Agenda Report

2725 Judge Fran Jamieson Way
Viera, FL 32940

Resolution/Award/Presentation

C.1. 1/12/2026

Subject:

Presentation - Natural Resources Management Department - Virginia Barker

Fiscal Impact:

Dept/Office:

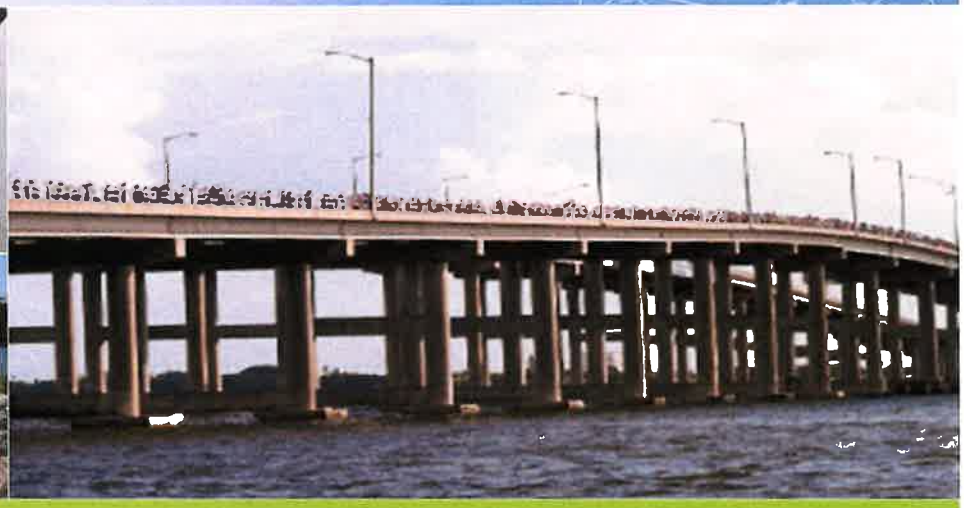
Requested Action:

Summary Explanation and Background:

Clerk to the Board Instructions:

Brevard County Workshop
on the
Save Our Indian River Lagoon Program

PROJECTS 119 COMPLETED



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%

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

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.

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.

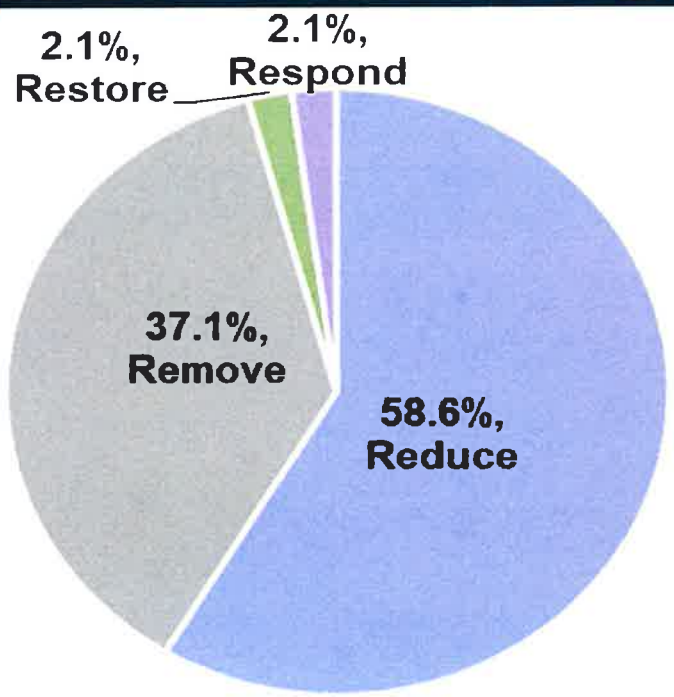
RESPOND to New Information

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

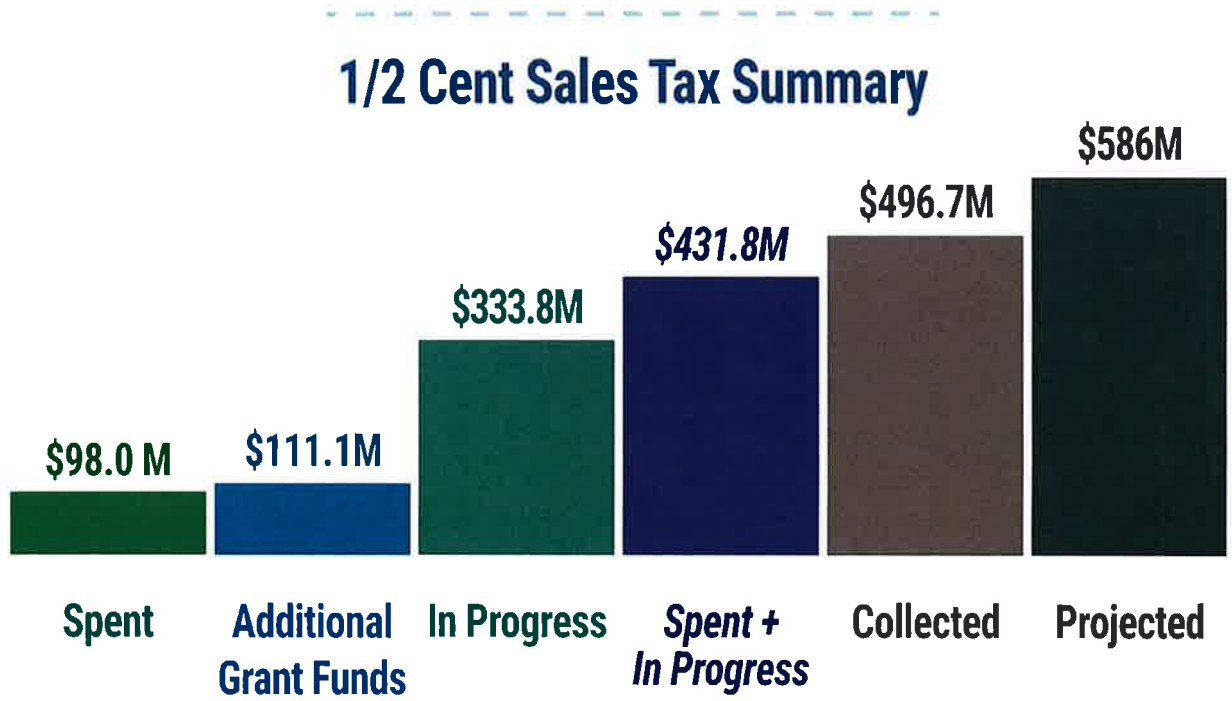
How Do We Win This Race?

