Sustainable Hollywood

Hollywood Lakes Civic Association

February 11, 2020

Presentation at a Glance

- Ecosystem and How We Flood
- Mainland Flooding Hot Spots
- Barrier Island Flooding Hot Spots
- Rain Events
- Foundational Plans to Address Flooding Into the Future
- Current Action Steps to Address Flooding in Near Future
- Self Sufficiency - What You Can Do

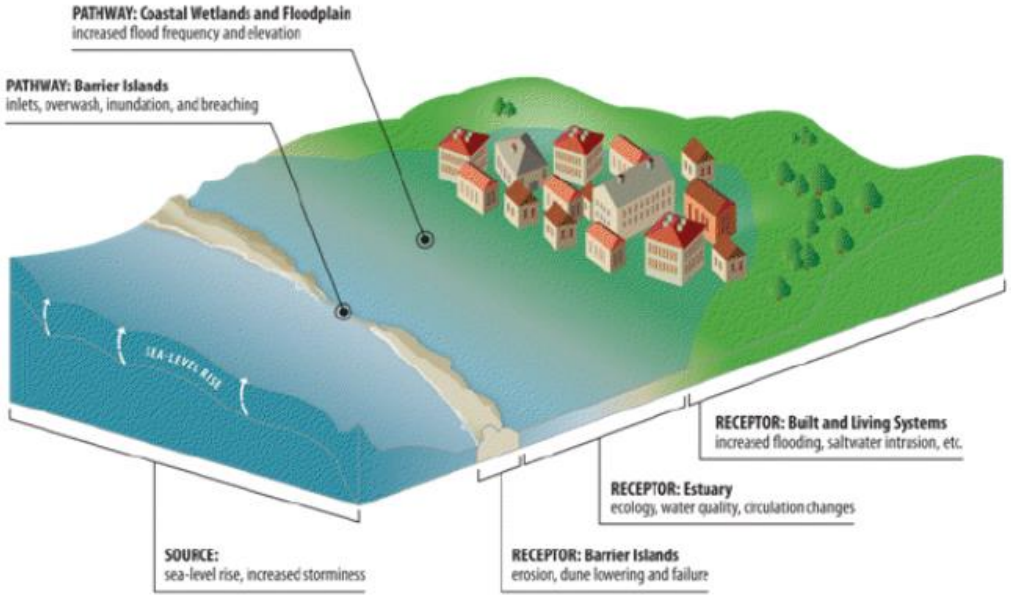
Humanity + Environment = Ecosystem

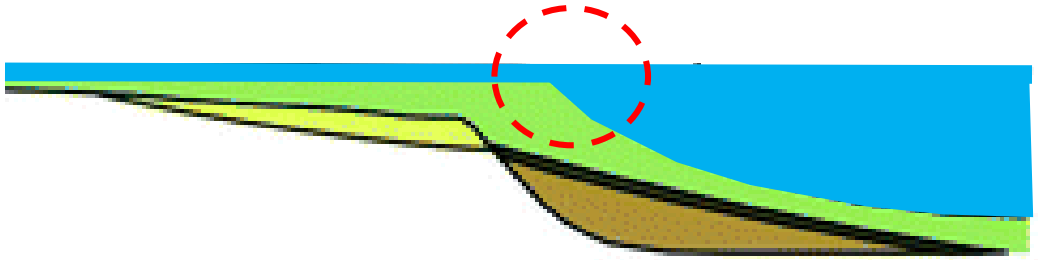
- Economy
- Population
- Tourism
- Mobility
- Housing
- Residents

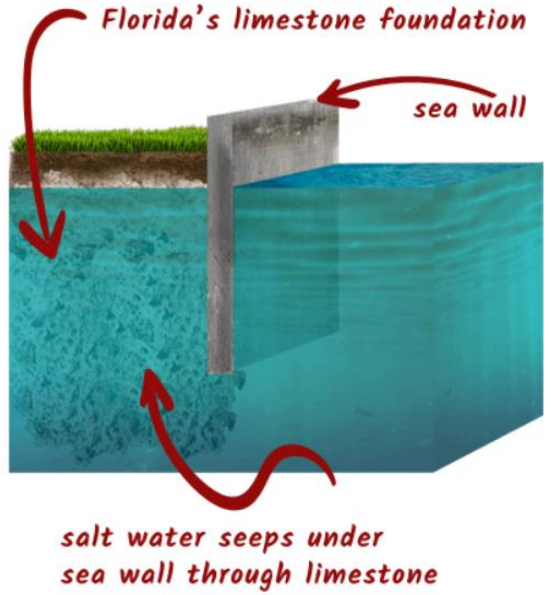
- Beaches
- Climate
- Sea Level Rise
- Erosion
- Flooding
- Rain

