

Citizen Science: A Two Prong Approach to Addressing Florida's Seagrass Loss

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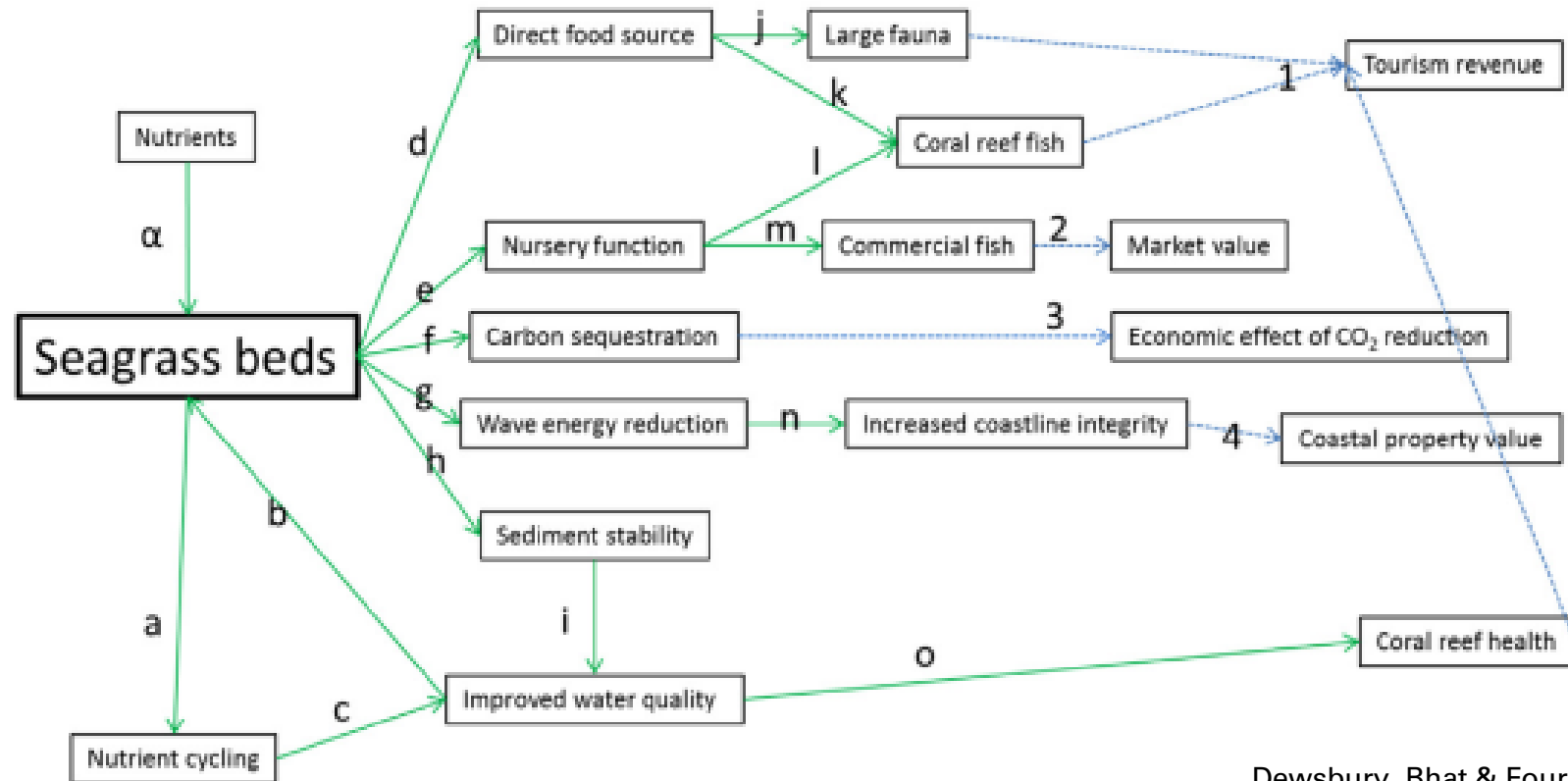


