

Southeast Florida

Understanding and Addressing Climate Vulnerabilities Across Our Community



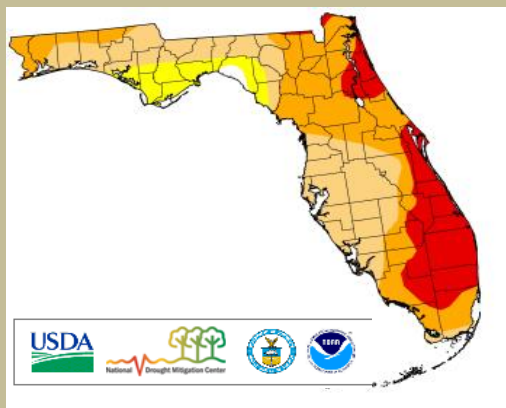
Changing Temperatures



Extreme Weather



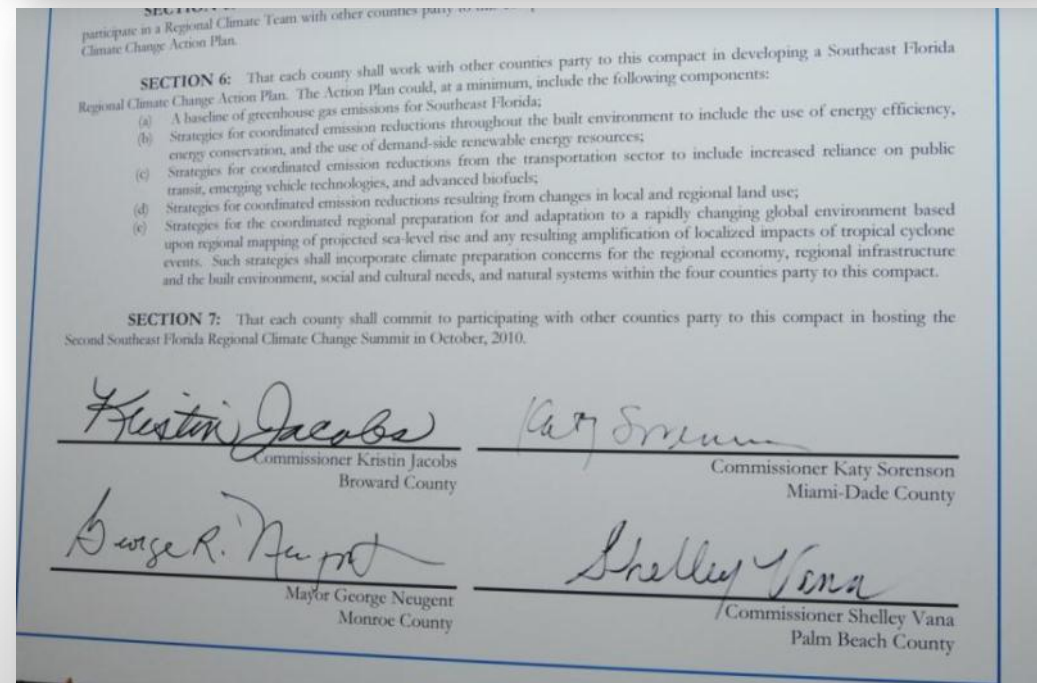
Sea Level Rise



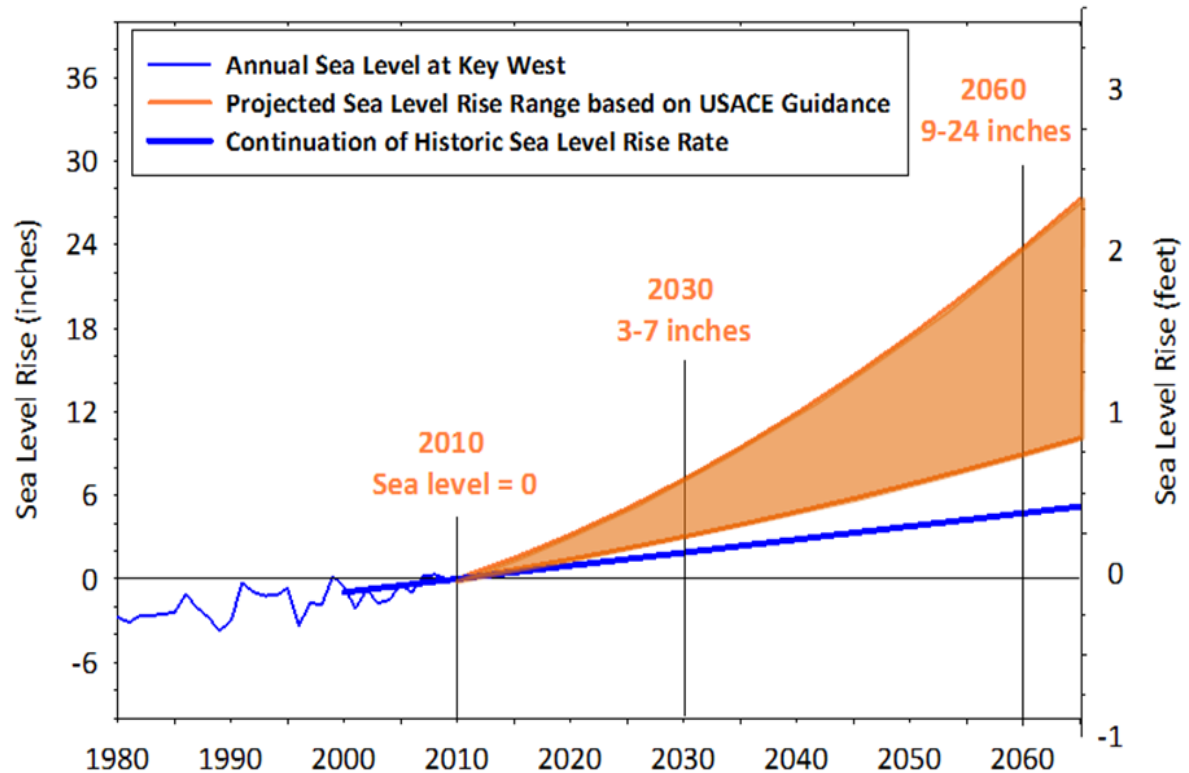
The Compact



- State and Federal Climate Policy Collaboration
