

# Brevard County Workshop on the Save Our Indian River Lagoon Program



Brevard County's  
*Save*  
*our*  
**LAGOON**



# November 2016 Ballot Language

Brevard County, Florida

Save Our Indian River Lagoon ½ Cent Sales Tax Referendum

To restore the Indian River Lagoon through financing, planning, constructing, maintaining, and operating capital improvements and capital maintenance projects and programs designed to improve water quality, fish, wildlife and marine habitat, remove muck and reduce pollution, shall an ordinance be approved levying a ½ cent sales tax for ten years and requiring deposit of all revenue to a Save Our Lagoon Trust Fund solely for such projects, with citizen committee oversight and annual independent audits?

YES For the ½ cent sales tax  
62.41%

NO Against the ½ cent sales tax  
37.5%

A scenic photograph of a mangrove forest with lush green trees and a white egret standing in the shallow water under a blue sky with clouds.

# Save Our Indian River Lagoon Project Plan

## **REDUCE** Excess Nitrogen & Phosphorus Inputs by 25%

- Fertilizer management through public education and outreach
- Septic system removal
- Septic system upgrades
- Wastewater treatment plant upgrades to improve reclaimed water quality
- Stormwater treatment

## **RESTORE** 20 Miles of Oyster Bars and Living Ecosystem Services

Create long, narrow oyster bars throughout the lagoon to increase filtration and decrease shoreline erosion.

## **REMOVE** Detrimental Muck to Reduce Flux by 25%

Remove muck through environmental dredging. Muck contributes to turbidity, inhibits seagrass growth, consumes oxygen, stores and releases nutrients, smothers the natural bottom, and destroys healthy communities of benthic organisms.

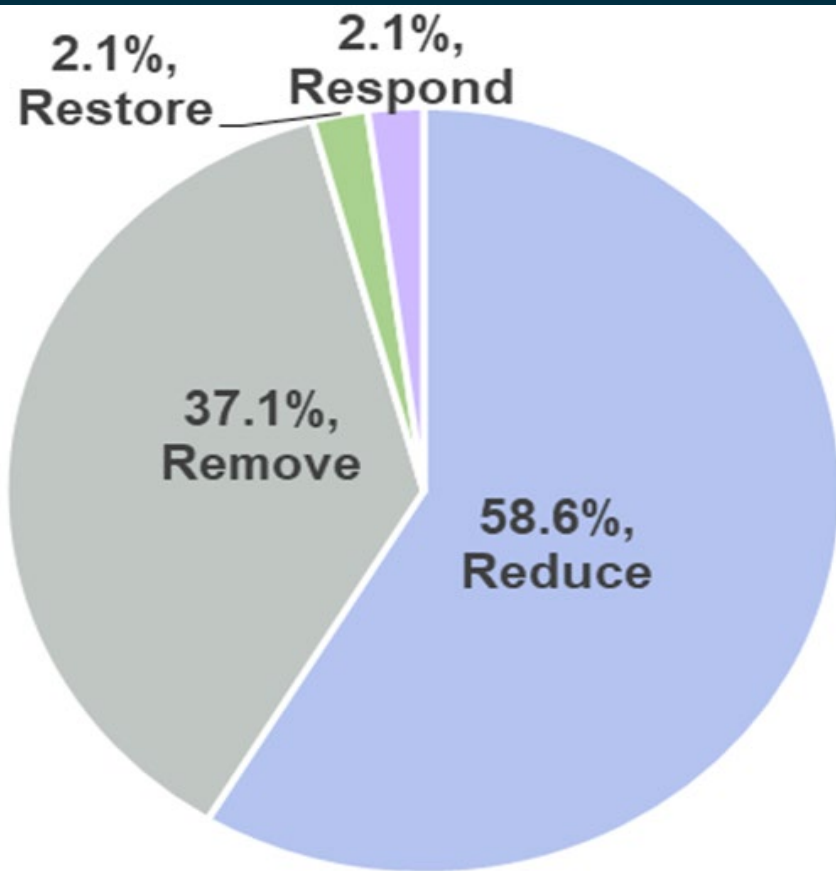
## **RESPOND** to New Information

Measure progress annually, evaluate changing needs and conditions, consider technological opportunities, and respond by amending the plan accordingly.



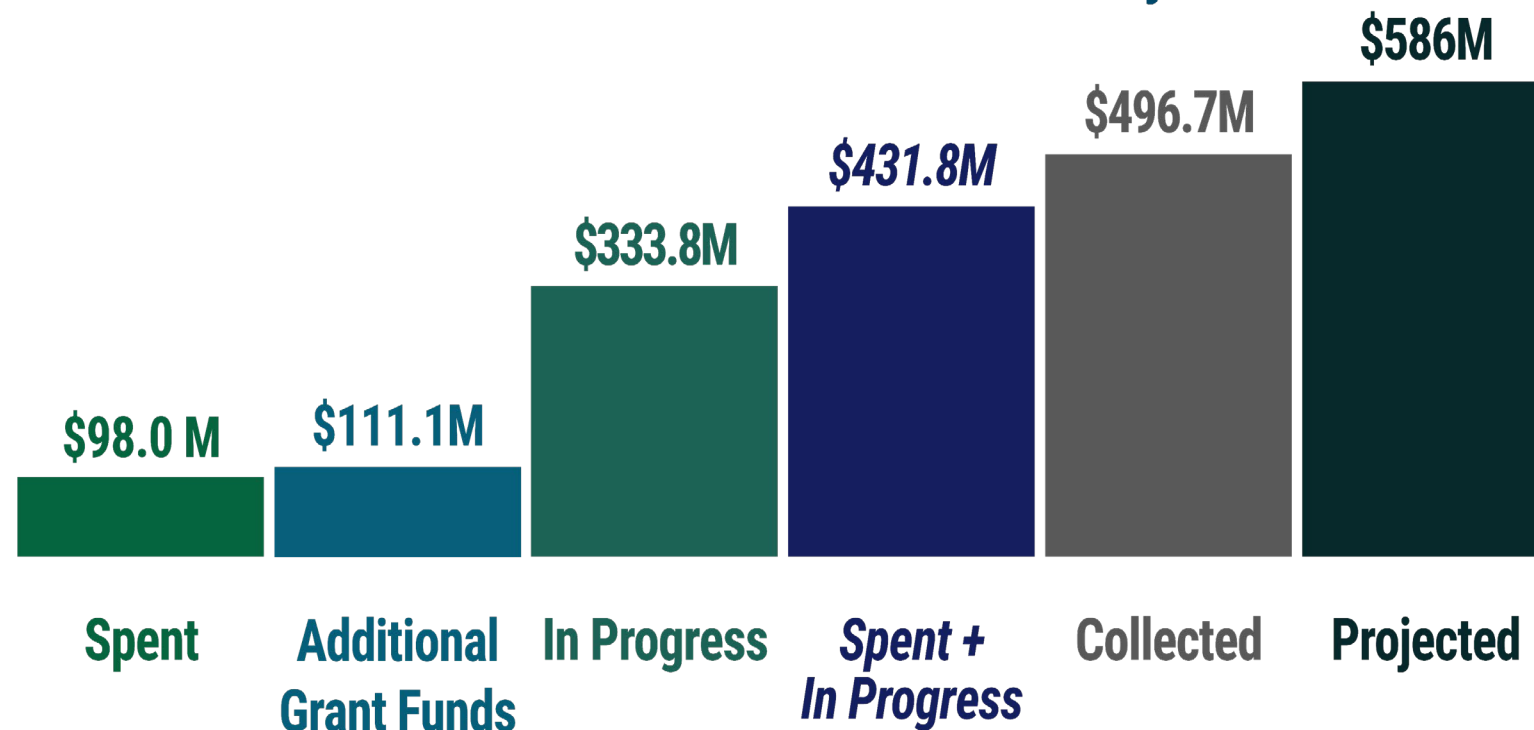
# How Do We Win This Race?