Photo: http://pics-about-space.com/

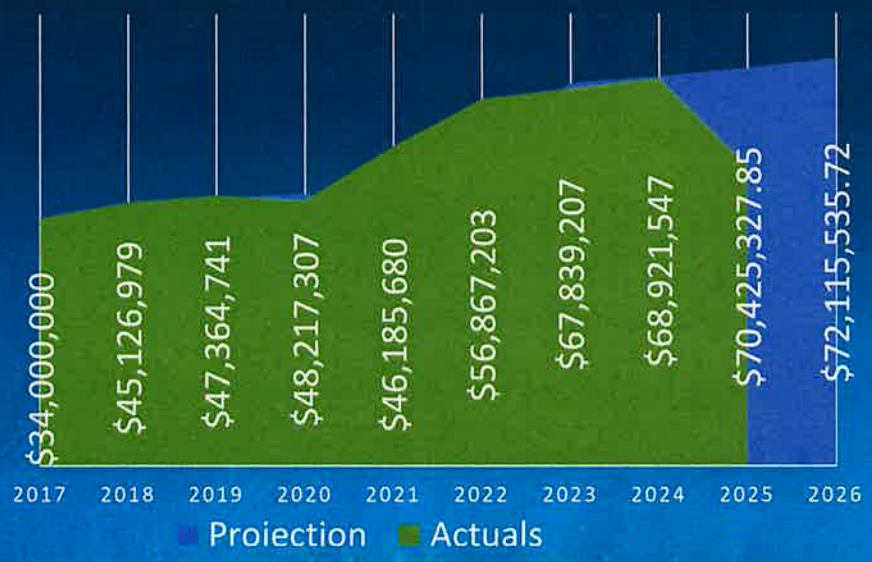
Funding Allocation and Spending



Distribution of SOIRL Funds

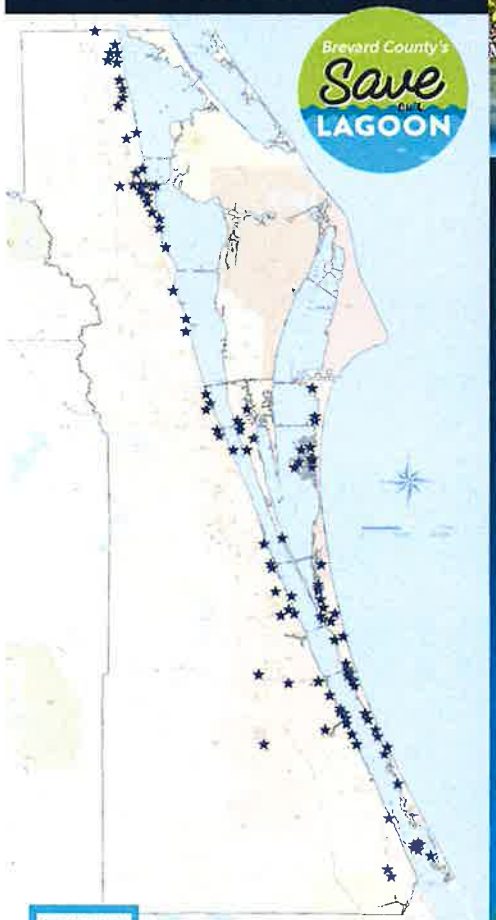


Revenues and Leveraging



SAVE OUR INDIAN RIVER LAGOON PROGRAM

COMPLETED PROJECTS



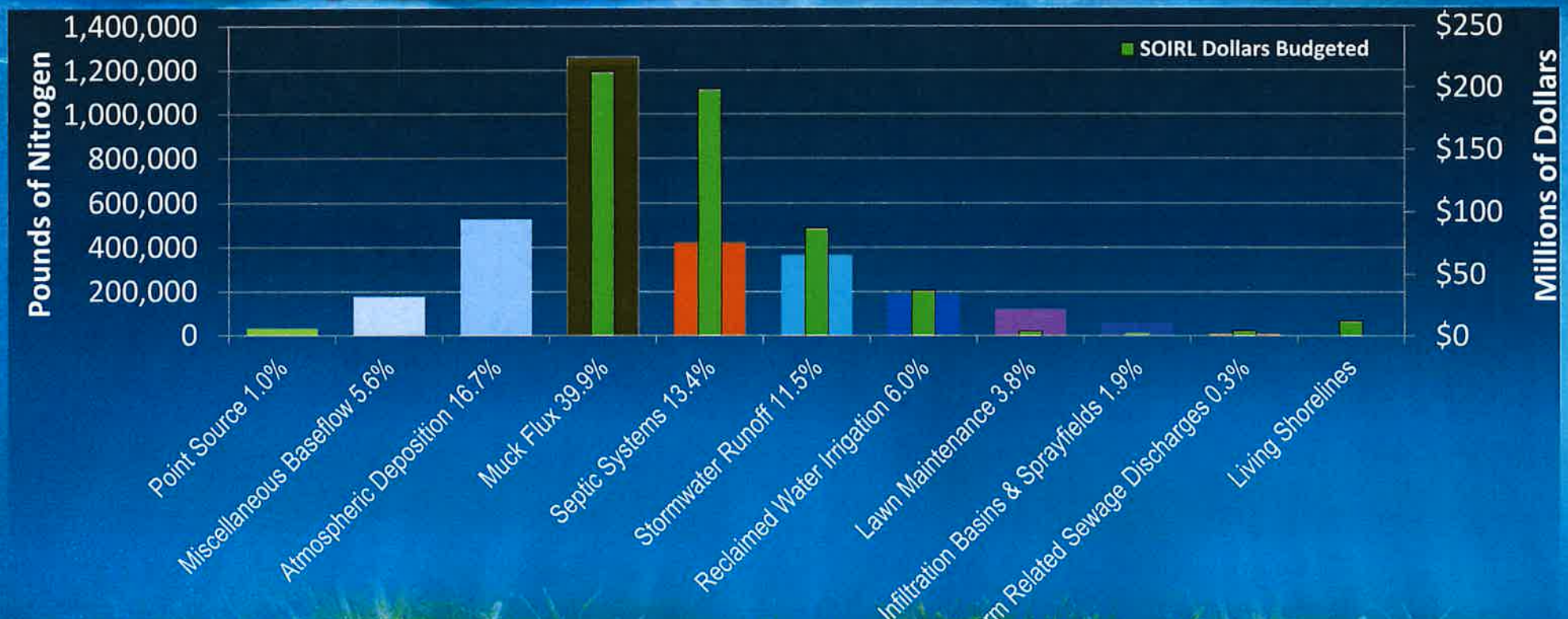
Scan for more project information

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

