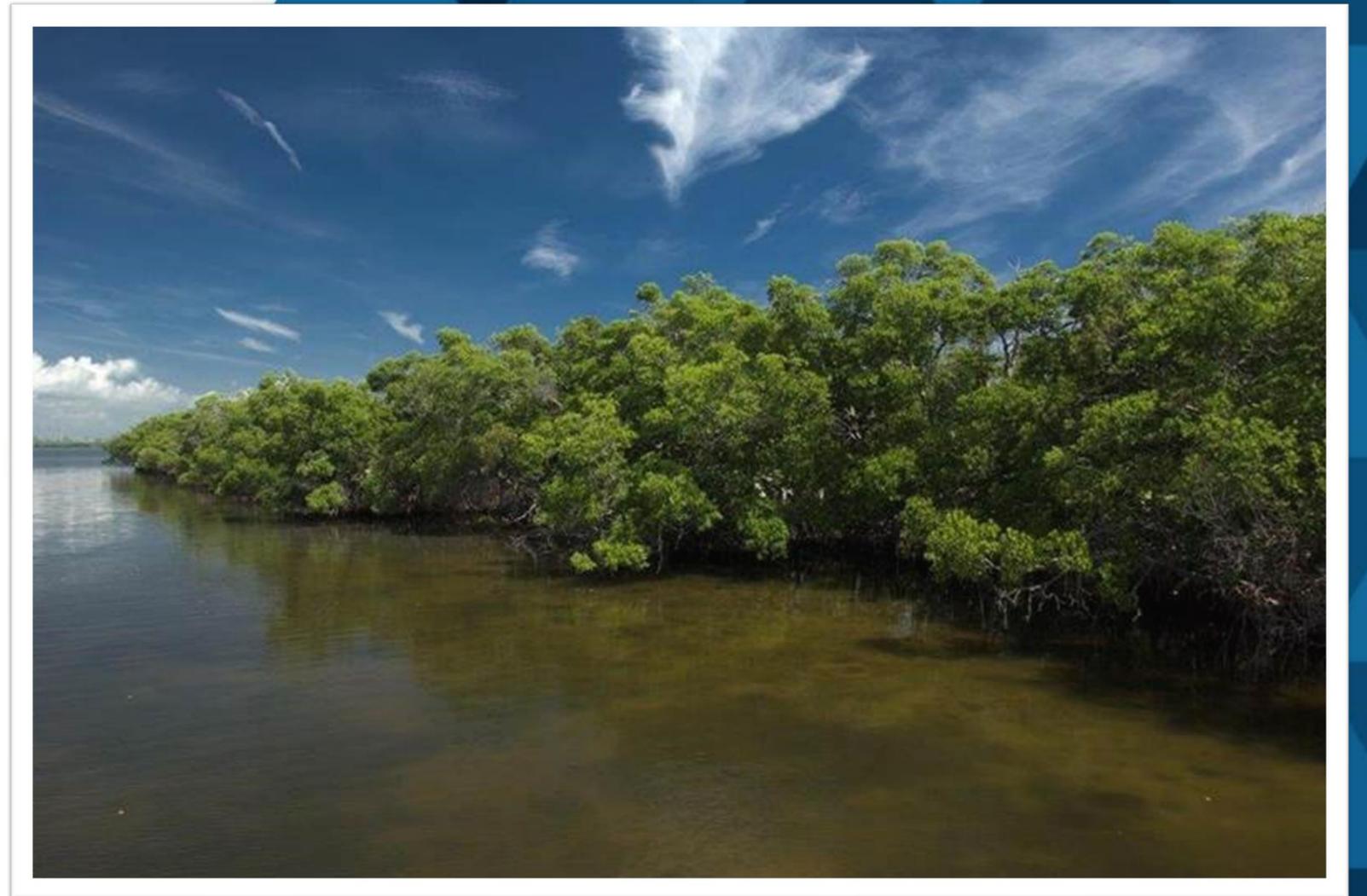


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OCTOBER 22, 2024