- Technical Planning Tools
- Regional Climate Change Action Plan
- Annual Summits



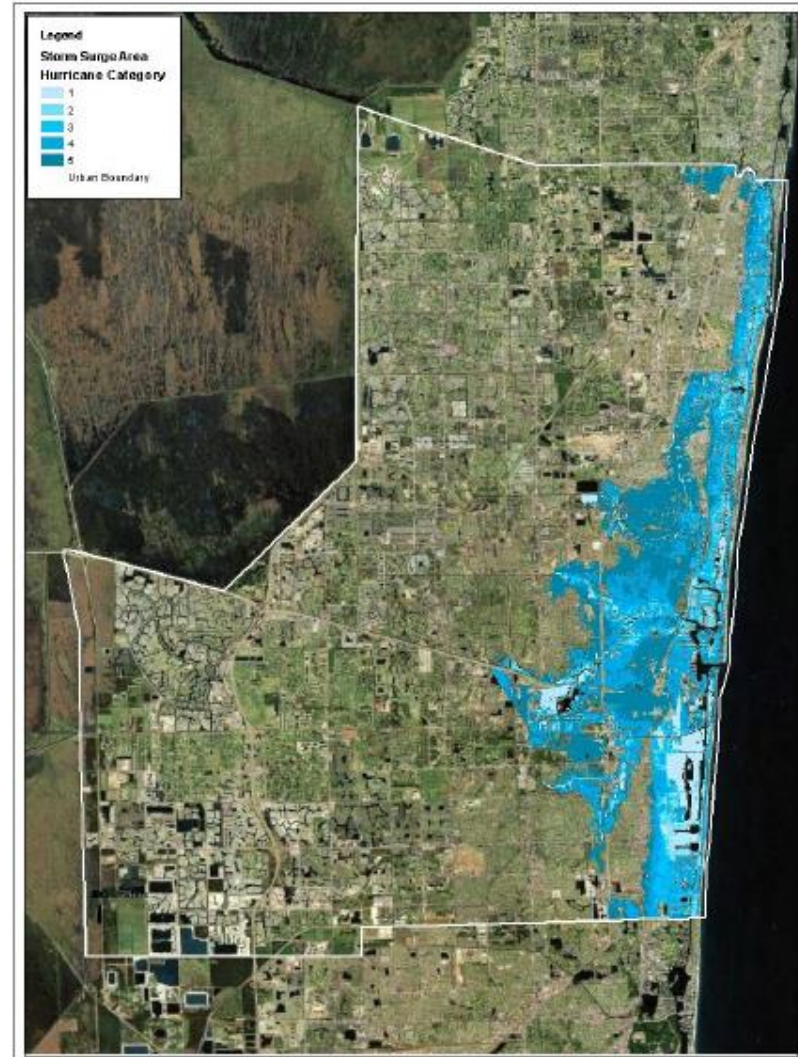
Planning for Sea Level Rise



Local Climate Challenges

- Warming Oceans and Sea Level Rise influence on
 - Extreme High Tides
 - Tropical Storms
 - Storm Surge

Map 4.10 – Aerial of Storm Surge Inundation (2011)



