



City of Indian Harbour Beach Staff Report

City Council Agenda Item

Approval of an Interlocal Agreement between Brevard County and the City of Indian Harbour Beach and Other Municipalities Agreeing to the Referendum for a Discretionary One-half Cent Discretionary Sales Tax for the Indian River Lagoon Levied for Ten Years and the Distribution of the Proceeds of this Sales Tax for the Save Our Lagoon Trust Fund to be Utilized for Lagoon Restoration Projects and Programs Outlined in the Save Our Lagoon Project Plan Adopted August 9, 2016; Adopting Resolution No. 674 Supporting Placing this One-half Cent Sales Tax Referendum on the November 8, 2016 General Election Ballot.

Meeting Date: August 23, 2016

Staff Recommendation: Approval of an Interlocal Agreement between Brevard County and the City of Indian Harbour Beach and Other Municipalities Agreeing to the Referendum for a Discretionary One-half Cent Discretionary Sales Tax for the Indian River Lagoon Levied for Ten Years and the Distribution of the Proceeds of this Sales Tax for the Save Our Lagoon Trust Fund to be Utilized for Lagoon Restoration Projects and Programs Outlined in the Save Our Lagoon Project Plan Adopted August 9, 2016; Adopting Resolution No. 674 Supporting Placing this One-half Cent Sales Tax Referendum on the November 8, 2016 General Election Ballot.

Background Information:

At the August 9, 2016 Brevard County Commission Meeting the County Commission received the Save Our Lagoon Project Plan, a comprehensive blueprint of projects and strategies to address this county's most precious resources, the Indian River Lagoon (IRL). This plan will certainly help restore this distressed natural treasure. Brevard County did a remarkable job in preparing this important roadmap to help the lagoon to recovery.

The cost to implement this plan exceeds \$302 million. The Benefit to Cost Ratio is calculated return on investment by local economic experts at 20:1.

Section 212.055(2)(c), Florida Statutes requires the execution of an Interlocal Agreement between the county governing authority and the governing bodies of the municipalities

representing a majority of the county's municipal population in order to determine the distribution of the revenues derived from the one-half cent discretionary infrastructure sales tax in lieu of using the statutory formula set forth in section 218.62, Florida Statutes. The attached Interlocal Agreement provides that the proceeds of this discretionary sales tax would be deposited into the Save Our Lagoon Trust Fund to be utilized for Lagoon Restoration projects and programs outlined in the Save Our Lagoon Project Plan adopted by the Brevard County Board of County Commissioners on August 9, 2016. In adopting this Interlocal Agreement the City of Indian Harbour Beach will relinquish any rights to a pro rata share of the discretionary one-half cent sales tax.

The Brevard County Natural Resources Department is the entity that developed the strategic plan for the restoration of the IRL and has undertaken some of the muck removal occurring in portions of the lagoon. Additionally, the County's Natural Resources Department has implemented the spend plan of the appropriations from the Florida Legislature. Therefore, this agency will manage and implement projects funded by the Save Our Lagoon Trust Fund in conjunction with a Citizen's Oversight Committee.

Our community will be eligible to make application for funds for projects, such as muck removal from municipal canals that conform to the Save Our Lagoon Plan.

Also included in this agenda package is City Resolution No. 674 supporting the Brevard County Commissioners' initiative to have the voters of Brevard County determine whether to impose a One-half Cent Discretionary Sales Tax for ten years to fund projects or programs for the restoration of the Indian River Lagoon.

Staff Recommendation:

Approval of an Interlocal Agreement between Brevard County and the City of Indian Harbour Beach and other municipalities agreeing to the referendum for a Discretionary One-half Cent Sales Tax for the Indian River Lagoon Levied for ten years and the distribution of the proceeds of this sales tax for the Save Our Lagoon Trust Fund to be utilized for lagoon restoration projects and programs outlined in the Save Our Lagoon Project Plan adopted August 9, 2016; Adopting Resolution No. 674 supporting placing this One-half Cent Discretionary Sales Tax Referendum on the November 8, 2016 General Election Ballot.



BOARD OF COUNTY COMMISSIONERS

County Manager's Office

2725 Judge Fran Jamieson Way
Building C, Room 301
Viera, Florida 32940

August 10, 2016

City Manager Mark Ryan
Town of Indian Harbour Beach
2055 South Patrick Drive
Indian Harbour Beach, FL 32937

Re: Indian River Lagoon Project Plan/Referendum/Infrastructure Sales Tax.

Dear City Manager Ryan,

In regular session on Tuesday, August 9, 2016, the Board of County Commissioners adopted the Save Our Lagoon Project Plan. The Plan is a comprehensive, science based approach that outlines a 10 year strategy to restore the Indian River Lagoon.

To fund the plan, the Board (with a 5 to 0 vote) authorized advertisement of an ordinance for a county-wide ½ cent infrastructure sales tax to be considered at their August 23, 2016 Board meeting. The following referendum would be placed on the November 8, 2016 ballot.

Caption: *Save Our Indian River Lagoon ½ Cent Sales Tax Referendum*

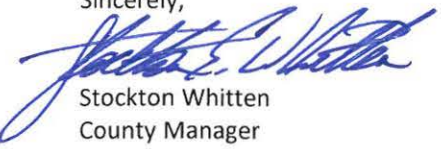
To restore the Indian River Lagoon through financing, planning, constructing, maintaining, and operating capital improvements and capital maintenance projects and programs designed to improve water quality, fish, wildlife and marine habitat, remove muck and reduce pollution, shall an ordinance be approved 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?

___ *FOR* *the ½ cent sales tax*
___ *AGAINST* *the ½ cent sales tax*

As you are aware the implementation of this county-wide funding source would require adoption of an interlocal agreement with cities representing a majority of the county's municipal population. We are asking all cities to enter into the agreement as we all work together to preserve one of Brevard's most precious and valuable natural resources.

I have attached a copy of the interlocal agreement and ask that it be considered at your August 23, 2016 council meeting. I have also attached copies of the ordinance and PowerPoint presentation highlighting the development and major components of the plan.

Sincerely,


Stockton Whitten
County Manager

cc: Board of County Commissioners
Scott Knox, County Attorney
Virginia Barker, Natural Resources Department Director

Attachments (3)

INTERLOCAL AGREEMENT

This Interlocal Agreement, was made and entered into this ___ day of _____, 2016, by and between Brevard County, Florida (“County”) and [Municipalities Here], all of which are political subdivisions of the State of Florida and collectively are referred to herein as “Parties.”

WITNESSETH

WHEREAS, it is critical that this interlocal agreement be executed by all parties on or before August 23, 2016 in order to meet the deadline set by the Supervisor of Elections for submitting ballot language; and

WHEREAS, the Board of County Commissioners of Brevard County, Florida, has been granted authority under Section 212.055(2)(a), Florida Statutes, to levy for a period of ten (10) years from the date of levy, a discretionary infrastructure sales tax of a one half cent, pursuant to ordinance enacted by a majority of the members of the Board of County Commissioners and approved by a majority of the electors of the County voting in a referendum on the surtax; and

WHEREAS, Section 212.055(2)(d)1., Florida Statutes, defines “infrastructure” to mean “[a]ny fixed capital expenditure or fixed capital outlay associated with the construction, reconstruction, or improvement of public facilities that have a life expectancy of 5 or more years, any related land acquisition, land improvement, design, and engineering costs, and all other professional and related costs required to bring the public facilities into service. For purposes of this sub-subparagraph, the term “public facilities” means facilities as defined in s. 163.3164(38), s.163.3221(13), or s. 189.012(5), regardless of whether the facilities are owned by the local taxing authority or another governmental entity; and

WHEREAS, Sections 163.3164(38), 163.3221(13), and 189.012(5), Florida Statutes all define the term “public facilities” to include parks and recreational facilities; and

WHEREAS, based upon Florida law, the County comprehensive plan, a 1987 EPA designation, and findings by the Florida Legislature, the Parties find that the Indian River Lagoon is a “public facility” as that term is defined in section 212.055(2), Florida Statutes; and

WHEREAS, the Parties see the urgent need to implement the “Save Our Lagoon Project Plan,” with the aim 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, as permitted under Section 212.055(2)(d)1., Florida Statutes; and

WHEREAS, such infrastructure projects are more equitably funded by revenue sources other than ad valorem taxation; and

WHEREAS, the Board of County Commissioners of Brevard County, Florida, has promulgated Brevard County Ordinance no. 16-___, (“the Ordinance”) imposing a one half cent discretionary infrastructure sales tax for a period of ten (10) years from the date of levy, for the

purposes expressed above, subject to approval of said surtax by a majority vote of those qualified electors of Brevard County voting in a referendum to be held on November 8, 2016; and

WHEREAS, it is contemplated that if approved in said referendum, said one half cent discretionary infrastructure sales tax shall be imposed and collected countywide, commencing on February 1, 2017, and continuing thereafter for a period of ten (10) years until December 31, 2027; and