WATER QUALITY PROJECTS UPDATE

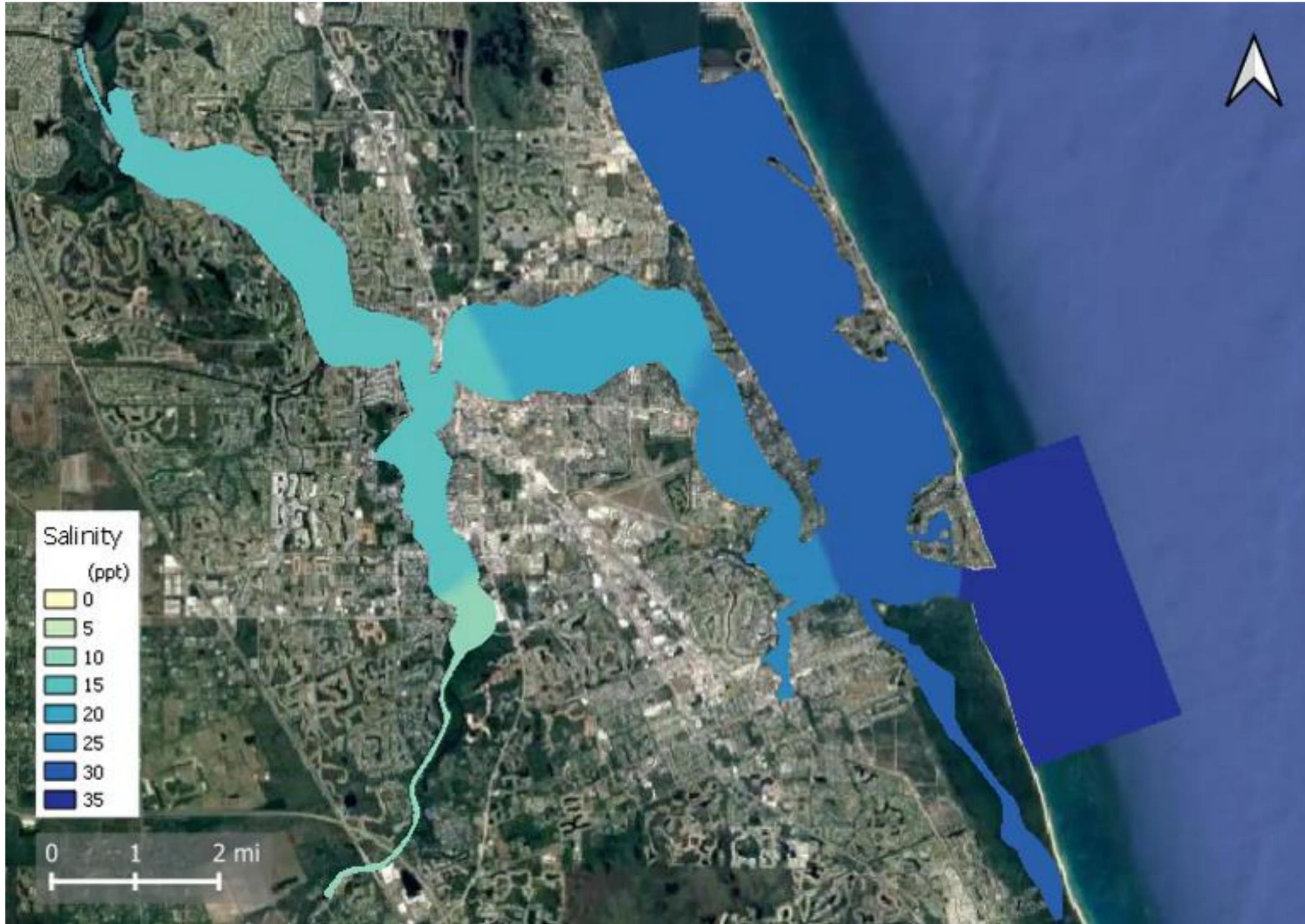
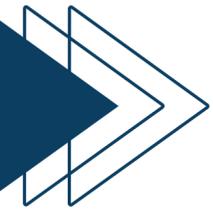