How Do We Flood

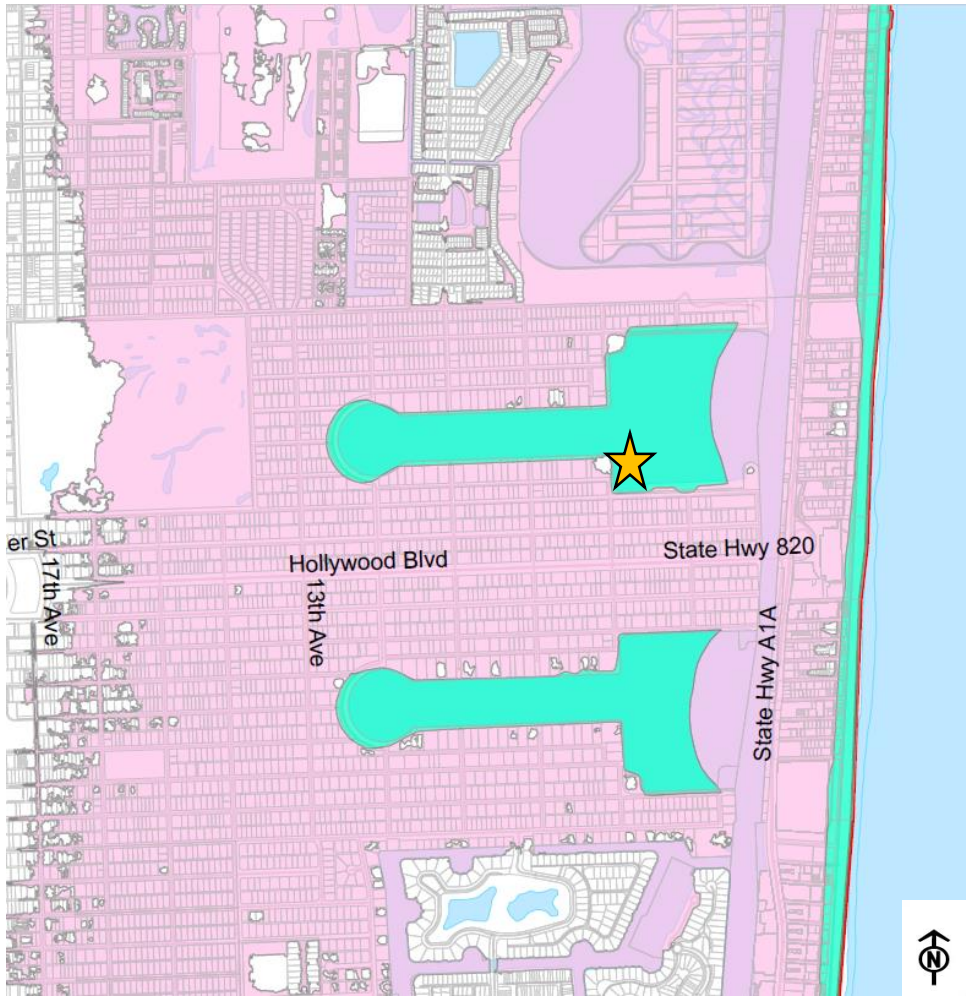
Sea Level Rise, King Tide, Elevations, Storm Surge, Rain…