WHEREAS, section 212.055(2)(c), Florida Statutes requires distribution of an interlocal agreement between the county governing authority and the governing bodies of the municipalities representing a majority of the county's municipal population in order to determine the distribution of the revenues derived from the half cent discretionary infrastructure sales tax in lieu of using the statutory formula set forth in section 218.62, Florida Statutes; and

WHEREAS, the parties have determined that it is in the best interests of all residents and property owners in Brevard County that all revenues derived from the half cent sales tax levied for projects and programs for the restoration of the Indian River Lagoon, as those projects and programs are described in the Ordinance; and

WHEREAS, the Parties deem it in the best interest of all of the citizens and residents of Brevard County, Florida, that the proceeds of the one half cent discretionary infrastructure sales tax, if approved by the qualified electors of Brevard County voting in the above-referenced referendum to be held on November 8, 2016, be used to fund projects and programs designed to restore the Indian River Lagoon in the manner set forth in the Ordinance, including operations, maintenance and reasonable administrative costs of those projects and programs:

NOW, THEREFORE, Brevard County and [Municipalities Here] agree as follows:

1. The recitals set forth hereinabove are true and correct in all respects and are incorporated herein by reference as if set forth herein verbatim.
2. The parties hereby acknowledge that the County has taken, or will take, such action as necessary to place the issue of levy of a one half cent discretionary infrastructure sales tax before the voters of Brevard County on the ballot in the referendum to be held on November 8, 2016.
3. If the levy of the one half cent discretionary infrastructure sales tax is approved in the November 8, 2016 referendum, upon implementation by ordinance of the sales tax by the County, any and all revenue generated by said tax shall be deposited into the Save Our Lagoon Trust Fund and used for Lagoon restoration projects and programs in the manner prescribed by the County Save Our Lagoon ordinance to be enacted on August 23, 2016, provided that the County and the governing bodies of the municipalities representing a majority of the county's municipal population execute a copy of this agreement.
4. It is the intent of the Parties that even though this interlocal agreement is separately executed by the County with multiple municipalities, that all of such separately

executed agreements shall be construed to constitute a single interlocal agreement which provides for the use and distribution of the proceeds from the one half cent infrastructure surtax as follows:

- a. Any and all revenue generated by the surtax will be deposited into the Save Our Lagoon Trust Fund, administered by the County, for financing the implementation of the Save Our Lagoon Project Plan; and
 - b. The Indian River Lagoon Advisory Committee, as established in Brevard County Ordinance no. 16-____, will assist the County with annual plan updates and may review any proposed capital improvement, project, program, audit or other matter presented to it by the Board of County Commissioners for a recommendation to the County Commission.
5. This Agreement is an interlocal agreement, as contemplated by Chapter 163, Part III, Florida Statutes, and other applicable law. This interlocal agreement adopts, incorporates and ratifies the provisions of Brevard County Ordinance no. 16-____. It is governed by the laws of Florida.
6. This Agreement and its exhibits may only be amended, supplemented or cancelled only by a written instrument duly executed by the parties hereto.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals on the day and year indicated next to the signature of their respective authorized representatives and this agreement shall take effect upon the date of execution by the last party to the agreement, the “last party” being defined as the authorized representative of the Brevard County municipality whose city population will cause the total population of cities executing this agreement to exceed 50% of the total municipal population in the County, as that total is set forth on Exhibit A, attached hereto.

BREVARD COUNTY, FLORIDA

By: _____
Jim Barfield, Chair

ATTEST: _____
Clerk

DATE: _____

CITY OF _____, FLORIDA

RESOLUTION NO. 674

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF INDIAN HARBOUR BEACH, BREVARD COUNTY, FLORIDA, SUPPORTING THE BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS INITIATIVE TO HAVE BREVARD COUNTY VOTERS DETERMINE WHETHER TO IMPOSE A ONE-HALF CENT DISCRETIONARY SALES TAX FOR TEN YEARS TO FUND PROJECTS AND PROGRAMS FOR THE RESTORATION OF THE INDIAN RIVER LAGOON THROUGH A VOTER REFERENDUM ON NOVEMBER 8, 2016; PROVIDING AN EFFECTIVE DATE

WHEREAS, The Indian River Lagoon (IRL) system includes Mosquito Lagoon, Banana River Lagoon, and the Indian River. This is a unique and diverse system that connects Volusia, Brevard, Indian River, St. Lucie, and Martin counties. The IRL is part of the National Estuary Program (NEP), one of 28 estuaries of National Significance, and has one of the greatest diversity of plants and animals in the nation. A large portion of the IRL system, 71% of its area and nearly half its length, is within Brevard County and provides County residents and visitors many opportunities and economic benefit; and

WHEREAS, the IRL is a delicate ecosystem imperiled by a myriad of issues ranging from stormwater runoff from urban and agricultural areas, wastewater treatment discharges, septic tank systems, and nutrients and sediments from items such as fertilizer entering the lagoon. These pollutants create cloudy conditions in the lagoon and feed algal blooms, both of which negatively affect the seagrass community that provides habitat for much of the lagoon's marine life. In addition, these pollutants lead to muck accumulation, which releases (fluxes) nutrients and hydrogen sulfide, depletes oxygen, and creates a lagoon bottom that is not hospitable to seagrass, shellfish, or other marine life; and

WHEREAS, efforts have been ongoing for decades to address these sources of pollution. Despite significant load reductions, in the last five years, signs of human impact to the IRL system have been magnified. In 2011, the "superbloom" occurred, an intense algal bloom in the Mosquito Lagoon, Banana River Lagoon, and North IRL, as well as a secondary, less intense bloom in the Central IRL. There have also been recurring brown tides; unusual mortalities of dolphins, manatees, and shorebirds; and large fish kills due to low dissolved oxygen from decomposing algae; and

WHEREAS, Local governments and the St. Johns River Water Management District (SJRWMD) have been proactive in implementing projects over the last several decades. However, to restore the lagoon to health and prosperity, it became necessary to prepare a

comprehensive blueprint for the restoration of the Lagoon and cost estimates for implementation to save the lagoon. This blueprint, the Save Our Lagoon Project Plan, was adopted by the Brevard County Board of County Commissioners on August 9, 2016 with an implementation cost exceeding \$302 million; and

WHEREAS, Local Governments see the urgent need to implement the “Save Our Lagoon Project Plan,” with the aim 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, as permitted under Section 212.055(2)(d)1., Florida Statutes and provides a dedicated funding stream for implementation; and

WHEREAS, the Brevard County Board of County Commissioners approved the placement of a referendum on the November 8, 2016 General Election Ballot whether to impose a one-half cent discretionary sales tax to fund projects and programs for the restoration of the Indian River Lagoon; and

WHEREAS, the voters of Brevard County can vote whether or not to impose a one-half cent discretionary sales tax under Florida law, if they so choose, and dedicate the proceeds from this self-imposed tax for the restoration of the Indian River Lagoon; and

WHEREAS, the City of Indian Harbour Beach supports the initiative of the Brevard County Board of County Commissioners to allow the voters of Brevard County to determine through a referendum whether or not to impose a one-half cent discretionary sales tax on the November 8, 2016 General Election Ballot.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Indian Harbour Beach, Brevard County, Florida supports the initiative of the Brevard County Board of County Commissioners to allow the voters of Brevard County to determine through a referendum whether or not to impose a one-half cent discretionary sales tax on the November 8, 2016 General Election Ballot. The City formally adopts and agrees to execute the “Interlocal Agreement” attached to this Resolution as Exhibit A; provided, however, that such adoption and agreement to execute is deemed completed as of the effective date of this Resolution but shall be and is withdrawn should the referendum not approved by the qualified electors on November 8, 2016.

BE IT FURTHER RESOLVED, that the City Clerk shall transmit a certified copy of this resolution to the Brevard County Board of County Commissioners, as well as the municipalities within Brevard County.

THIS RESOLUTION shall take effect immediately upon adoption.

PASSED AND ADOPTED at a regular meeting the City Council of the City of Indian Harbour Beach, Florida, the ____ day of August, 2016.

David A. Panicola, Mayor

ATTEST:

Deborah Maliska, CMC
City Clerk

ORDINANCE 2016-_____

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, CALLING A COUNTYWIDE SAVE OUR LAGOON ½ CENT SALES TAX REFERENDUM ELECTION ON NOVEMBER 8, 2016 WITHIN THE TERRITORIAL LIMITS OF BREVARD COUNTY ON THE QUESTION AS TO WHETHER THE BOARD OF COUNTY COMMISSIONERS SHOULD LEVY A ½ CENT INFRASTRUCTURE SALES TAX FOR FINANCING THE COUNTY’S SHARE OF THE COST FOR THE SAVE OUR LAGOON PROJECT PLAN; PROVIDING FOR FINDINGS; CALLING A REFERENDUM; PROVIDING FOR NOTICE OF THE REFERENDUM; PROVIDING FOR BALLOT LANGUAGE; APPROVAL OF SAVE OUR LAGOON PROJECT PLAN; PROVIDING FOR LEVY OF THE ½ CENT SALES TAX FOR RESTORATION OF THE INDIAN RIVER LAGOON; CREATING A SAVE OUR INDIAN RIVER LAGOON PROJECT TRUST FUND; SAVE OUR LAGOON OVERSIGHT COMMITTEE; PROVIDING FOR SEVERABILITY; REPEALER; AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA:

SECTION 1. AUTHORITY FOR ORDINANCE. This Ordinance is adopted pursuant to Sections 212.055(2), Florida Statutes; Chapter 125, Florida Statutes, Section 101.161, Florida Statutes and all other applicable provisions of law, including Florida election laws.

