

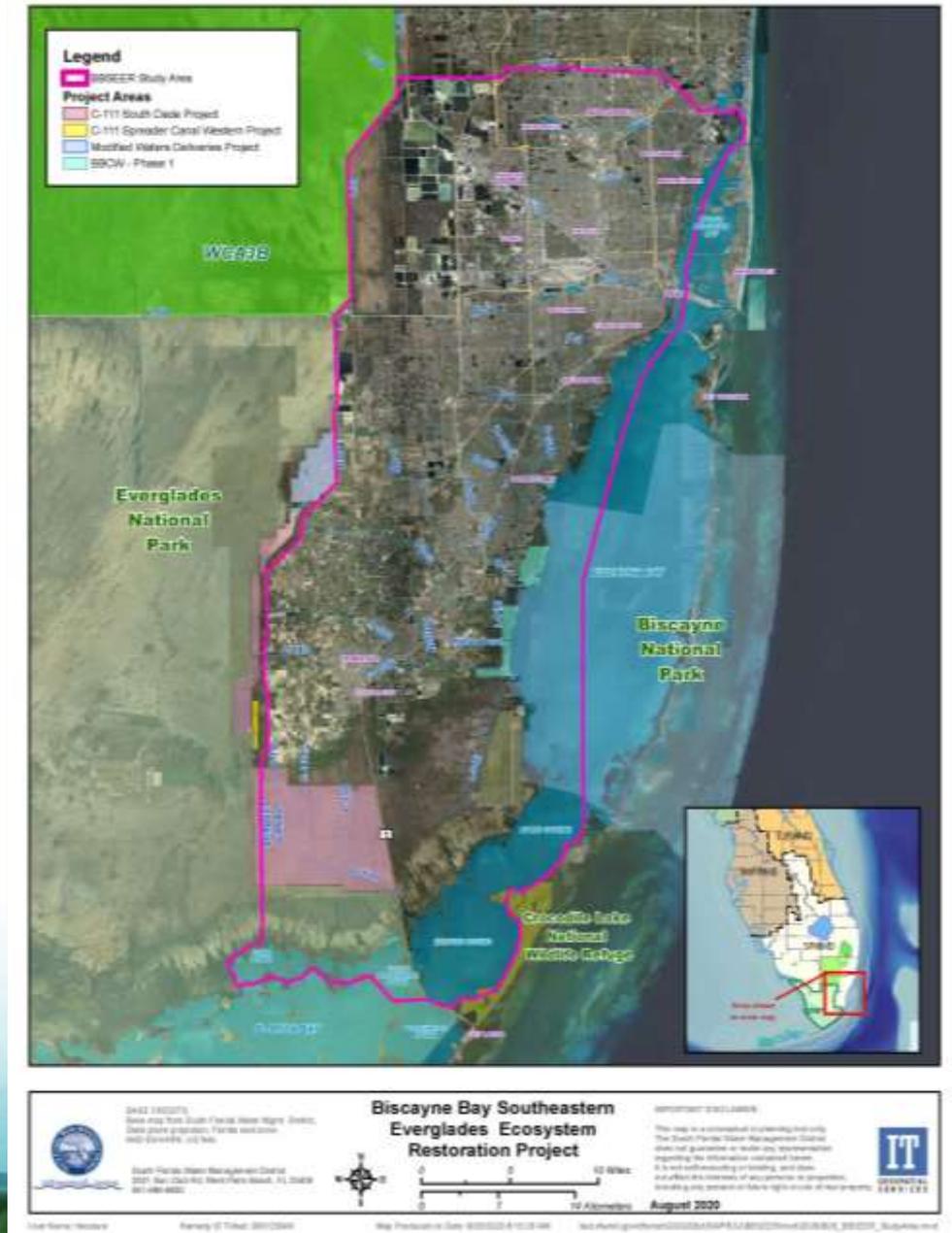


Strategy for Incorporation of Future Sea Level Change

Biscayne Bay and Southeastern Everglades Restoration Study

Dr. Carolina Maran
District Resiliency Officer
South Florida Water Management District

Jason Engle
Water Resources Engineering Chief
Jacksonville District
U.S. Army Corps of Engineers