Flood Hazard Area Map



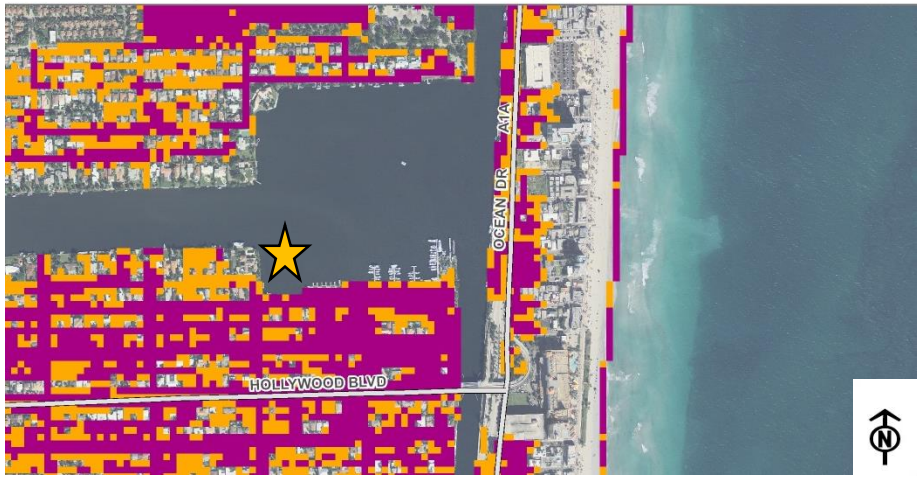
Major Impacts

- AE (high risk) Flood Zone
- Low flood elevations

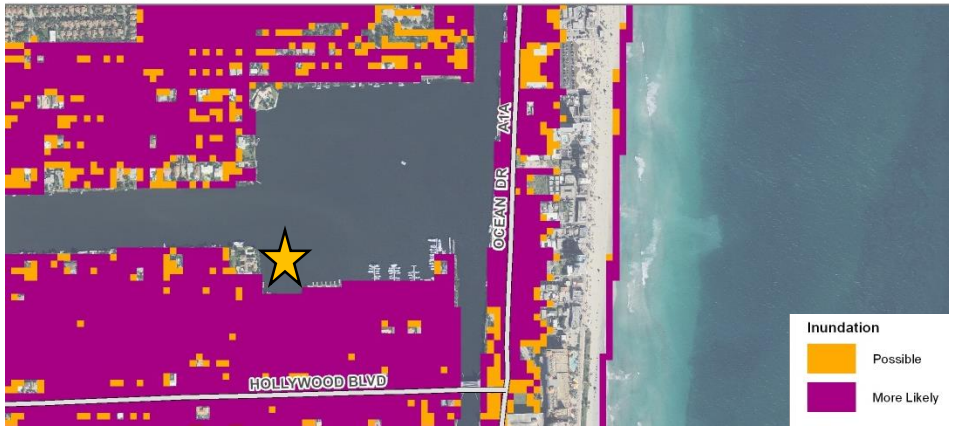
Flood Zone	Area (Acres)
AE	5062.84
AH	3314.8
AO	0.23
VE	480.57

Sea Level Rise

Hollywood Beach Vulnerability: 2 Foot Sea Level Rise



Hollywood Beach Vulnerability: 3 Foot Sea Level Rise



Broward County Inundation Mapping and Vulnerability Analysis

Major Impacts

- Roadway inundation increases
- Evacuation routes impacted
- Impacts to low lying communities near Intracoastal Waterway

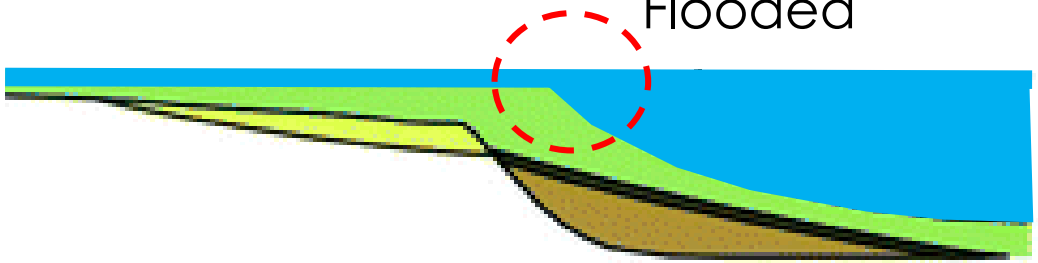
- Significant property impacts
- Loss of road access
- Beach impacts