SECTION 2. FINDINGS The County Commission hereby finds and determines as follows:

A. That section 212.055, Florida Statutes grants the Board of County Commissioners the discretionary authority to pass an ordinance calling a referendum on the issue as to whether a ½ cent sales tax should be approved to finance, plan, and construct infrastructure, as that term is defined in subsection (d)1. of section 212.055, Florida Statutes, and for the acquisition of any interest in land for public recreation, conservation, or protection of natural resources;

B. That section 212.055(2)(d)1. defines “infrastructure” to mean “[a]ny fixed capital expenditure or fixed capital outlay associated with the construction, reconstruction, or improvement of public facilities that have a life expectancy of 5 or more years, any related land acquisition, land improvement, design, and engineering costs, and all other professional and related costs required to bring the public facilities into service. For purposes of this sub-subparagraph, the term “public facilities” means facilities as defined in s. 163.3164(38), s. 163.3221(13), or s. 189.012(5), regardless of whether the facilities are owned by the local taxing authority or another governmental entity.

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C. Sections 163.3164(38), 163.3221(13), and 189.012(5), Florida Statutes all define the term “public facilities” to include parks and recreational facilities.

D. Chapter 163.3177 requires every county to include a recreation and open space element in their comprehensive plan. The relevant section of that statute reads as follows: Fla. Stat. § 163.3177: (6)(e) A recreation and open space element indicating a comprehensive system of public and private sites for recreation, including, but not limited to, natural reservations, parks and playgrounds, parkways, beaches and public access to beaches, open spaces, waterways, and other recreational facilities.

E. In the Brevard County comprehensive plan, the term “open space” and “recreation” are defined as follows:

1. **Open Space** - lands and *water* not covered by structures including agriculture, which are *suitable for passive recreation or conservation use*.
2. **Recreation** - the pursuit of leisure time activities occurring in an indoor or *outdoor* setting.

F. In turn, the term “passive recreation” is defined as: “

1. **Passive Recreation** - recreation uses where very minimum alteration of vegetation, topography or other native feature is necessary, for the enjoyment of the site amenities. Activities which are considered passive include, but are not limited to, hiking, bicycling, nature observation, camping, non-motorized boating, rowing, swimming, picnicking, archaeological or historic preservation.

G. As defined in the Comprehensive Plan Glossary, the term “passive recreation” includes activities such as sailing, rowing, swimming, nature observation and, though not listed, would also include sailboarding and non-motorized recreational fishing—all of which are activities commonly undertaken on the Indian River Lagoon, and all of which depend upon a swimmable and fishable quality of water¹ allowing the lagoon to function as a natural “passive recreation” “open space”, “public recreational facility” and a “public site for recreation.”

H. The recognition of the Lagoon’s availability and contemplated use for passive recreation is found in the Coastal Management element of the comprehensive plan in Policy 11.9 which reads:

1. “Brevard County shall investigate the feasibility of acquiring narrow strips

¹ <http://www.dep.state.fl.us/water/wqssp/classes.htm>

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of land along the Indian River Lagoon, where such areas could provide visual access or provide parking for passive recreation within the Lagoon.”

I. As an open water body, the Indian River Lagoon also falls within the scope of numerous goals, policies and objectives found in the recreation and open space element of the plan relating to passive recreation.²

J. “The U.S. Environmental Protection Agency (EPA) designated the lagoon as “an estuary of national significance” in April 1990 and included the lagoon in the National Estuary Program. The Indian River Lagoon National Estuary Program is a partnership whose members work to improve the water quality and ecological integrity of the 156-mile-long estuary on Florida’s east coast. The St. Johns River and South Florida water management districts, the five counties that border the lagoon — Brevard, Indian River, Martin, St. Lucie and Volusia — and representatives of state, federal and regional governments and agencies make up the Indian River Lagoon Advisory Board, charged with guiding and overseeing the lagoon’s protection and

² Recreation And Open Space Element

GOAL 1

PROVIDE A PARK AND OPEN SPACE SYSTEM WHICH OFFERS OPPORTUNITIES FOR A VARIETY OF PASSIVE AND ACTIVE RECREATION, PROMOTES VISUAL APPEAL AND PROVIDES RELIEF FROM EXPANSES OF DEVELOPMENT.

Parks and Open Space System

Objective 1

Provide a system of parks and open space to meet the recreational needs of the public.

Policy 1.6

Develop and enhance existing parks and open space sites to provide additional recreational facilities based on the recreational needs of the public and as funding become available.

GOAL 2

PROVIDE A COMPREHENSIVE PROGRAM OF ACTIVE AND PASSIVE RECREATION THAT MEETS THE NEEDS OF THE PUBLIC.

Objective 1

To ensure that Brevard’s waterways are a publicly-accessible local system of waterways linked to a larger regional system that contributes to the greatest possible recreational and commercial access to the navigable waters of the State of Florida in a manner that does not jeopardize their environmental values.

Policy 1.1

By 2011, the County shall identify, inventory and characterize its system of waterways in terms of use, capacity and relationship to recreational and commercial working waterfronts.

Public and Private Partnerships

Objective 4

Coordinate public and private resources to meet recreational demands.

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restoration.” <http://www.cakex.org/directory/organizations/indian-river-lagoon-national-estuary-program>

K. With regard to the function and restoration of water quality in the Indian River Lagoon, the Florida Legislature has made the following findings:

1. The Indian River Lagoon system has been targeted by the state as a priority water body for restoration and preservation since the 1987 Surface Water Improvement and Management Act;
2. Coastal lagoon activities relating to saltwater fishing account for a multibillion dollar economic base;
3. The St. Johns River and South Florida Water Management Districts have jointly developed a management plan that includes water quality improvement, habitat restoration, and public awareness and education; and
4. The Legislature supports the restoration efforts of the water management districts.³

L. Based upon the above statutory and county comprehensive plan provisions, EPA designation, and findings by the Florida Legislature, the Board of County Commissioners concludes that the Indian River Lagoon is a “public facility” as that term is defined in section 212.055(2), Florida Statutes.

M. Because the Indian River Lagoon meets the definition of a “public facility,” section 212.055(2), Florida Statutes, authorizes the use of the ½ cent discretionary local government infrastructure sales tax for capital improvement projects, which include capital maintenance such as muck removal, and projects with a life span of 5 years or longer such as projects to reduce primary sources of pollution (including excess fertilizer, septic systems, nutrient rich reclaimed water, and stormwater); to remove historical pollution that is now accumulated in muck deposits that smother seagrass, cloud the water column, release nutrients and deplete oxygen; and to restore natural stabilization and filtration systems (including oyster bars and living shorelines).

N. The population of Brevard County exceeds 75,000 people and for the tax year 2016, the taxable value of real property is less than 60 percent of the just value of real property for ad valorem tax purposes, as determined by the Brevard County Property Appraiser’s Office.

O. Based on the data provided by the Brevard County Property Appraiser’s Office, section 212.055(2)(g), Florida Statutes applies within Brevard County, which statute provides as follows:

- (g) Notwithstanding paragraph (d), a county having a population greater than 75,000 in which the taxable value of real property is less than 60 percent of the just value of real property for ad valorem tax purposes for the tax year in which an infrastructure surtax

3 Fla. Stat. §320.08058(a)

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referendum is placed before the voters, and the municipalities within such a county, *may use the proceeds and interest of the surtax for operation and maintenance of parks and recreation programs* and facilities established with the proceeds of the surtax throughout the duration of the surtax levy or while interest earnings accruing from the proceeds of the surtax are available for such use, whichever period is longer.

P. In 1996 the Florida Advisory Council on Intergovernmental Relations, assisted by the State of Florida Department of Revenue, interpreted the uses for “operation and maintenance of parks and recreation programs *and* facilities established with the proceeds of the surtax” to authorize use of the infrastructure surtax for the “operation and maintenance of parks and recreation programs, as well as facilities originally established with surtax proceeds”⁴.

Q. The Board of County Commissioners finds that the Save Our Lagoon Project Plan presented with this Ordinance, along with the Indian River Lagoon Comprehensive Conservation and Management Plan⁵ referenced in the Surface Water Management Element of the Brevard County Comprehensive Plan, constitute a recreation program within the meaning of section 212.055(2)(g), Florida Statutes based upon the goals, objectives and policies in each respective plan, as set forth in the following subparagraph R:

R. **Brevard County Comprehensive Plan: Surface Water Management Element: Policy 1.3:** The Natural Resources Management Office shall be the lead agency for the development and implementation of the Master Stormwater Management Plan and shall coordinate its efforts with the St. John's River Water Management District on the **Indian River Lagoon Comprehensive Conservation and Management Plan** (CCMP), Total Maximum Daily Loads (TMDL's) and the National Pollution Discharge Elimination System (NPDES) permit schedule and requirements.