EYES ON SEAGRASS

*UF/IFAS Extension Charlotte County
Florida Sea Grant*

The Value of Seagrass

Seagrass Ecosystems Valuation Model

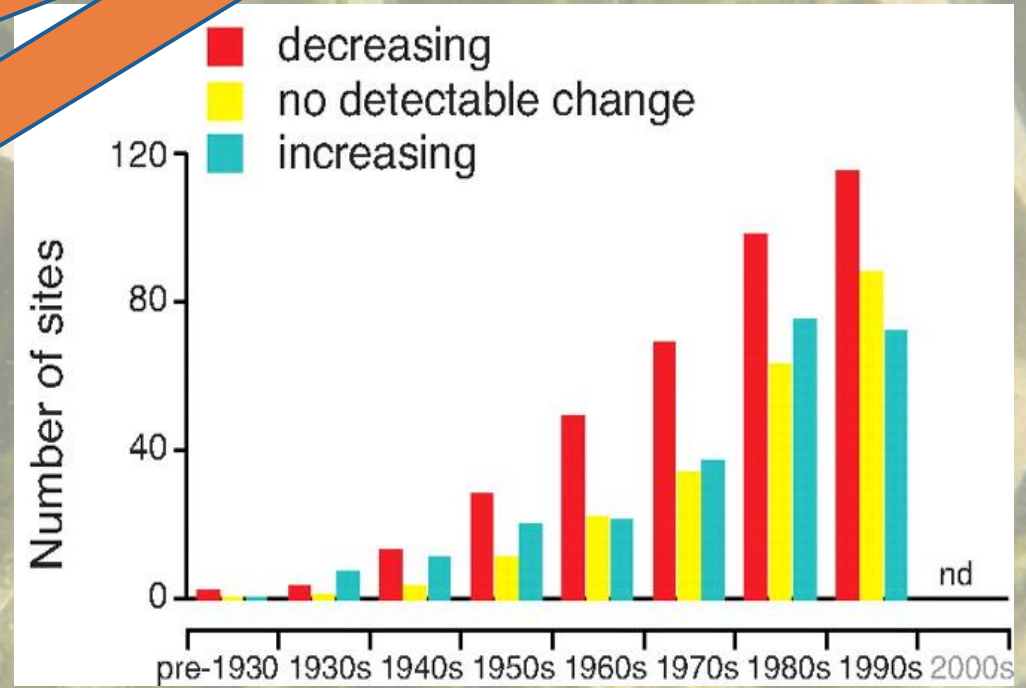
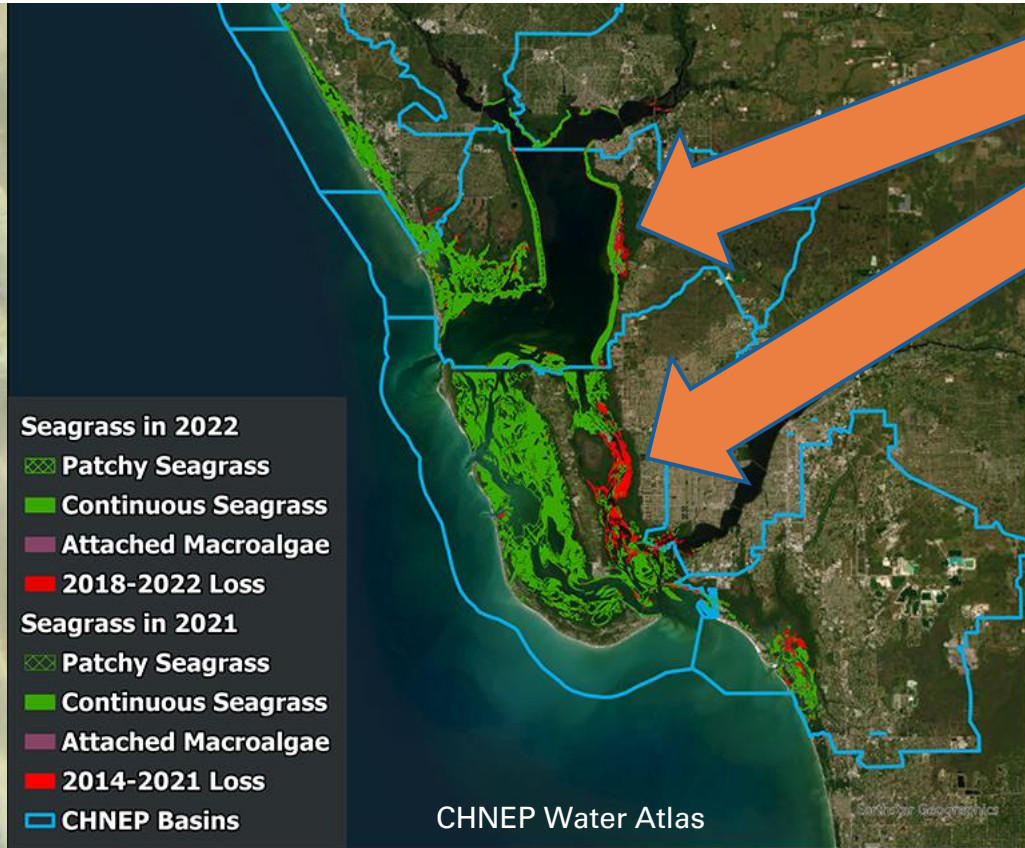