Local Climate Impact

- Beach erosion
- Impacts to public infrastructure and private property



2000 ft of beach and
a portion of Hwy
A1A collapsed
Thanksgiving 2012

1 Foot Sea Level Rise

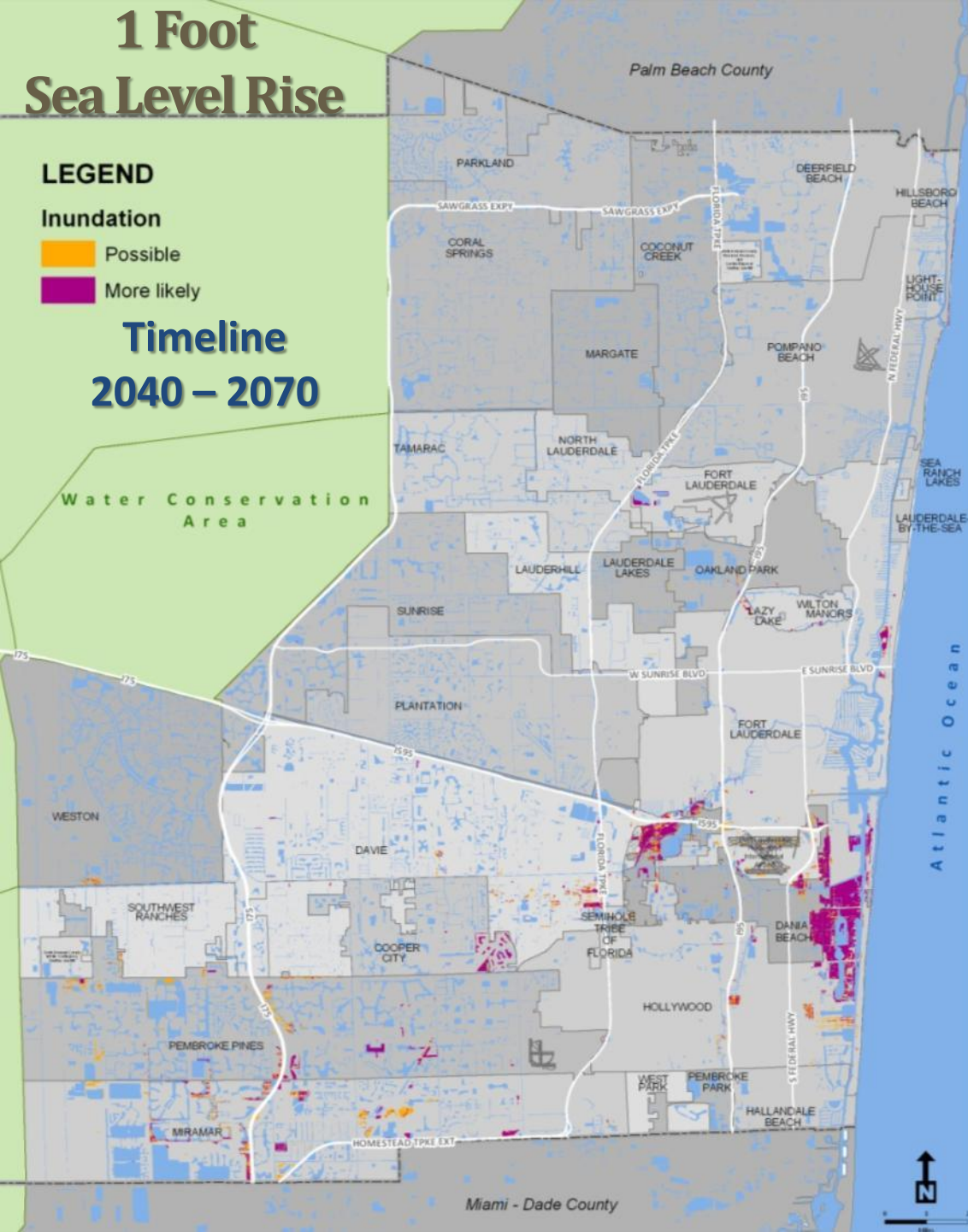
LEGEND

Inundation

- Possible
- More likely

Timeline
2040 – 2070