Indian River Lagoon Comprehensive Conservation and Management Plan:

As part of the effort to coordinate and compliment the IRL SWIM and IRL CCMP plans, the IRL NEP adopted the three IRL SWIM goals:

Goal 1: To attain and maintain water and sediment of sufficient quality to support a healthy estuarine lagoon ecosystem;

Goal 2: To attain and maintain a functioning, healthy ecosystem which supports endangered and threatened species, fisheries, commerce and **recreation**;

Goal 3: To achieve heightened public awareness and coordinated interagency management of the Indian River Lagoon ecosystem.

⁴ Local Government Financial Information Handbook, July 1996, *Florida Advisory Council on Intergovernmental Relations, with the assistance of the Department of Revenue and its Division of Economic and Demographic Research, Joint Legislative Management Committee, Florida Legislature*; p. 185;
<http://edr.state.fl.us/Content/local-government/reports/lgfi96.pdf>

⁵ https://www.epa.gov/sites/production/files/2015-09/documents/ccmp_update_2008_final.pdf

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The IRL NEP added one additional goal to the CCMP relating to the identification of long term funding resources for implementation of the CCMP's recommendations:

Goal 4: To identify and develop long-term funding sources for prioritized projects and programs to preserve, protect, restore and enhance the Indian River Lagoon system.

Objective: Develop and implement a coordinated scientific conservation and management strategy to preserve, protect and restore biodiversity in the Indian River Lagoon.

Point Source Discharges Action Plan

Objective: To ensure compliance with the Indian River Lagoon Act and to reduce or eliminate, where possible, industrial and domestic wastewater discharges to the Indian River Lagoon

PS-1 Ensure compliance with the **Indian River Lagoon Act, Chapter 90-262, also known as the Indian River Lagoon Act.**

PS-3 Reduce or eliminate industrial discharges to the Indian River Lagoon.

On-Site Sewage Treatment and Disposal Systems Action Plan

Objective: Determine the impacts on on-site sewage treatment and disposal systems (OSTDS) on the resources of the Indian River Lagoon and to develop and implement strategies to address these impacts.

OSDS-4: Promote the connection of areas served by OSTDS to central sewer service or, where connection to central sewer is not feasible, promote the development and use of alternative or advanced OSTDS technologies offering improved treatment in areas identified in the IRL SWIM studies as “problem” or “potential problem” for OSTDS. Identify and publicize potential funding sources that could be used to connect areas served by OSTDS to central sewer or support the development and use of alternative or advanced OSTDS technologies.

Fresh and Storm Water Discharges Action Plan

Objective: To develop and implement strategies to address the impacts of freshwater and stormwater discharges on the resources of the Indian River Lagoon.

FSD-4 Develop and implement best management practices (BMPs) for the management of stormwater, agricultural and fresh water discharges.

FSD-6 Reduce the impacts of muck on the Indian River Lagoon.

FSD-10 Encourage the proper use of fertilizers, herbicides, pesticides and reuse water.

FSD-11 Educate residents and property owners about the impacts of freshwater and

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stormwater discharges on the Indian River Lagoon and what they can do to reduce these impacts.

FSD-12 Continue reviews of plans of reclamation for water control districts and the standard operating procedures and project works of each large drainage system and agricultural drainage system. Develop and implement strategies to reduce discharges and pollutant loadings to the Indian River Lagoon from these sources.

FSD-13 Upgrade existing urban and agricultural stormwater systems to reduce pollutant loadings to the Indian River Lagoon.

FSD-14 Develop and implement appropriate mechanisms to fund and undertake the operation, maintenance and improvement of urban and agricultural stormwater management systems to reduce pollutant loadings

Seagrass Protection, Restoration And Management Action Plan

Objective: To protect and restore seagrass integrity and functionality in the Indian River Lagoon by reducing anthropogenic impacts and attaining and maintaining water quality capable of supporting a healthy, productive and sustainable submerged aquatic vegetation community meeting the seagrass coverage and depth targets developed by the water management districts for the Indian River Lagoon.

SG-1 Implement a program of protection, restoration and management activities needed to maintain, protect and restore the seagrass/SAV community of the Indian River Lagoon.

Wetlands Action Plan

Objective: Preserve, protect, restore and enhance the wetland resources of the Indian River Lagoon region.

W-5 Continue the restoration and rehabilitation of impacted or impounded coastal wetlands.

Fisheries Action Plan

Objective: Conserve, protect, and restore the fin and shellfish resources of the Indian River Lagoon

F-1 Conserve, protect, restore and manage the finfish and shellfish resources in the Indian River Lagoon region.

Public Involvement and Education Action Plan

Objective: Facilitate implementation of the Indian River Lagoon (IRL) Comprehensive Conservation and Management Plan (CCMP) through public involvement and education.

PIE-1 Implement and expand public involvement and education projects or programs.

½ sales tax: IRL only

PIE-4 Increase public and governmental involvement in activities designed to protect and restore the resources of the Indian River Lagoon.

PIE-5 Strategically prioritize and implement public education programs based on pollution potential, perceived likelihood for behavior change, resource availability, and opportunities that arise.

Brevard County Comprehensive Plan: Surface Water Management Element:

Policy 1.7 Brevard County should continue the public information program on the value of stormwater management. The County should continue to coordinate this program with Natural Resource Conservation Service (NRCS), the Indian River Lagoon National Estuary Program and other appropriate agencies.

Policy 4.11 Brevard County will continue to identify and map point and nonpoint sources of pollution within the Indian River Lagoon system and watershed to identify and reduce point and nonpoint sources of pollution. This program shall be coordinated with other federal, state and local agencies.

Conservation Element

Policy 3.3 Brevard County shall continue to make efforts to prevent negative impacts of development in and adjacent to the Indian River Lagoon and its tributaries designated as Class II waters, Aquatic Preserves and Outstanding Florida Waters by implementing and revising as necessary, the Surface Water Protection Ordinance...

Policy 3.4 Brevard County shall continue to prevent negative impacts of development in and adjacent to Class III waters (except Outstanding Florida Waters and Aquatic Preserves) along the St. Johns River and Indian River Lagoon and its tributaries by implementing and revising as necessary, the Surface Water Protection Ordinance...

Policy 3.8 When deemed necessary to meet State-mandated water quality standards, Brevard County may establish setbacks from the shoreline of the Indian River Lagoon for septic tanks and drainfields. Such setbacks shall at a minimum, be in accordance with F.S. 381.0065(4), as may be amended. In those cases where there is insufficient lot depth to meet County-established setbacks more stringent than those established by State statute, septic tanks and drainfields shall be located in accordance with F.S. 381.0065(4), as may be amended.

Policy 3.10 Brevard County shall continue to work with the St. Johns River Water Management District (SJRWMD), FDEP, and Indian River Lagoon Program (IRLP) and other appropriate agencies in developing appropriate water quality standards for estuarine waters within the Indian River Lagoon.

Policy 3.11 Brevard County shall continue to support programs for plugging free-flowing artesian wells, with highest priority being given to those adjacent to the Lagoon.

Policy 3.13 Brevard County strongly supports the designation of the Indian River Lagoon from SR 405 north to the County line as an Aquatic Preserve.

Policy 3.15 By 2013, the County shall establish appropriate protective measures along conveyance systems and tributaries of the St. Johns River and Indian River Lagoon to meet State

½ sales tax: IRL only

and Federal water quality standards.

S. In January through March 2016, Brevard County residents endured the most extensive and intensive algal bloom ever recorded in the Indian River system during winter/spring months. The collapse of this bloom in March resulted in one of the most extensive fish kills ever recorded in the county. The winter/spring 2016 bloom followed an algal super bloom that occurred in 2011, brown tides that followed in 2012, 2013 and 2015, and unusual mortality events for dolphins, manatees and pelicans.

T. On March 29, 2016 the Board of County Commissioners voted to send a letter to the Governor requesting assistance. The Governor sent the leadership of multiple state agencies to assess the fish kill and meet with County staff and members of the Legislative delegation to discuss solutions and resource needs. The County was advised to develop a project plan to include a comprehensive list of projects to restore lagoon health, estimate the funding needs for those projects and determine a timetable for implementation. With such a plan, the County would be in a better position to seek dedicated cost-share from the FL Legislature.

U. On April 7, 2016 the County Commission directed staff to develop a Save Our Lagoon Project Plan to restore health to the lagoon and explore dedicated funding mechanisms to fund the entire plan or provide the local match needed to leverage State appropriations and other grants.

