2024 Springs Coast Seagrass Mapping Results

Springs Coast Steering Committee Meeting
July 23, 2025

Southwest Florida Water Management District

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Presentation Outline

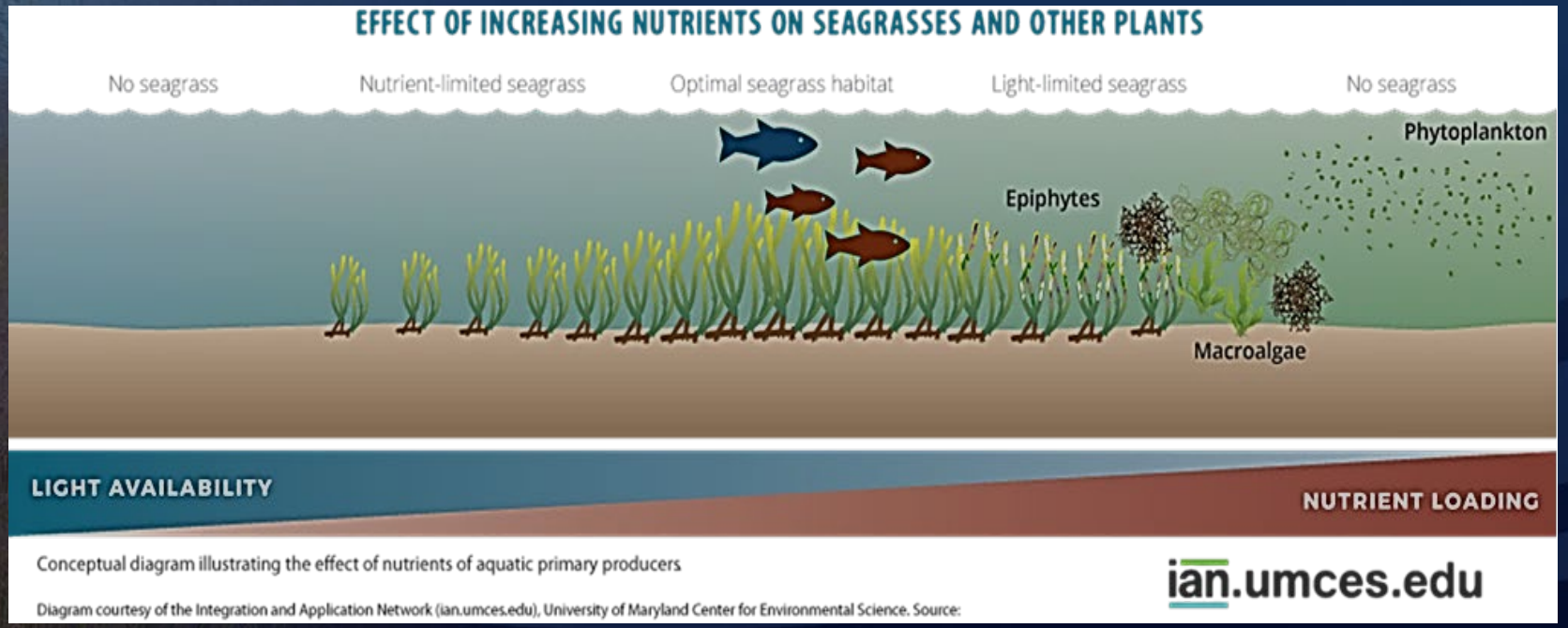
1. Importance of seagrasses
2. The mapping process
3. Suncoast results
4. Springs Coast results

Importance of Seagrass

- Ecologically and economically important
  - Provide habitat for fish and shellfish
  - Powerful carbon storage systems
  - Stabilize sediment and reduce turbidity
  - Improve water quality