# Funding Allocation and Spending



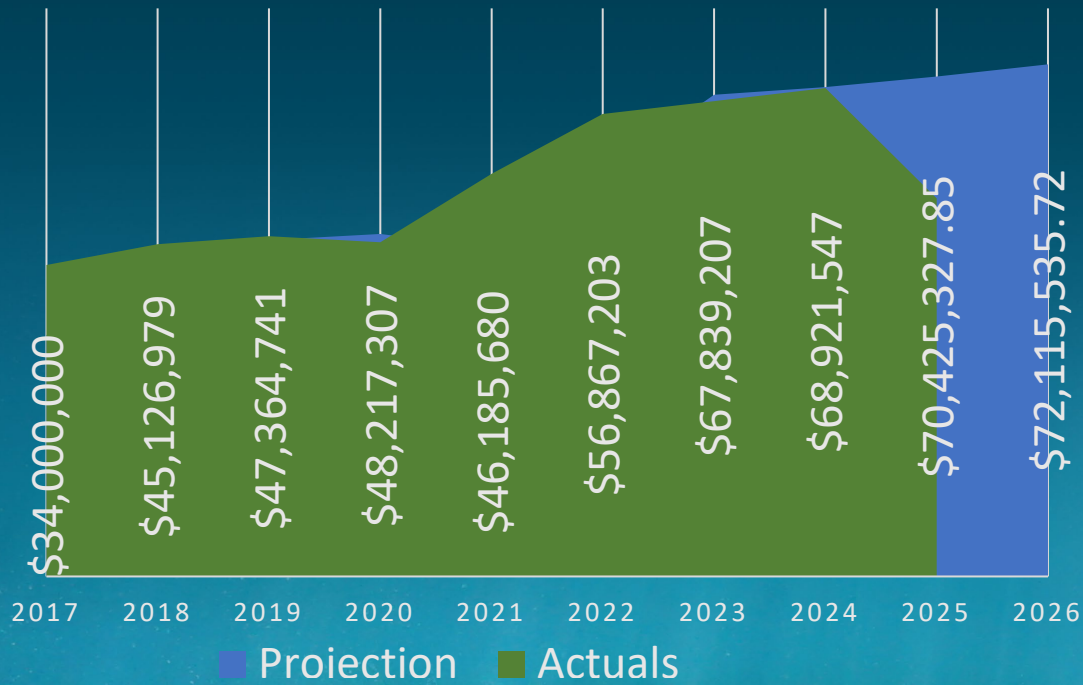
Distribution of SOIRL Funds

## 1/2 Cent Sales Tax Summary

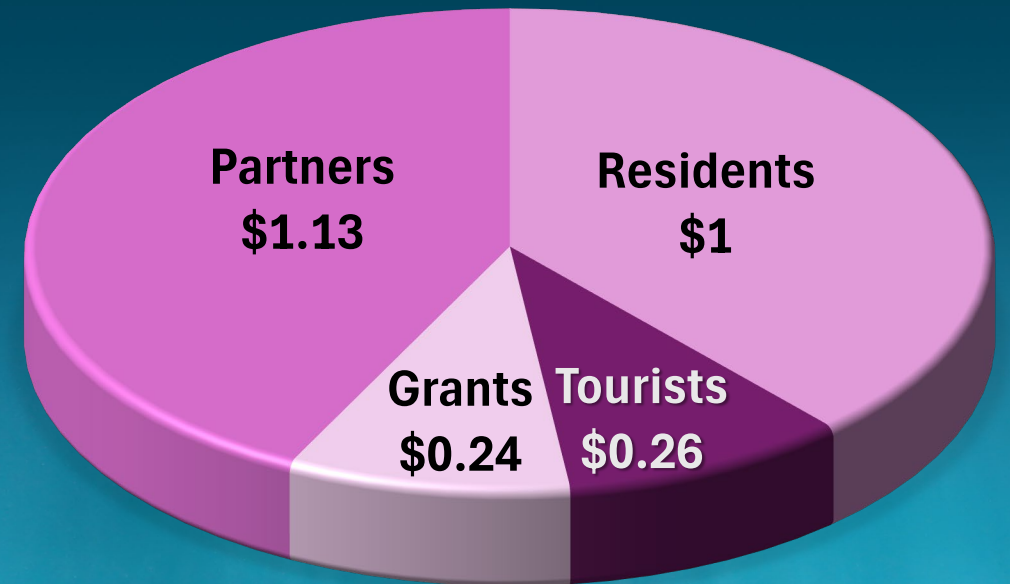


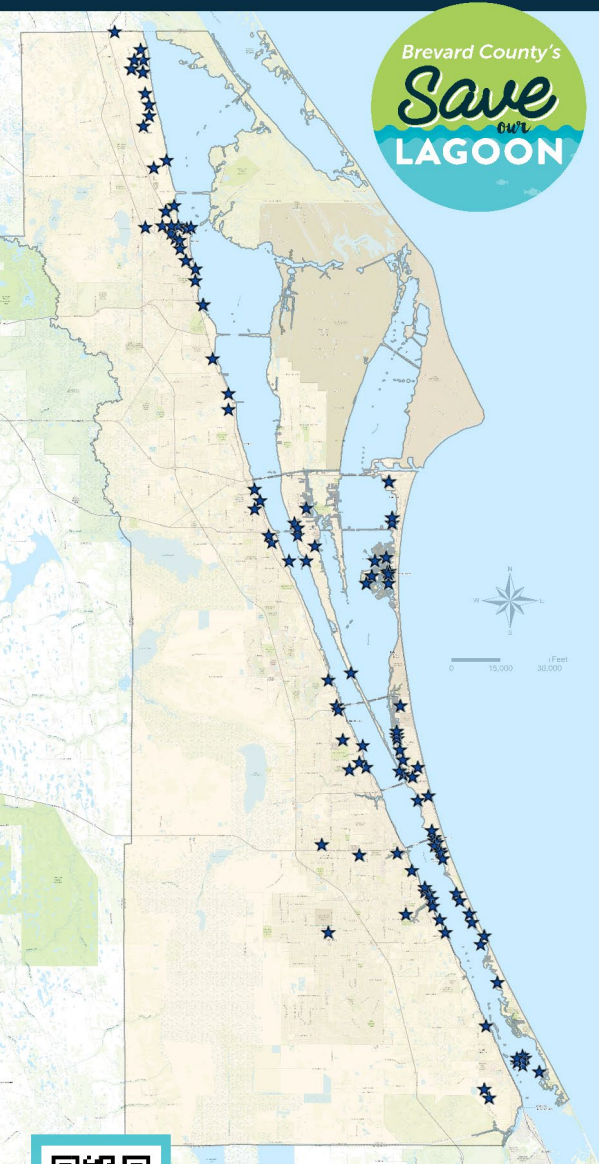
# Revenues and Leveraging

## SAVE OUR LAGOON SURTAX REVENUES



## LEVERAGING EACH DOLLAR \$2.63





Scan for more  
project information



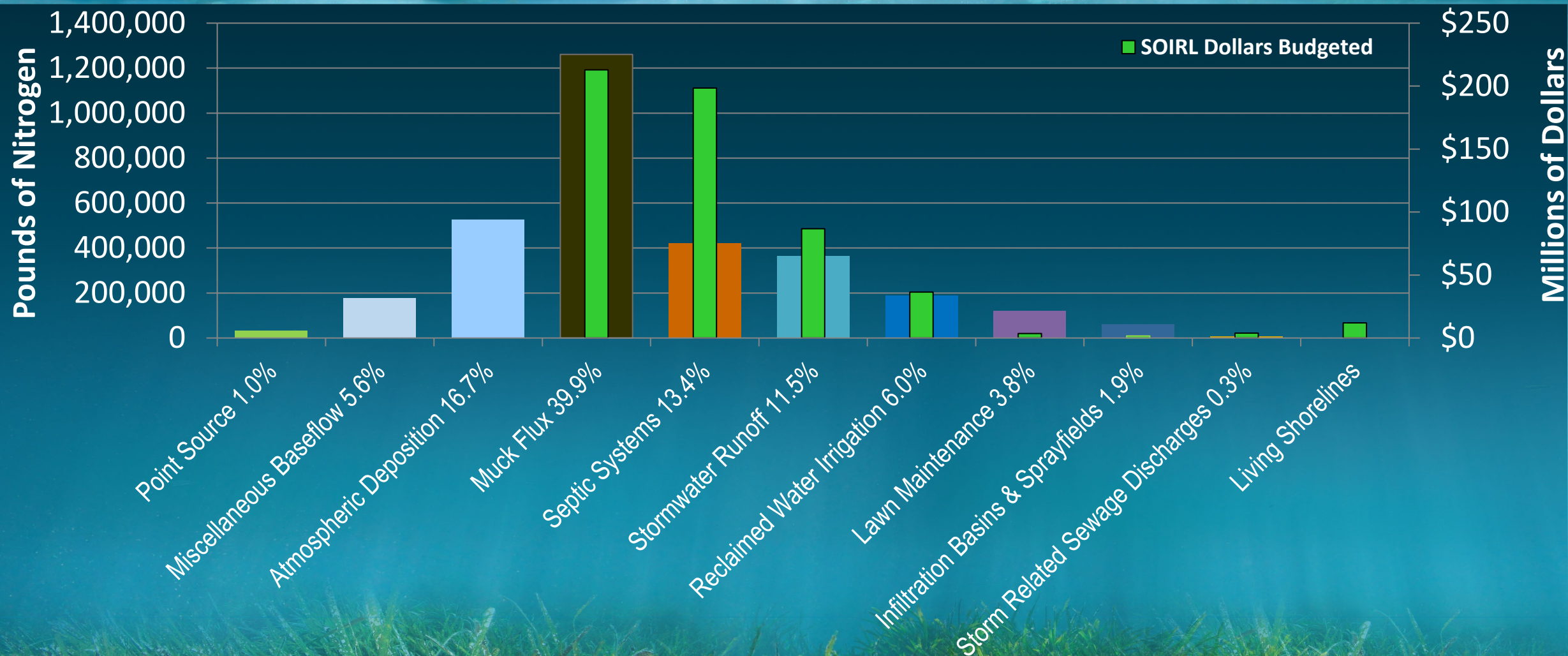
# SOIRL Project Progress

## 119 Completed Projects

16 Titusville  
12 Brevard Zoo  
10 Cocoa Beach  
10 Clam Farmers  
5 Marine Resources Council  
5 Melbourne  
4 Cocoa  
3 Satellite Beach  
2 Indian Harbour Beach  
2 Palm Bay

2 Rockledge  
2 West Melbourne  
1 Private Mobile Home Park  
1 Private Business Park  
1 Cape Canaveral  
1 Indialantic  
1 Melbourne Tillman WCD  
1 Merritt Island Redevelopment  
1 St. Johns River Water Mgmt  
39 Brevard County Projects  
+ 2,269 Homeowner Projects

# Pollution Sources vs Fund Allocations



100 Community  
Projects  
Completed!

1,842 Home  
Owner Projects  
Completed!



# 2025 Save Our Indian River Lagoon Project Status

Progress as of December 31, 2024



142,023 lbs of  
nitrogen reduced  
per year

127,103 lbs of  
one-time nitrogen  
removal

## Public Education & Engagement



Budget: \$4,017,807  
TN Reduction: 33,709 lbs/year  
Average Cost/lb TN: \$119  
Projects Completed: 1  
Projects Underway: 6  
Projects in the Plan: 7

## WWTF Upgrades for Reclaimed Water



Budget: \$36,471,408  
TN Reduction: 82,151 lbs/year  
Average Cost/lb TN: \$444  
Projects Completed: 4  
Projects in Design: 3  
Projects in the Plan: 9

## Rapid Infiltration Basin/ Sprayfield Upgrades



Budget: \$90,658  
TN Reduction: 317 lbs/year  
Average Cost/lb TN: \$286  
Projects Completed: 1  
Projects in Construction: 0  
Projects in the Plan: 2

## Package Plant Connections



Budget: \$1,574,111  
TN Reduction: 992 lbs/year  
Average Cost/lb TN: \$1,587  
Projects Completed: 1  