Mainland Flooding Hot Spots

City Marina

Normally

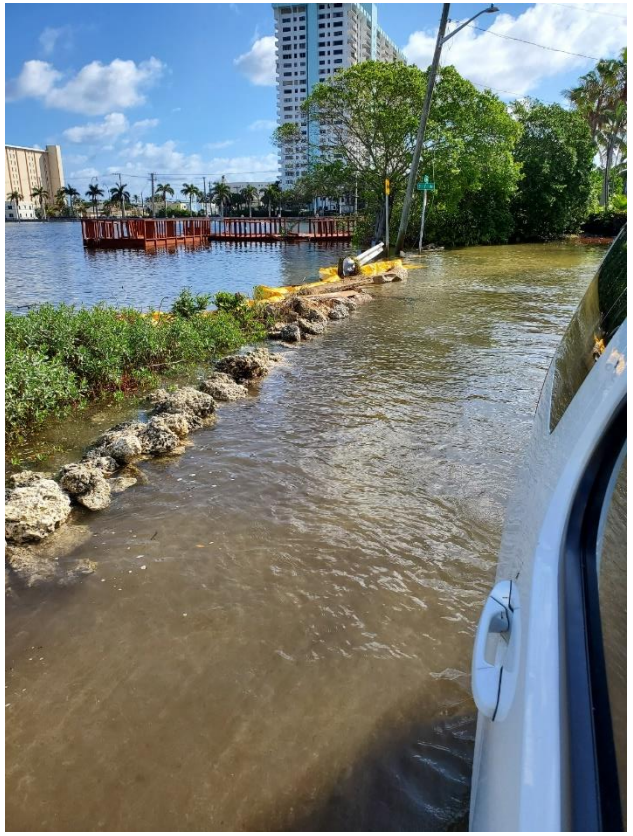
Flooded



Source: Broward County's Document the Floods Crowdsourcing Tool

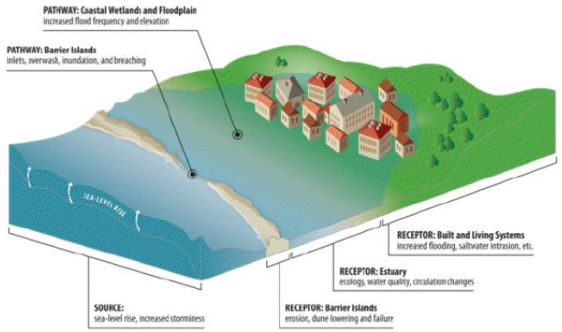
Mainland Flooding Hot Spots

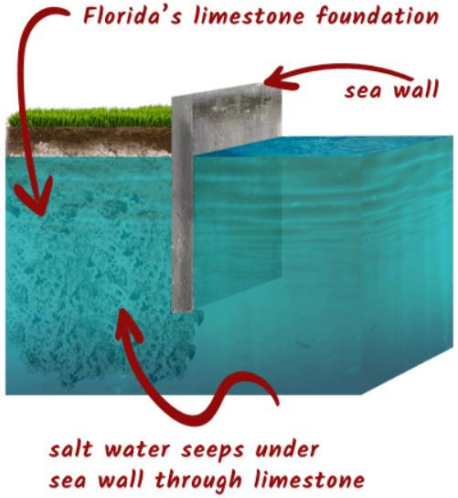
South Southlake Drive



Looking East from 10th Avenue

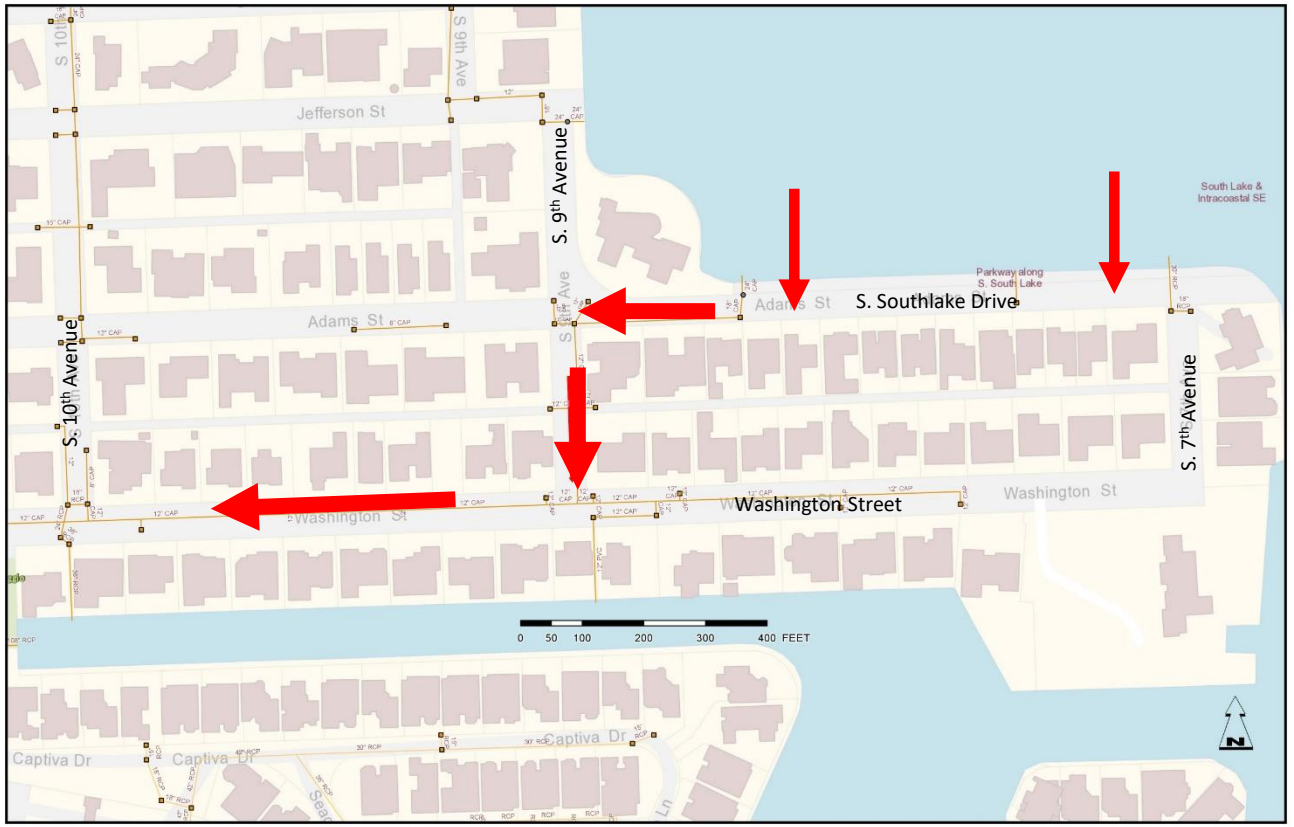
Looking West from 10th Avenue





Mainland Flooding Hot Spots

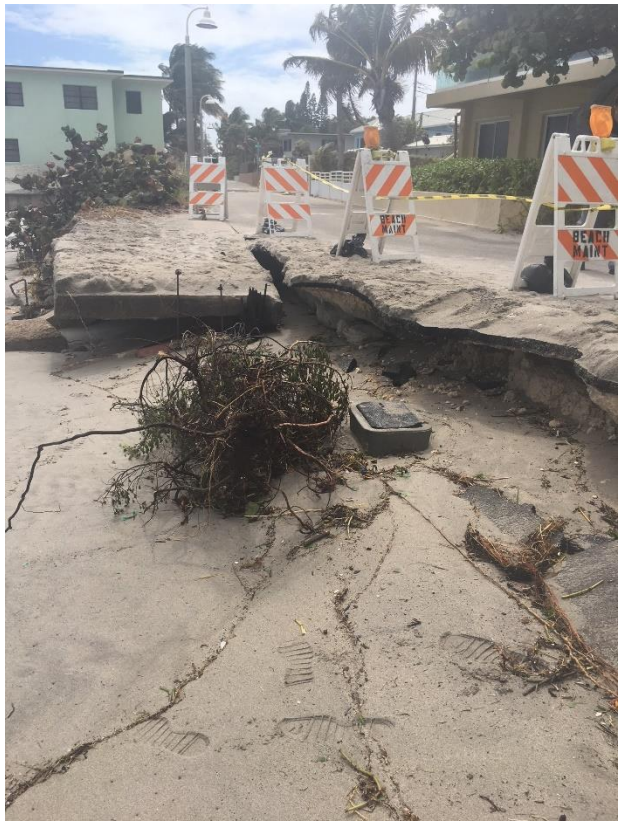
S. Southlake Drive and Washington Street

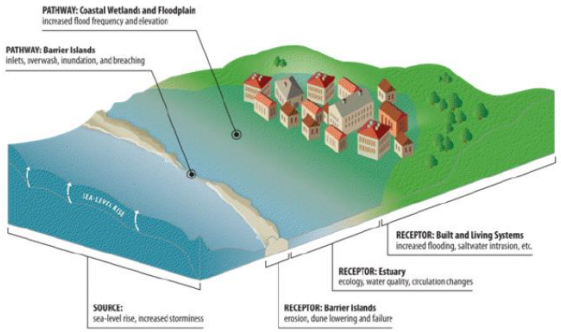


Interconnection of Storm Sewer and Tidal Water

Barrier Island Flooding Hot Spots

Balboa Street





Barrier Island Flooding Hot Spots

Balboa Street

Temporary fix by mother nature

Barrier Island Flooding Hot Spots

Rain Events

Hollywood

- December 2009
  - 13 inches over two days
- June 2013
  - 8 inches of rain in less than 24 hours
  - Occurred during high tide
- February 2015
  - 8 inches of rain in less than 24 hours
  - Occurred during high tide
- December 2020
  - 8.6 inches
  - 5 hours of rain
  - 80-year rain event
  - Occurred during high tide