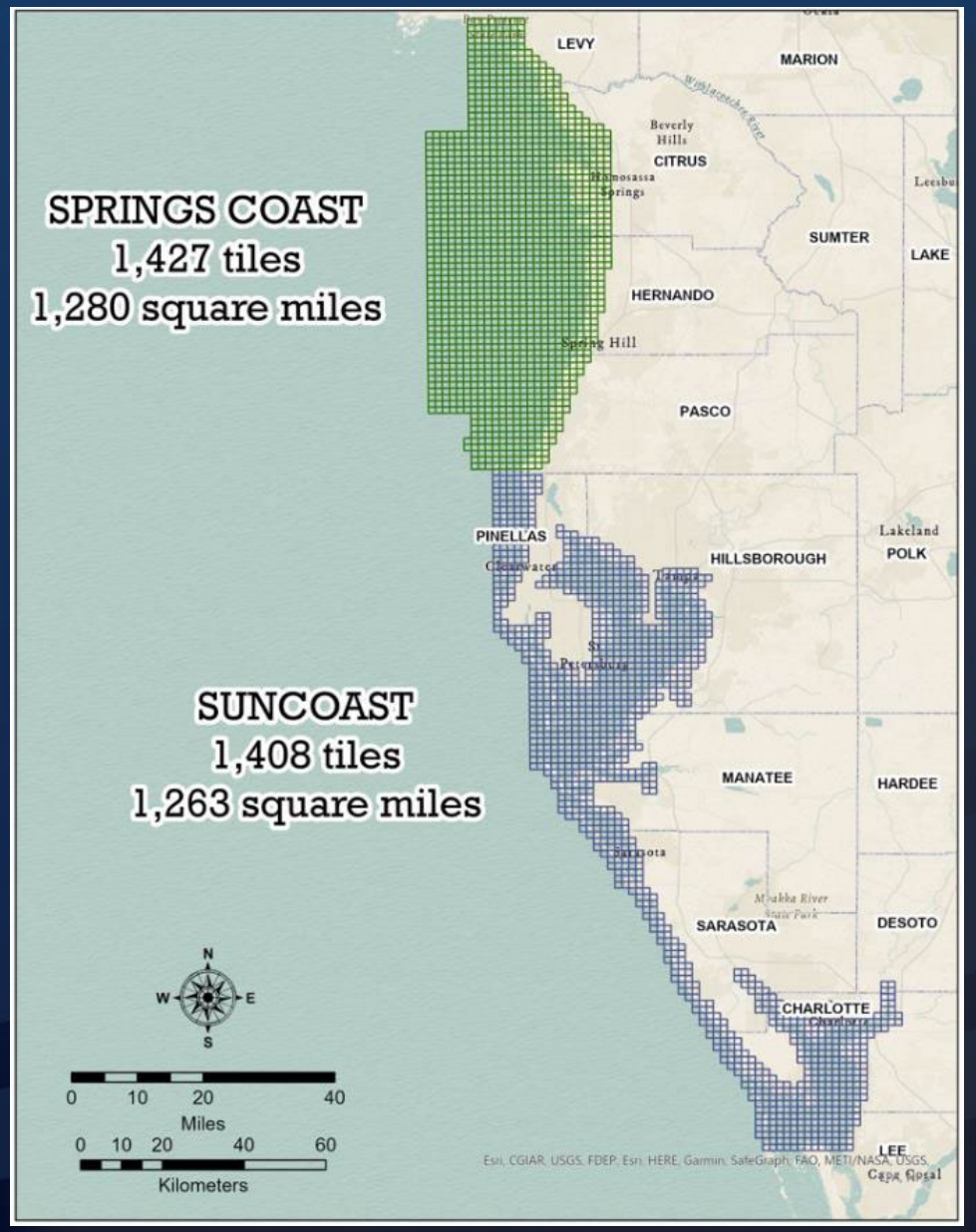
Why the District maps seagrass

- Sensitive to water quality changes
- Primary indicator of long-term estuarine health
- Measure overall resource management effectiveness



District Seagrass Mapping Program

- Suncoast
  - 1988 – Present
  - Two-year cycle
- Springs Coast
  - 2007 – Present
  - Four-year cycle
- Methodology similar with other WMDs
  - SJRWMD – Indian River Lagoon
  - SFWMD – Estero Bay



Seagrass Mapping Process

Image Acquisition

Photointerpretation

Field Verification

Image Acquisition

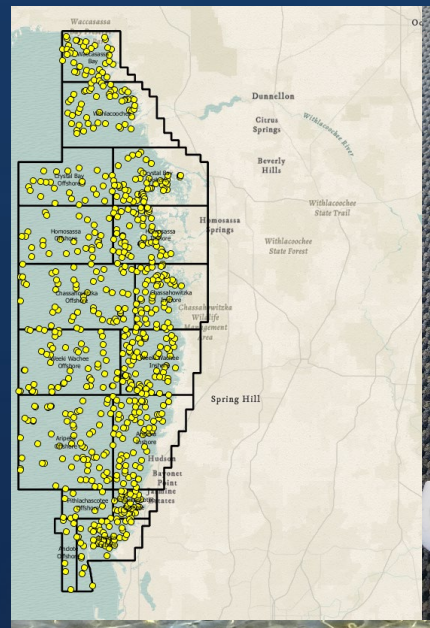
- Aerial Photography
  - Advanced remote sensing technology
  - Strict go-no-go criteria for flight
  - Flight window (December – February)
- Post-processing
  - Ground control survey for horizontal accuracy
  - Color balance, pixel stretching, edge matching
  - Mosaic creation

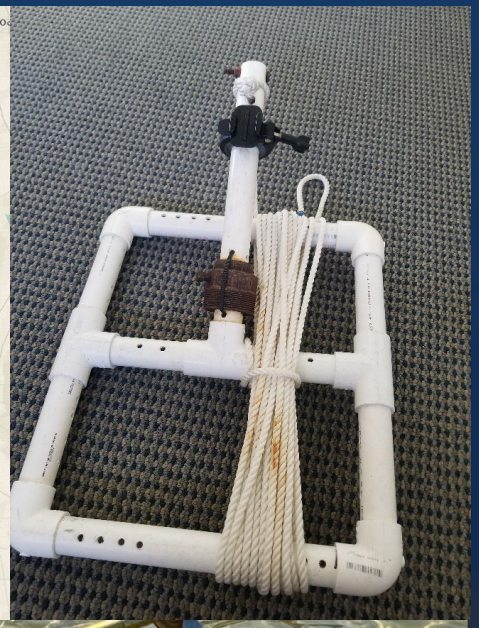
Map results represent pre-2024 hurricane season conditions

Field Verification

- Accuracy Assessment
  - Independent contractor
  - Must achieve 90% accuracy
- Photo-Interpreter Field Checks
- Draft Map QC Checks

- Innovative and Technological Advances
  - Video-based point attribution
  - Over 2,000 field verification points collected

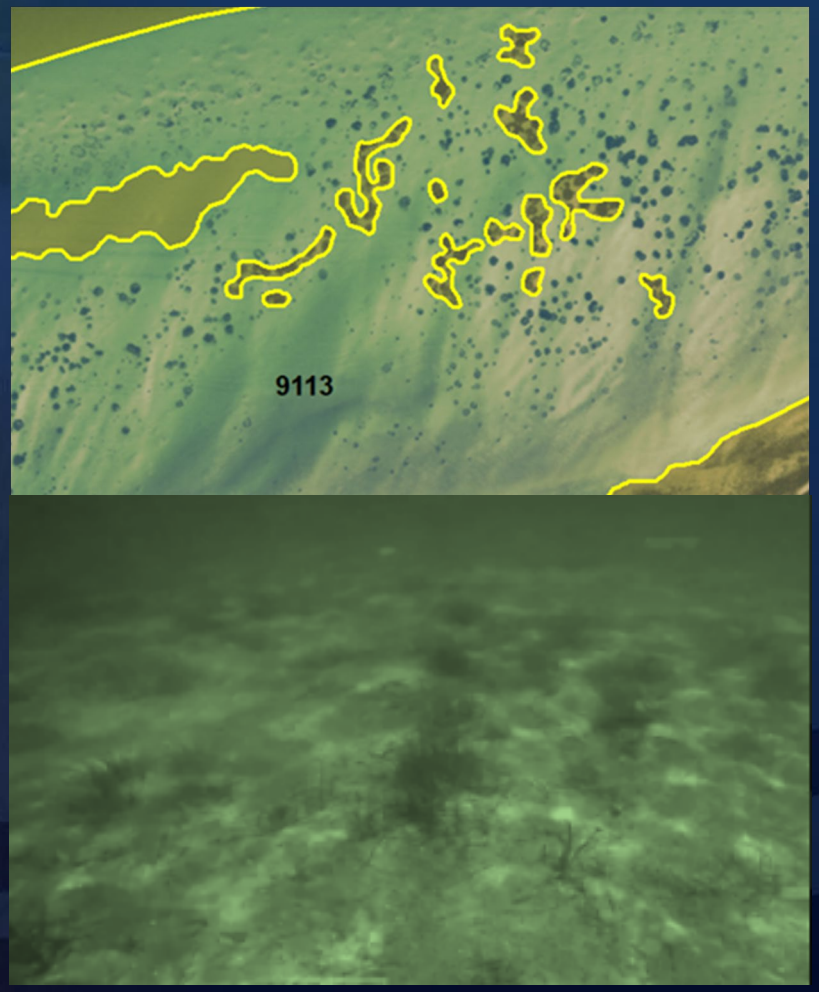




Photointerpretation

Continuous (9116)