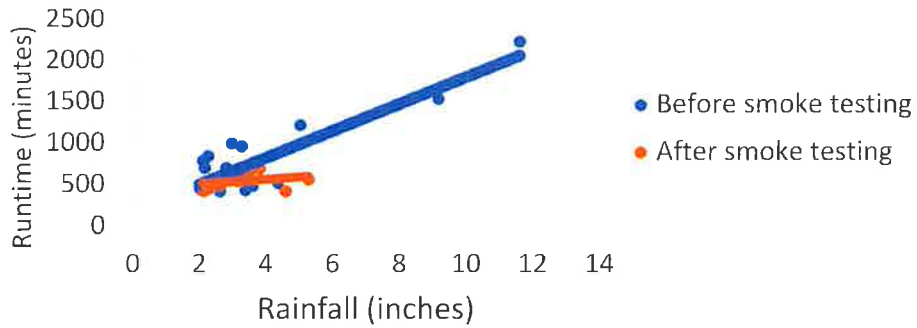
10-Year Revenue Estimate = $585.7M

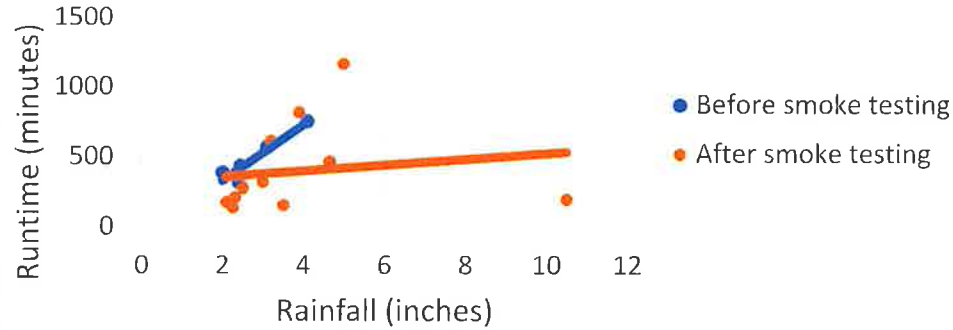
Save our LAGOON

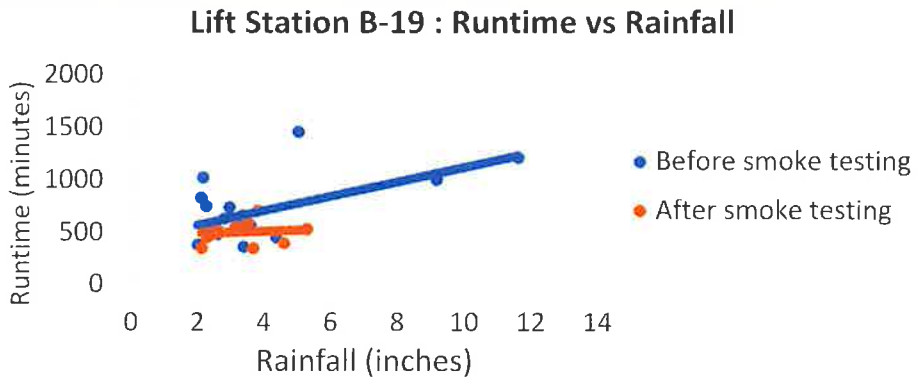
2017-2024 Expenditures = $79.5M

Projects Underway = $332.9M

Prevent Sewage Overflows

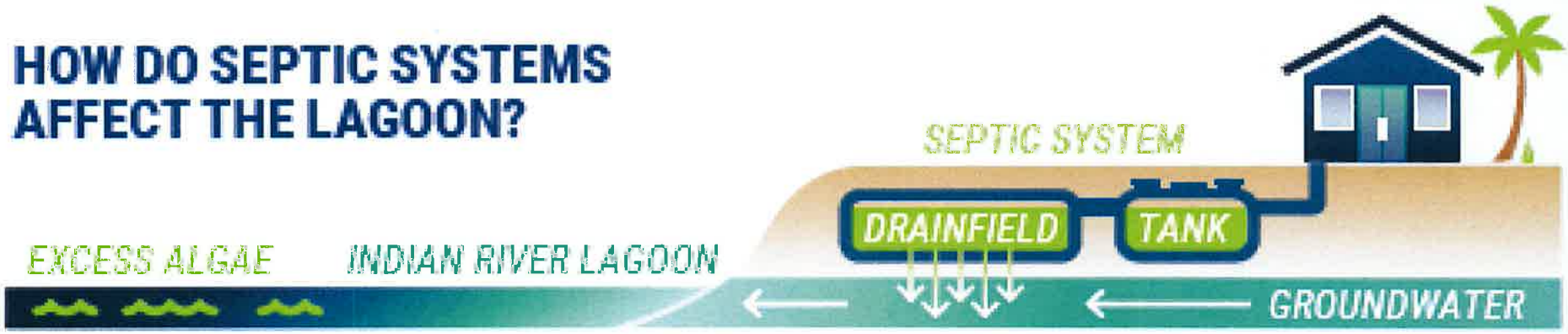






How Septic Systems Pollute the Lagoon

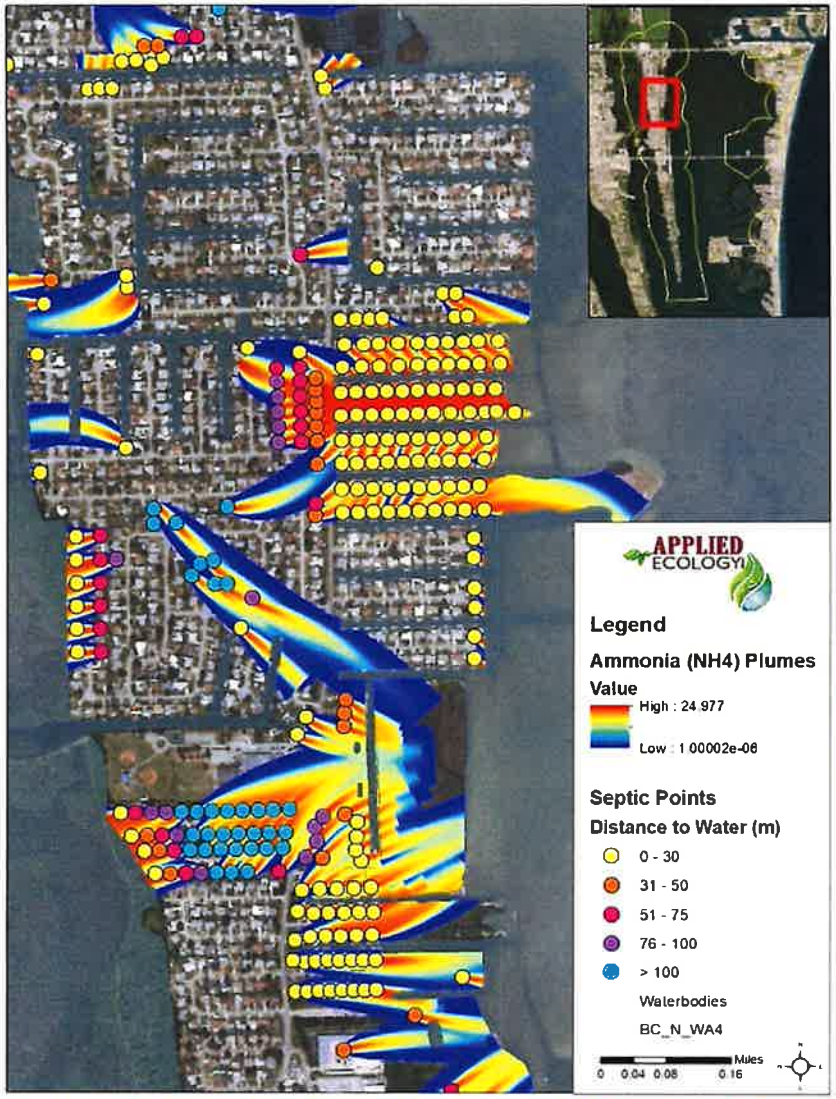
HOW DO SEPTIC SYSTEMS AFFECT THE LAGOON?