Water Conservation Area



Analysis of the Vulnerability of Southeast Florida to Sea Level Rise

Southeast Florida Regional Climate Change Compact
Inundation Mapping and Vulnerability Assessment
Work Group

August 2012



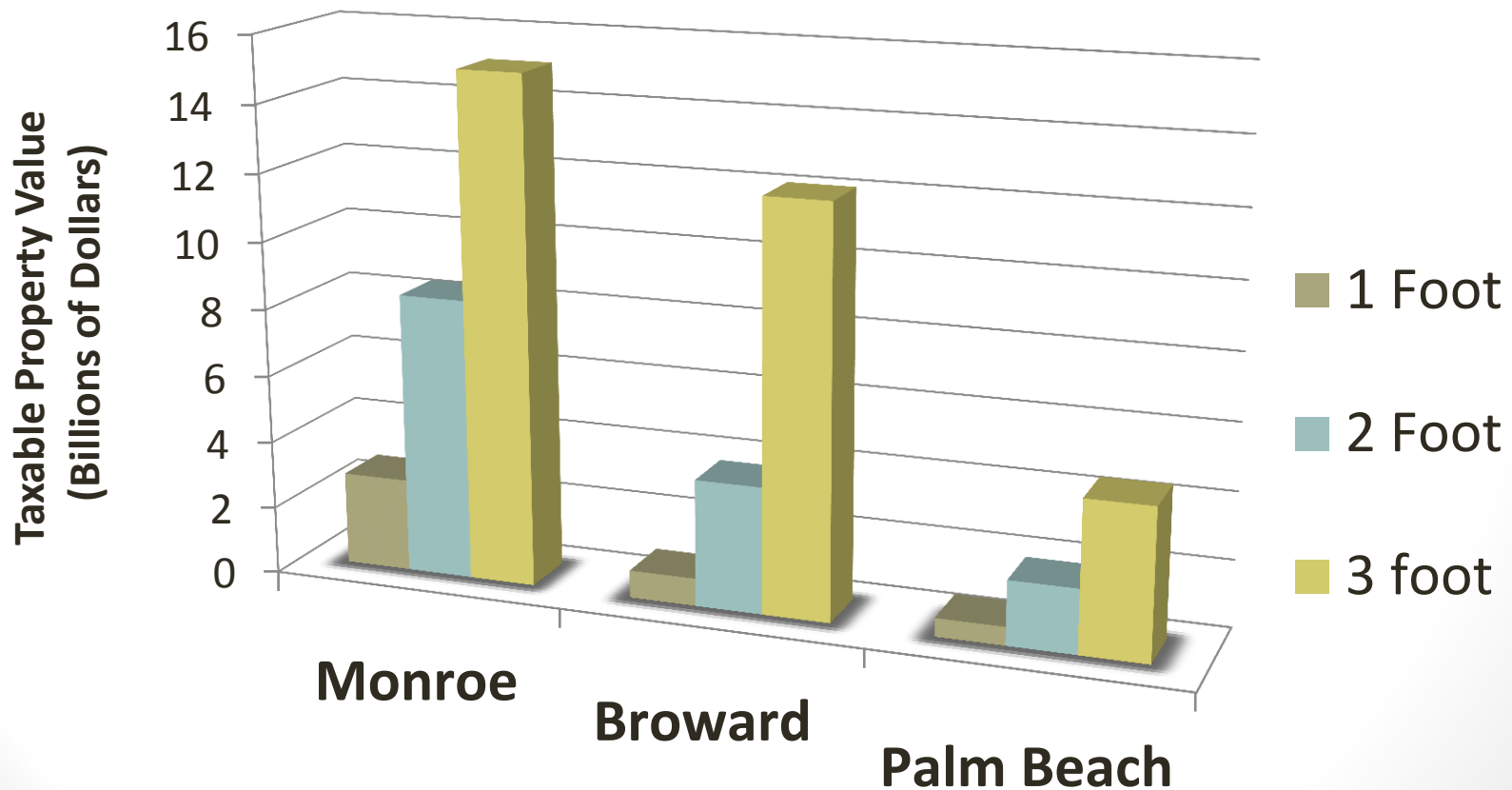
Areas with elevations
below MHHW with
one foot sea level rise.