V. The proposed Save Our Lagoon Project Plan includes a portfolio of projects to **Reduce** primary sources of pollution (including excess fertilizer, septic systems, nutrient rich reclaimed water, and stormwater); **Remove** historical pollution that is now accumulated in muck deposits that smother seagrass, cloud the water column, release nutrients and deplete oxygen; **Restore** natural stabilization and filtration systems (including oyster bars and living shorelines); and a process to monitor project implementation, efficiency, and cost-effectiveness with a volunteer citizen oversight committee to **Respond** to monitoring data, new technology, changing conditions, alternative project proposals and recommend plan revisions to the County Commission annually. The projected cost of the proposed plan is \$302,881,000.

SECTION 3. REFERENDUM. A referendum election is hereby called and ordered to be held in Brevard County at the time of the next general election to be held on November 8, 2016 to determine whether the board of county commissioners should levy a ½ cent sales tax for financing the county's share of the cost for the Save Our Lagoon project plan.

SECTION 4. NOTICE OF REFERENDUM. This Ordinance shall be published twice in full as part of the Notice or the Referendum Election, together with a notice in substantially the form attached hereto as Exhibit "A" in *Florida Today*, a newspaper of general circulation in the County. The publications shall occur once in the fifth week and once in the third week prior to the week which includes November 8, 2016.

SECTION 5. NOTICE TO SUPERVISOR OF ELECTIONS. Upon adoption of this ordinance, notice of the calling of the referendum election provided for in this Ordinance shall be delivered to the Supervisor of Elections. This Ordinance shall not be implemented unless the Supervisor of Elections provides her consent to a date when the registration books can be available pursuant to Section 100.151, Florida Statutes.

SECTION 6. PLACES OF VOTING, INSPECTORS, CLERKS. The polls will be open at the voting places on the date of the referendum during the times prescribed by law. All qualified electors residing within the County shall be entitled and permitted to vote at the referendum on the proposition set forth below. The places of voting and the inspectors and clerk for the referendum shall be those designated by the Supervisor or Elections of Brevard County.

SECTION 7. OFFICIAL BALLOT. Ballots to be used in the referendum shall contain a statement of the description of the proposed issue on economic development ad valorem tax exemptions and shall be in substantially the following form:

BALLOT
Brevard County, Florida

Caption: 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?

FOR the ½ cent sales tax
 AGAINST the ½ cent sales tax

SECTION 8. ABSENTEE VOTING. The form of ballots to be used in such referendum for absentee voters shall be the same as used at the polling places for said referendum or such other form as may be prescribed by law.

SECTION 9. PRINTING OF BALLOTS. The Supervisor or Elections for Brevard County is hereby authorized and requested to (a) have sample ballots printed and to deliver such sample ballots to the inspectors and clerks on or before the date and time for opening of the polls for such referendum and (b) have official ballots for use in such referendum printed and delivered in accordance with law.

SECTION 10. PAYMENT OF REFERENDUM EXPENSES. The County Manager is hereby authorized and directed to approve the payment of lawful expenses associated with conducting the referendum election and the Clerk of the Board of County Commissioners is hereby authorized and directed to disburse the funds necessary to pay such expenses.

SECTION 11. VOTER REGISTRATION BOOKS. The Supervisor of Elections for Brevard County is hereby authorized and requested to furnish the poll workers, inspectors and clerks required at each place where the votes are to be cast in such referendum, as well as applicable portions of the registration books or certified copies thereof showing the names of the qualified electors residing in the County.

SECTION 12. ELECTION PROCEDURE. The referendum shall be held and conducted in the manner prescribed by law and shall, as soon as practicable, be returned and canvassed in the manner prescribed by law. The result shall show the number of qualified electors who voted at such referendum and the number of votes cast respectively for and against approval of the proposition. Upon certification in the manner prescribed by law, the results shall be recorded in the minutes of the Board of County Commissioners.

SECTION 13. ELECTION RESULTS. If the majority of the votes cast at such a referendum shall vote for the proposition, the Ordinance shall take effect and be implemented and administered by the Board of County Commissioners through its County Manager and designees.

SECTION 14. APPROVAL OF SAVE OUR LAGOON PROJECT PLAN

The Save Our Lagoon Project Plan (SOLPP), as presented to the Board of County Commissioners on August 23, 2016, is hereby approved and adopted. The implementation of the SOLPP shall be undertaken by the Brevard County Board of County Commissioners through and under the supervision of the County Manager or his designee, with Oversight Committee input and coordination with the Indian River Lagoon Council and all state and federal agencies participating in the implementation of the SOLPP.

SECTION 15. LEVY OF ½ CENT SALES TAX FOR INDIAN RIVER LAGOON RESTORATION

As authorized under section 2121.055(2), Florida Statutes, upon the effective date of this ordinance there is hereby levied for a period of ten years a ½ cent infrastructure sales surtax to be collected, deposited and expended for Indian River Lagoon improvements, projects and programs, as specified in this ordinance.

SECTION 16. SAVE OUR INDIAN RIVER LAGOON PROJECT TRUST FUND.

If the county electorate approves the ½ cent infrastructure sales surtax provided for in this ordinance, the County Manager, or his designee in cooperation with the Board Finance division of the Office of the Clerk of the Circuit Court, shall create a Trust Fund reserved solely for the deposit of revenues derived from the approved tax. Thereafter, all revenues collected from the tax shall be deposited into the Trust Fund and shall be distributed in the manner provided for in

the interlocal agreement required under section 212.055(c)1., Florida Statutes. Trust Fund expenditures shall be restricted to :

1. reasonable and necessary capital improvement, capital maintenance and other projects and programs implementing a) the Save Our Lagoon Project Plan, as adopted hereunder or as amended from time to time; b) in the Indian River Lagoon Conservation and Management plan, as amended from time to time; and/or c) with the approval of the Board of County Commissioners, the costs of any lagoon restoration project or program identified and pursued in accordance with any future plan, as amended from time to time, enacted by the Indian River Lagoon Council created pursuant to the Indian River Lagoon National Estuary Program Interlocal Agreement dated February 19, 2015. Such reasonable and necessary expenses may include lagoon restoration project permitting costs and the costs experts used in obtaining or consulting on the acquisition of such permits;
2. Costs of issuing bonds, including financial advisor fees; bond counsel fees; and bond validation attorneys and expert witness fees, if any are utilized;
3. lagoon restoration project related costs, if any, contemplated by the interlocal agreement required by section 212.055(2), Florida Statutes;
4. any reasonable lagoon restoration related project or expense approved by the Board of County Commissioners, at its discretion, upon recommendation by the Save Our Lagoon Oversight Committee established hereunder;
5. Lagoon restoration project related operation and maintenance expenses;
6. Save Our Lagoon Project Plan education and community awareness initiatives or programs;
7. any membership dues payable to the Indian River Lagoon Council.

Such expenditures shall be made in accordance with established county contract, bidding and authorized administrative expense limitations, as set forth in Board policies and County Manager Administrative Orders.

Such expenditures may include use for grant matching funds for federal, state or private contributions pledged for paying expenses or costs related to lagoon restoration projects, or repayment of bonds, if any, issued for financing the cost of capital improvement or capital maintenance projects related to the restoration of the Indian River Lagoon.

SECTION 17. SAVE OUR LAGOON OVERSIGHT COMMITTEE

There is hereby created an Save Our Lagoon Oversight Committee which shall consist of seven members. The intent of this volunteer oversight committee of diversely skilled citizens would be to recommend updates of the Save Our Lagoon Project Plan to the Board of County Commissioners annually and to provide public oversight and a transparent process that not only allows, but fosters, development and implementation of better, less costly and/or more timely tools and techniques for restoration of the Indian River Lagoon.

A. STRUCTURE:

Membership shall consist of seven representatives and seven alternates. Committee members

shall represent a diversity of demonstrated expertise and experience to annually update and improve the Save Our Lagoon Project Plan. Each member and alternate shall represent at least one of the following fields of expertise: science, technology, economics/finance, real estate, education/outreach, tourism, and lagoon advocacy. A good working knowledge of lagoon water quality issues and sources of pollution is highly desirable. A Chair and Co-Chair shall be elected by a majority vote of the Oversight Committee members.

B. APPOINTMENT PROCESS:

The County Commissioners shall call for interested volunteers to submit their qualifications to the Natural Resources Management Department. ONRM Department staff will review the applications and provide a qualified list of applicants to the League of Cities and to the County Commission to ensure that municipal and County interests are represented. The League will nominate members for three fields of expertise and nominate alternates for the remaining four fields of expertise. Each Commissioner will review the qualifications of the remaining applicants and score them from 1 to 3. Department staff will tabulate the ranking scores to select members for the remaining four fields of expertise and alternates for the remaining three fields of expertise. The County Commission will appoint the League of City nominees to the Oversight Committee and fill the remaining seats with candidates with the highest County Commission ranking. Appointments will be for two year terms, after which time members and alternates may be considered for reappointment or replacement. If replacement members or alternates are required, the entity who selected that member can upgrade the alternate to the member seat, choose a replacement from the existing pool of applicants, or request a new call for qualified citizen volunteers.