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

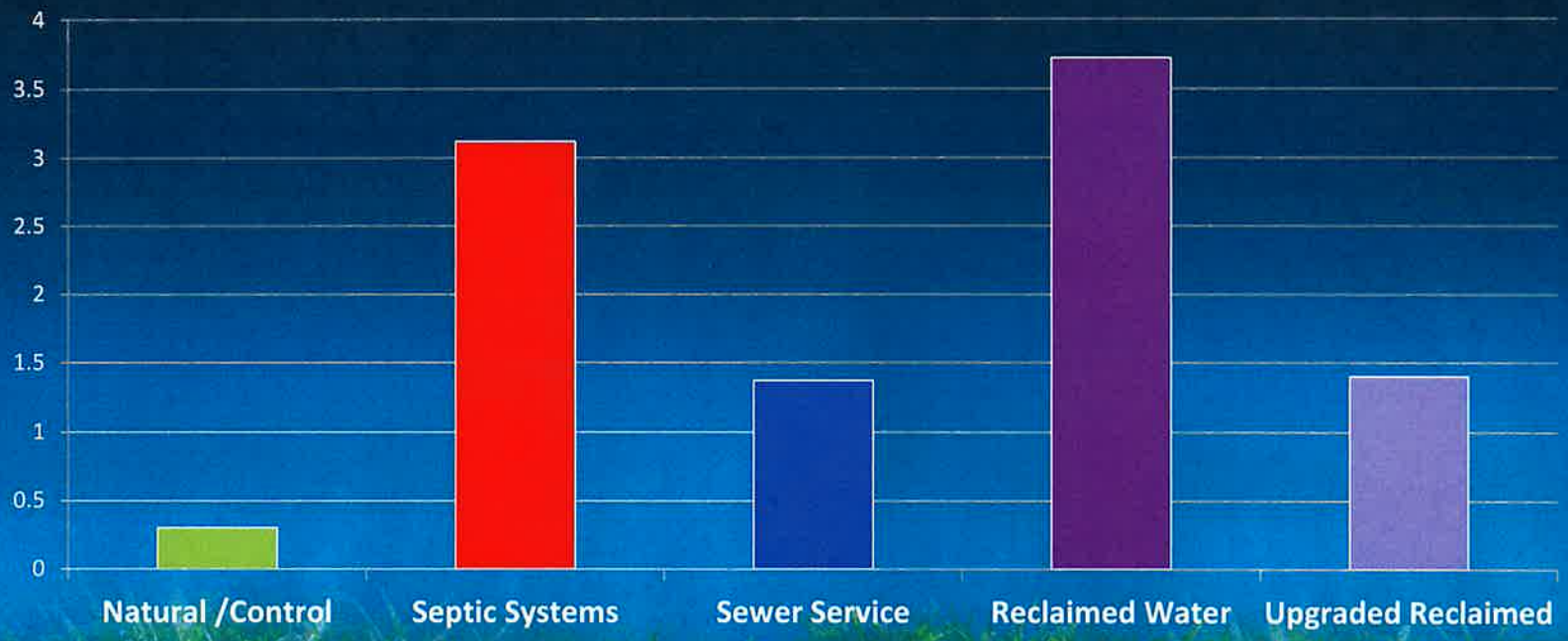
Table 16: Short-Term Opportunities for Septic System Removal in Banana River Lagoon

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

Save our LAGOON

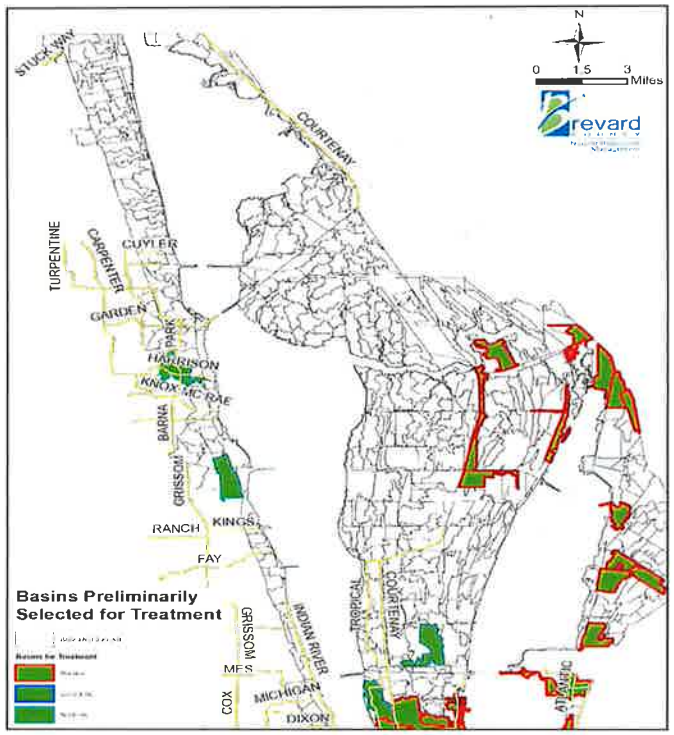
Groundwater Monitoring Data

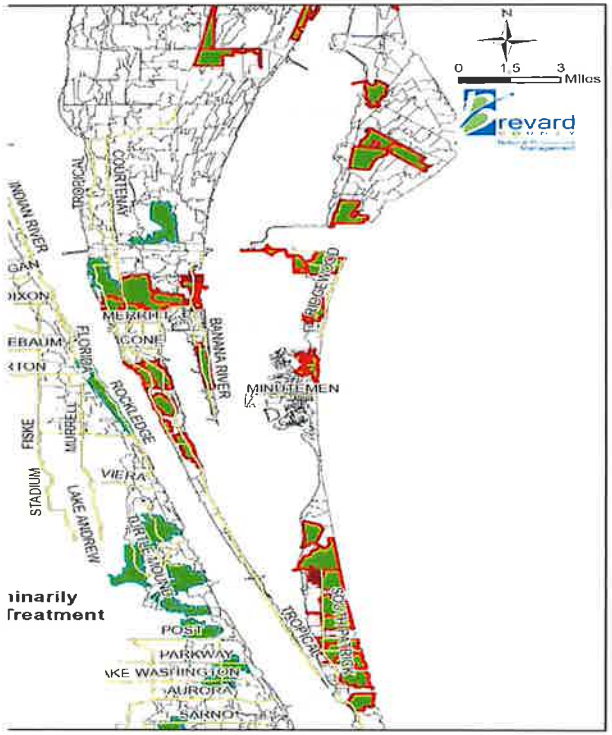
Groundwater Nitrogen Concentrations
(June 2018 – November 2025, Geometric Mean mg/L TN)