THE CHALLENGE

- ▶ Central and South Florida system
- ▶ Florida is increasingly popular
- ▶ Humans = nutrients
- ▶ Nutrients = water quality problems
- ▶ Water quality problems = ecological, human health, economic, and quality of life issues





Martin County Board of County Commissioners



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WHY IT'S WORTH SAVING

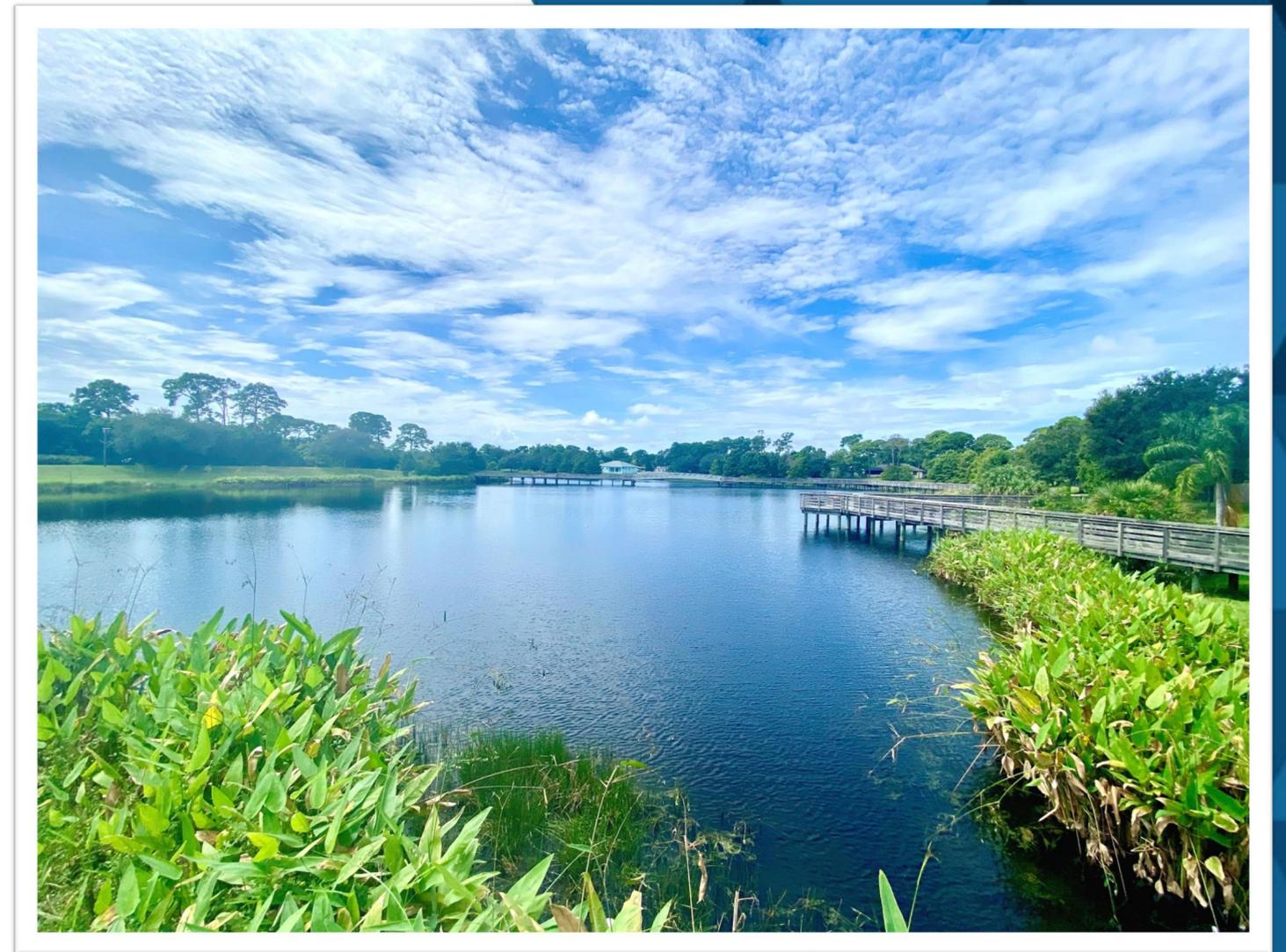
- ▶ Central park of the lower east coast
- ▶ Most biodiverse estuary in the U.S.
from Pine Flatwoods to coral reefs and Large
Mouth Bass to Sailfish