LEGEND

Inundation

- Possible
- More likely

Taxable Property Value Vulnerable to Sea Level Rise



Fort Lauderdale

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Seasonal High Tide Solar Drive - Flooding Oct 2010



Photo Credit: Paul Krashefski (Broward County)

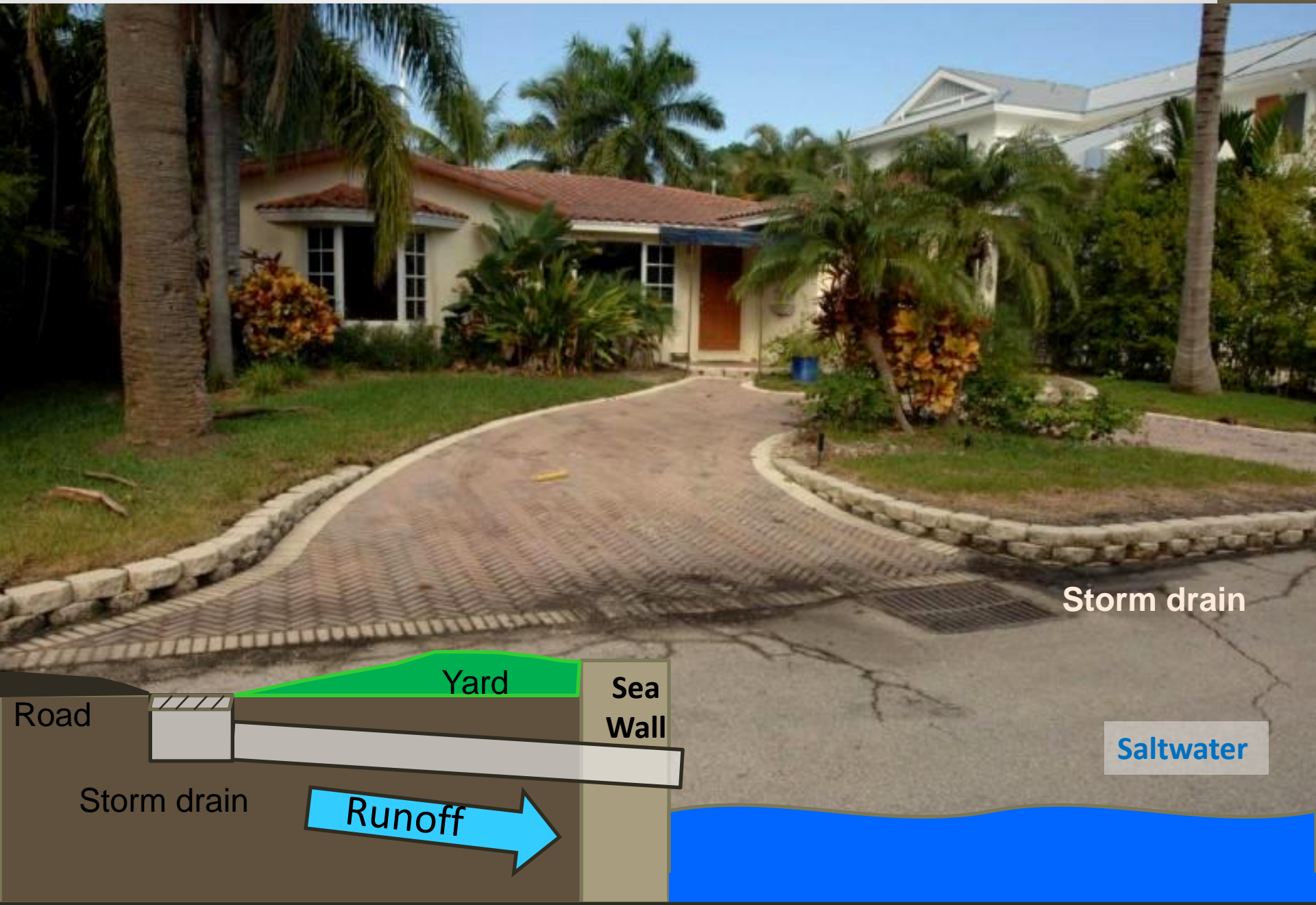


Seasonal High Tide

Mola Ave - Flooding Oct 2010



Drainage Under Average Tidal Conditions



Drainage Challenge with Sea Level Rise



2 Foot Sea Level Rise

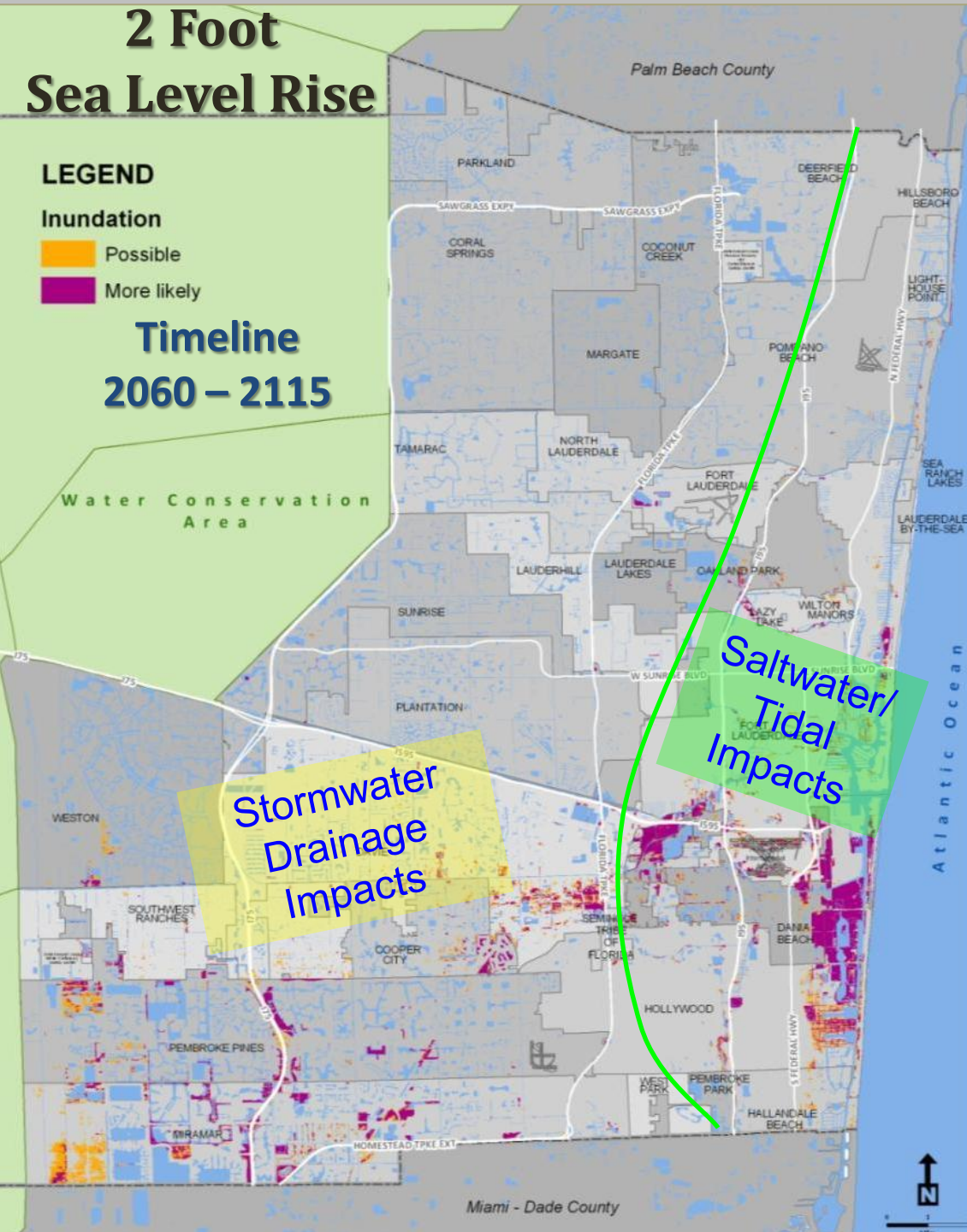