Projects in Design: 1  
Projects in the Plan: 3

## Smoke Testing/ Sewer Lateral Repairs



Budget: \$1,700,205  
TN Reduction: 6,196 lbs/year  
Average Cost/lb TN: \$274  
Miles Smoke Tested: 299  
1,089 of 1,126 Leaks Repaired  
Projects in the Plan: 5

## Septic to Sewer



Budget: \$163,234,830  
TN Reduction: 113,243 lbs/year  
Average Cost/lb TN: \$1,441  
Homes Connected: 830  
Homes in Construction: 355  
Homes in the Plan: 5,144

## Septic System Upgrades



Budget: \$30,731,280  
TN Reduction: 34,294 lbs/year  
Average Cost/lb TN: \$896  
Homes Upgraded: 353  
Homes Contracted: 591  
Homes in the Plan: 1,469

## Stormwater Projects



Budget: \$84,213,758  
TN Reduction: 239,381 lbs/year  
Average Cost/lb TN: \$352  
Projects Completed: 46  
Projects in Construction: 5  
Projects in the Plan: 253

## Aquatic Vegetation Harvesting



Budget: \$2,337,175  
TN Reduction: 42,913 lbs  
Average Cost/lb TN: \$54  
Projects Completed: 8  
Projects in Construction: 0  
Projects in the Plan: 10

## Muck Removal



Budget: \$161,761,411  
TN Reduction: 235,134 lbs/year  
Average Cost/lb TN: \$688  
Projects Completed: 3  
Projects in Construction: 2  
Projects in the Plan: 21

## Interstitial Water Treatment



Budget: \$50,860,669  
TN Reduction: 500,032 lbs  
Average Cost/lb TN: \$102  
Projects Completed: 2  
Projects in Construction: 2  
Projects in the Plan: 16

## Oyster Bars



Budget: \$11,361,634  
TN Reduction: 23,057 lbs/year  
Average Cost/lb TN: \$493  
Projects Completed: 11  
Projects in Construction: 5  
Projects in the Plan: 28

## Planted Shorelines



Budget: \$115,895  
TN Reduction: 450 lbs/year  
Average Cost/lb TN: \$258  
Projects Completed: 8  
Projects in Construction: 1  
Projects in the Plan: 10

## Clam Restoration



Budget: \$510,117  
TN Reduction: 3,574 lbs  
Average Cost/lb TN: \$143  
Projects Completed: 6  
Project Underway: 4  
Projects in the Plan: 12