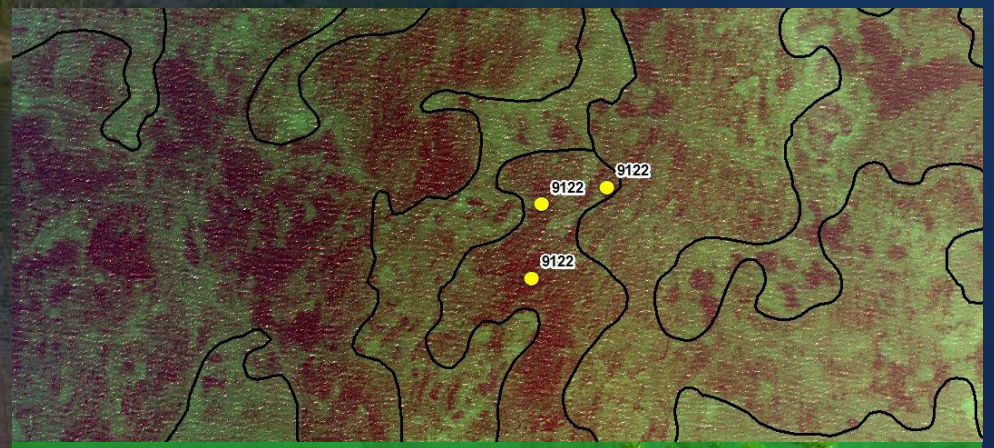
Patchy (9113)



Composite Colonized Seagrass (9115)

Photointerpretation

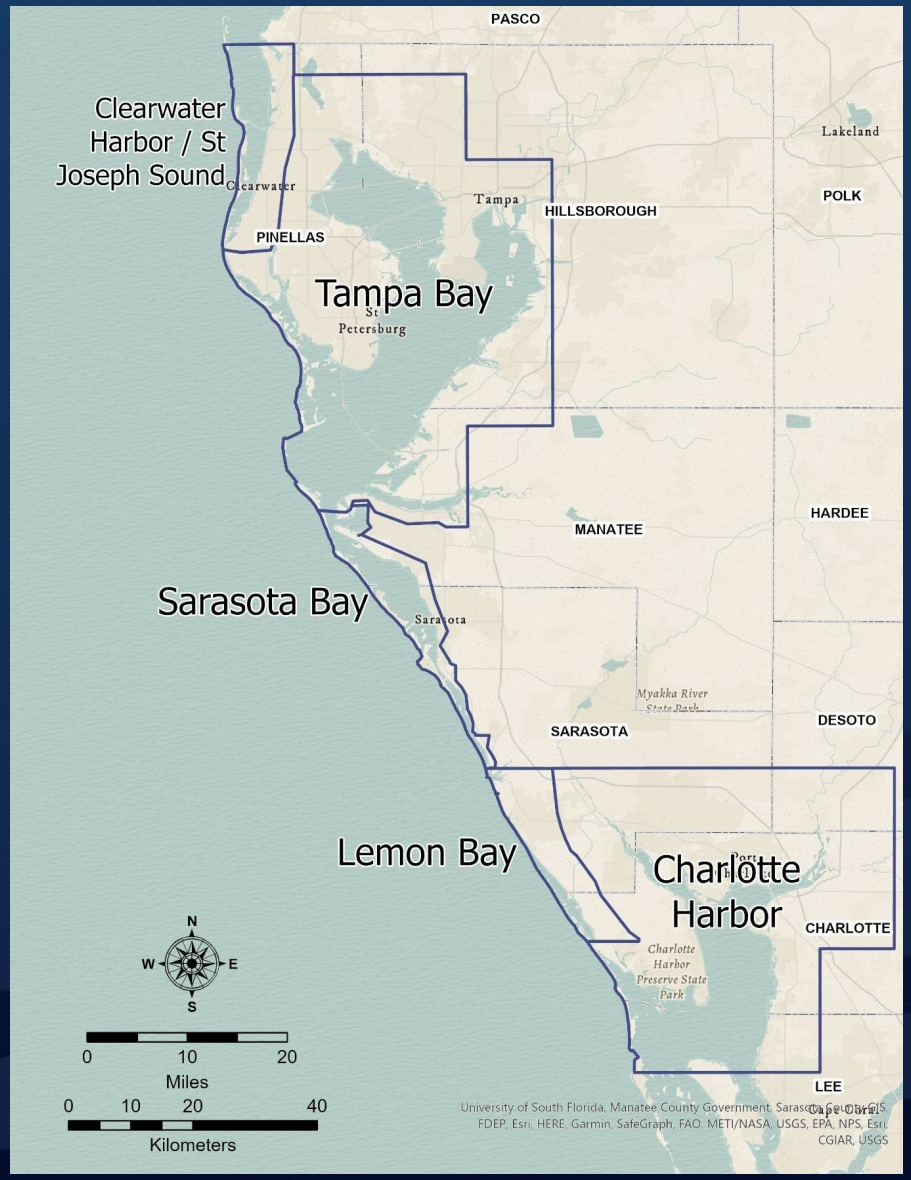
Composite Colonized Algae (9122)



Attached Algae (9121)