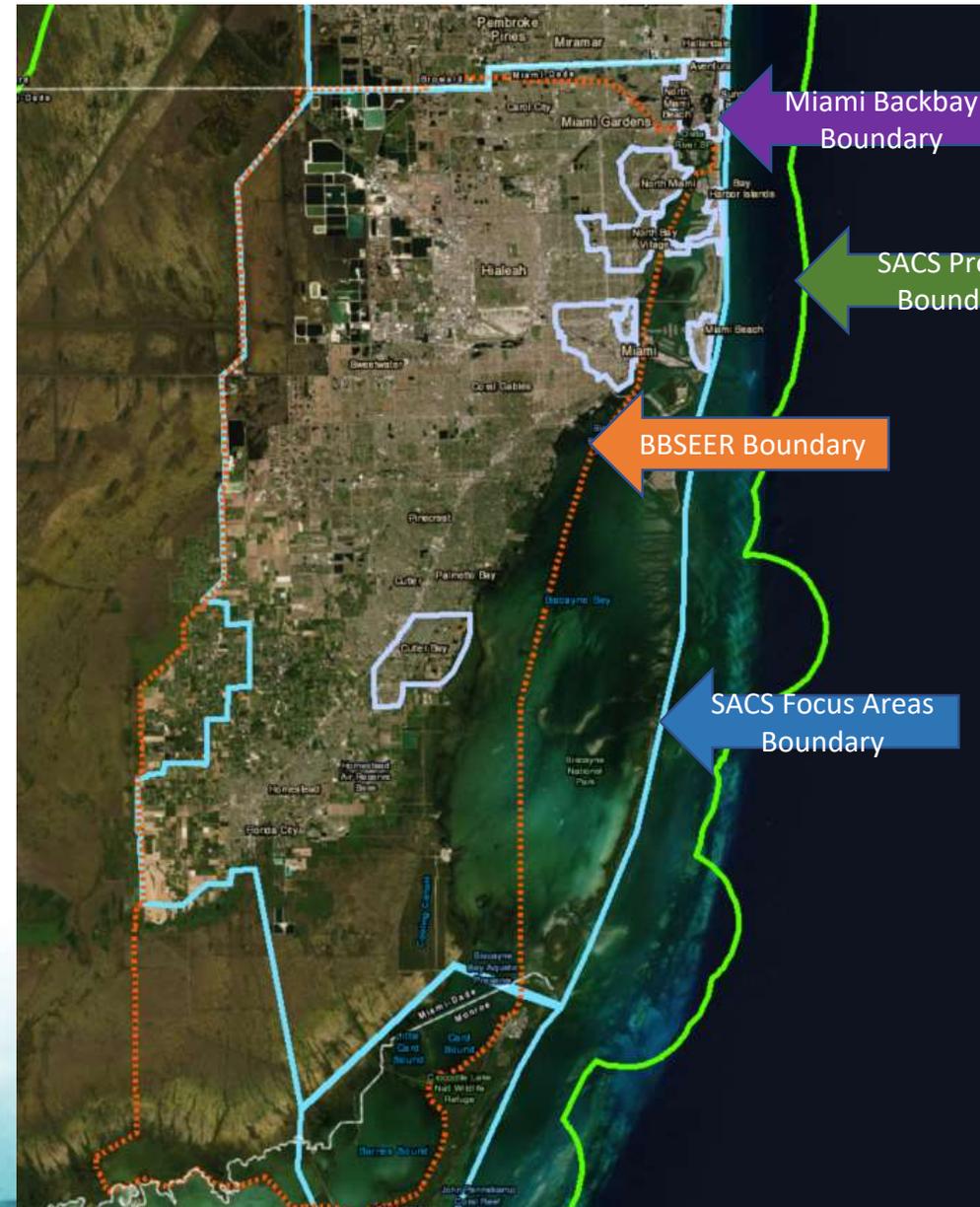
Existing and Ongoing Studies

- Miami-Dade CSRM 'Back-Bay' Study
- South Atlantic Coastal Study
- Southeast Florida Climate Compact – 2019 Unified Sea Level Rise Projection

Consistent Findings

- Future sea level change is uncertain
- Infrastructure resiliency must be evaluated across a range of sea level change scenarios
- Region is highly vulnerable to sea level change

BBSEER will build upon these studies





U.S. Army Corps of Engineers Climate Change Guidance

ECB 2018-14

Guidance For Incorporating Climate Change Impacts To Inland Hydrology In Civil Works Studies, Designs, And Projects, 10 September 18