2017-2024 Revenue = \$434.7M

10-Year Revenue Estimate = \$585.7M

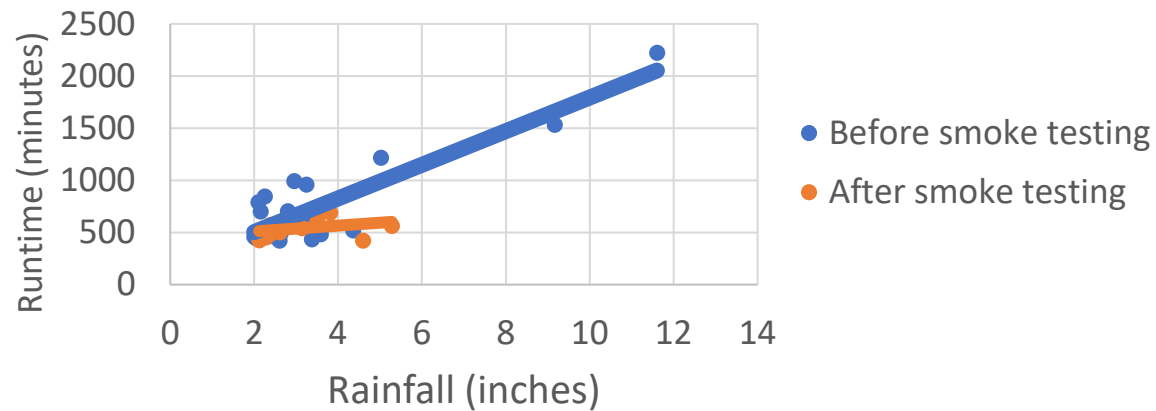
Save  
our  
LAGOON

2017-2024 Expenditures = \$79.5M

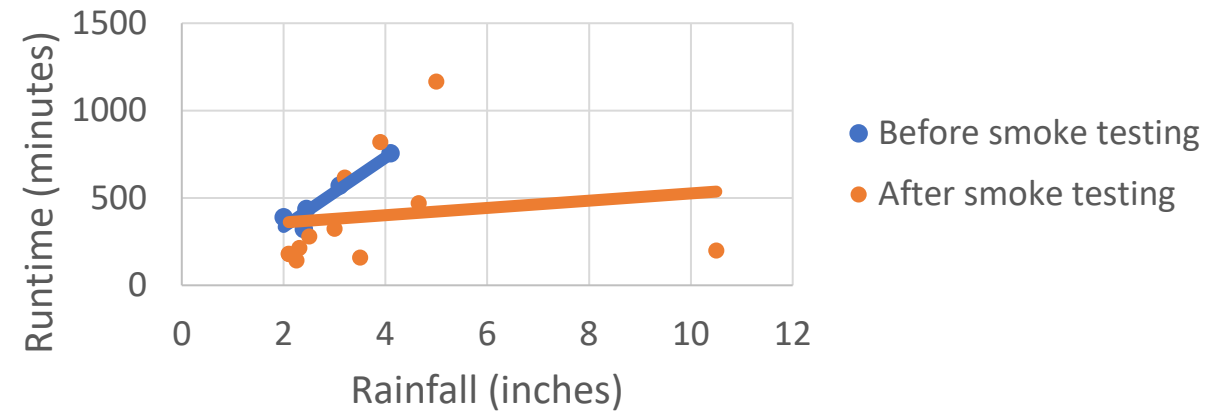
Projects Underway = \$332.9M

# Prevent Sewage Overflows

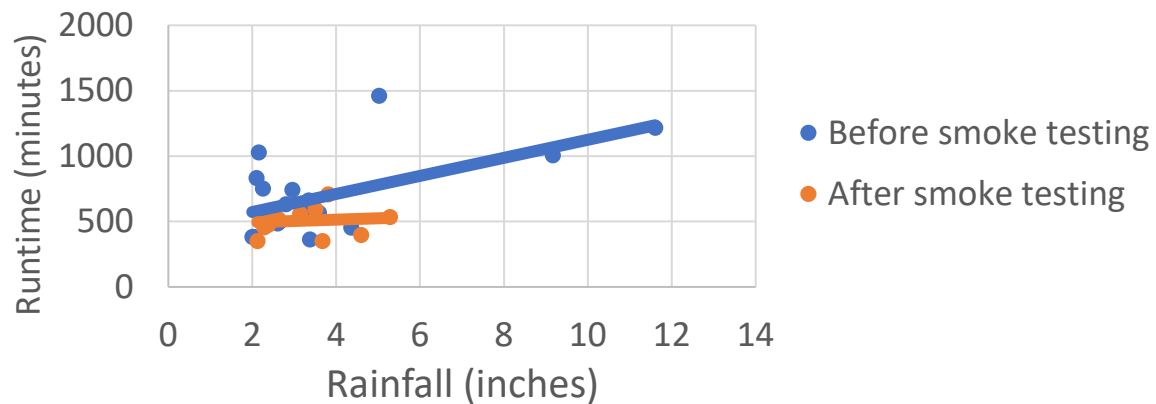
Lift Station B-01 : Runtime vs Rainfall



Lift Station M-06 : Runtime vs Rainfall



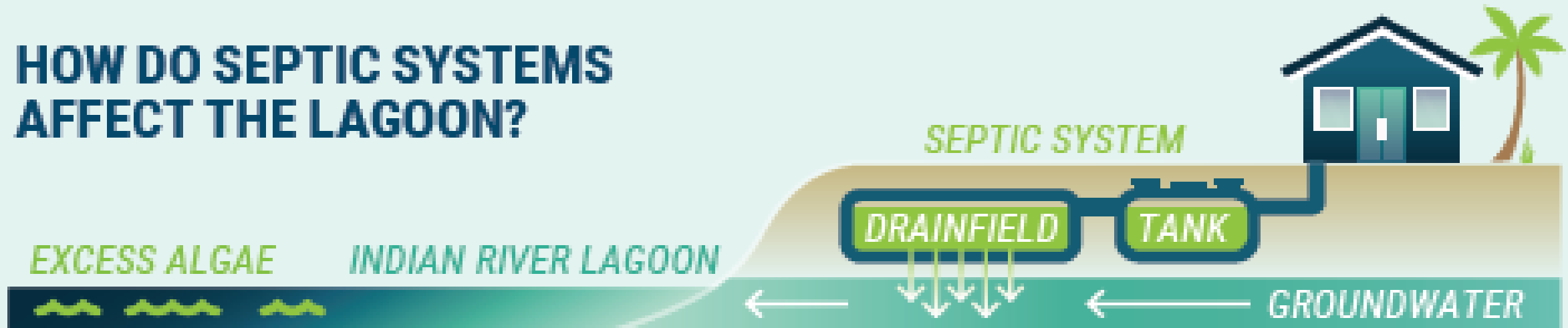
Lift Station B-19 : Runtime vs Rainfall



Hampton Manor Senior Living Facility

# How Septic Systems Pollute the Lagoon

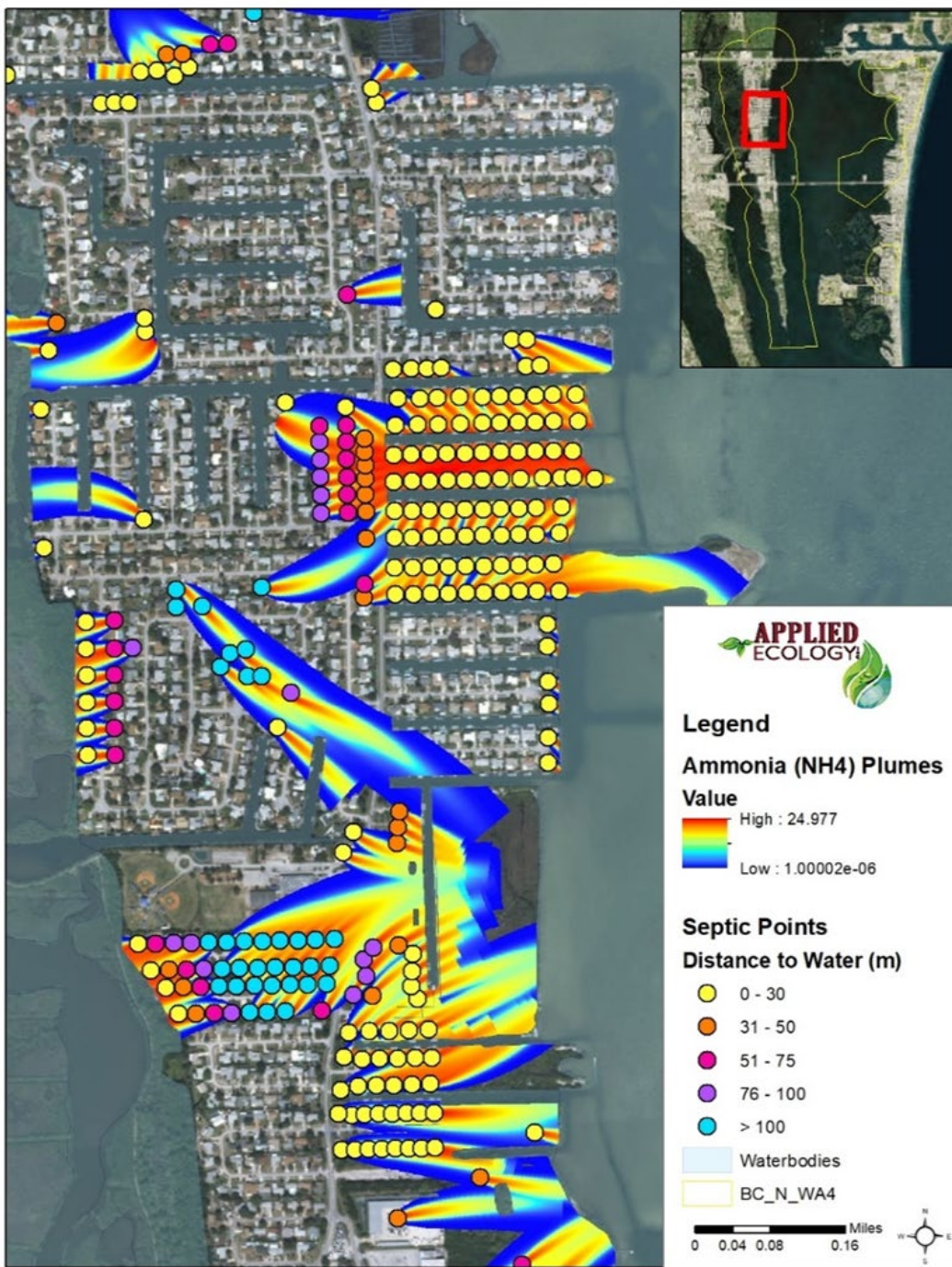
## HOW DO SEPTIC SYSTEMS AFFECT THE LAGOON?



Excess nitrogen, phosphorus, and pollutants from septic systems can enter groundwater and migrate to the IRL.

Traditional septic systems remove only 30-40% of the nitrogen that flows through them.