Dewsbury, Bhat & Fourqurean 2016

Seagrass is declining

Thousands of acres of seagrass gone in Charlotte Harbor

By BETSY CALVERT Staff Writer Jun 11, 2021 Updated Jul 17, 2022



Waynecott et al 2009

Eyes on Seagrass

Charlotte County, FL



Depth
Sediment Type
Algae Cover
Seagrass Cover
Seagrass species
Canopy height
Secchi Depth
Algae Biomass
Algae Sample



EYES ON SEAGRASS



Methods

Eyes on Seagrass

Est. 2019

- “Random” transects
- 1/2 m² quadrat
- 50m transect
- Algae coverage & biomass

FDEP Charlotte Harbor Aquatic Preserves

Est. 1999

- Fixed Transects
- 1 m² quadrat
- Survey to deep edge
- Algae coverage



Eyes on
Seagrass



Eyes on
Seagrass



FDEP/CHAP

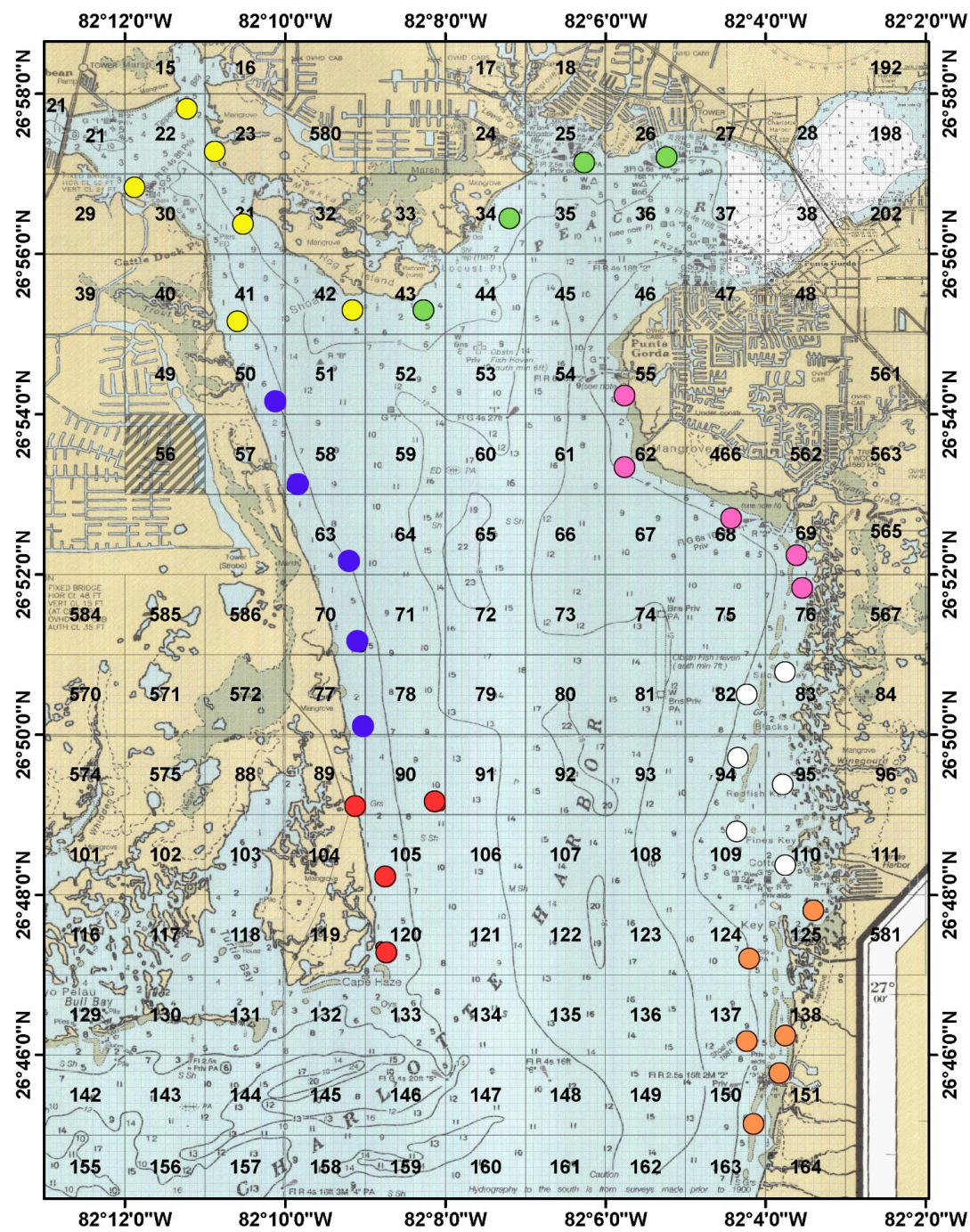
Prong I: Increasing Sampling Capacity

45 sites for 4 years

- Close to 2,000 quadrats since 2019

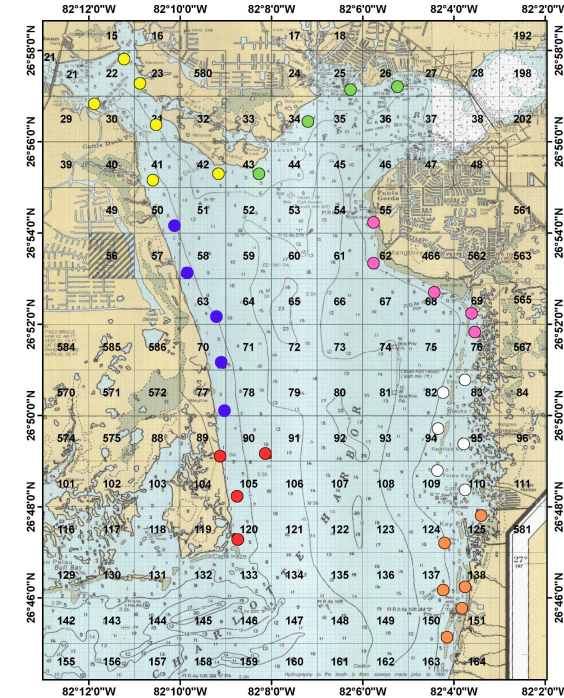
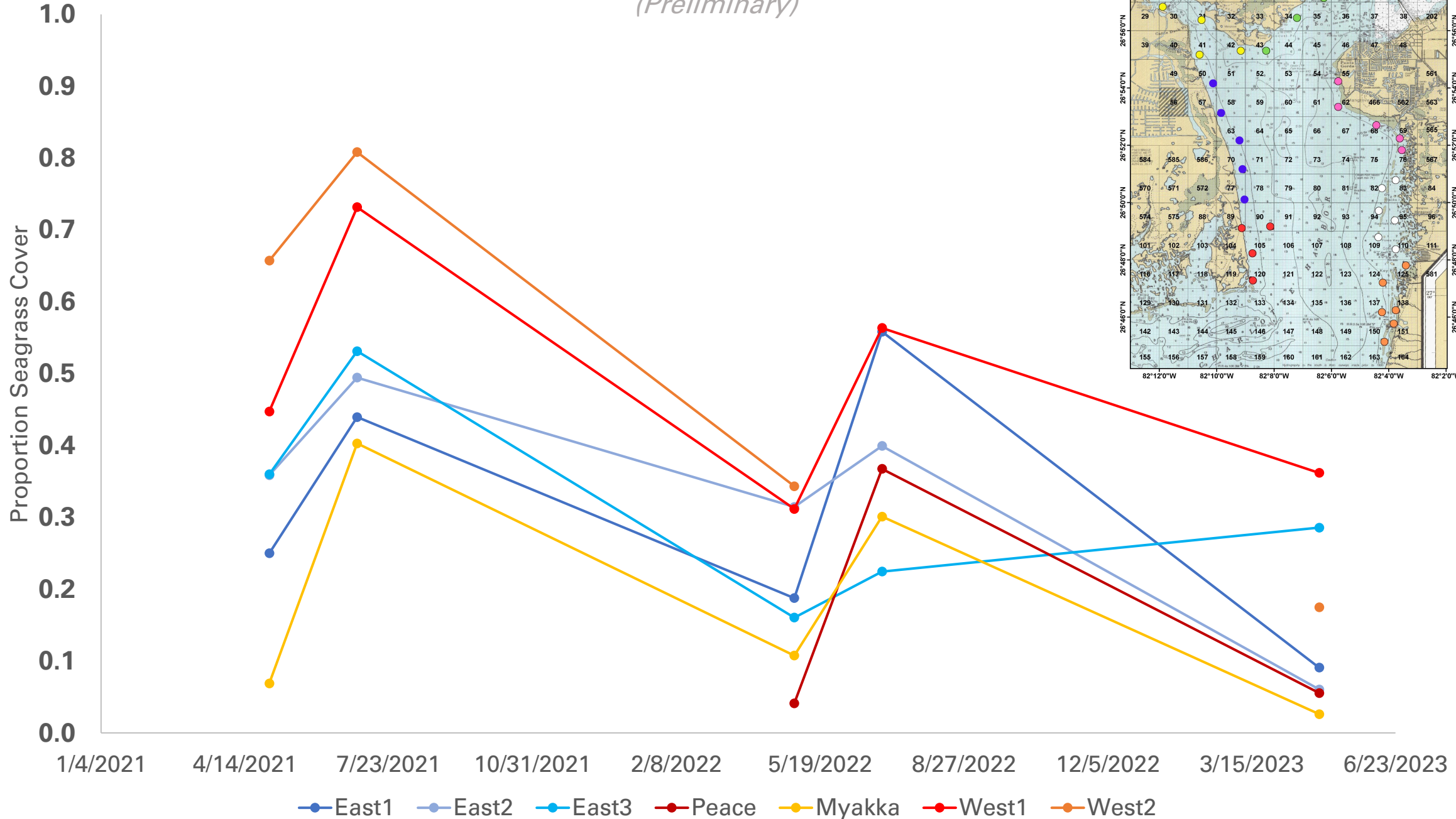
Volunteer time and resources > \$110,000