LEGEND

Inundation

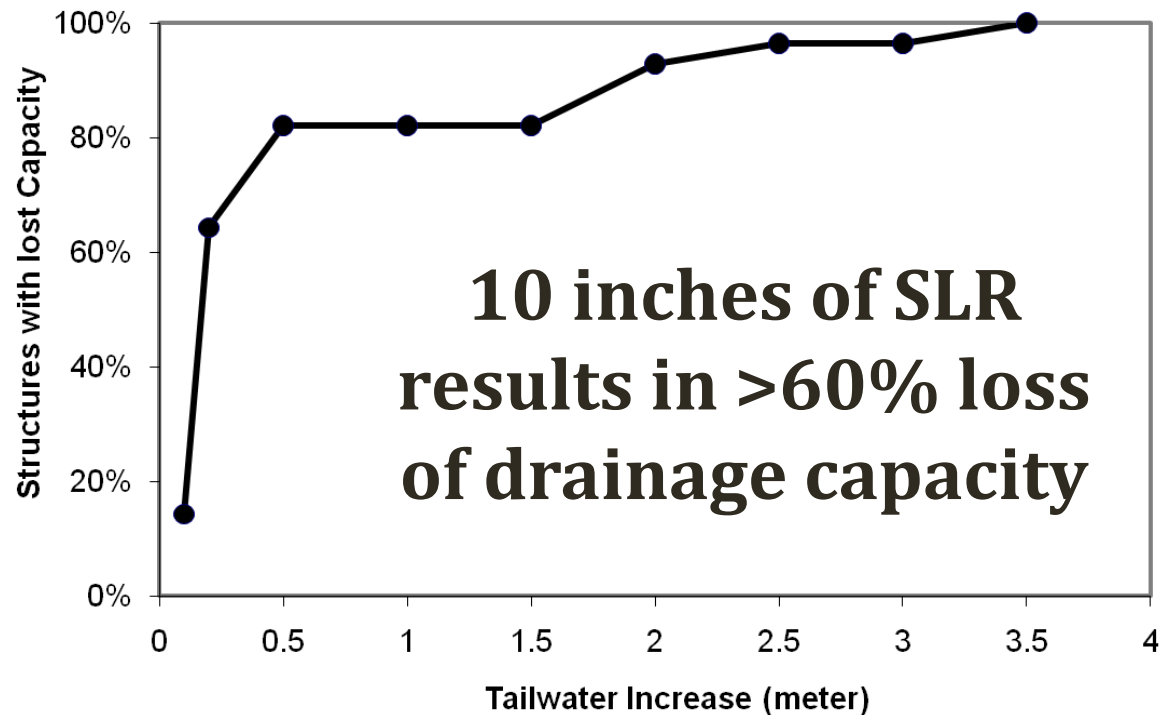
- Possible
- More likely

Timeline
2060 – 2115

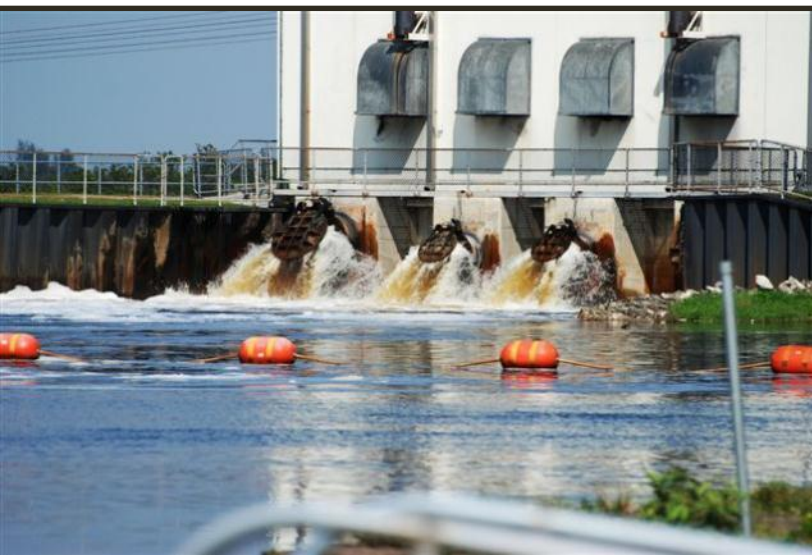
Water Conservation Area



Vulnerability
to Sea Level
Rise
is not just a
Coastal Issue



Courtesy of SFWMD

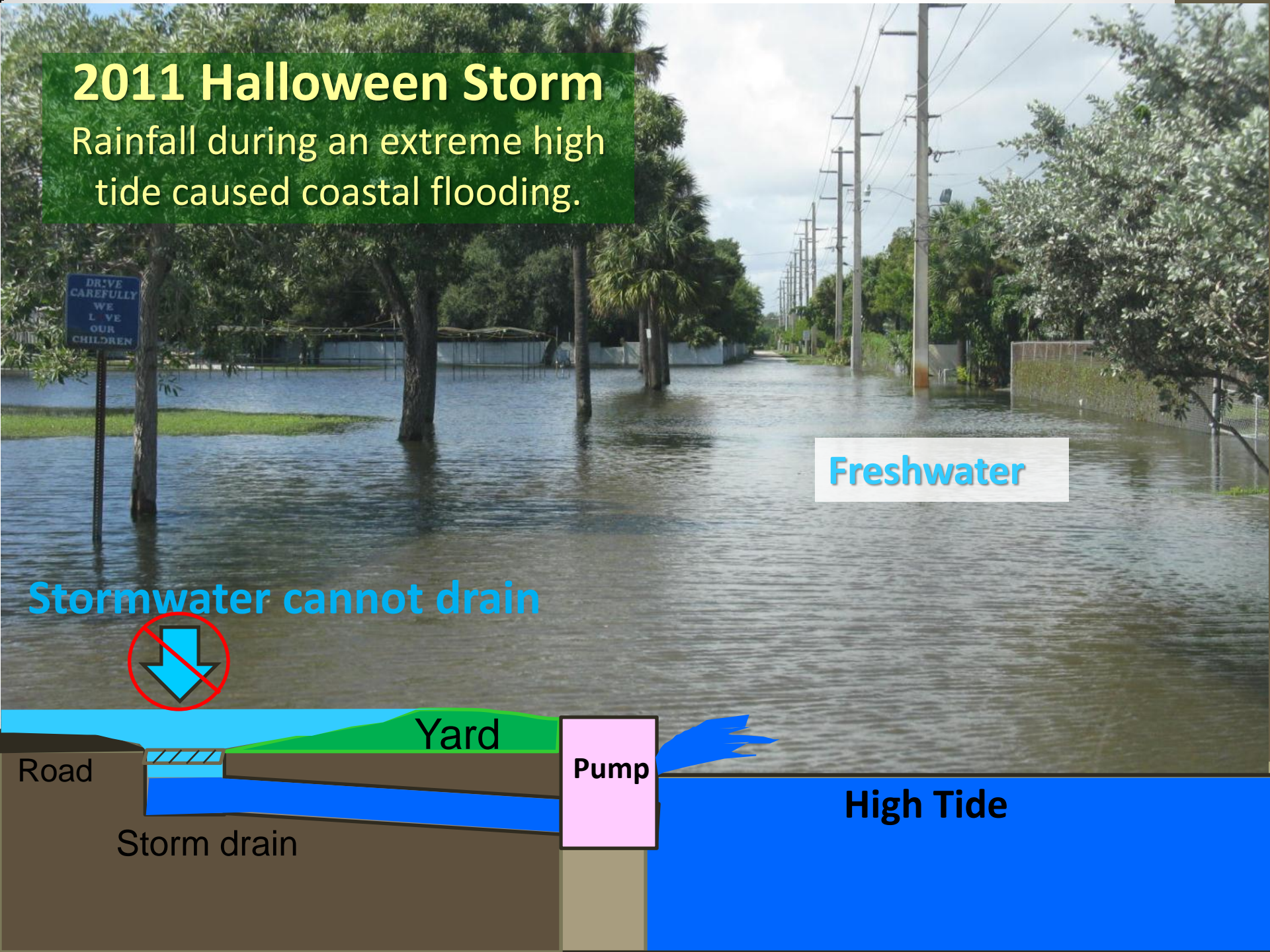


Local Climate Impact

- More flooding
- Compromised drainage infrastructure

2011 Halloween Storm

Rainfall during an extreme high tide caused coastal flooding.



Building Resilience at Every Scale of Government