**20%**  
of the algae-feeding nitrogen entering the IRL is from septic systems.



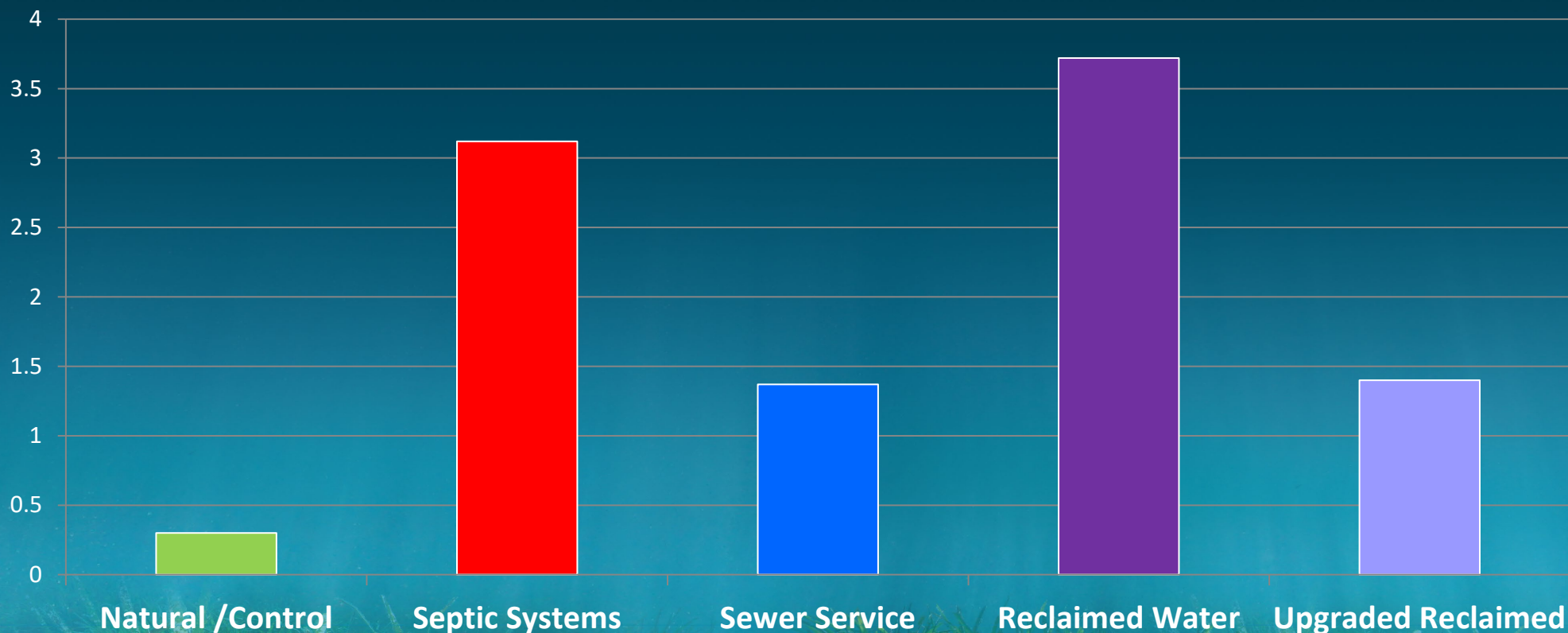
# Septic to Sewer Prioritization

Table 16: Short-Term Opportunities for Septic System Removal in Banana River Lagoon¶

Service Area¶	Number of Lots¶	Cost¶	TN Reduction (lbs/yr)¶	TN Cost/lb/yr¶
Sykes Creek -- Zone N¶	86¶	\$1,720,000¶	2,330¶	\$738¶
Sykes Creek -- Zone M¶	58¶	\$1,160,000¶	1,572¶	\$738¶
Sykes Creek -- Zone T¶	139¶	\$2,780,000¶	3,685¶	\$754¶
Sykes Creek -- Zone X¶	14¶	\$280,000¶	359¶	\$780¶
Sykes Creek -- Zone V¶	98¶	\$1,960,000¶	1,927¶	\$1,017¶
Sykes Creek -- Zone U¶	145¶	\$2,900,000¶	2,573¶	\$1,127¶
Sykes Creek -- Zone Z¶	73¶	\$1,460,000¶	1,290¶	\$1,132¶
Sykes Creek -- Zone W¶	142¶	\$2,840,000¶	1,923¶	\$1,477¶
Sykes Creek -- Zone R¶	206¶	\$4,120,000¶	2,686¶	\$1,534¶
Sykes Creek -- Zone Q¶	186¶	\$3,720,000¶	2,319¶	\$1,604¶
Sykes Creek -- Zone S¶	163¶	\$3,260,000¶	1,407¶	\$2,317¶

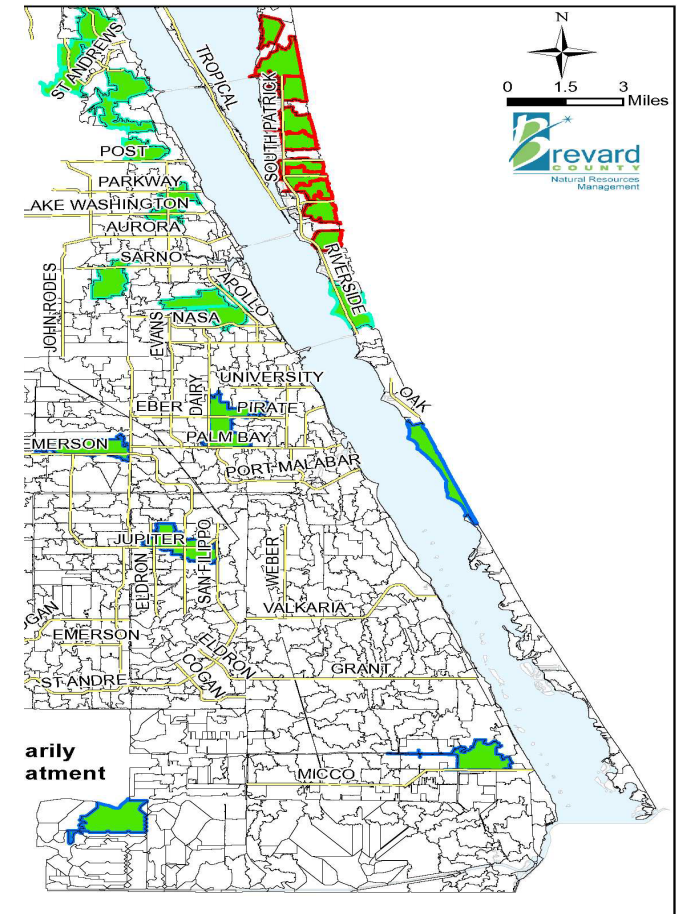
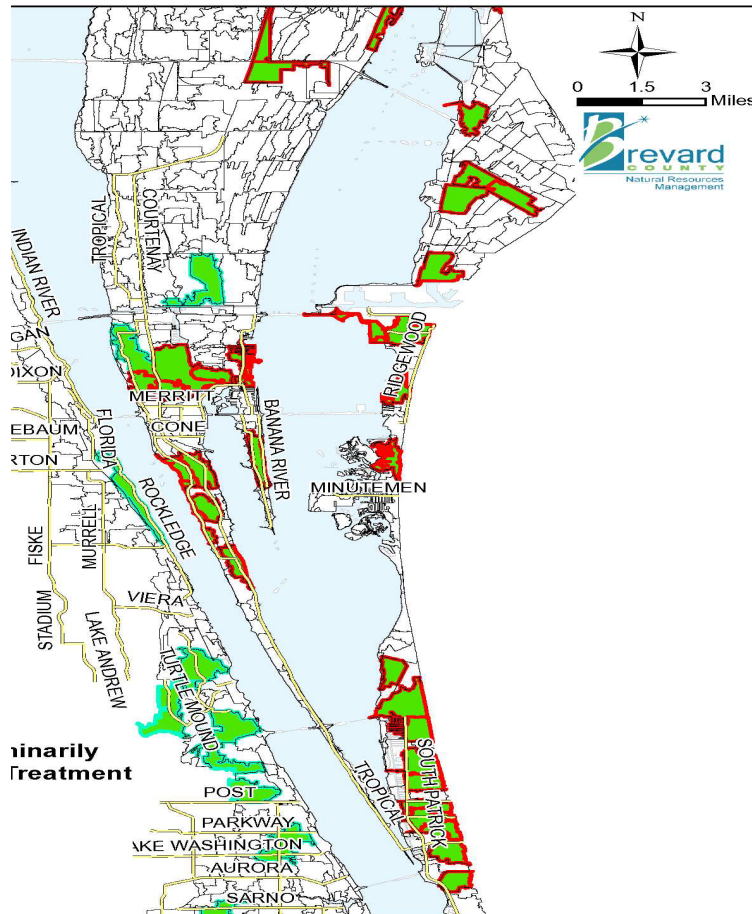
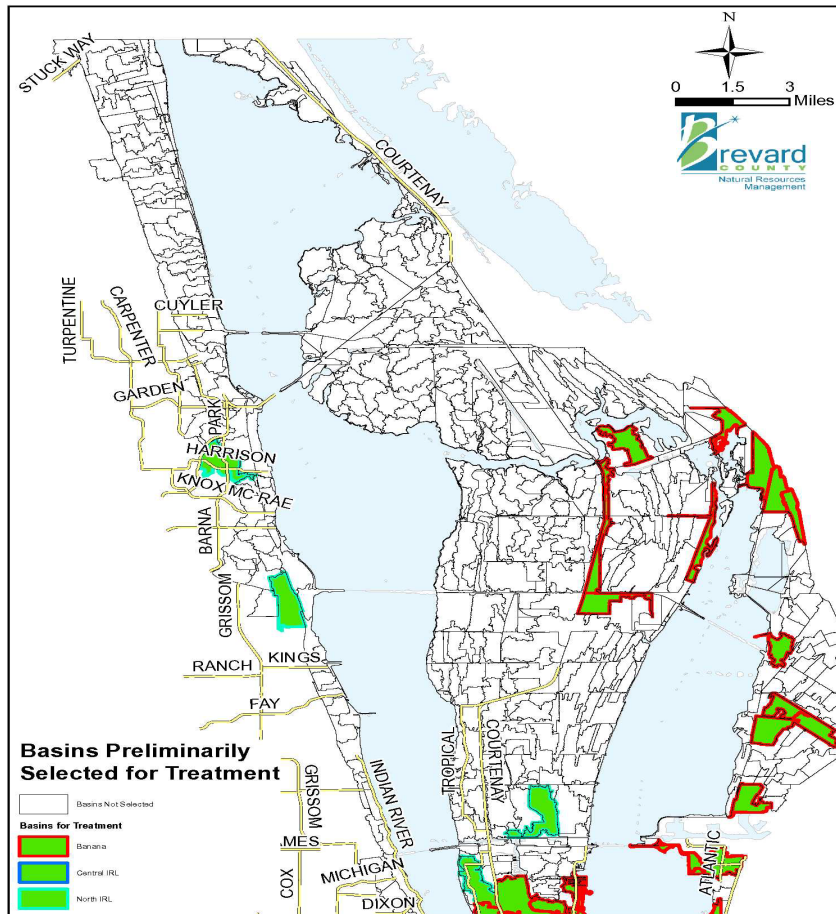
# Groundwater Monitoring Data