- Skilled volunteer value = \$27.68/hr (Florida Independent Sector)



Charlotte Harbor Seagrass Coverage

(Preliminary)

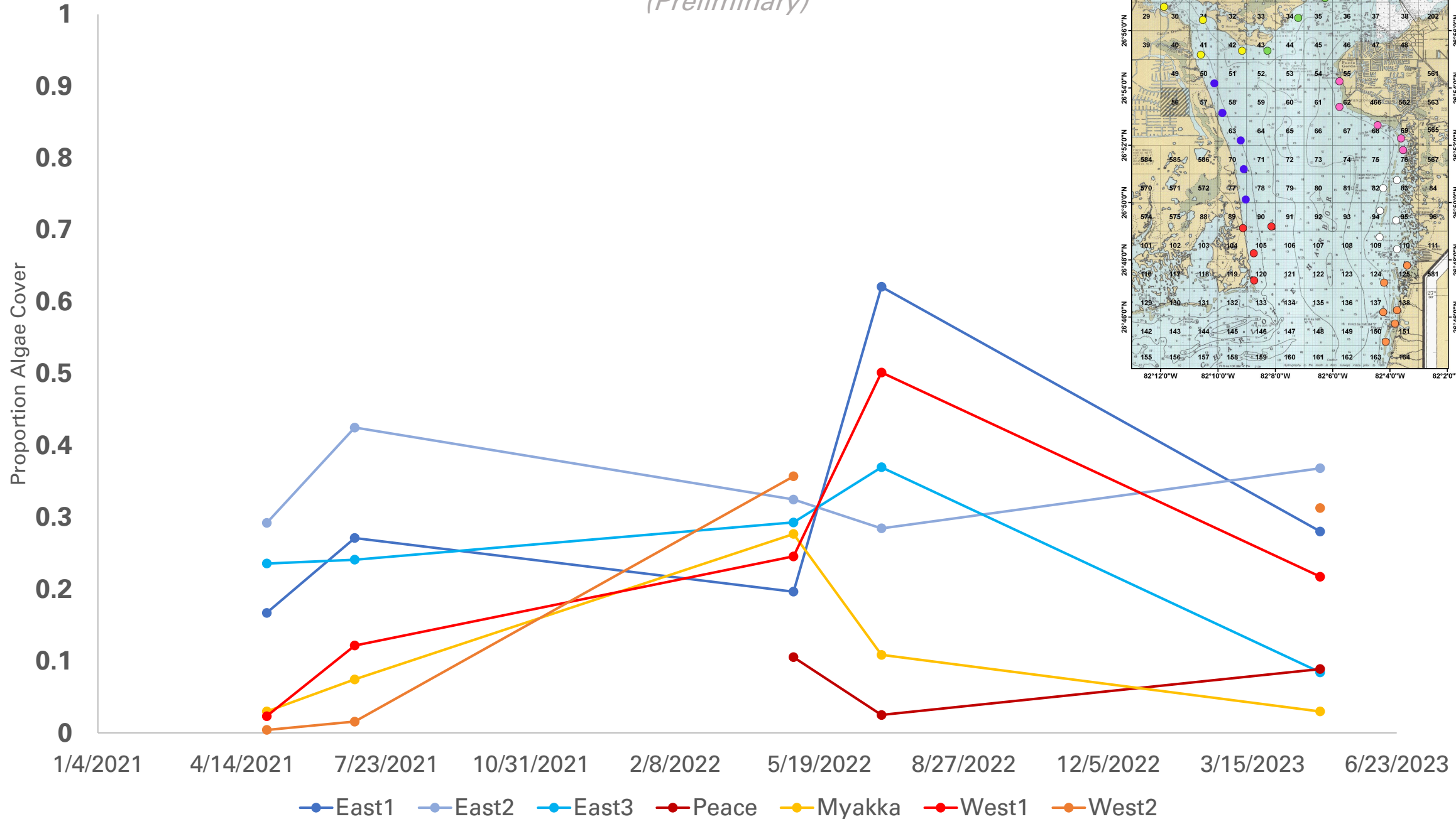