C. RESPONSIBILITIES:

1. Although Save Our Lagoon plan was developed with the best information available in 2016, verifying the sources of water quality pollution and keeping up with technological advancements is important for maximizing timely and cost-effective solutions. In order to review and adapt to better information and opportunities through time, monitoring is necessary. As projects from this plan are implemented, the actual costs and nutrient reduction benefits will be tracked.

2. Brevard County staff will provide project monitoring reports to the Oversight Committee and will work with them to recommend adjusting the planned projects, as needed. An adaptive management process shall be utilized to allow alternative projects to be submitted by municipalities and other community or lagoon focused partners for review by the Oversight Committee for inclusion in the next annual update to this plan.

3. The role of the Oversight Committee will be to review monitoring data on timeliness of project delivery, actual and updated project costs, and actual nutrient removal effectiveness, review new literature and local studies on the types of projects included in the plan and potential alternative project types, evaluate alternative project proposals received from the community, and recommend annual adjustments to the plan including Table 46, the Timeline for Funding Needs.

4. The Committee's recommendations will be presented annually by the Committee Chair, working with Department staff, to the Board of County Commissioners for their inclusion; modification and inclusion; or non-inclusion in the Save Our Lagoon plan.

5. Upon County Commission approval, a project or projects that deliver comparable

nutrient removal benefits may be added to listed Save Our Lagoon projects or substituted for the funding allocated to one or more other Save Our Lagoon projects in the same sub-lagoon. Unless otherwise agreed to by the County Commission, if a substituted project costs more than the project listed in the Save Our Lagoon plan, the requesting partner must provide the balance of the costs.

SECTION 18. SEVERABILITY. In the event that any word, phrase, clause, sentence or paragraph hereof shall be held invalid by any court of competent jurisdiction, such holding shall not affect any other word, clause, sentence or paragraph hereof.

SECTION 19. REPEALING CLAUSE. All ordinances or other actions of the County which are in conflict herewith are hereby repealed to the extent of such conflict or inconsistency.

SECTION 20. EFFECTIVE DATE. This Ordinance shall take effect upon November 8, 2016 if the ½ cent sales tax is approved by a majority of the electors of the county voting in the referendum on that date. However, the Ordinance shall not be implemented until such time as a) the Supervisor of Elections has consented to obtaining and making registration books available in accordance with Section 100.151, Florida Statutes; b) election results demonstrate an affirmative vote of the majority of the electors has approved the Save Our Indian River Lagoon ½ cent sales tax.

DONE AND ADOPTED in Regular Session of the Board of County Commissioners of Brevard County, Florida this 23rd day of August, 2016.

ATTEST:

BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA

Scott Ellis, Clerk

By: _____
Jim Barfield, Chair

(as approved by the Board on August 23, 2016)

Exhibit "A"

**NOTICE OF SAVE OUR SAVE OUR INDIAN RIVER LAGOON ½ CENT SALES TAX
REFERENDUM**

Pursuant to the provisions of Section 100.342, Florida Statutes, notice is hereby given that a referendum election shall be held on Tuesday, November 8, 2016, to determine whether the Brevard County Board of County Commissioners should levy a ½ cent infrastructure sales tax for financing the county's share of the cost for the Save Our Lagoon Project Plan as described in the following Ordinance number 2016-_____ adopted by the Board of County Commissioners of Brevard County, Florida on _____, 2016:

(Set forth adopted Ordinance here)

Save Our Lagoon Project Plan



August 9, 2016

Presentation Outline

2

- Introduction
- Economic Importance
- Science-Based Targets
 - Impacts of Muck
- Data-Driven Project Selection
 - Transparency/Accountability/Adaptability
- Funding Options
- Acknowledgements



Presenters

3

- Virginia Barker, Director, Natural Resources Management Department
- Al Vazquez, Managing Partner, Closewaters LLC
- Dr. John Windsor, Professor Emeritus, Florida Institute of Technology Oceanography and Environmental Science
- Marcy Frick, REM, Senior Water Resources Engineer, Tetra Tech Inc.



Why Are We Here?

- 2011 algal superbloom
- 2011 secondary bloom
- 2012 brown tide
- 2013 brown tide
- 2013 unusual mortalities
- 2015-2016 brown tide
- 2016 extensive fish kill
- 60% loss of seagrass beds



2016 Events

- March fish kill
- April
 - Letter to the Governor
 - State agency response
 - Legislative delegation
 - Faster federal permits
- May
 - Board direction to develop referendum options
 - Board direction to draft a project plan



Indian River Lagoon

A deadly sequence of events

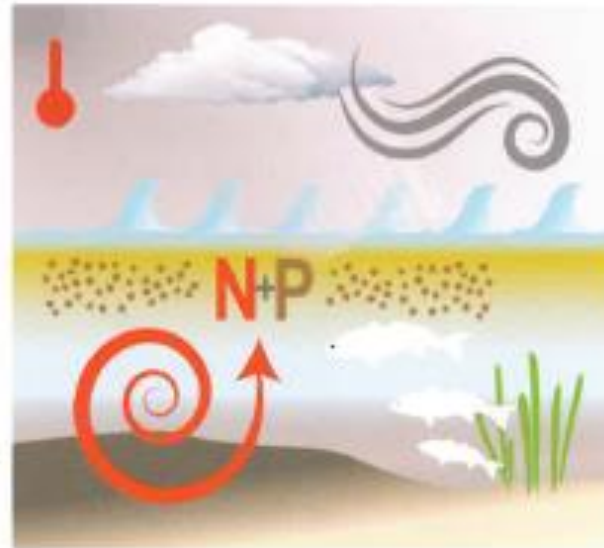
Decades of pollution

Winter 2015

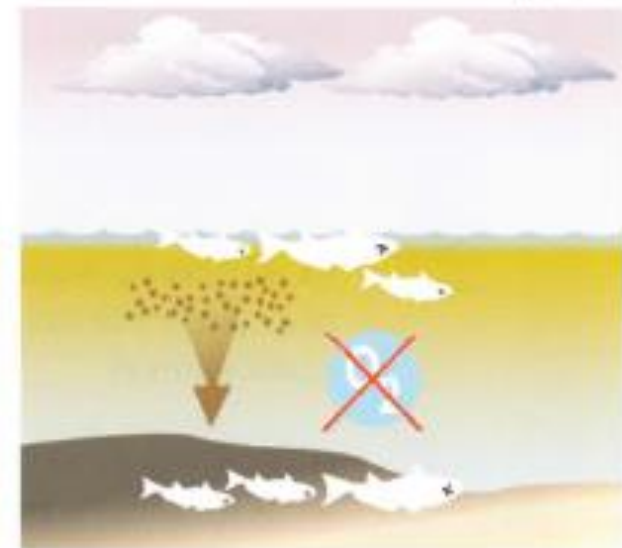
March 2016



Excess nutrients are delivered



A time bomb explodes



Oxygen plummeted as algae died



www.mrcirl.org

Contact information

Leesa Souto, Ph.D.
Executive Director
Marine Resources Council
3275 Dixie Hwy, NE
Palm Bay, FL 32905
Ph. 321-725-7775

Science Communication Team

H. Kelsey, C. Donovan, J. Hawkey
Integration & Application Network
University of Maryland Center for
Environmental Science