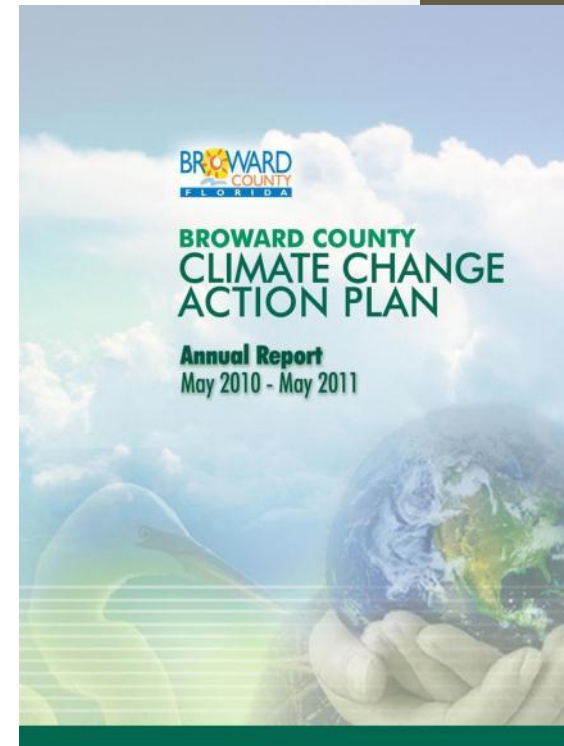


Broward Climate Change Action Plan



126 recommendations

- Energy & Water Conservation
- Transportation
- Building Codes
- Alt energy & fuels
 - Reforestation
- Solid waste/Recycling
- Adaptation Planning



Emergency Management

Storm surge, a major concern for coastal Florida.

Broward County's *Enhanced Local Mitigation Strategy (All Hazards Plan)* incorporates
(1) sea level rise and
(2) economic impacts

Map 4.10 – Aerial of Storm Surge Inundation (2011)