ER 1100-2-8162

Incorporating Sea Level Change In Civil Works Programs, 31 December 2013

Sea-Level Change Curve Calculator

http://corpsmapu.usace.army.mil/rccinfo/slc/slcc_calc.html

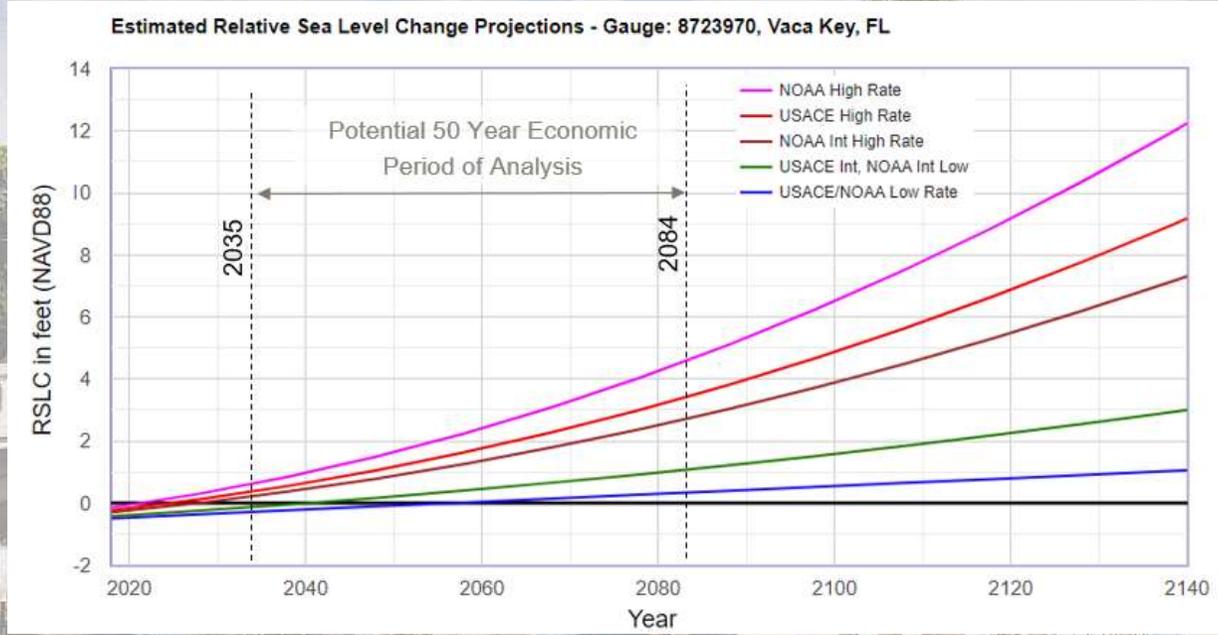


US Army Corps of Engineers

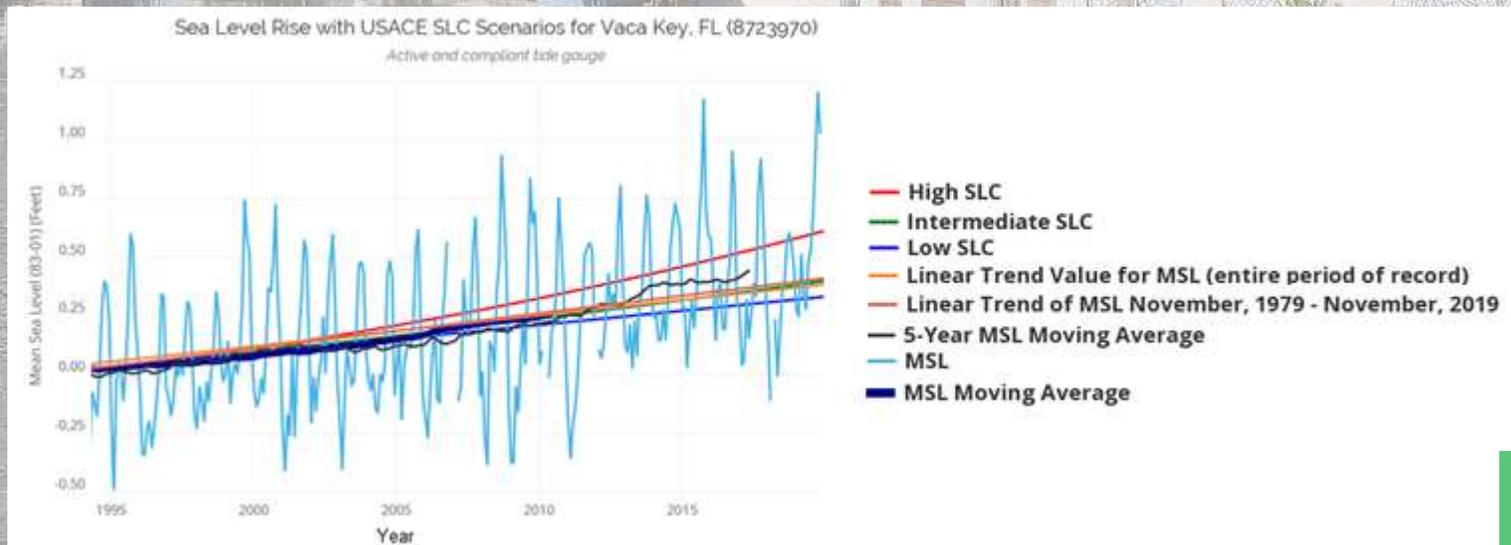
MIAMI-DADE BACK BAY CSRM SEA LEVEL CHANGE