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ACCOMPLISHMENTS

- ▶ 43 stormwater treatment projects
- ▶ Reduced over 70,000 pounds Total Nitrogen
- ▶ Reduced over 15,000 pounds of Total Phosphorus
- ▶ 15,000+ acres within the St. Lucie River watershed getting treatment
- ▶ \$150 million expended with approximately 50% of those funds from state and federal grant sources.
- ▶ Acquisition of over 70,000 acres that are part of the conservation lands inventory



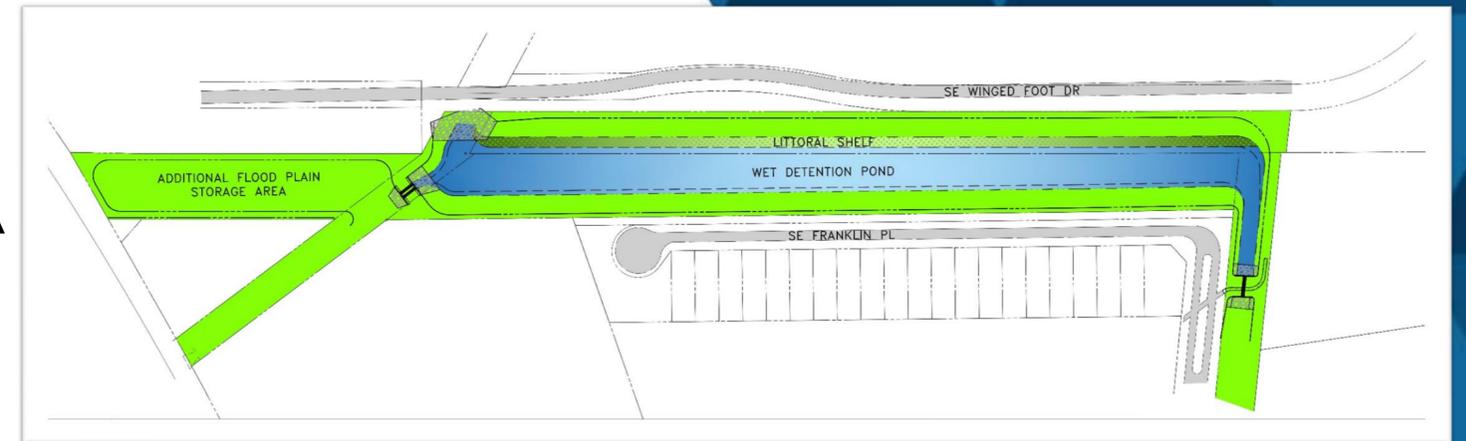
ACCOMPLISHMENTS *CONTINUED*

- ▶ Integrated Pest Management (IPM)
- ▶ Fertilizer ordinance
- ▶ Water Ambassadors
- ▶ Over 4000 septic to sewer conversions
- ▶ 70 package wastewater treatment plants removed
- ▶ Numerous resolutions adopted to support St. Lucie River and water quality initiatives
- ▶ State and Federal Advocacy
- ▶ Lake Okeechobee System Operating Manual