We Are Not Alone

Sunrise: Sawgrass Mills Mall

- June 2017
- 15 inches of rain over three days
- Closed for 3 days

Foundational Plans Address Flooding

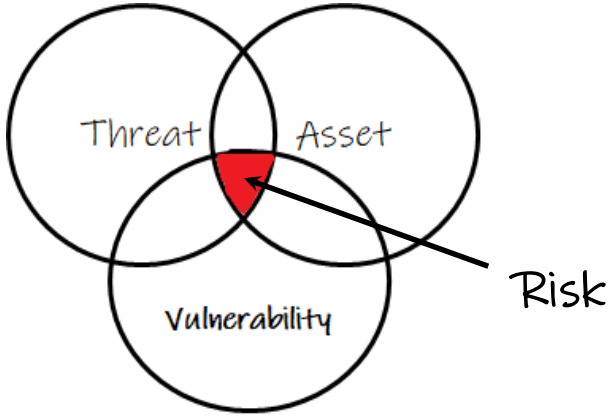
SOUTHEAST FLORIDA REGIONAL COMPACT CLIMATE CHANGE

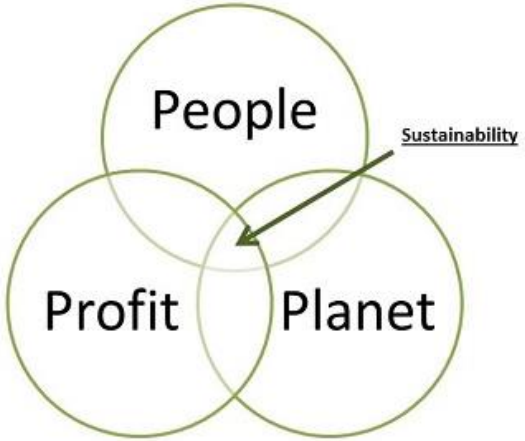
Sustainability Action Plan

Adopted: March 15, 2017

Vulnerability Assessment and Adaption Plan

Adoption: Early 2020





Comprehensive Plan

Starting: Spring 2020

Storm Water Master Plan

Starting: Fall 2020

Current Steps Being Undertaken to Address Flooding

Marina Ramps and Parking Area

Current Action Steps Being Undertaken to Address Flooding

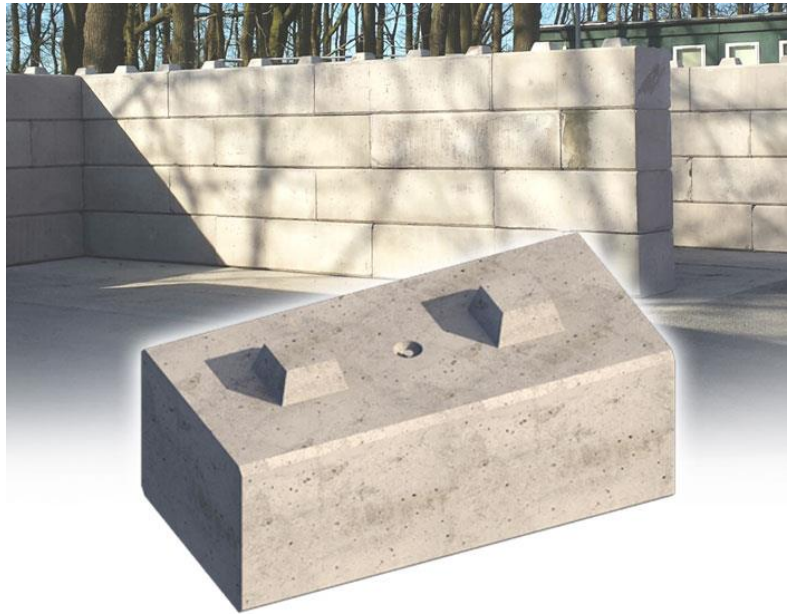
Entrance to Boat Ramps

Before

After

Current Action Steps Being Undertaken to Address Flooding

Concrete interlocking blocks



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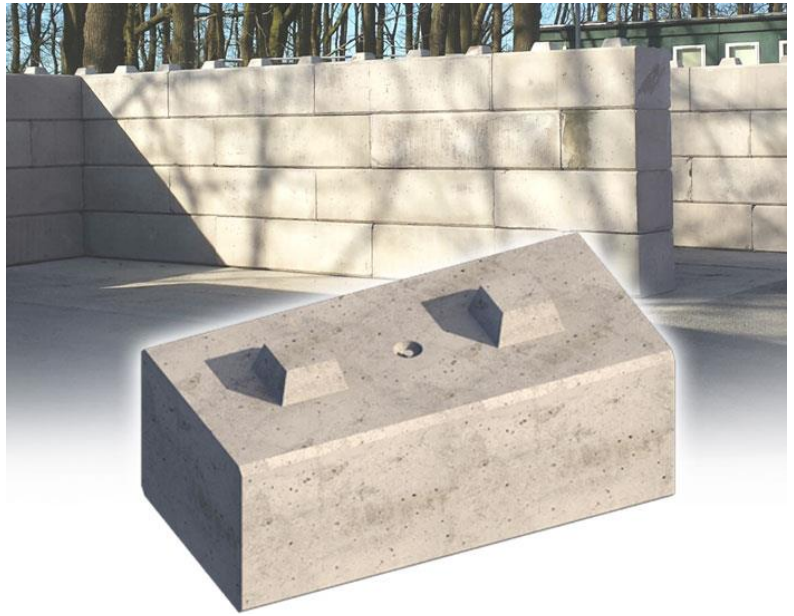
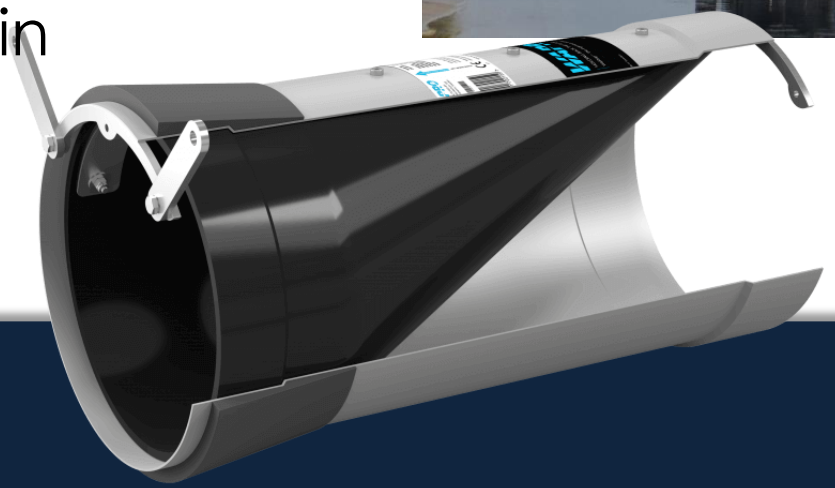


Current Action Steps Being Undertaken to Address Flooding

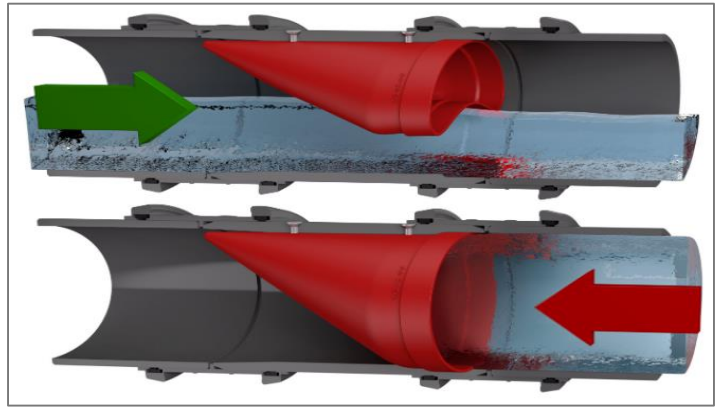
- FDOT will complete the installation of tidal valves north of Harrison Street by April 2020 on Barrier Island
- City will provide 5 Wapro valves for FDOT to install in February 2020. Located south of Harrison Street
- City is completing inspection of all tidal valves owned by the City in preparation of the next season.



Other Action Steps to Address Flooding in the Future

Near Term (Less than 12 months)

- Completed – Inspection of all 38 Flap Gates
- Contractor mobilized for repairs tidal valve repairs
- Manning the permanent pump stations in the Lakes area
- Stationing the auxiliary pumps
- Adding new tidal valves
- Replacing large size check valves and flap gates in station SW-08
- Started Condition assessment of pump stations in the Lakes area
- FDOT is initiating a drainage study for the barrier island. Considering installation of pump stations
- Finalize Phase I Vulnerability Assessment
- Initiation of Dune Master Plan



Other Action Steps to Address Flooding in the Future

Intermediate Term (2 – 5 Years)

- Implement recommendations of Condition Assessment
- Vulnerability Assessment Implementation
- Neighborhoods, Infrastructure, and Resiliency: $17 million
  - Sea Walls for Tidal Flooding Mitigation
  - Hardening of Utilities in North Beach

Long Term (5+ years)

