BRADENTON	MANATEE	1 07	Tampa Bay	Southwest Flo	1	YES	
BRADENTON BCH	MANATEE	1 07	Tampa Bay	Southwest Flo	1	YES	
BREVARD CO	BREVARD	2 05	East Central	St Johns Rive	5	YES	
BRINY BREEZES	PALM BEA	2 09	Treasure Coa	South Florida	4	YES	
BROWARD CO	BROWAR	2 10	South Florid	South Florida	4	YES	
CALLAWAY	BAY	1 01	Emerald Coa	Northwest Flo	3	YES	
CAPE CANAVERAL	BREVARD	2 05	East Central	St Johns Rive	5	YES	
CAPE CORAL	LEE	2 08	Southwest Fl	South Florida	1	YES	
CARRABELLE	FRANKLIN	1 02	Apalachee	Northwest Flo	3	YES	
CEDAR KEY	LEVY	1 03	North Centra	Suwannee Ri	2	YES	
CHARLOTTE CO	CHARLOT	2 08	Southwest Fl	Southwest Flo	1	YES	
CINCO RAYOU	OKALOOS	1 01	Emerald Coa	Northwest Flo	3	YES	

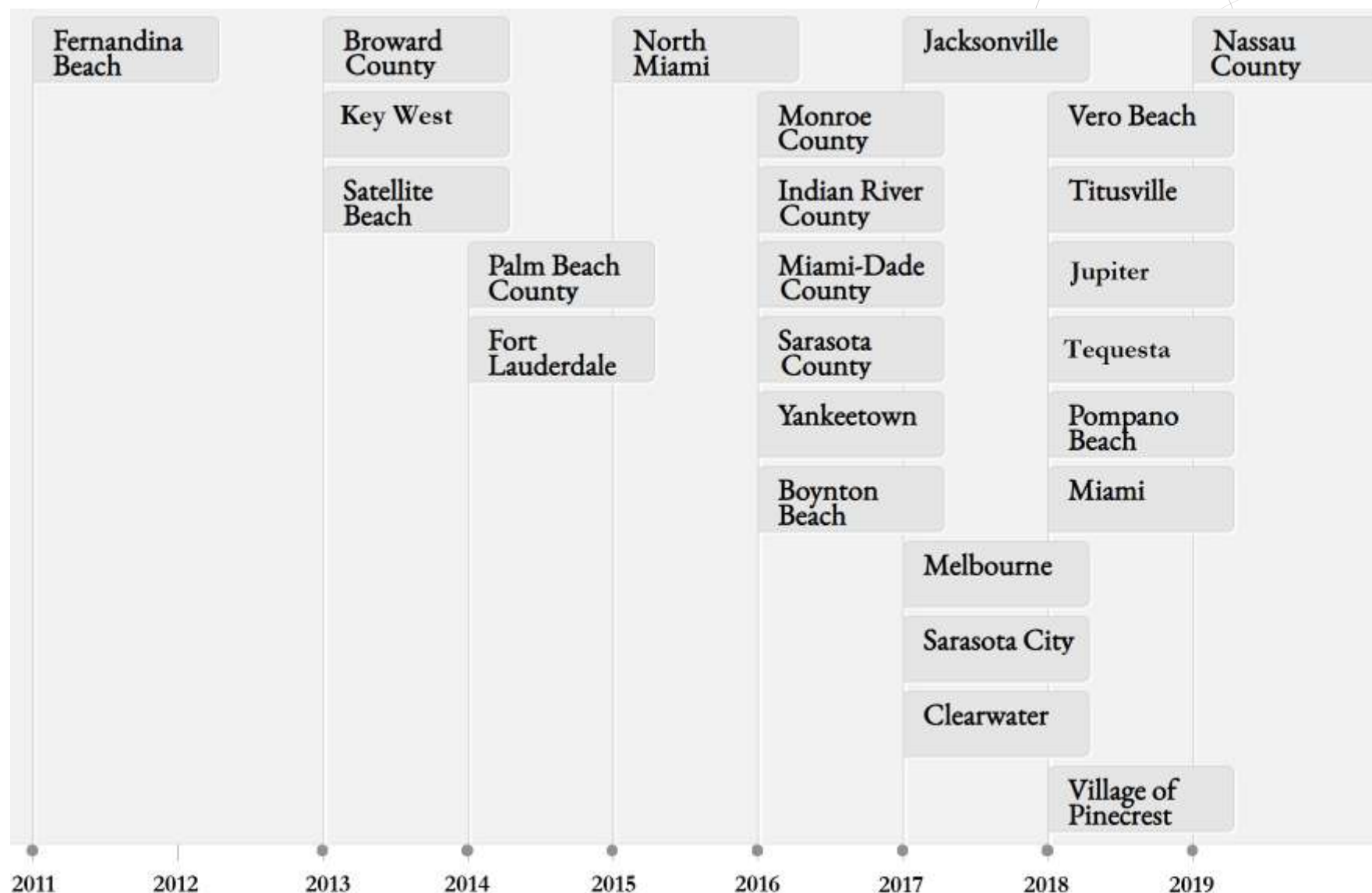
## METHODS

- Global Municode search
- Systematic review of local government websites
- Develop spreadsheet / adoption timeline
- Analysis
  - Aspirational v. Operational distinction
  - Thematic variation (built environment, natural resources, social equity)
  - Policy approach (regulatory, project-based)



# TIMELINE

- CPA was enacted in 2011
- 25 coastal municipalities and counties have amended their comprehensive plans AAA since Fernandina Beach became the first





# AAA MAP

- Skewed distribution toward South Florida and the Compact governments
- Absence of Big Bend Panhandle communities

## Legend

- ★ County
- ★ City
- Florida
- County Boundary