Groundwater Nitrogen Concentrations  
(June 2018 – November 2025, Geometric Mean mg/L TN)

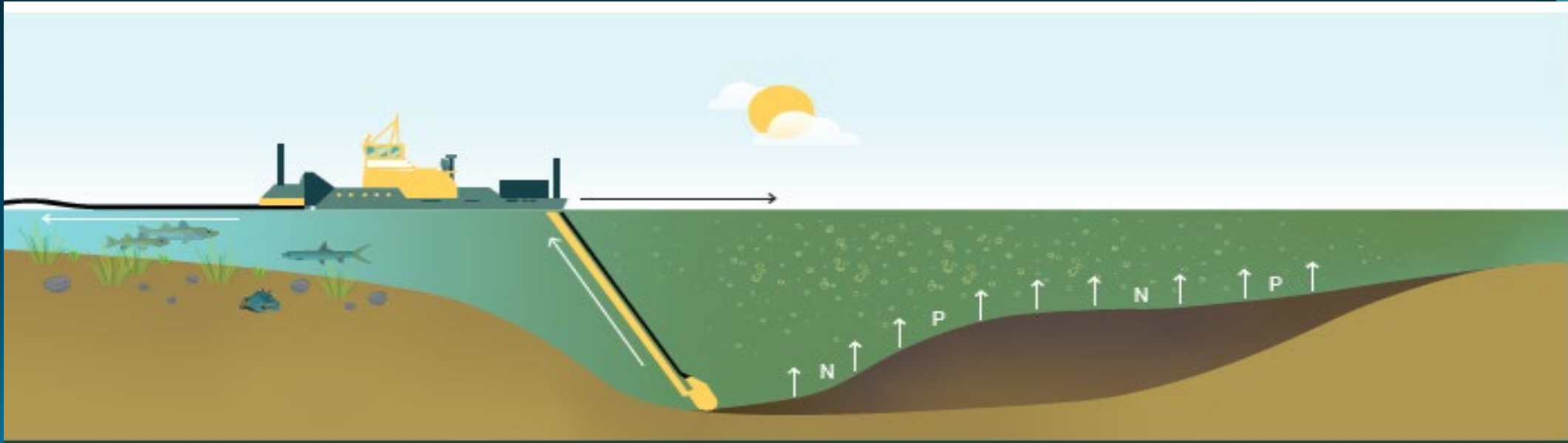


Results from 6+ Years of Monthly Groundwater Quality Sampling

# Stormwater Project Prioritization

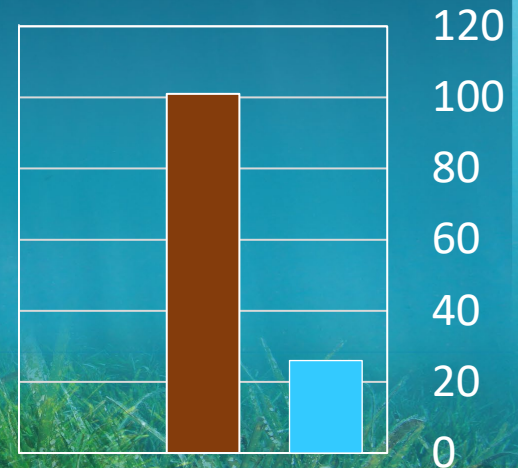


# Muck Removal



Eau Gallie River  
Muck Dredging

Bloom Severity Index  
Before and After  
Dredging



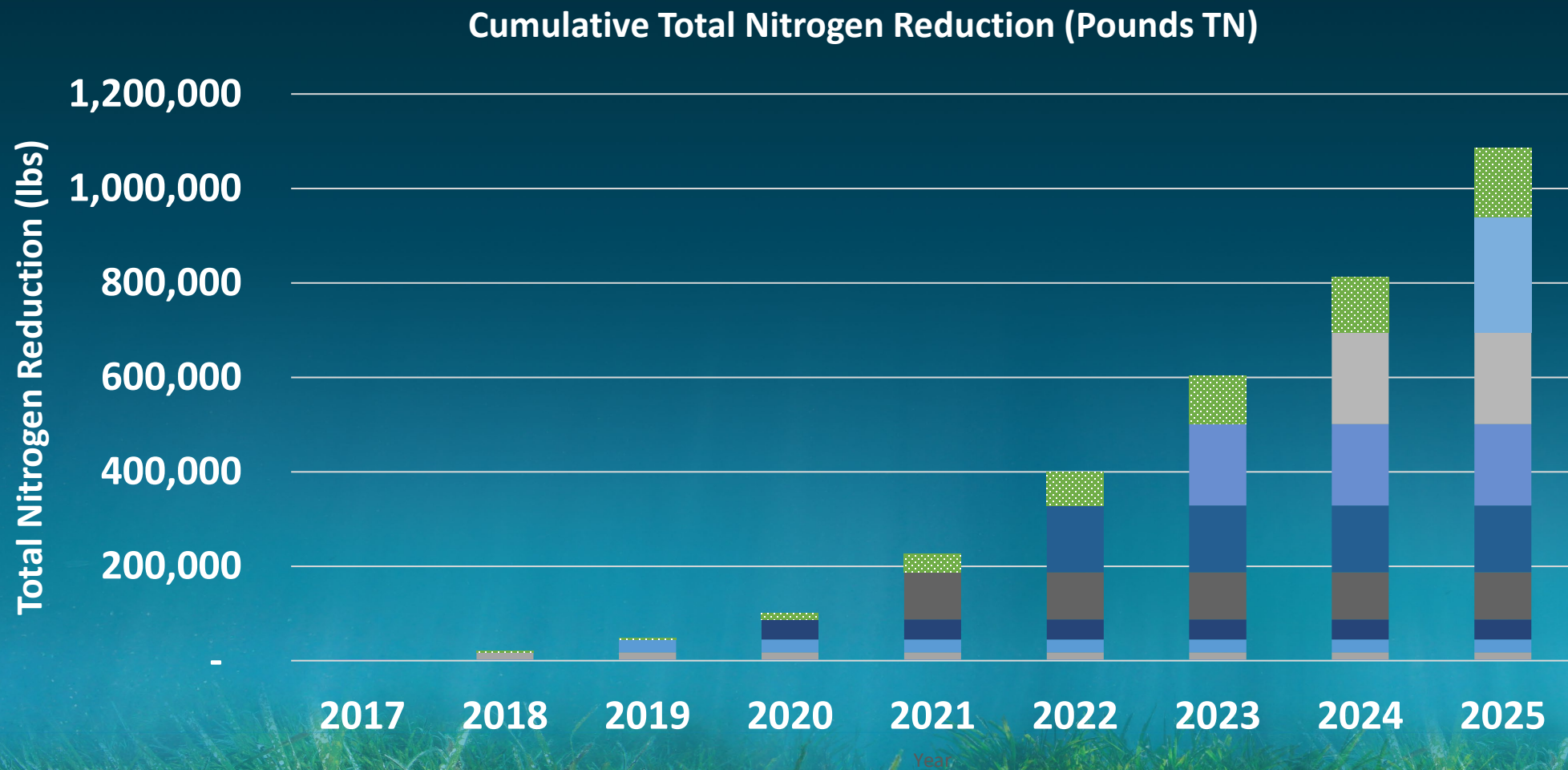
A scenic view of a mangrove ecosystem. In the foreground, there is a body of water with a greenish tint. In the background, there are several mangrove trees with dense green foliage. A white egret is perched on a tree on the right side. The sky is blue with some white clouds.