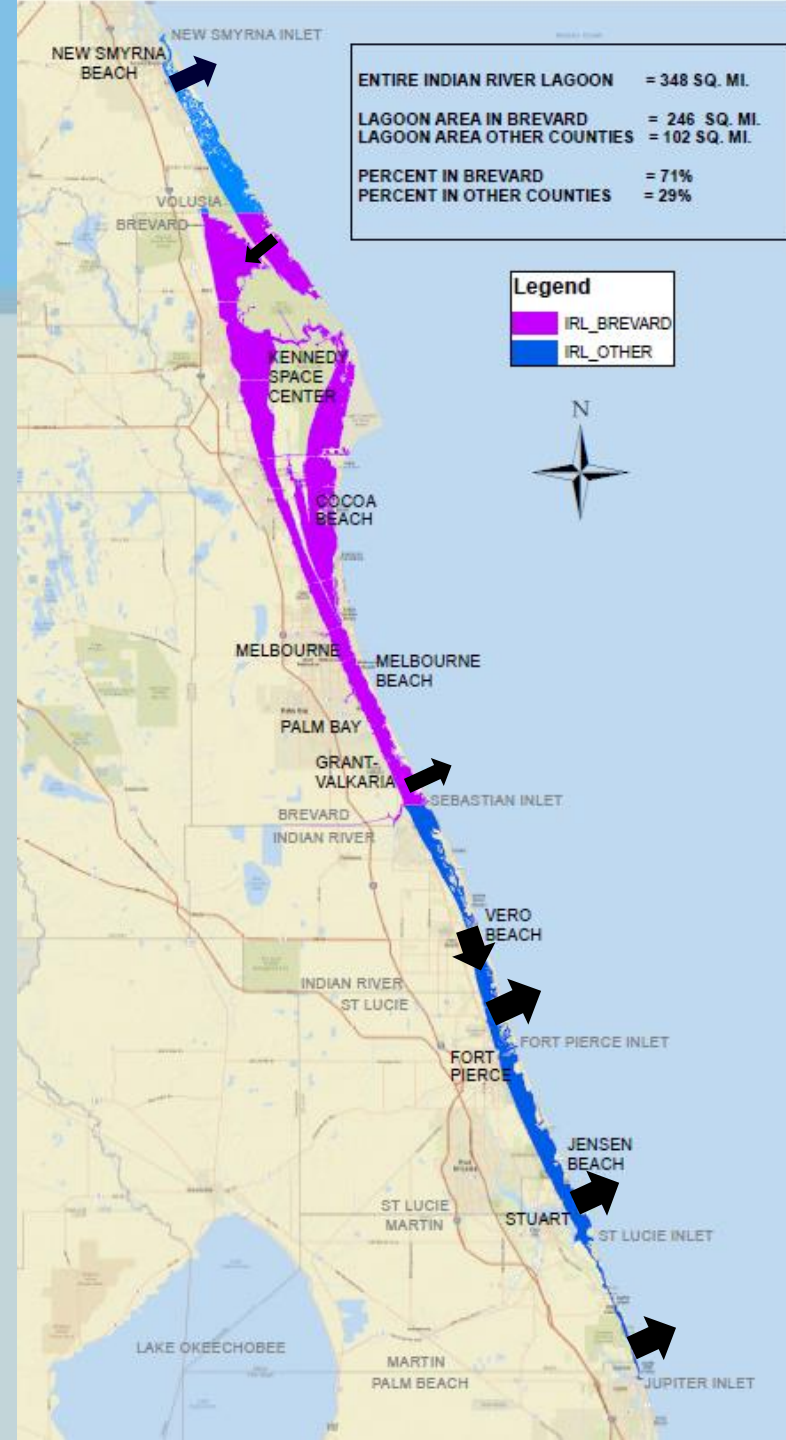
iafi.umces.edu



Indian River Lagoon

7

- 71% of the IRL is in Brevard County
- 157,000 acres
- Local pollution
- Local responsibility
- Local opportunity



Delicate Balance

8

- IRL is an Estuary of National Significance
- One of the greatest diversity of plants and animals in the nation
- Balance has been disturbed:
 - Excessive pollutant inputs to the lagoon
 - Accumulation of harmful muck deposits
 - Loss of natural filtration systems



Plan Development

9

- Address remaining major sources of pollution
- Minimal cost to achieve regulatory compliance and healthy conditions;
 - Maximize benefits
 - Science and data-driven to minimize risk
 - Optimize Return on Investment
 - Allow for innovation and adaptation



Save Our Lagoon Project Plan

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Economic Importance of the Indian River Lagoon

Al Vazquez, Managing Partner
Closewaters LLC



\$2 Billion Potential Economic Gain with Restoration

Expected Present Value (Millions) Annual Benefits



Not Included: Health and Collateral Brand Benefits e.g. Beach Tourism

\$4.3 Billion Potential Economic Loss without Restoration

Expected Present Value (Billions)

Annual Losses (Millions)

Tourism, Recreation -\$3.0

-\$237

Property Value -\$1.2

-\$92

Commercial Fishing -\$0.087

-\$6

-\$335

Not Included: Regulatory Fines, Pathogen Outbreak, Collateral Brand Impacts

Return on Investment and the Value of Timeliness

13

- \$6.3 billion benefit:
 - \$2 billion gain
 - \$4.3 billion loss avoidance
- \$302 million plan
- 20:1 Benefit to Cost Ratio
- \$526 million/year at risk with delay
 - 26% ROI for completion in 5 years
 - 10% ROI for completion in 10 years



FY 2016-2017 Proposed County General Fund Budget

GF Revenue Sources:		GF Uses:	
Current Ad Valorem	\$132,922,029	Charter Officers	\$105,248,379
Prior Year Ad Valorem	\$380,000	Court Operations	\$2,805,831
Communication Svc Tax	\$6,398,374	Outside Agencies	\$510,200
FPL Franchise Fees	\$10,133,158	Mandates	\$25,953,827
State Shared Revenue	\$11,456,316	Reserves	\$15,808,953
Local Half Cent Sales Tax	\$25,038,719	Total GF Uses	\$150,327,190
All Other Operating Revenue	\$8,759,462	BOCC GF Supported Departments	
Balance Forward	\$18,457,810	Total Comp and Benefits	\$30,942,164
Non-Operating Revenue	\$6,863,981	Operating and Capital Expenses	\$33,946,465
Total General Fund Sources:	\$220,409,848	Debt Service	\$5,194,029
		Total General Fund Uses:	\$220,409,848

3 Key Funding Points

15

1. General Fund of \$220 million cannot fund a \$302 million plan
2. County funding of \$302 million would enable leverage of matching funds to improve on bare-bones plan
3. Acceleration to 5 years increases ROI from 10% to 26% so it makes sense to finance at 4% to speed implementation



Decision Science

16

- Select most cost-effective projects and sequence into a multi-year plan
- Maximize the benefits for every dollar spent and minimize the unavoidable risks
- Involve local experts in plan development



Input from Subject Matter Experts

17

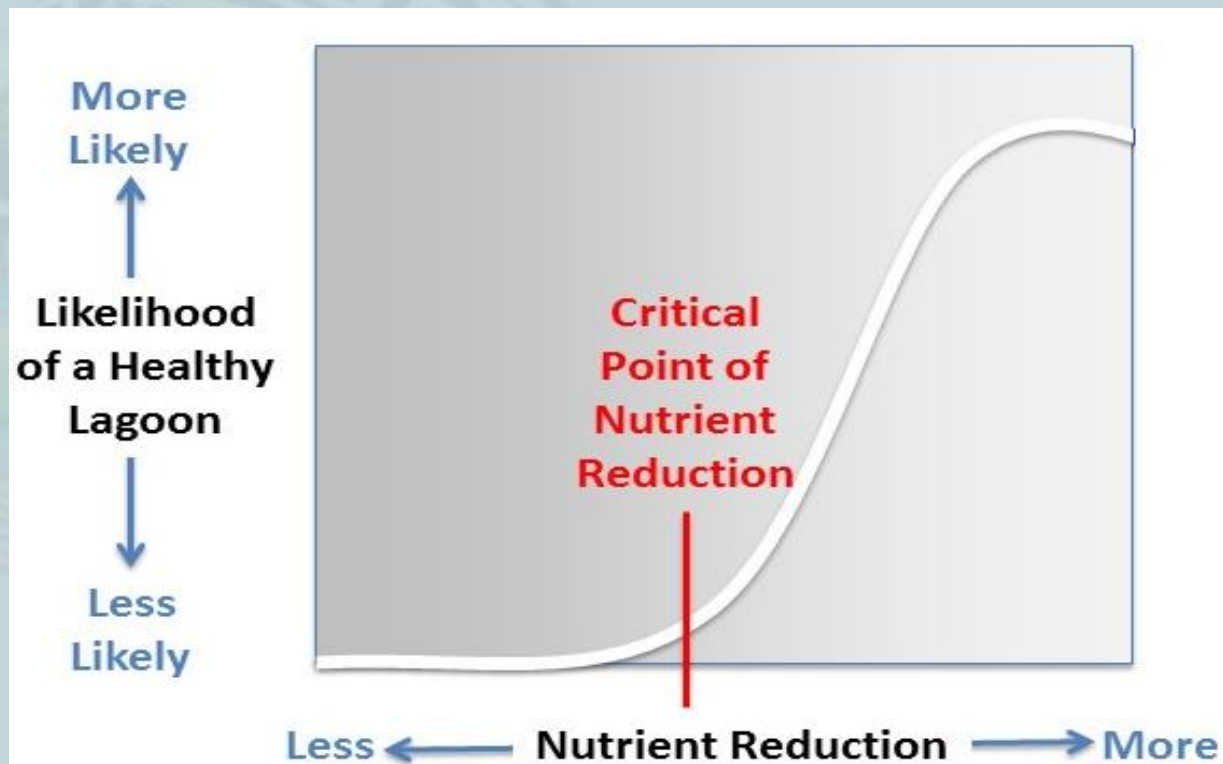
- Achieve nutrient abatement through a blend of options
- No one type of project alone can achieve adequate nutrient abatement
- Must stop excessive nutrient loading to minimize recurring muck accumulation



IRL Response Curve

18

- **“Critical mass” of nutrient** reductions needed to achieve significant and sustainable benefits



Save Our Lagoon Project Plan

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Science - Based Targets for Indian River Lagoon Health