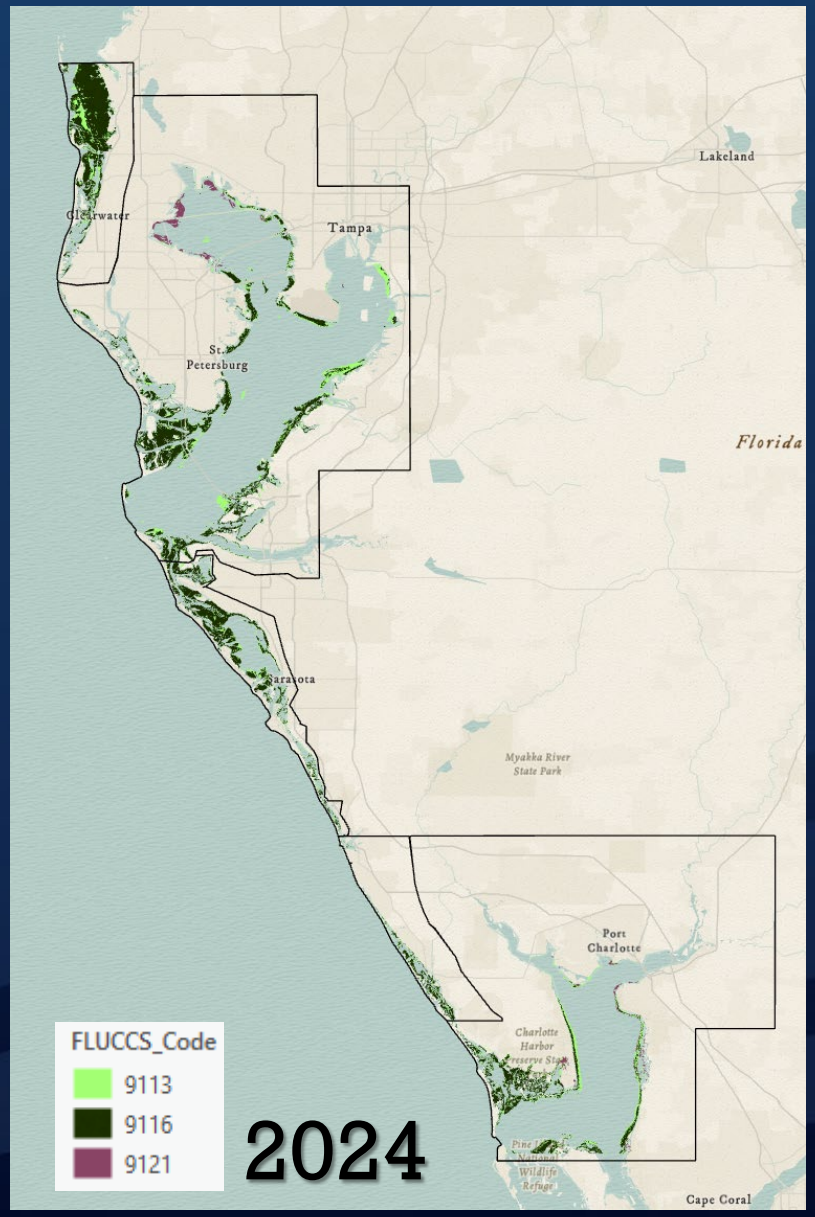
Suncoast Results

- St. Joseph Sound/Clearwater Harbor
- Tampa Bay
- Sarasota Bay
- Lemon Bay
- Charlotte Harbor



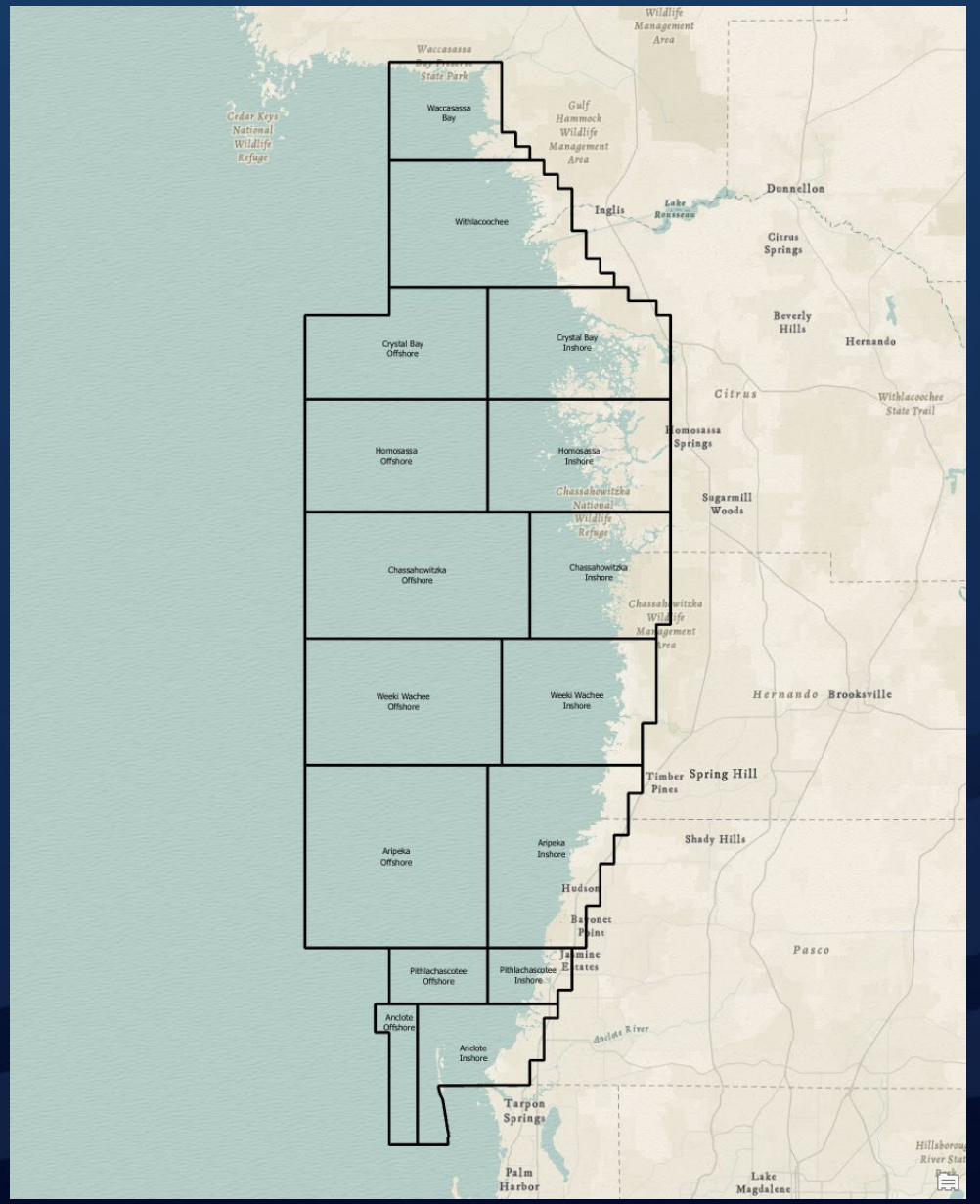
Suncoast Results

Estuary	2022 *(acres)*	2024 *(acres)*	Acreage Change	% Change
St Joseph Sound/ Clearwater Harbor	17,815	18,007	192	+1%
Tampa Bay	30,135	31,562	1,427	+5%
Sarasota Bay	9,963	11,876	1,913	+19%
Lemon Bay	2,427	2,417	-10	<1%
Charlotte Harbor	14,913	14,020	-893	-6%
Grand Total	75,253	77,882	2,629	+3%