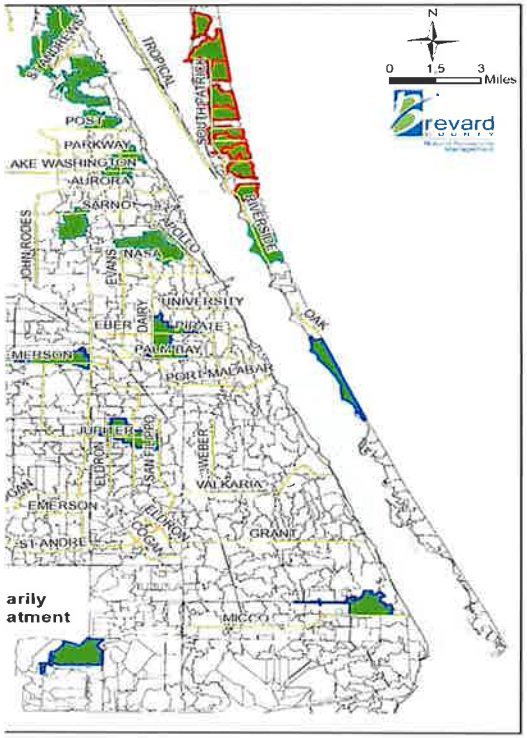


Results from 6+ Years of Monthly Groundwater Quality Sampling

Stormwater Project Prioritization







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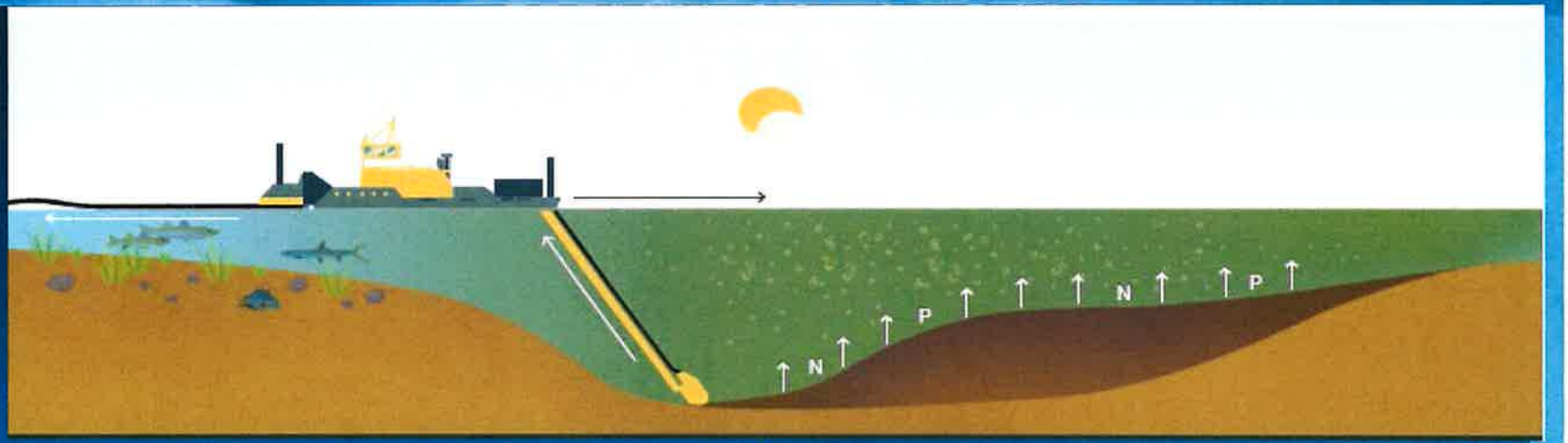
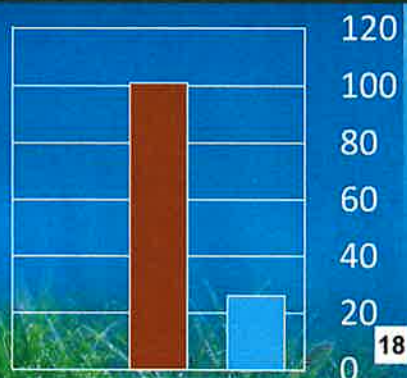
Muck Removal



Eau Gallie River
Muck Dredging

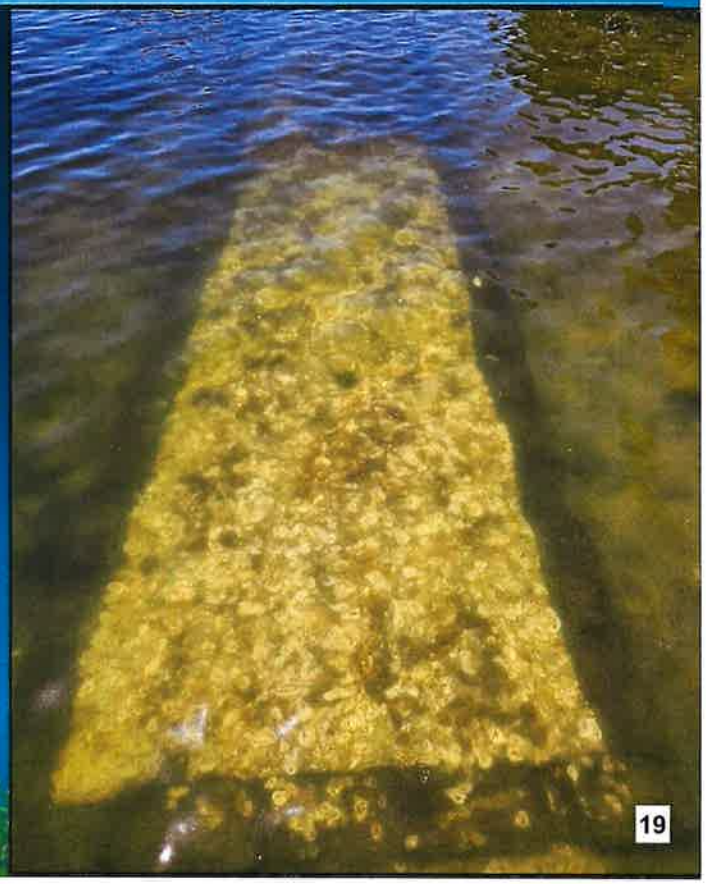
Bloom Severity Index
Before and After
Dredging