Lemon Bay Seagrass Coverage

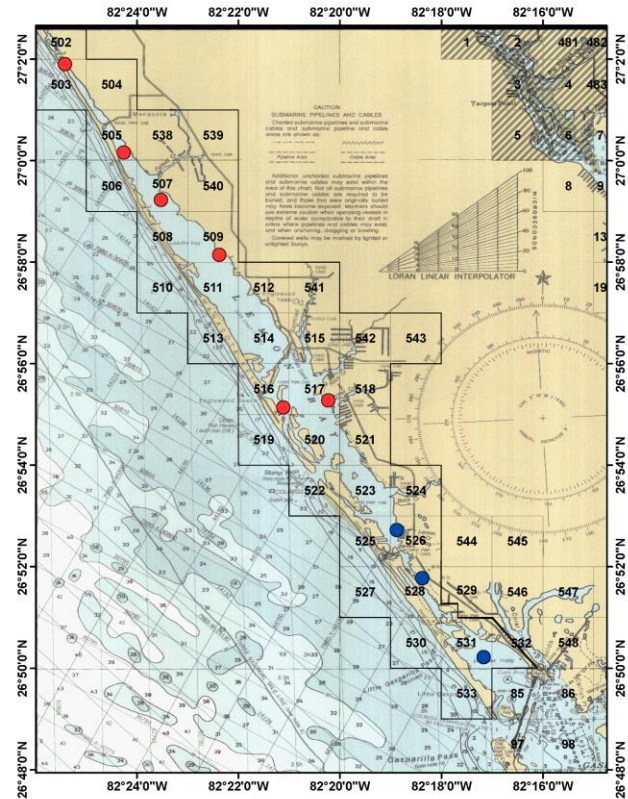
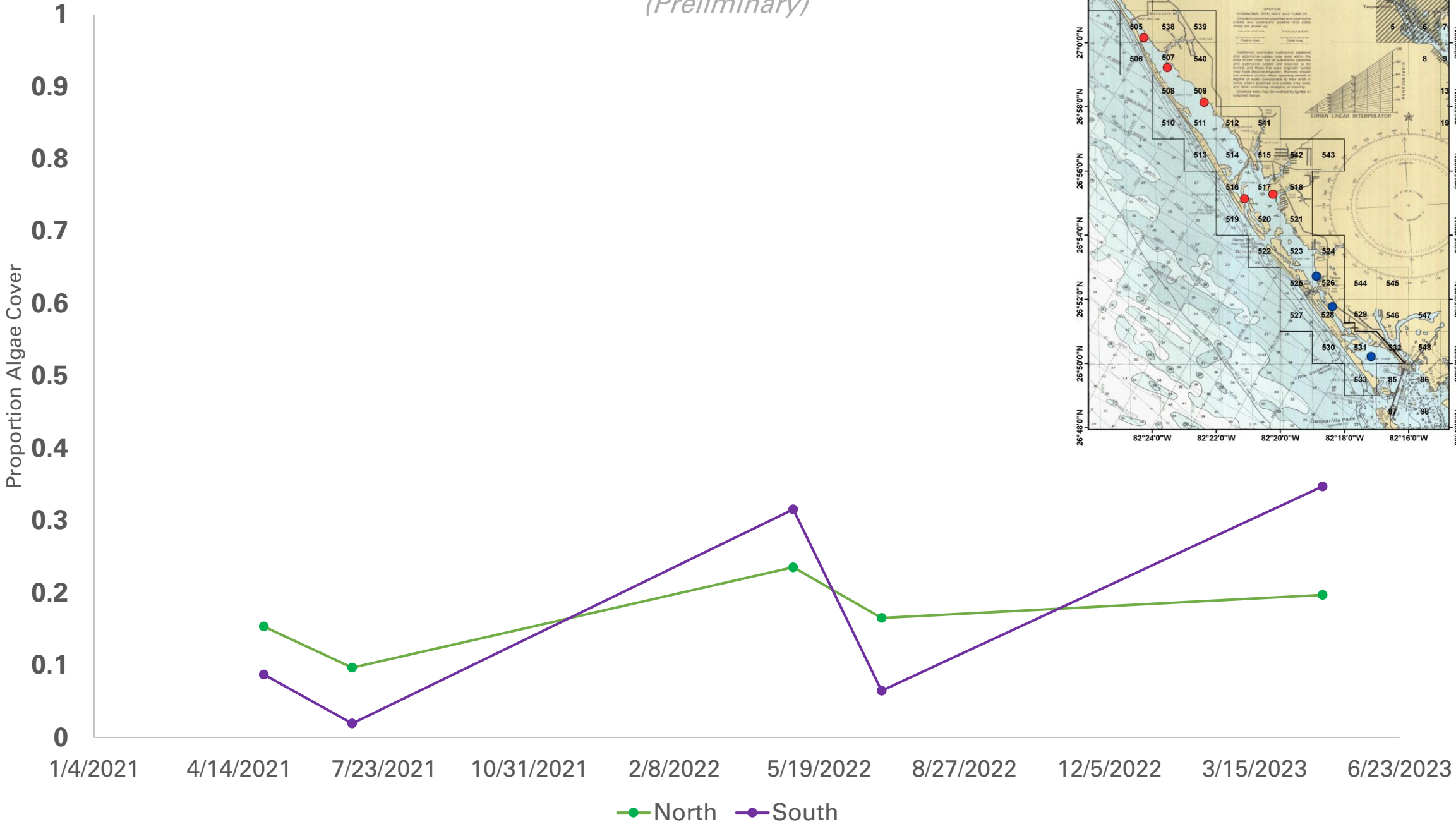
(Preliminary)