Springs Coast Results

- Waccasassa Bay
- Withlacoochee
- Crystal Bay
- Homosassa
- Chassahowitzka
- Weeki Wachee
- Aripeka
- Pithlachascotee
- Anclote



Springs Coast Results

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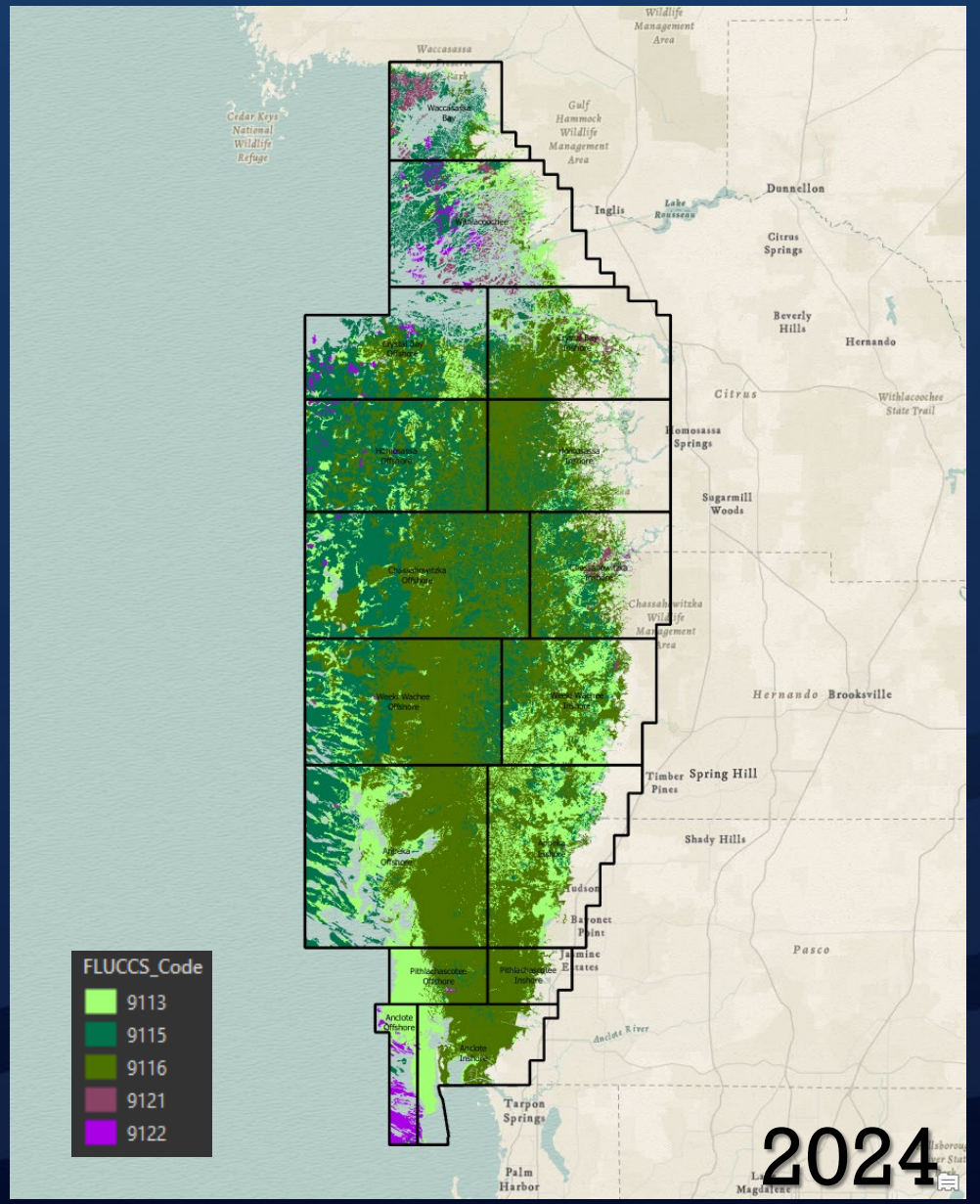
- Anclote

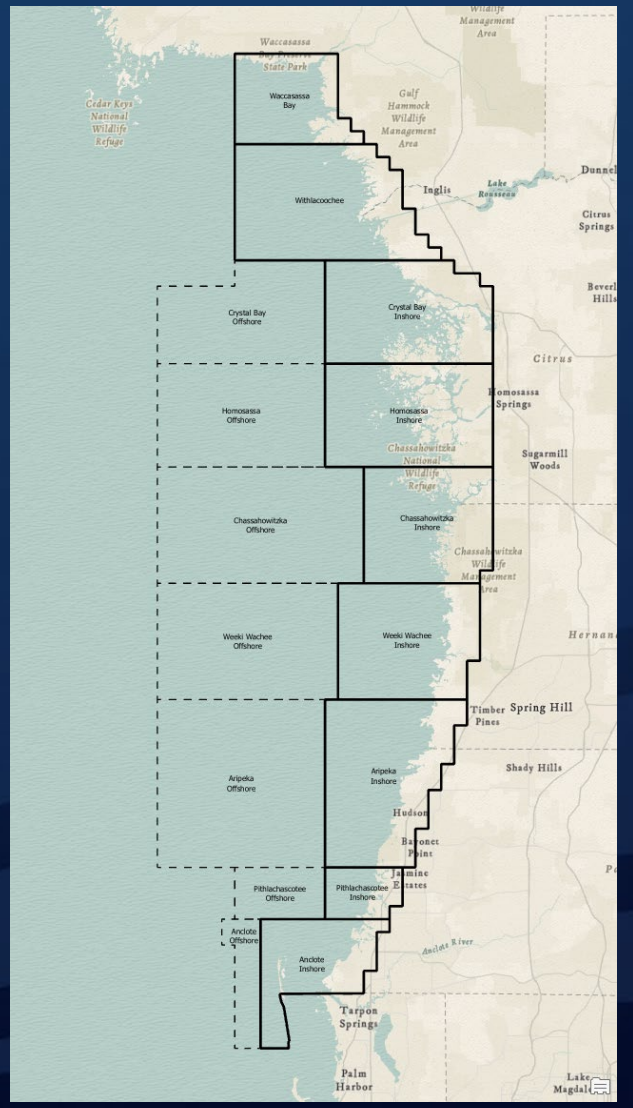
2020 *(acres)*	2024 *(acres)*
586,511	580,857