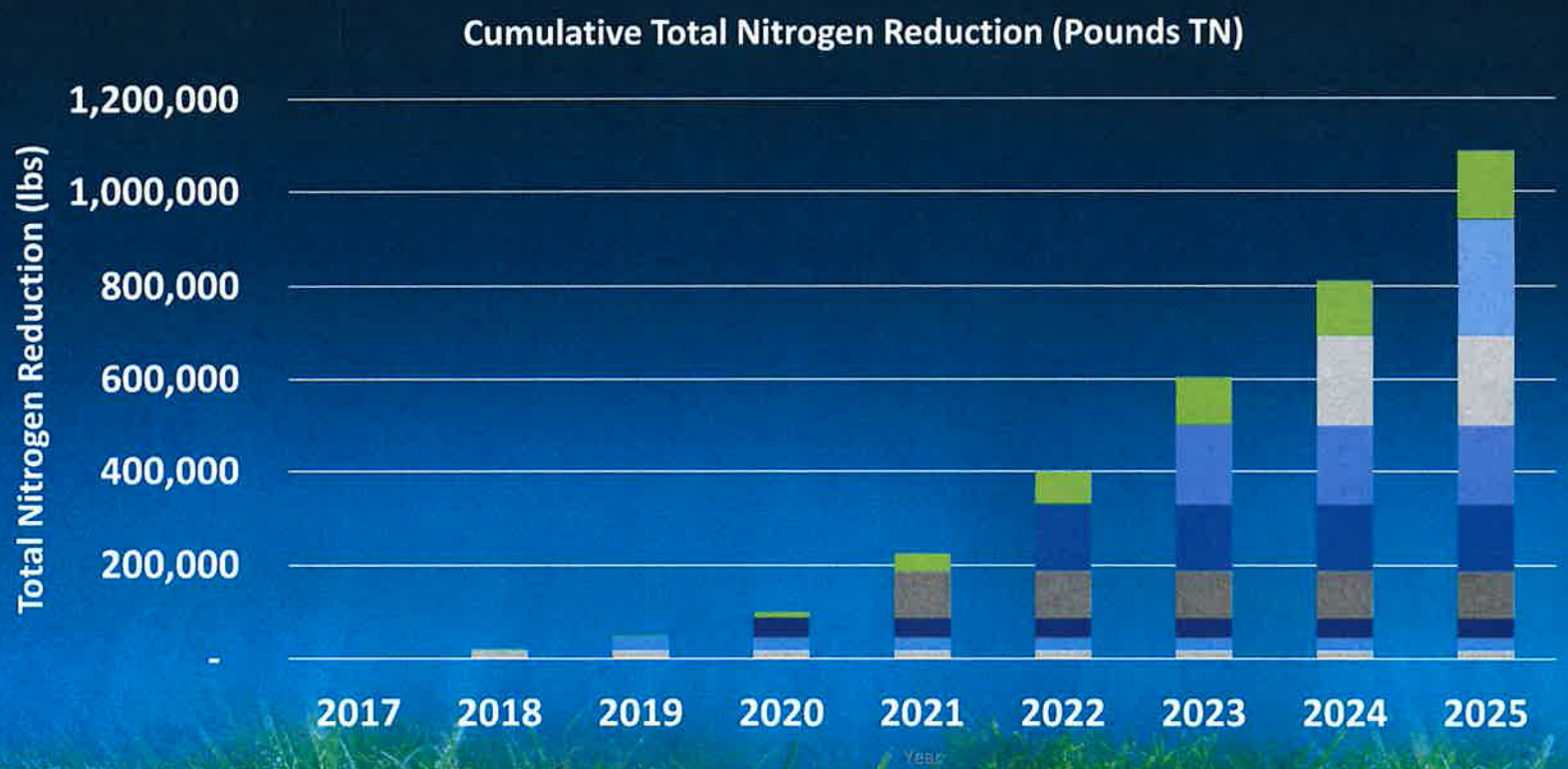
Oyster Restoration

- Most sites are built by Brevard Zoo
- UCF provides independent monitoring
- 100% success this year
- 80% success over all years

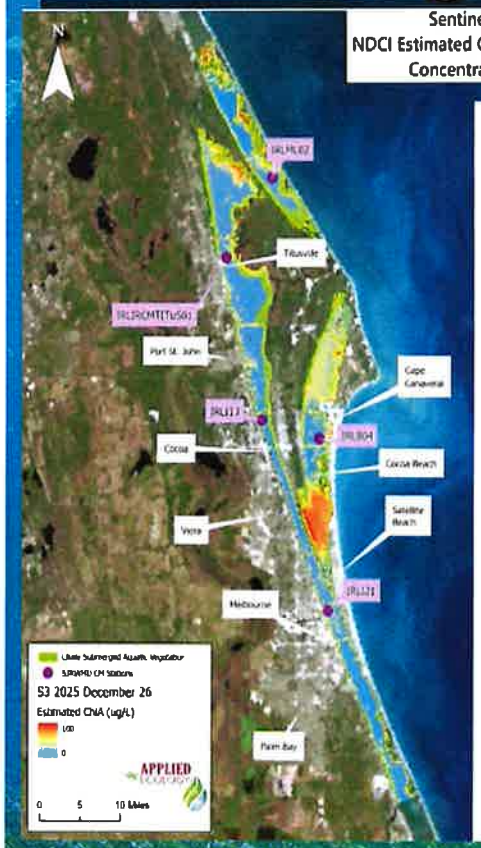
- Clam restoration getting started
- Planted Living Shoreline buffers