# ASPIRATION & OPERATIONAL

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AAA amendment language is written in two categories: *aspirational* and *operational*.

Aspirational refers to adoption language that calls for, but does yet not create, a spatially explicit AAA.

Operational refers to adoption language, or post-adoption actions, that creates a spatially explicit adaptation planning area.





Aspirational Language	Year	Operational Language		Year
Boynton Beach	2016	Broward County		2013
Clearwater	2017	Fort Lauderdale		2014
Fernandina Beach	2017	Indian River County		2016
Jupiter	2019	Jacksonville		2017
Key West	2013	Miami-Dade County*		2016
Melbourne	2017	Satellite Beach		2013
Miami	2017	Vero Beach		2018
Miami-Dade County*	2016	Village of Pinecrest		2016
Monroe County	2016	Yankeetown		2016
Nassau County	2019			
North Miami	2016			
Palm Beach County	2014			
Pompano Beach	2018	*Operational resolution adopted, but not yet included in Comp plan		
Sarasota City	2017			
Sarasota County	2016			
Tequesta	2017			
Titusville	2018			





# REGIONAL & MULTI-JURISDICTIONAL

- AAA Construct well-suited to collaborative multi-jurisdictional planning.
- Currently only 2 examples:
  - Broward County
    - Creates AAA's of "regional significance"
      - Sand Bypass Project
      - Project specific but regionally significant
  - Miami-Dade County
    - Arch Creek AAA
    - Incorporates 5 jurisdictions