- ❑ Southeast Florida Climate Compact recognizes the USACE intermediate and high curves
- ❑ Miami-Dade Back Bay study being formulated to USACE high curve
- ❑ Sea level tracker shows MSL trending above intermediate curve for 20 years. The District also looked at project performance at USACE low and intermediate curves.



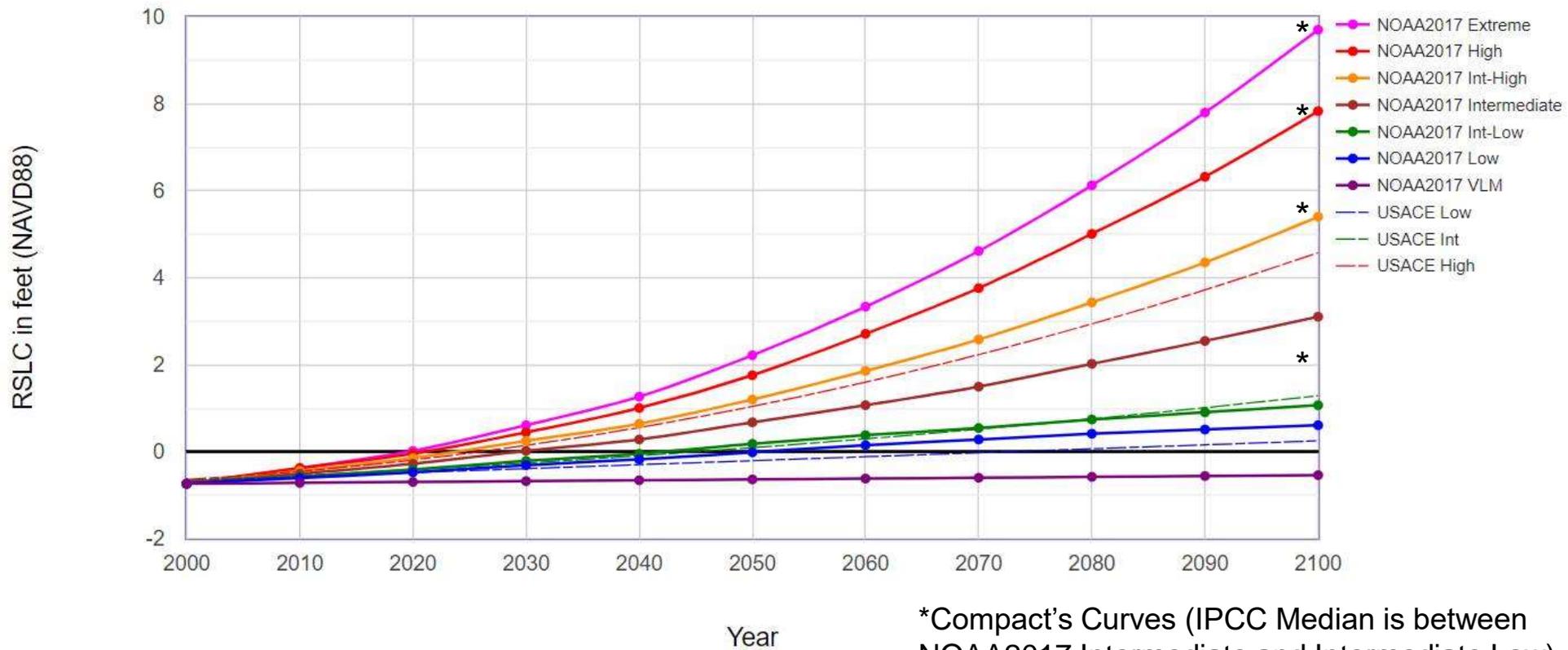
Projected SLR Increase (ft) to 2084 using 2019 sea level trend of 0.01263 ft/yr	
USACE Low	0.83
USACE Intermediate	1.52
USACE High	3.72
NOAA High	4.82