Acreage Change	% Change
-5,654	-1%



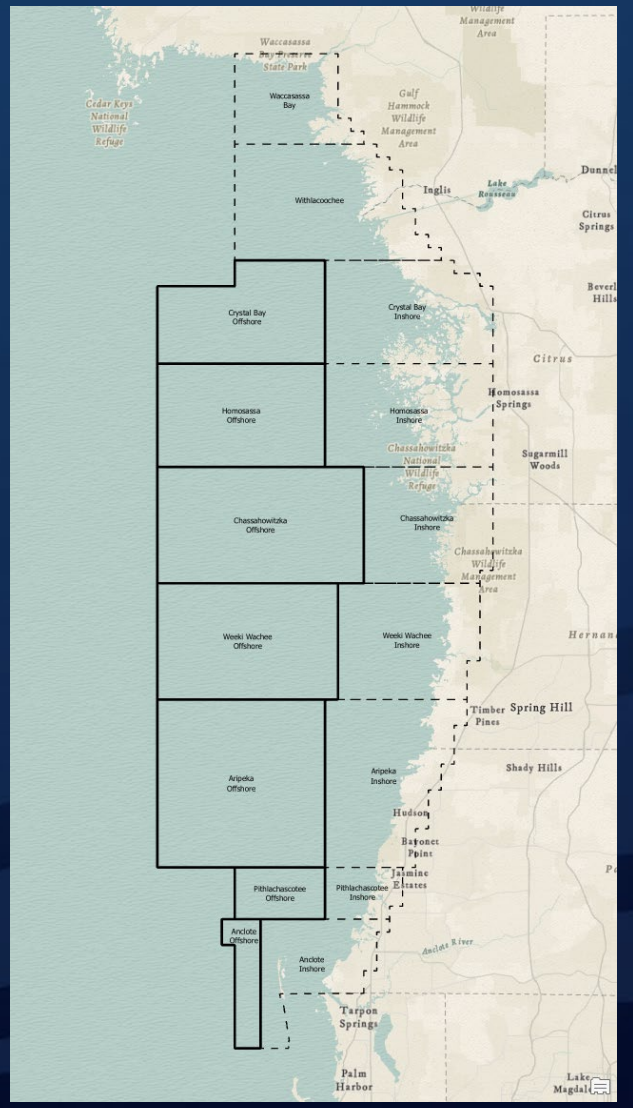
Springs Coast Results - Inshore

Segment	2020 *(acres)*	2024 *(acres)*	Acreage Change	% Change
Waccasassa Bay	12,807	9,201	-3,606	-28%
Withlacoochee	24,369	22,914	-1,455	-6%
Crystal Bay	27,223	26,381	-842	-3%
Homosassa	32,408	32,389	-19	<1%
Chassahowitzka	29,163	29,214	51	<1%
Weeki Wachee	42,249	42,206	-43	<1%
Aripeka	46,651	46,674	23	<1%
Pithlachascotee	8,427	8,444	16	<1%
Anclote	17,912	19,084	1,172	+7%
Inshore Total	241,209	236,507	-4,702	-2%



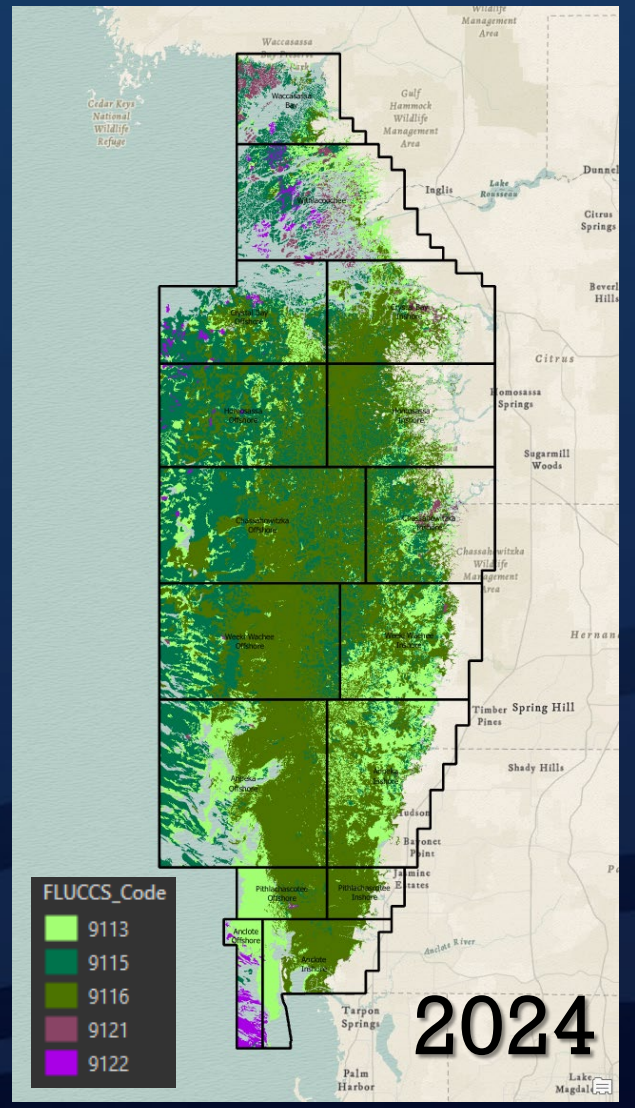
Springs Coast Results - Offshore

Segment	2020 *(acres)*	2024 *(acres)*	Acreage Change	% Change
Crystal Bay	33,780	34,233	453	+1%
Homosassa	58,639	58,997	359	+1%
Chassahowitzka	81,501	81,402	-98	<1%
Weeki Wachee	70,658	70,714	56	<1%
Aripeka	79,028	79,292	266	<1%
Pithlachascotee	15,213	15,243	30	<1%
Anclote	6,483	4,467	-2,015	-31%
Offshore Total	345,302	344,349	-953	<1%