# Oyster Restoration

- Most sites are built by Brevard Zoo
- UCF provides independent monitoring
- 100% success this year
- 80% success over all years
- Clam restoration getting started
- Planted Living Shoreline buffers



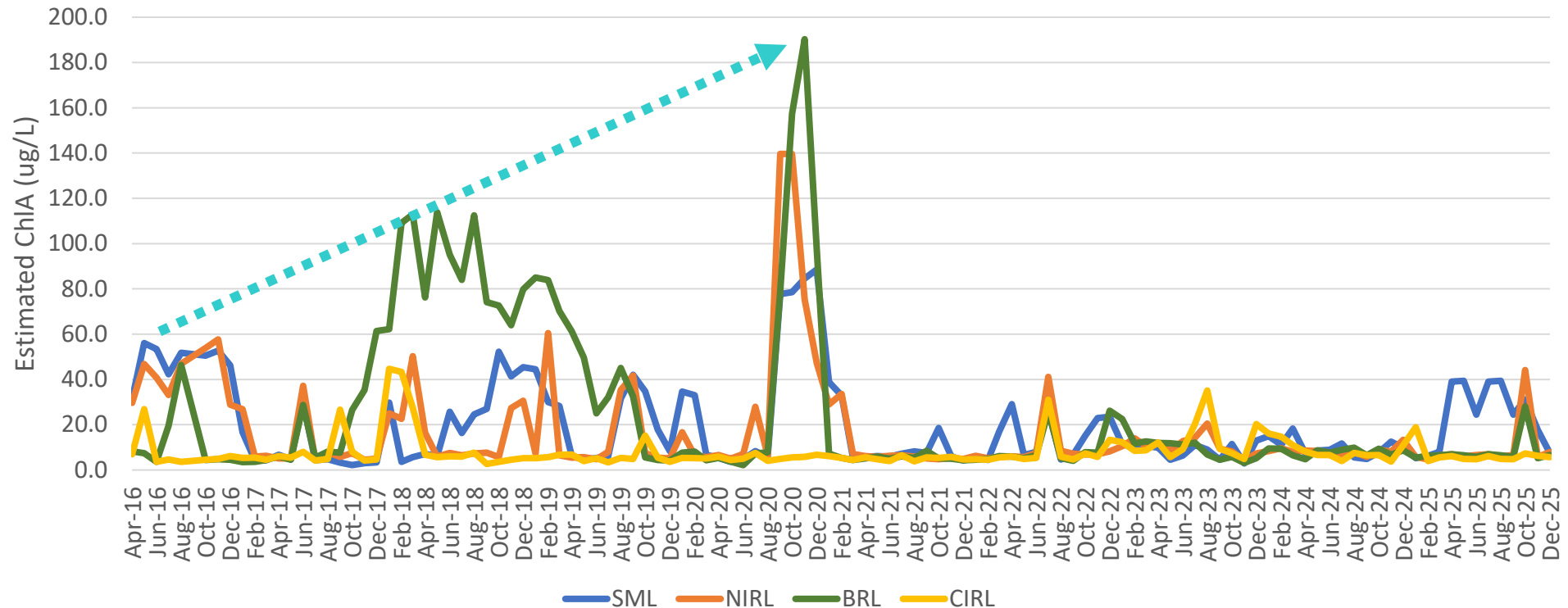
# Cumulative Total Nitrogen Reduction



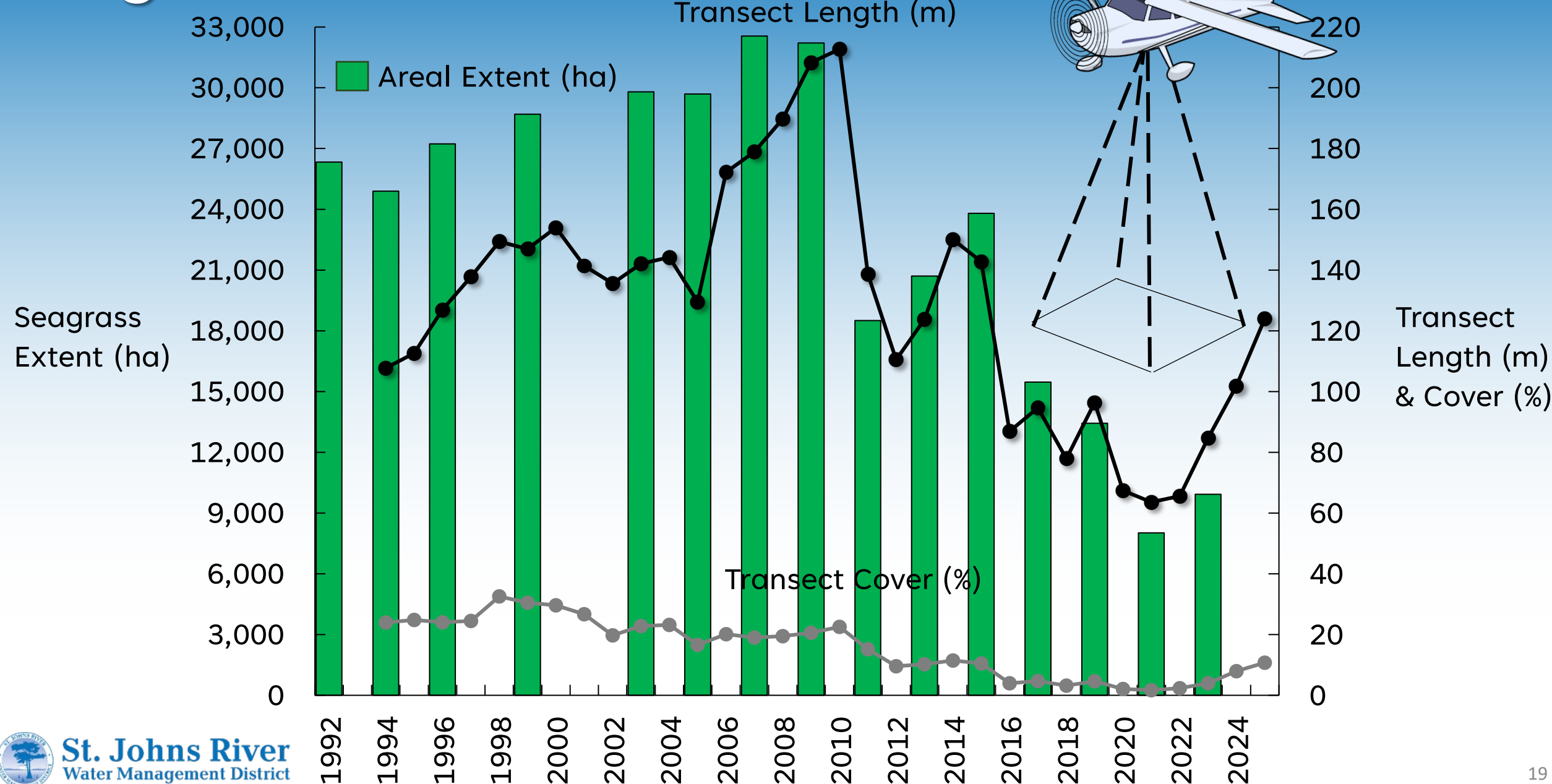
# Algae Bloom Response (2016-2025)