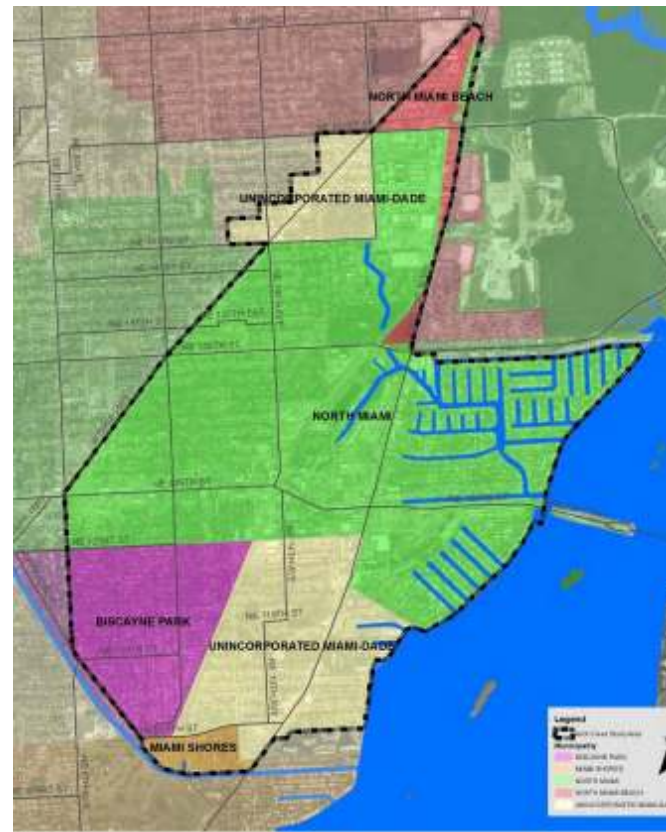
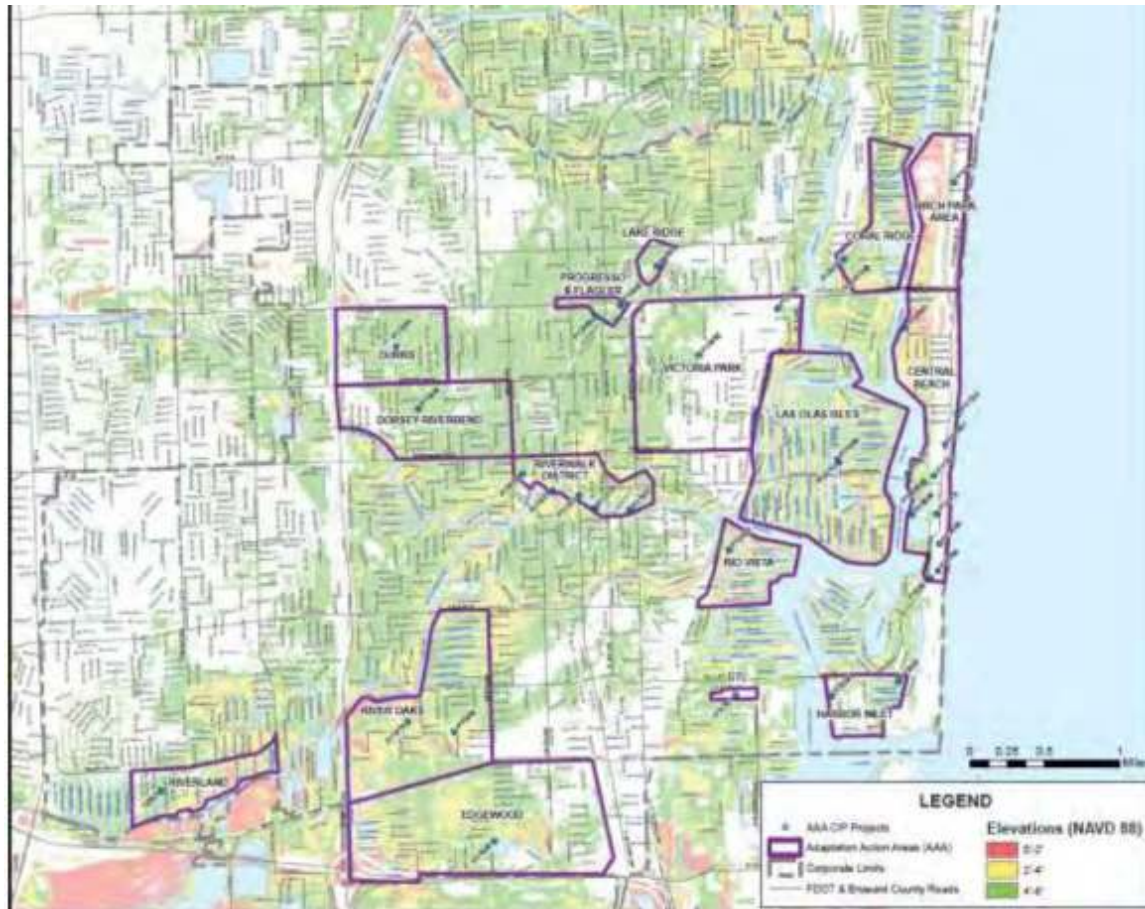


Figure 1: Proposed Adaptation Action Area Broward County Port Everglades Entrance Sand Bypass Project