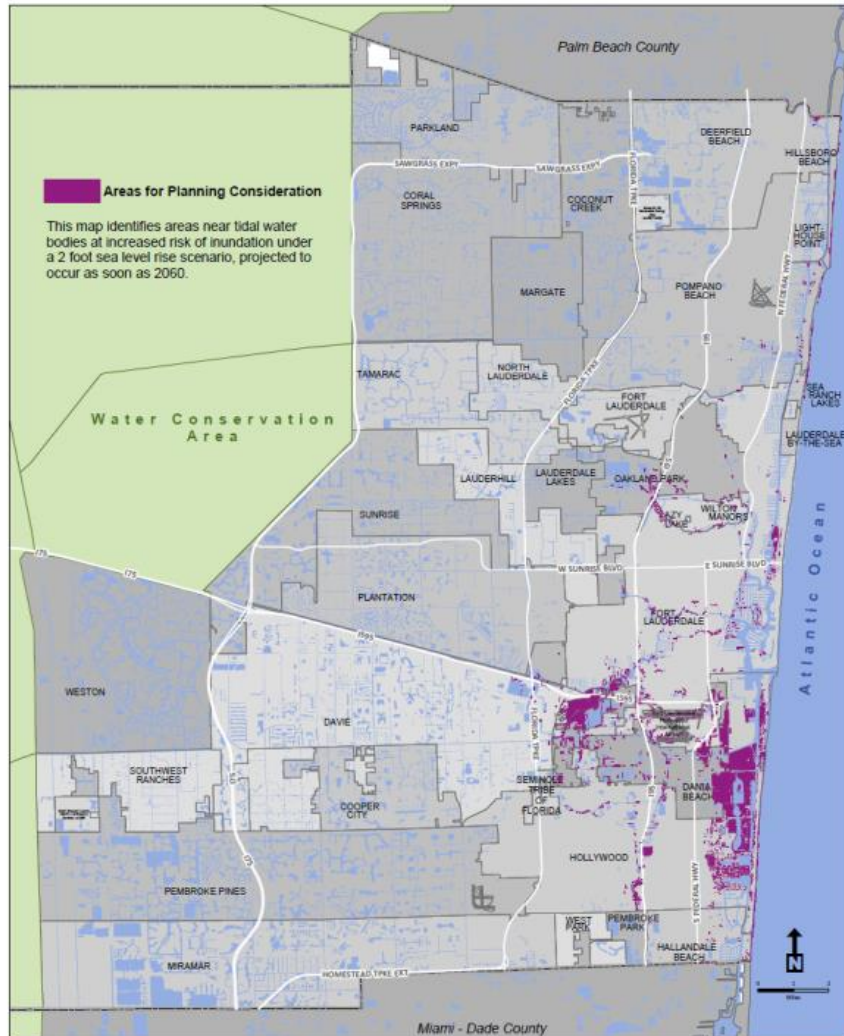
Master Planning for Adaptation



- Port Master Plan
- Port Stormwater Master Plan
- Airport Stormwater Master Plan
- Construction Management Design Standards
- Capital Improvement Planning
- Budget Justification Forms
- Parks Management Plan
- **Climate Change Element in the Comprehensive Plan**

SLR and Broward's Land Use Plan

PRIORITY PLANNING AREAS FOR SEA LEVEL RISE



POLICY A.03.05

Broward County shall evaluate (land use) plan amendments within PPAs and strongly **discourage those amendments which would place additional...development at risk of flooding from sea level rise.**

In review of such amendments, the County shall consider:

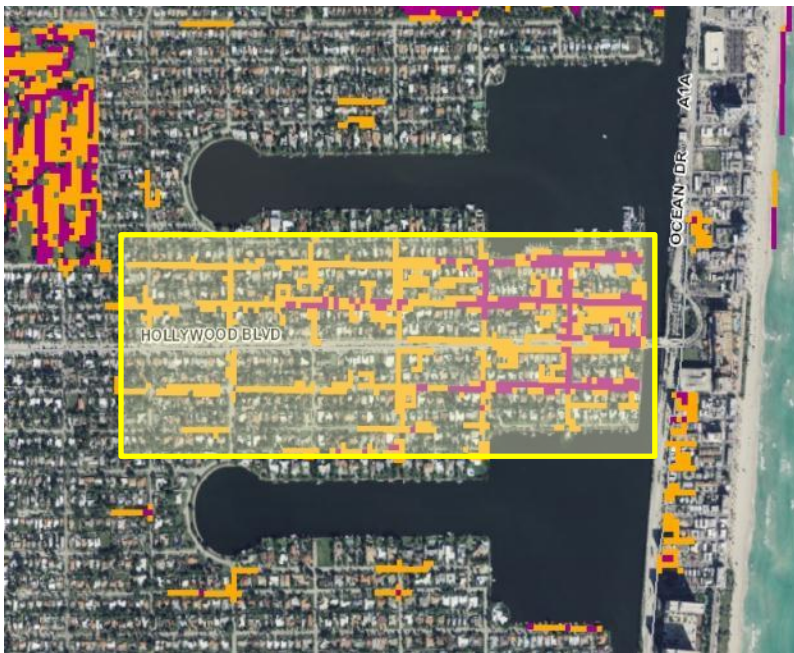
- Sea level rise/flood protection mitigation...; or
- Flood protection improvements ... which would mitigate or enhance flood protection and adaptation from rising sea levels.

Adaptation Action Areas (AAA)

1-Foot SLR Scenario

Florida Law now allows local governments to:

- Designate AAA for the purpose of
 - Identifying areas of SLR/Coastal flooding concern
 - Prioritizing funding for adaptation
- Working regionally on a “how to” guide
- Working with Ft. Lauderdale on pilot implementation



LEGEND

Inundation

- Orange square: Possible
- Purple square: More likely

Example
AAA

Regional Climate Change Action Plan



A Region Responds to a Changing Climate

Southeast Florida Regional Climate Change Compact Counties

Regional Climate Action Plan

October 2012



110 Actions

- Sustainable Communities & Transportation Planning
- Water Supply, Management and Infrastructure
- Natural Systems
- Agriculture
- Energy and Fuel
- Risk Reduction & Emergency Management
- Public Outreach
- Public Policy

<http://southeastfloridacclimatecompact.org>

RCAP as a Regional Template

- Expand upon the SE Florida Regional Climate Action Plan
 - Broaden recommendations
 - Identify additional focal areas
 - Expand the planning horizon



A Region Responds to a Changing Climate

Southeast Florida Regional Climate Change Compact Counties

Regional Climate Action Plan

October 2012



Conclusions

- *Every level of government in Southeast Florida is working toward a sustainable and climate resilient future.*
- *Legal issues will arise as planning for climate adaptation impacts land use, private property and public investments in infrastructure.*