Sea Level Change Scenarios for Miami Dade County

NOAA et al. 2017 Relative Sea Level Change Scenarios for : VACA KEY



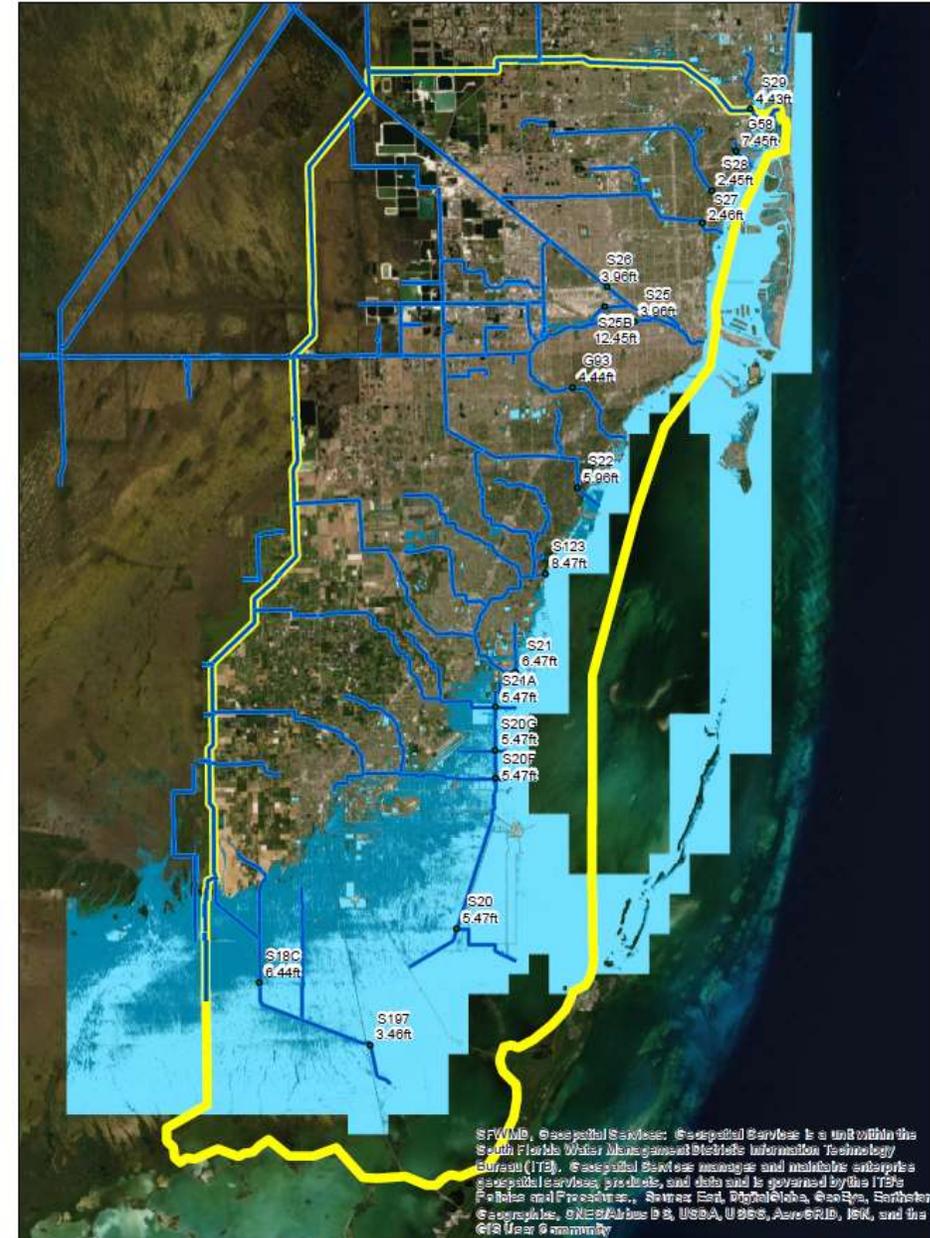
*Compact's Curves (IPCC Median is between NOAA2017 Intermediate and Intermediate Low)



Future Without Project

- Baseline for comparison of project alternatives
- 50 year period; approximately 2030-2080
- Will include sea level change

Inundation Map Representing USACE SLC Intermediate and High Curves Assuming 50-year Planning Horizon to Year 2080, which result in sea level increases to 0.67 ft. (light blue) and 2.85 ft. (dark blue) NAVD88 (respectively).



Inundation Map Representing USACE SLC Intermediate and High Curves Assuming 50-year Planning Horizon to Year 2080, Absolute Elevations of 0.67 ft. and 2.85 ft. NAVD88, Respectively. Coastal Structures with Bypass Elevation (ft. NAVD88) for Reference.