Charlotte Harbor Macroalgae Coverage (Preliminary)



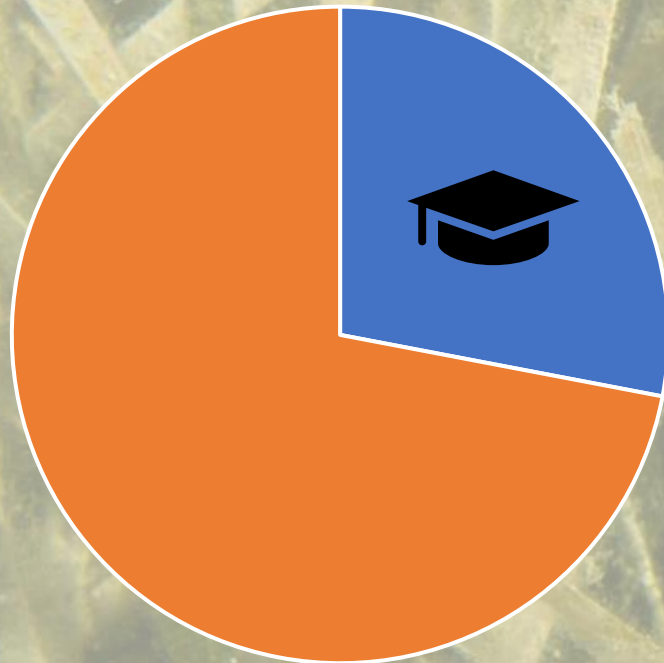
Lemon Bay Macroalgae Coverage *(Preliminary)*



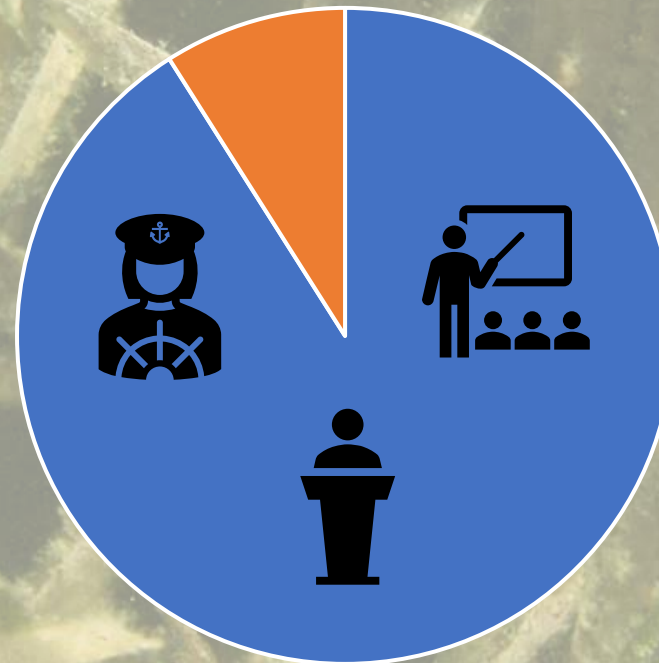
Prong II: Creating Environmental Stewards

2022 Volunteers

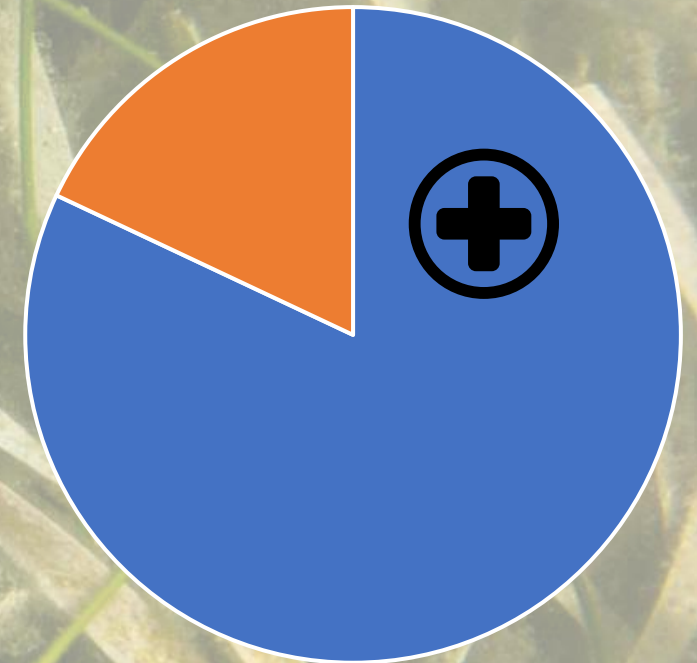
n=23 (35% response rate)