UPCOMING PROJECTS

- ▶ EAST FORK CREEK STORMWATER TREATMENT AREA - PHASE II
- ▶ SW PRONG MANATEE POCKET WATER QUALITY
- ▶ CORAL GARDENS STORMWATER TREATMENT AREA
- ▶ CYPRESS CREEK FLOODPLAIN RESTORATION
- ▶ PALM CITY FARMS WATER QUALITY PROJECT
- ▶ KITCHING CREEK EASTERN FLOW WAY
- ▶ SEA GRASS RESTORATION PROJECTS
- ▶ WATER QUALITY MONITORING EXPANSION



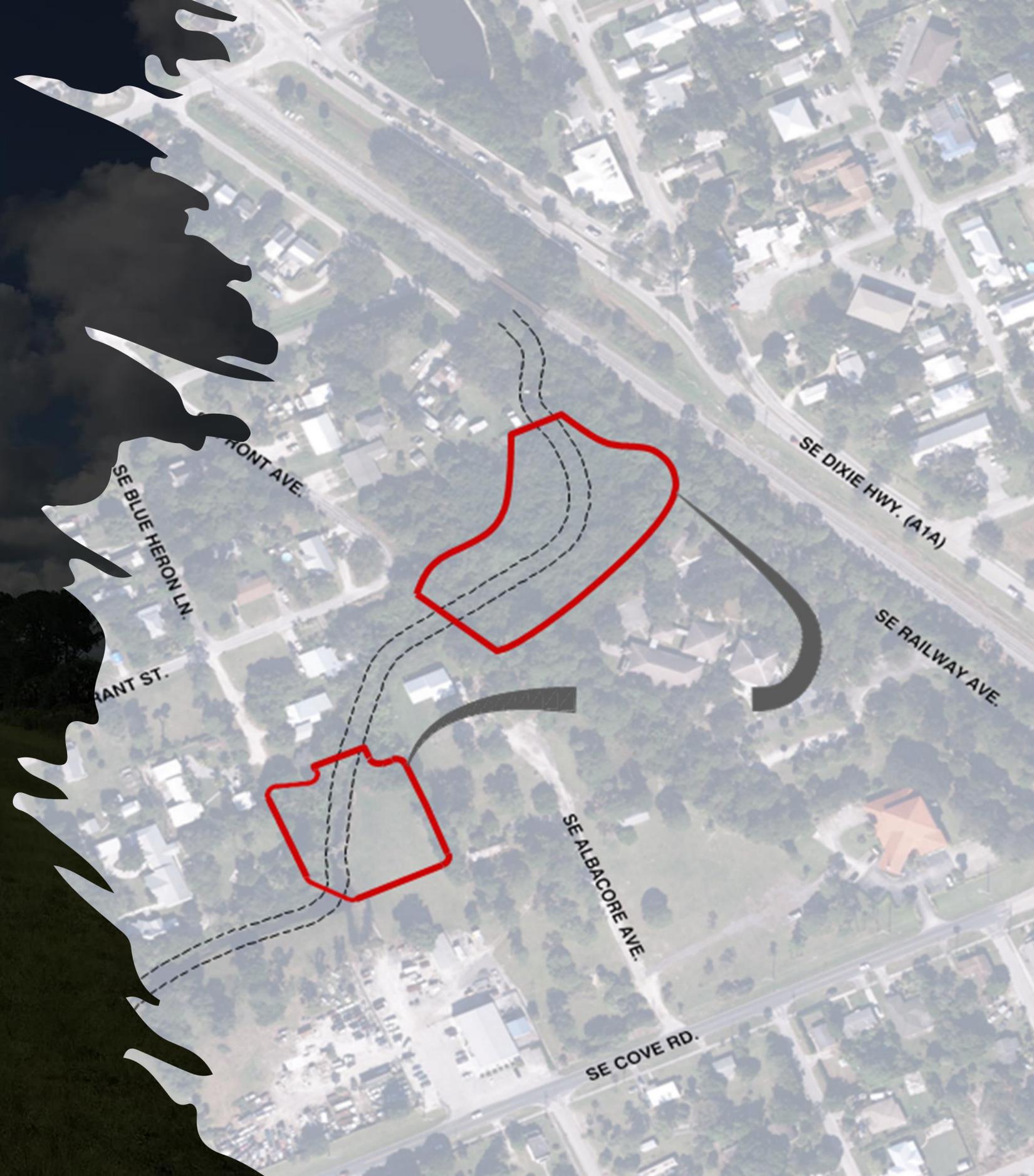
EAST FORK CREEK STORMWATER TREATMENT AREA – PHASE II