# SPATIAL EXPLICITNESS



Adaptation Action Areas have been spatially defined by:

- **Coastal High Hazard Area** (E.g. Jacksonville)
  - Note that thus far these are based on current and not future conditions with SLR
- **Storm surge** (Vero Beach – Cat 1 or Cat 2)
- **Drainage basins** (Miami Dade Arch Creek AAA)
- **SLR projections** (Satellite Beach Inland Flooding AAA)
- **Local conditions**
  - Seaward of A-1-A (Satellite Beach erosion AAA)
  - Drainage improvements & Sea wall upgrades (Ft. Lauderdale AAA)





# THEMES

AAA policy language primarily focuses on the built environment, the natural environment, or both

## Built

**Focuses on “grey” infrastructure**

Ft. Lauderdale’s sixteen AAAs

- (for the most part) created with the intention to protect infrastructure from flooding

## Natural

**Focuses on “green” infrastructure**

Yankeetown focused its AAA almost exclusively on the natural environment:

- maintenance of freshwater flows to slow saltwater intrusion,
- beneficial use of dredged spoil to maintain pocket beaches and salt marsh elevation, and
- rolling buffers and to promote habitat migration as sea levels rise.

# SOCIAL EQUITY CONSIDERATIONS

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- Social equity emerging as a theme but underperforming
- Concerning because can lead to neglect by default.
  - E.g. spatially defining and prioritizing one area can lead to neglect of another
- Bright spot -- Specifically addressed in Miami Dade County's Arch Creek AAA
  - mix of income levels with both subsidized and native affordable housing