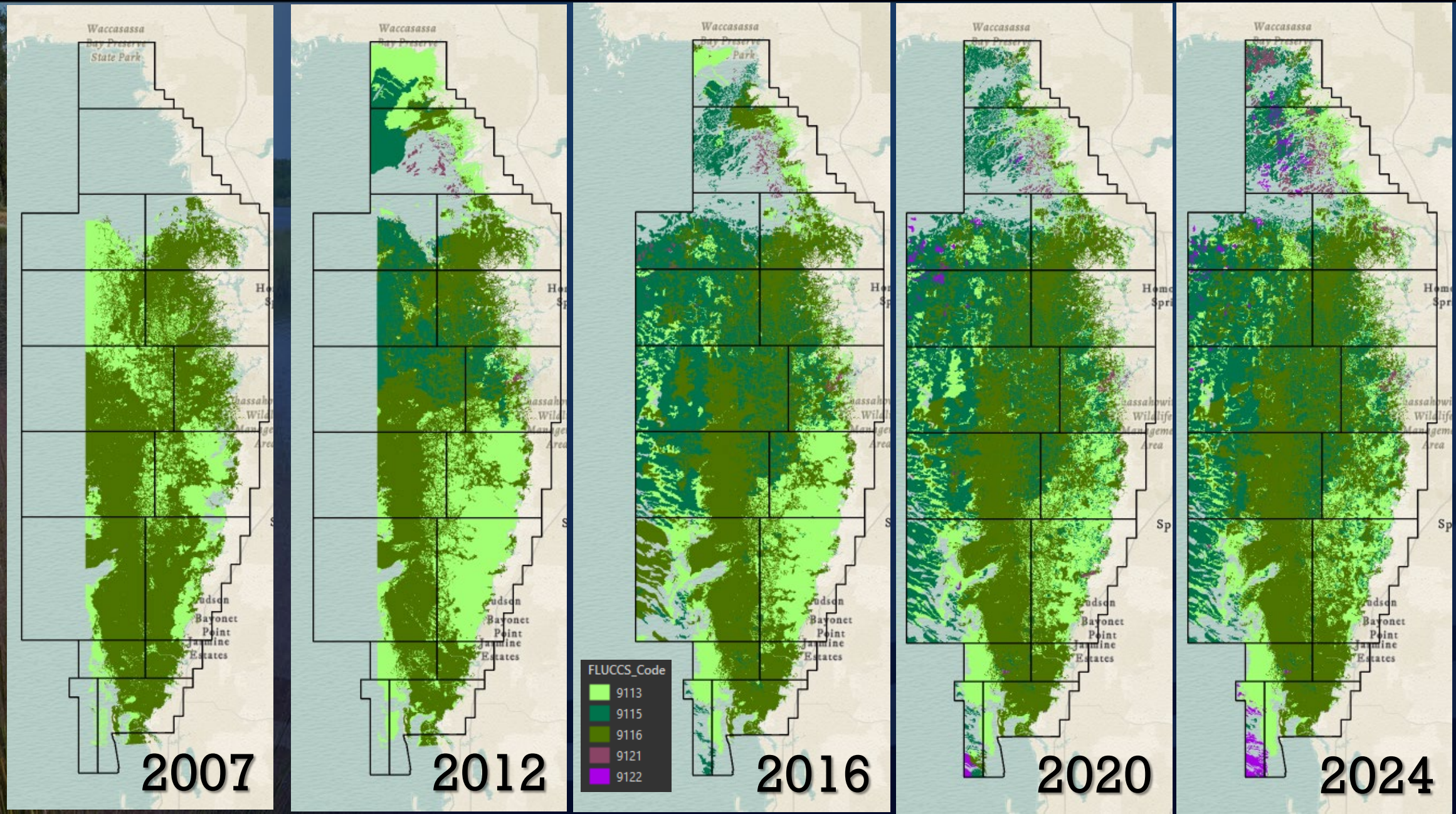
Springs Coast Results - Total

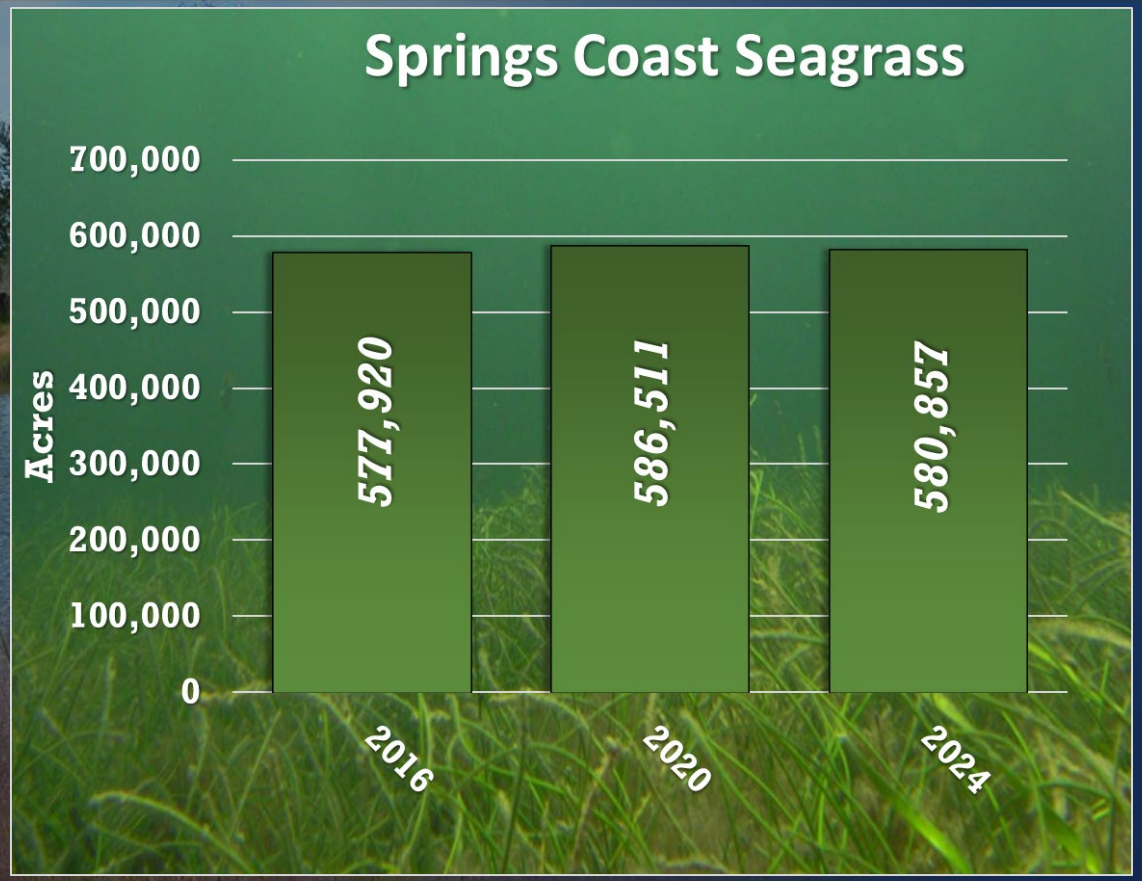
Segment	2020 *(acres)*	2024 *(acres)*	Acreage Change	% Change
Offshore Total	345,302	344,349	-953	<1%
Inshore Total	241,209	236,507	-4,702	-2%
Grand Total	586,511	580,857	-5,654	-1%