28% increase in
knowledge gain
(based on self-reflection)



91% reported
behavior change



82% were willing to
survey after Hurricane
Ian

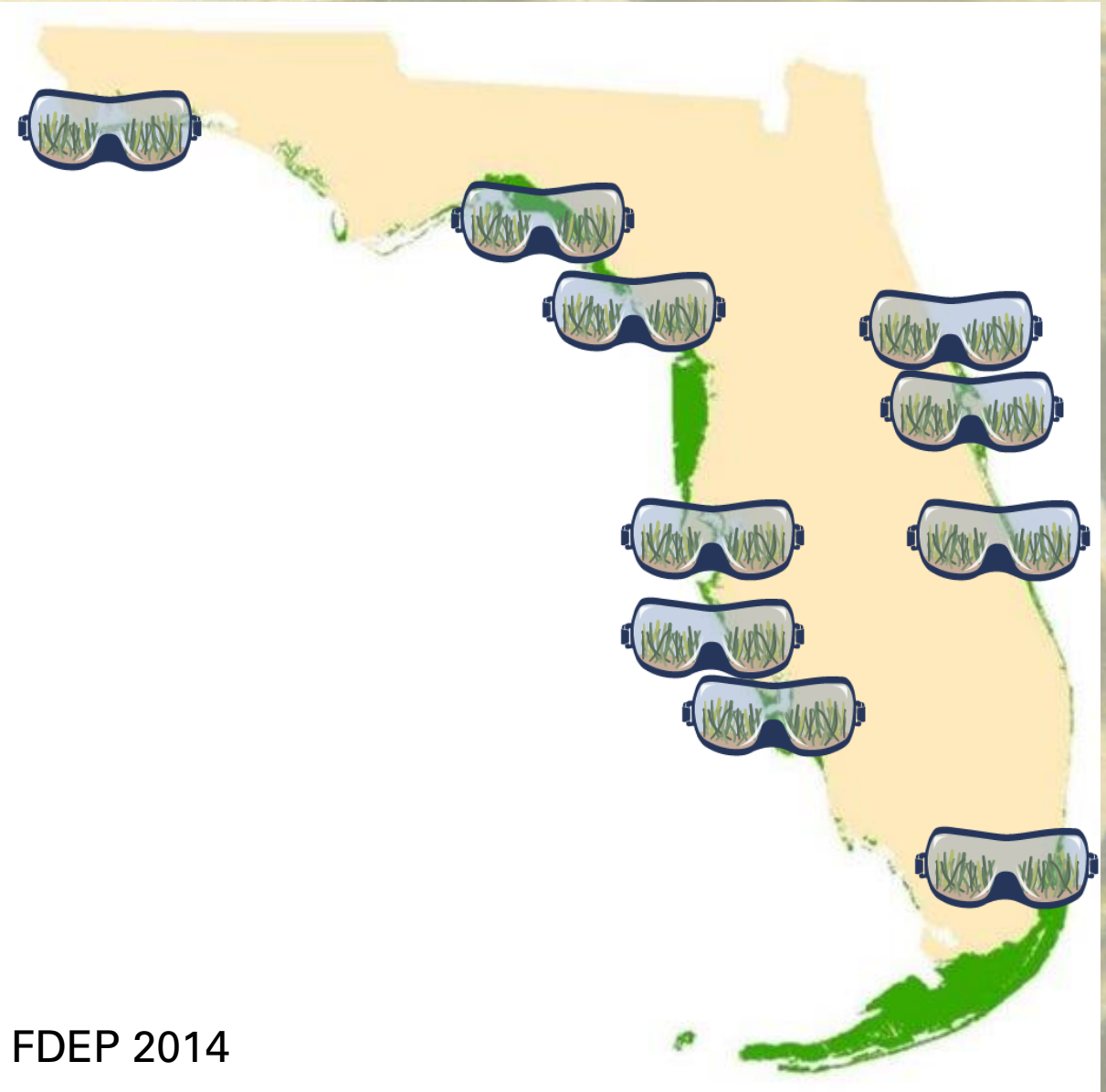
Next Steps

SWFL Regional Eyes on Seagrass Working Group

- UF/IFAS Extension Charlotte County
- Sarasota Bay Estuary Program
- Tampa Bay Estuary Program

Statewide Expansion

- Comparative dataset
- Local flexibility



FDEP 2014

Questions?



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