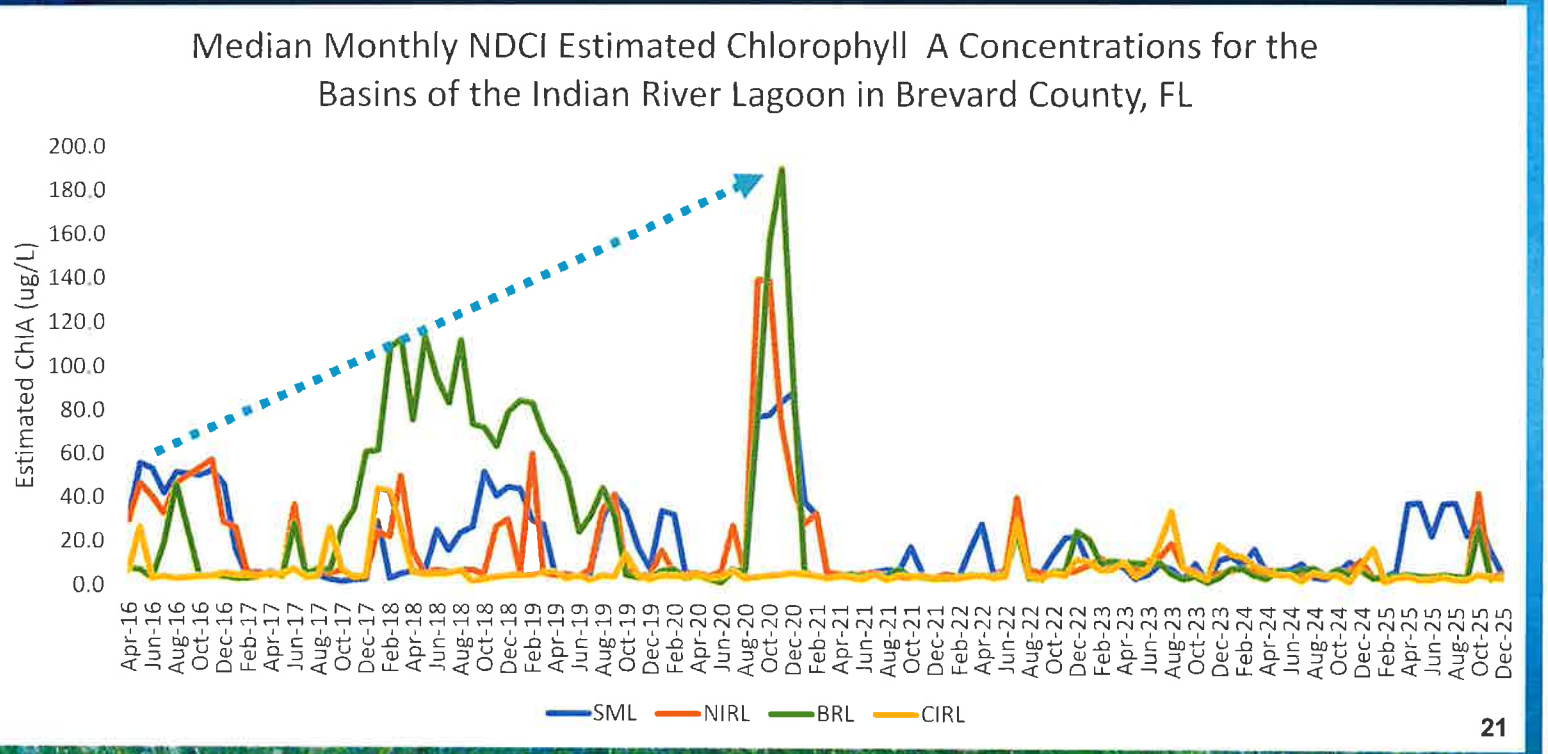


Cumulative Total Nitrogen Reduction

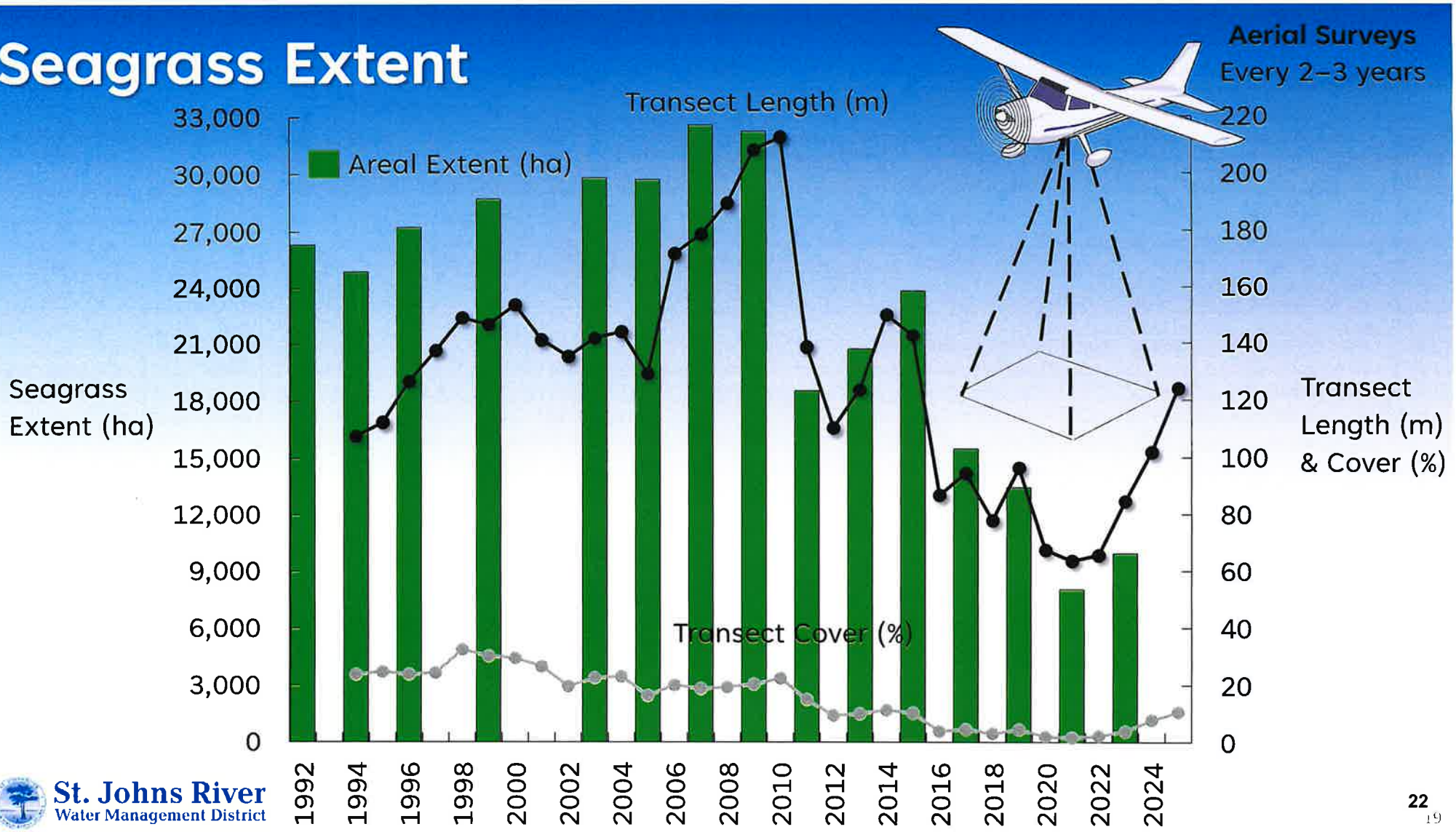


Algae Bloom Response (2016-2025)