- Linear lake and retention area
- Total Nitrogen reduction of 5,800 lbs/yr
- Total Phosphorus reduction of 1,174 lbs/yr
- \$2M project cost
- 20% local funds



SW PRONG MANATEE POCKET WATER QUALITY PROJECT

- Wet detention pond wetland restoration
- High-Performance upflow filter system
- Total Nitrogen reduction of 334 lb/yr
- Total Phosphorus reduction of 234 lb/yr
- \$1.2M project cost
- 60% local funds



CORAL GARDENS STORMWATER TREATMENT AREA

- Joining adjacent dry retention
 - Increasing storage by 260%
 - Total Nitrogen reduction
1147 lb/yr
 - Total Phosphorus reduction
17 lb/yr
-
- \$1.6M project cost
 - 10% local funds



CYPRESS CREEK FLOODPLAIN RESTORATION PROJECT

Restores hydrology to historic
floodplain in a major tributary
to the NW Fork of the
Loxahatchee River

- \$1.8M project cost
- 15% local funds



PALM CITY FARMS

Project to address nutrient pollution and flow attenuation in Mapp Creek and Hogg Creek

- \$5M project cost



KITCHING CREEK EASTERN FLOW WAY

Restores hydrology to hundreds
of acres of Cypress floodplain and
improves flood protection in the
Central flow way to Kitching Creek

- \$3M Project cost



SEA GRASS RESTORATION PROJECTS

Seagrass restoration study

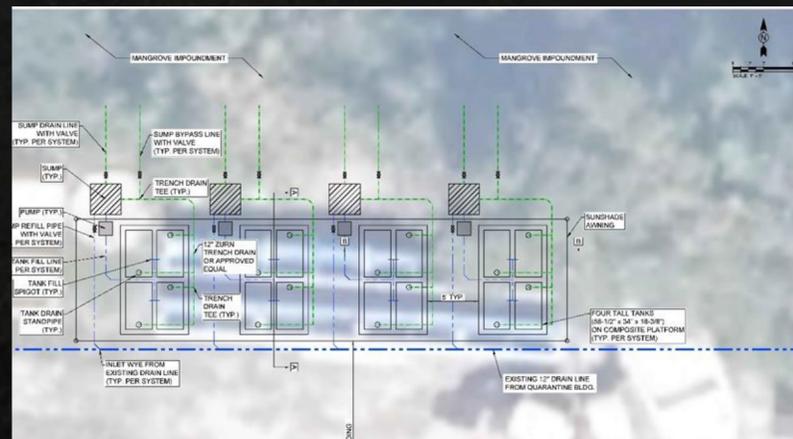
- Experimenting with seagrass species, algae control, water and sediment quality testing, and clam spawning and release

Construction of a seagrass nursery

- Florida Oceanographic Society to provide plant materials for future restoration projects
- \$170K Project cost
- 0% Local funds