- Implement the recommendation of the Storm Water Master Plan

NORTH LAKE & SOUTH LAKE PERIMETER ANALYSIS

Legend

SHORELINE

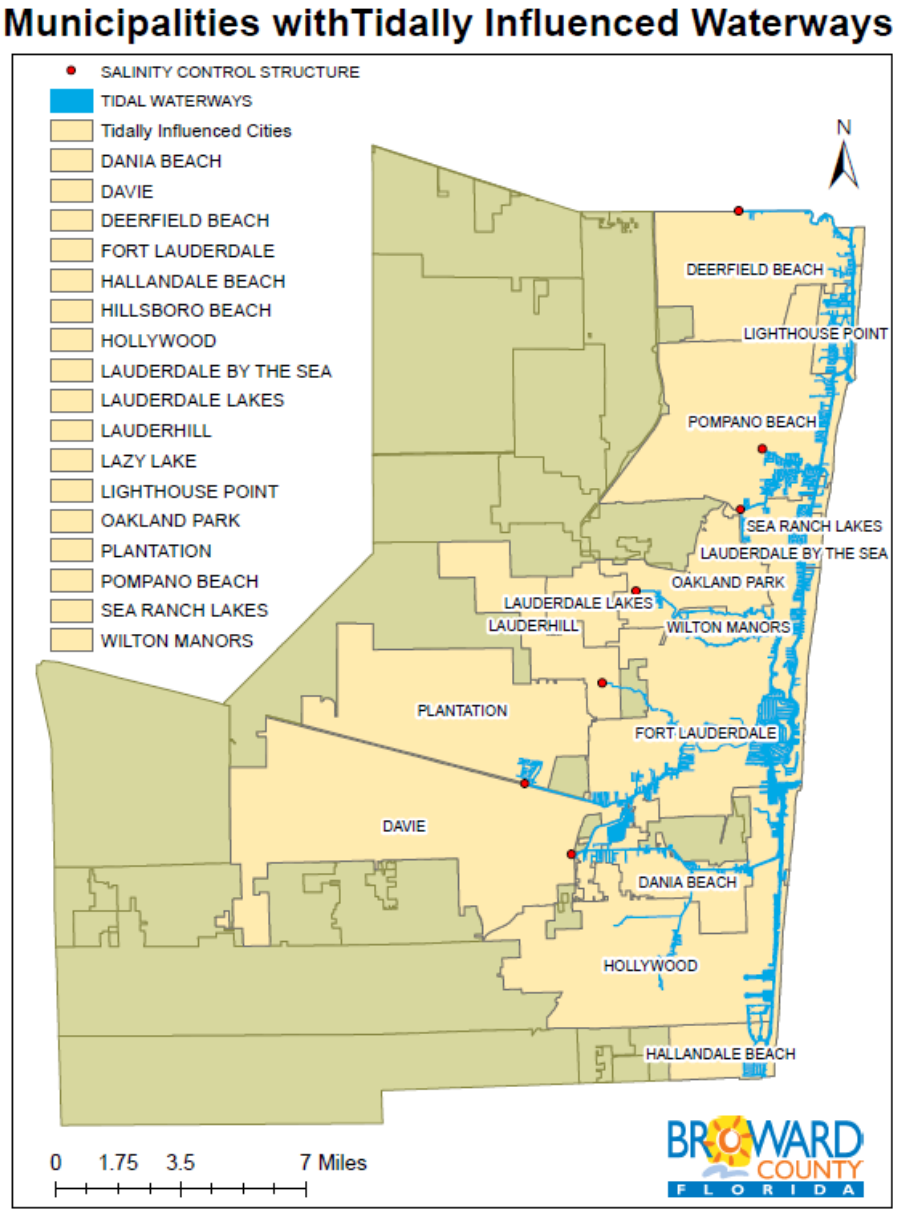
- COH OWNED \ NO SEAWALL (7,300 LF)
- COH OWNED \ SEAWALL (2,946 LF)
- PRIVATE OWNED \ NO SEA WALL (712 LF)
- PRIVATE OWNED \ SEAWALL (10,873 LF)

Broward County Sea Wall Requirements

All tidally influenced properties

- Uniform standard for seawalls and flood barriers- **5 feet NAVD**

- Allow for **4 feet NAVD until 2035**
  - Future tidal flooding avoided, through 2070
  - Limited or no surge protection
- Require **5 feet NAVD by 2050**
  - High frequency storm surge protection provided (~1 foot)
  - Some economic losses avoided.



Self Sufficiency – What You Can Do?

- Be proactive
- Have a plan, get an emergency kit, stay informed
- Sign up for the City's CodeRED
  - Free (wireless carrier fees may apply)
  - Phone call, text message and email
  - https://www.hollywoodfl.org/725/CodeRED
- Evaluate and mitigate your property
  - Construct new or raise your existing sea wall

CodeRED WEATHER WARNING®

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