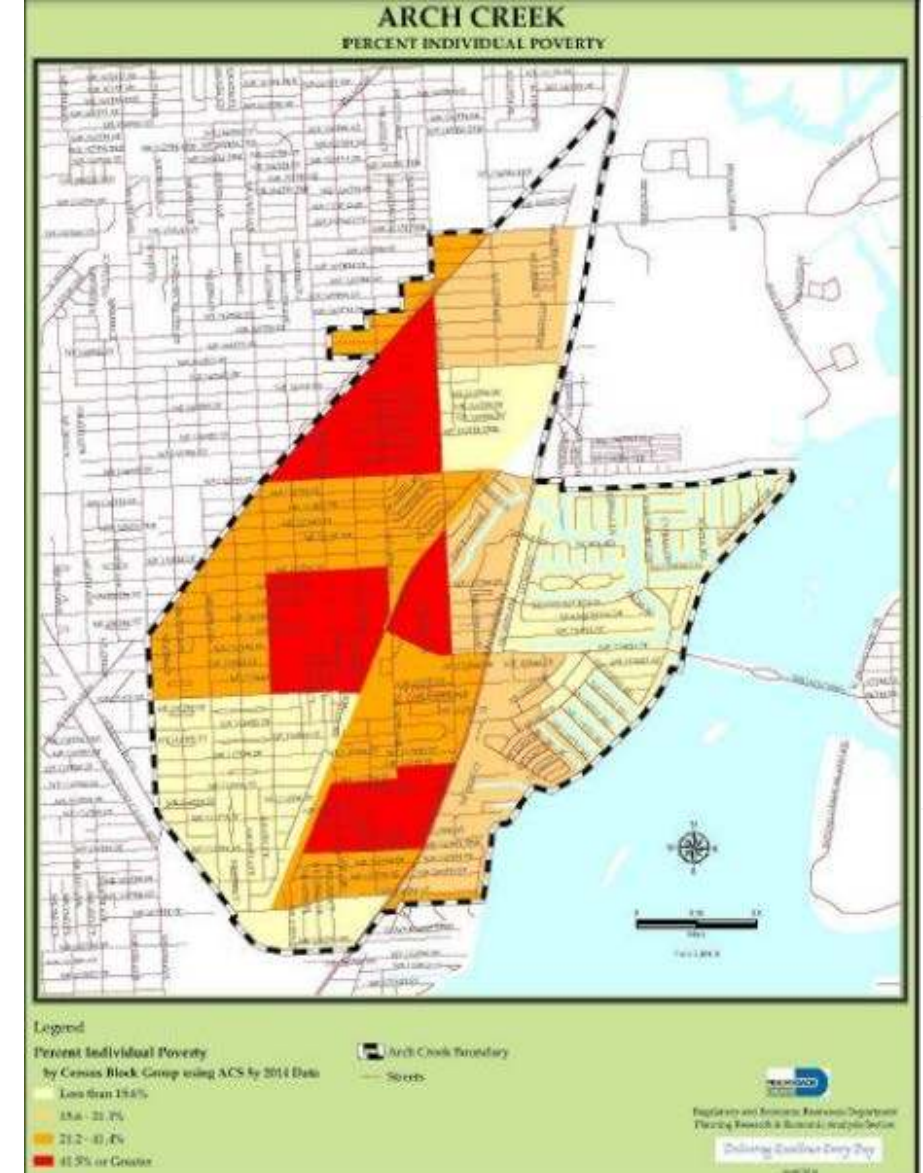
# ARCH CREEK BASIN AAA



## High rates of poverty

### ULI Equity Recommendations

- Consider swapping vulnerable properties with county-owned foreclosures on higher ground
- Use county HOME funds for voluntary relocations
  - Enable interested homeowners to pursue voluntary buy-outs for properties in Arch Creek Estates
- Create a community land trust or partner with existing organization to preserve open space







# ADAPTATION ACTIONS

Adaptation actions take two primary forms

- enhanced regulatory scrutiny and/or
- capital improvement projects

Enhanced regulation functions much like a traditional overlay zone in land use law (e.g. zone-specific stricter standards sit on top of jurisdiction-wide standards)

Nassau County explicitly characterizes its AAA as an overlay and offers several examples of stricter regulation to accomplish its objectives.

Satellite Beach amended its LDR's to prohibit second setback variance to “**promote a managed retreat** from the sensitive ocean bluff and erosion adaptation action areas”



## PRIORITIZED FUNDING

- Setting funding priorities is an explicit goal of the 2011 AAA legislation
- Served as the historical impetus for pursuing the concept at the federal level by the Climate Compact
- Capital Improvements element of the comprehensive plan
- Ft. Lauderdale AAA's are the poster children
  - Identified capital Improvements (drainage/sea walls)
  - Included in the community investment plan



# CONCLUSION AND RECOMMENDATIONS

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- Our review suggests that sea level rise has now been “baked in” to many if not most coastal local government comprehensive plans
- With a few exceptions, the AAA policy tool has yet to be operationalized in a meaningful way (e.g. through regulation or funding prioritization)
- Local government AAA’s continue to rely on present-day planning boundaries without regard to the future condition (e.g. the CHHA of today and not the CHHA of the future).
- With a few exceptions, AAA’s emphasize policies that address the built environment and natural resources, with less attention to social equity.
  - Prioritizing AAAs that don’t account for social equity can lead to resources being shifted away from social equity considerations
- The State should move beyond AAA planning grants to more substantial resources for adaptation-based capital improvements and other adaptation policies within AAA’s (e.g. buy-outs)
- Local governments should begin experimenting with spatially explicit revenue-generating policy tools within AAAs (e.g. special assessments, tax increment financing, etc.).





# THANK YOU



## SEA LEVEL RISE, COASTAL HAZARDS AND ADAPTATION POLICY:

- A Multi-Disciplinary Review of Current Sea-Level Rise Research in Florida
- Dynamic Habitat Accommodation: The Policy Framework for Migrating Shorelines
- Sea Level Rise Ready: Model Comprehensive Plan Goals, Objectives and Policies, To Address Sea-Level Rise Impacts in Florida
- Voluntary Telling Conservation Easements: A Parcel-Specific Approach to Shoreline Migration in Florida (annulated model with commentary)
- Florida's Coastal Hazards Disclosure Law: Property Owner Perceptions of the Physical and Regulatory Environment
- Crediting Adaptation Strategies Through the National Flood Insurance Program's Community Rating System Coordinator's Manual
- Protecting Florida's History From Hazards

## THE COASTAL CITIZEN

- Coastal Justice: Climate Change and Social Resilience in Florida

<https://www.law.ufl.edu/areas-of-study/experiential-learning/clinics/conservation-clinic/program-areas/coastal-development-ecosystem-change>