Sentinel 3  
NDCI Estimated Chlorophyll A  
Concentrations

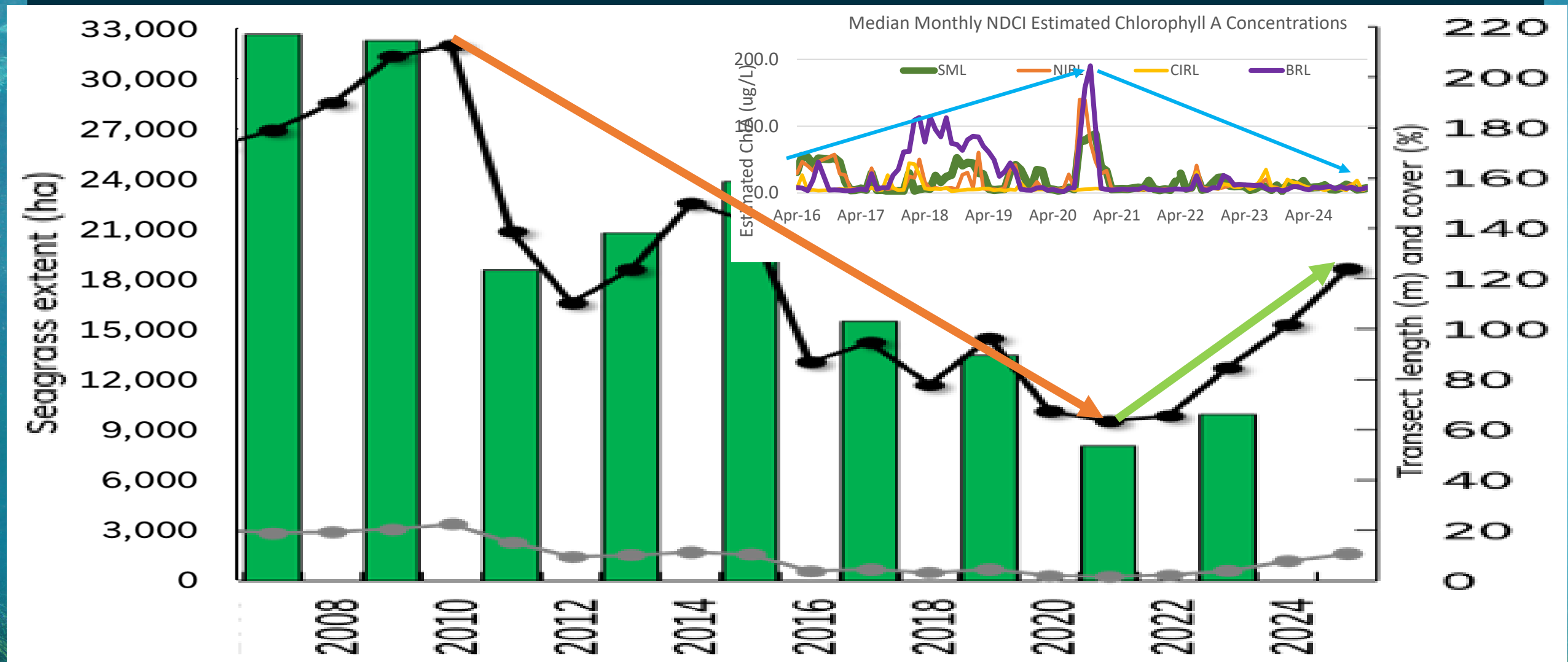
Median Monthly NDCI Estimated Chlorophyll A Concentrations for the  
Basins of the Indian River Lagoon in Brevard County, FL



# Seagrass Extent

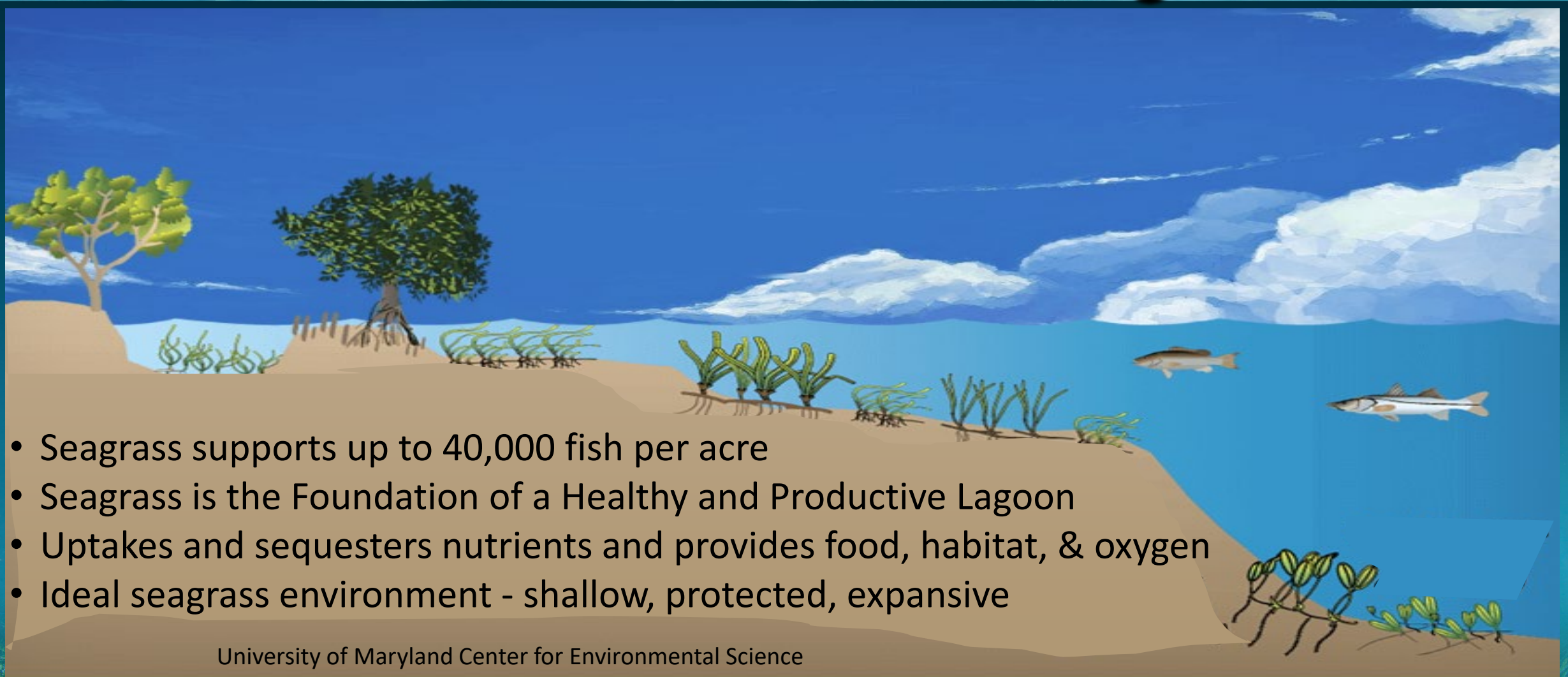


# Evidence of Progress: Seagrass Response





# Cleaner Water Grows More Seagrass



- Seagrass supports up to 40,000 fish per acre
- Seagrass is the Foundation of a Healthy and Productive Lagoon
- Uptakes and sequesters nutrients and provides food, habitat, & oxygen
- Ideal seagrass environment - shallow, protected, expansive



**SOIRL is working.  
Restoration takes time.  
Hope is on the Horizon!**

**Virginia Barker, Director  
Brevard County  
Natural Resources Management Department**



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*Kim*