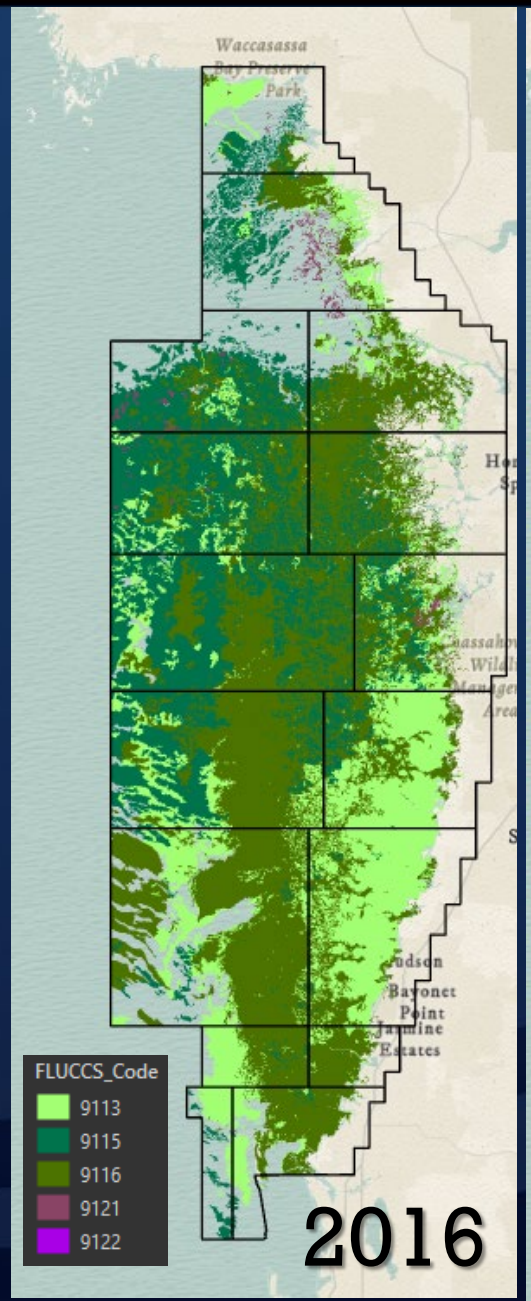
Springs Coast

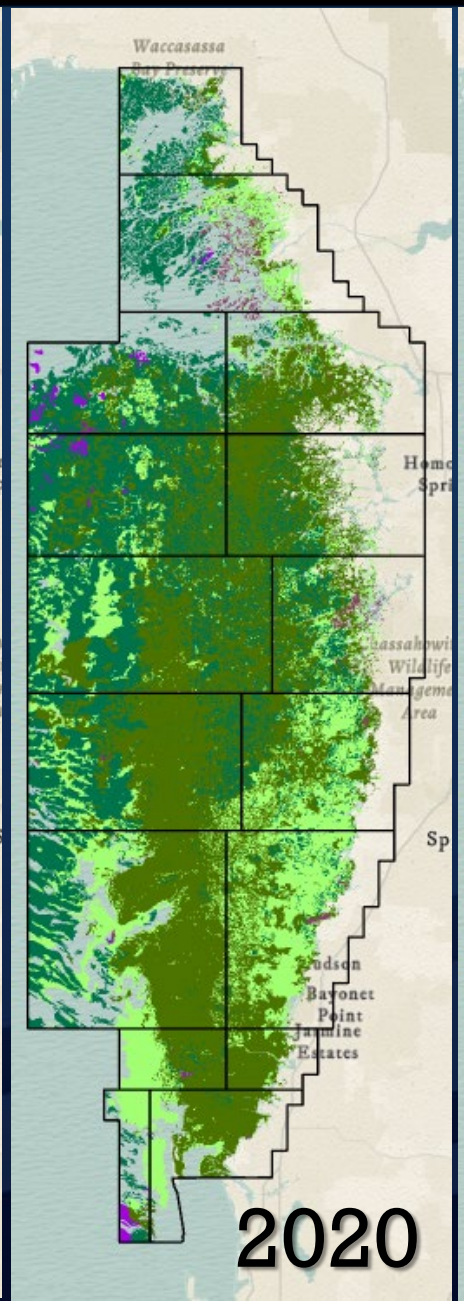
Southwest Florida Water Management District

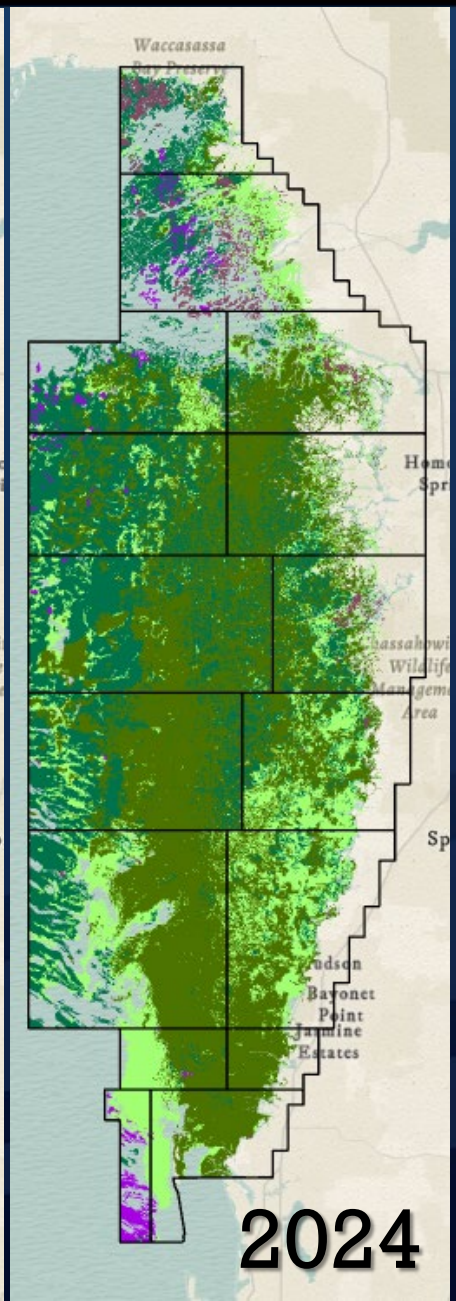




- Dominant signature is seagrass
  - Can include sponges, corals, attached algae, hard bottom
- Stable and resilient over time







Key Takeaways

Springs Coast

- Overall, little change since 2016
- Anclote Inshore seagrass gains
- Anclote Offshore and Waccasassa Bay transition from seagrass to composite colonized and attached algae
- Closely monitor changes

Thank you!

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