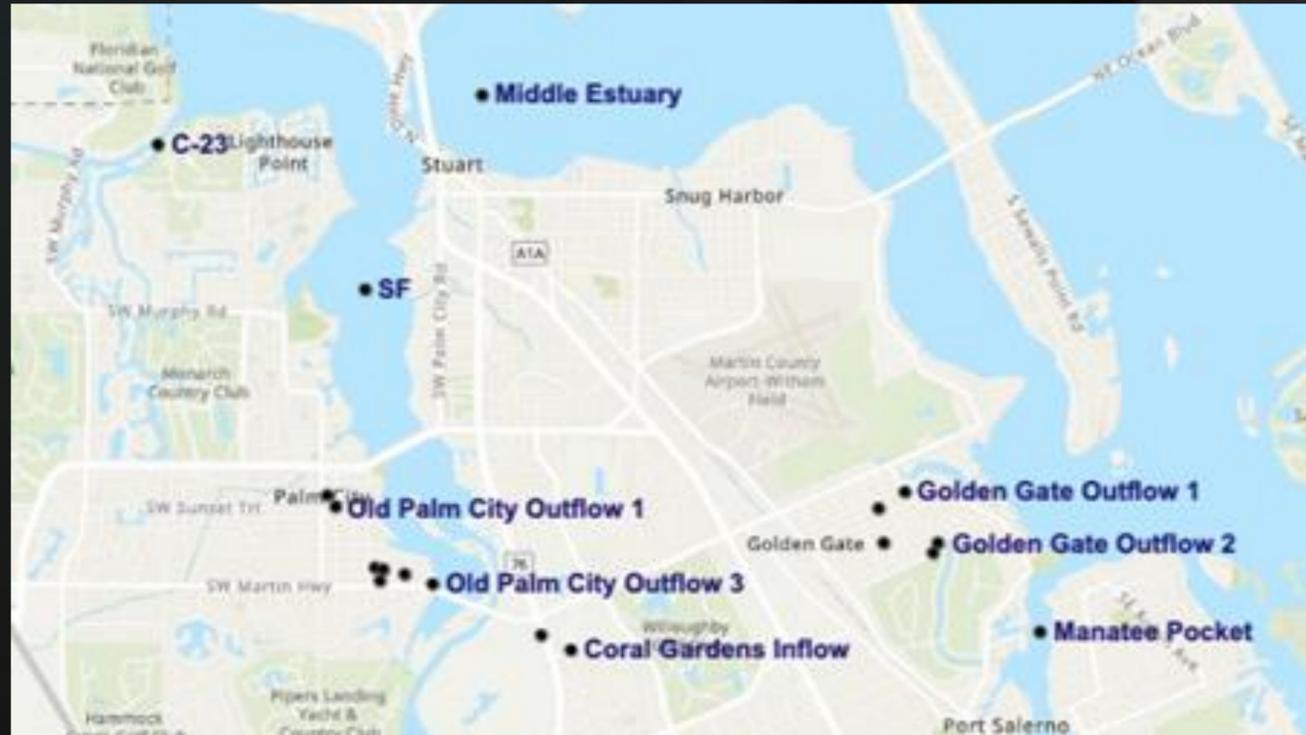
15-acre seagrass planting

- \$600K project cost
- 0% Local funds



WATER QUALITY MONITORING

- Assessments of STA performance
 - Tributary sampling
 - Sediment sampling
 - Historic wetland mapping
-
- \$500K project cost
 - 20% cost share





EVERGLADES RESTORATION

- ▶ C-23/24 North Reservoir Contract
- ▶ EAA A2 Reservoir Contract

- ▶ C-23/24 South Reservoir Construction
- ▶ C-23/24 Stormwater Treatment Area Construction

- ▶ Estuary Restoration and Natural Lands Project Partnership Agreement



CONCLUSION

- ▶ Local watershed management
- ▶ Regional project progress
- ▶ Lake schedule improvements
- ▶ Public awareness