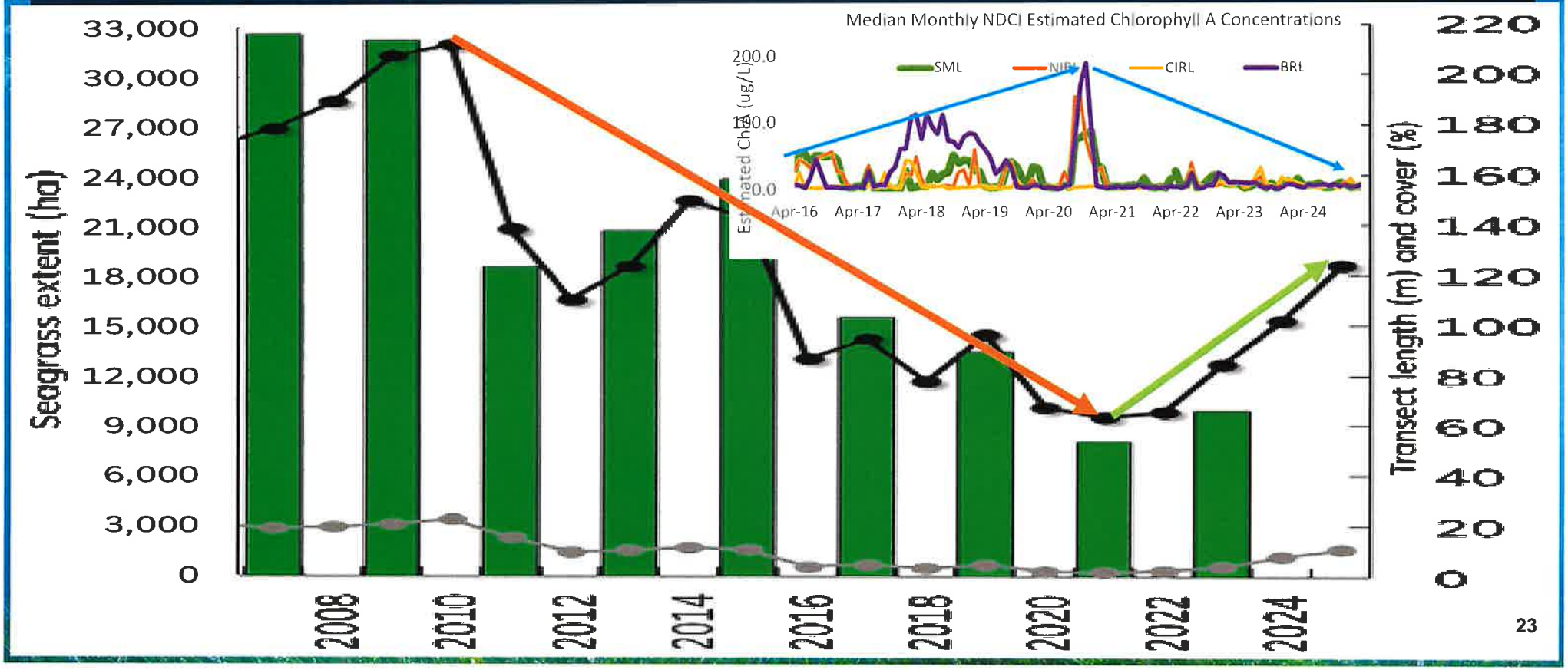


Seagrass Extent



St. Johns River
Water Management District

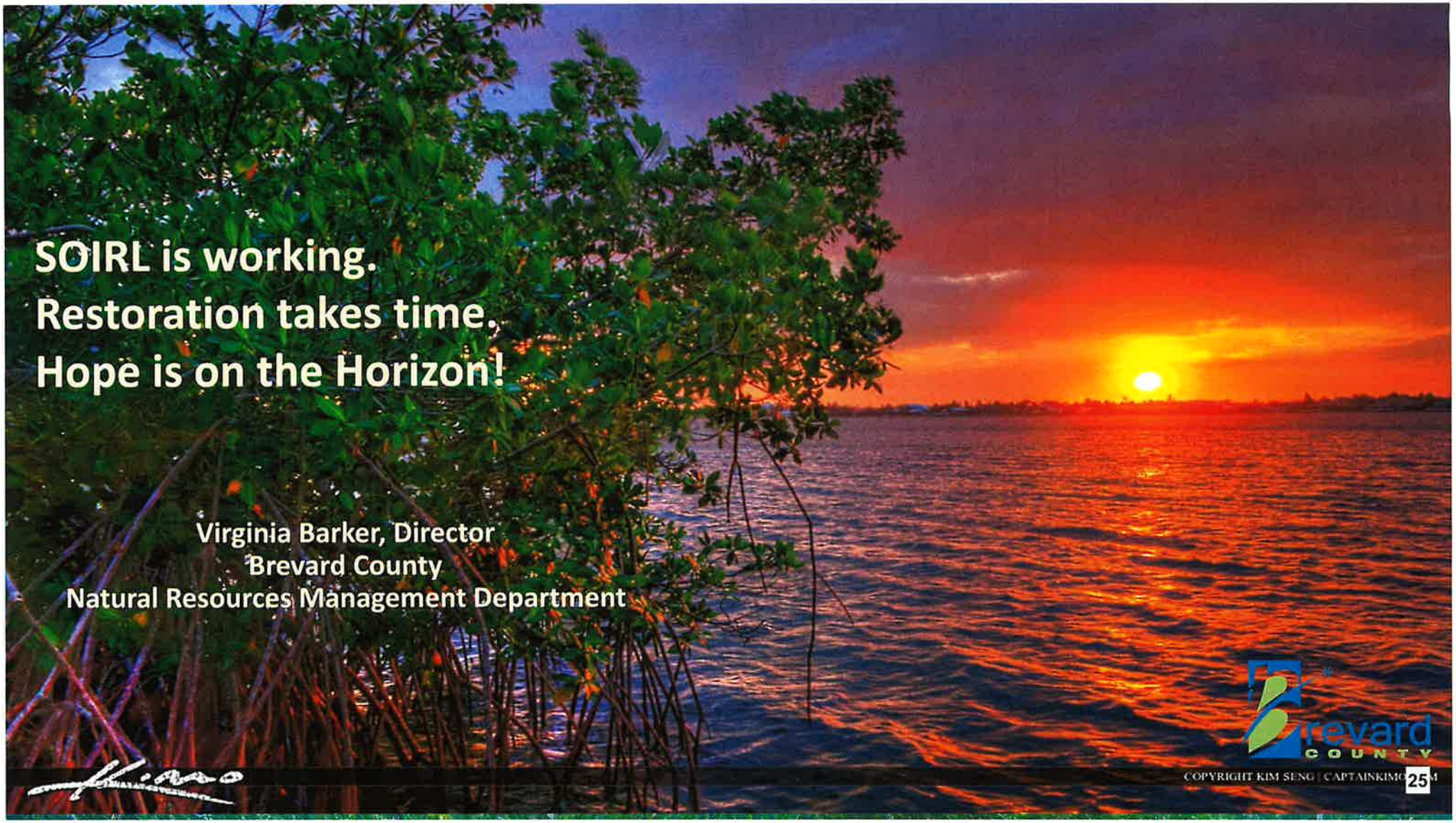
Evidence of Progress: Seagrass Response



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

University of Maryland Center for Environmental Science


SOIRL is working.
Restoration takes time.
Hope is on the Horizon!
Virginia Barker, Director
Brevard County
Natural Resources Management Department
Brevard
COUNTY
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