Virginia Barker, Director
Natural Resources Management Department



Healthy Lagoon Targets

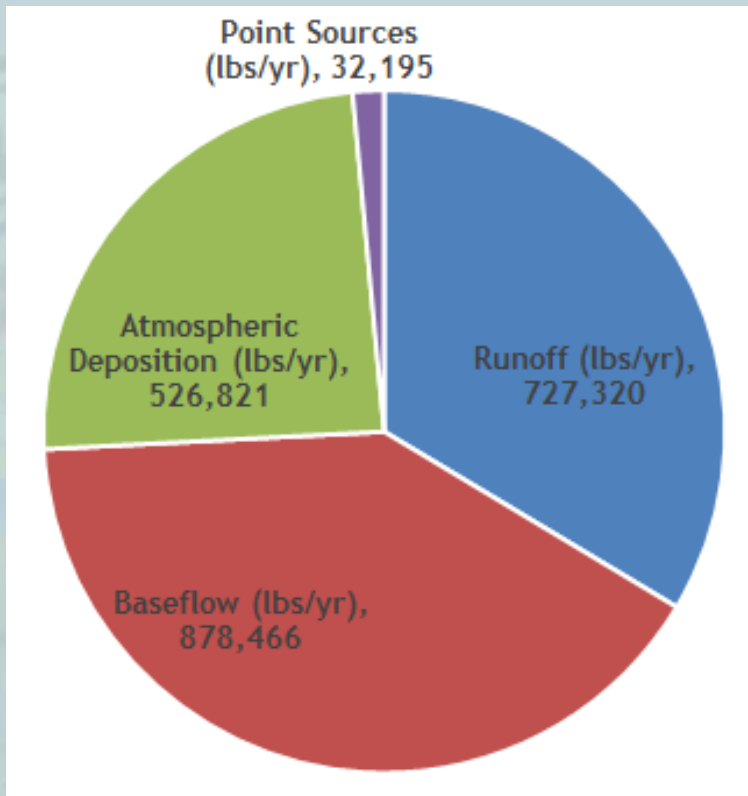
20

- Seagrass
 - Area to exceed 1943 mapped area
- Water Clarity
 - Algal blooms rare, bottom visible
- Dissolved Oxygen
 - Fish kills uncommon
- Clean, White, Sandy Sediment
 - Muck limited to deep pits and channels
- Filtration
 - Entire lagoon volume filtered annually

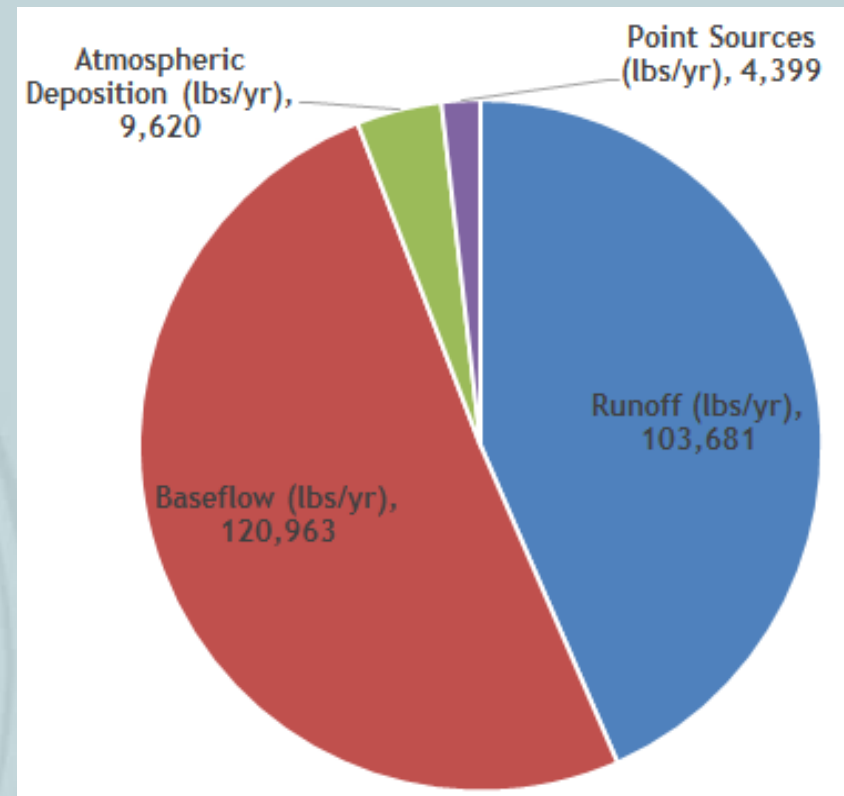


External Sources of Nutrient Pollutant into the IRL

Nitrogen Sources



Phosphorus Sources



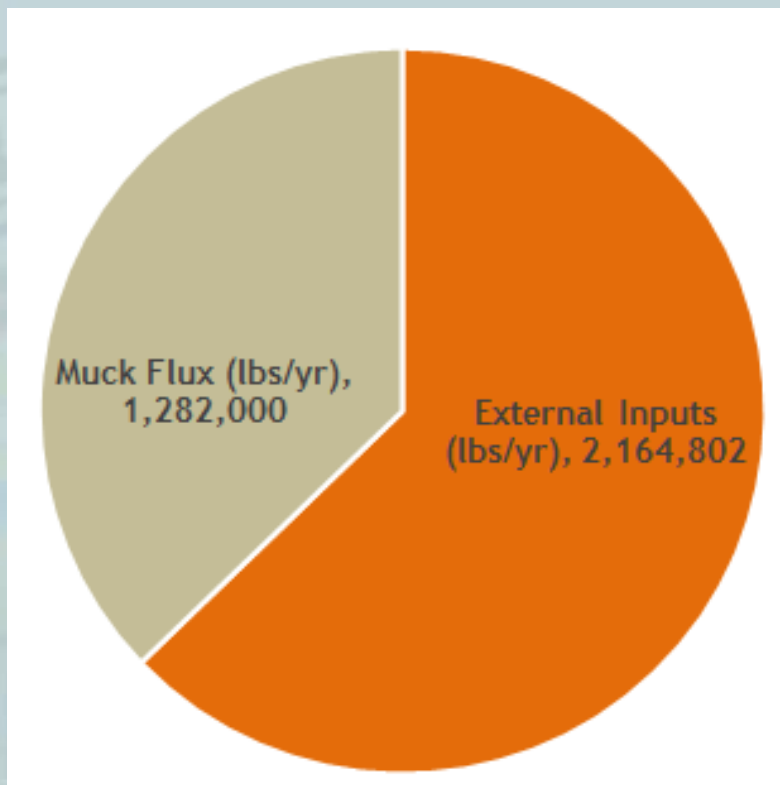
Source: IRL TMDL Refinement Studies, 2011-2016

Dr. Harvey Harper, Dr. Antony Janicki, Dr. Claudia Listopad, Dr. Steven Peene

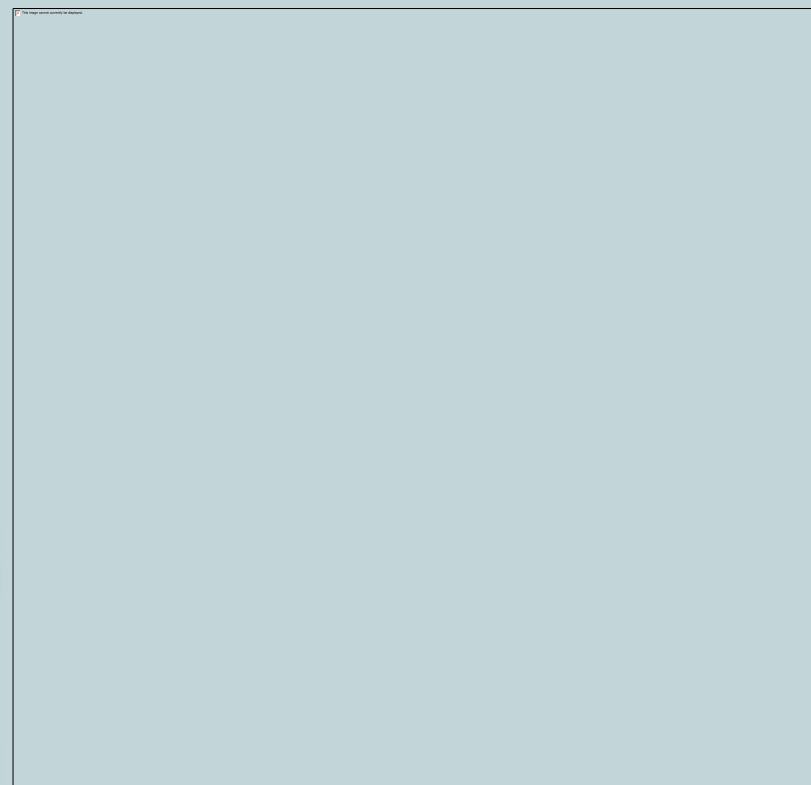


External Pollution Sources Versus Muck Flux in the IRL

Nitrogen Sources



Phosphorus Sources



Source: Personal Communication with Dr. John Trefry, 2016



Pollutant Sources Addressed in the Save Our Lagoon Project Plan

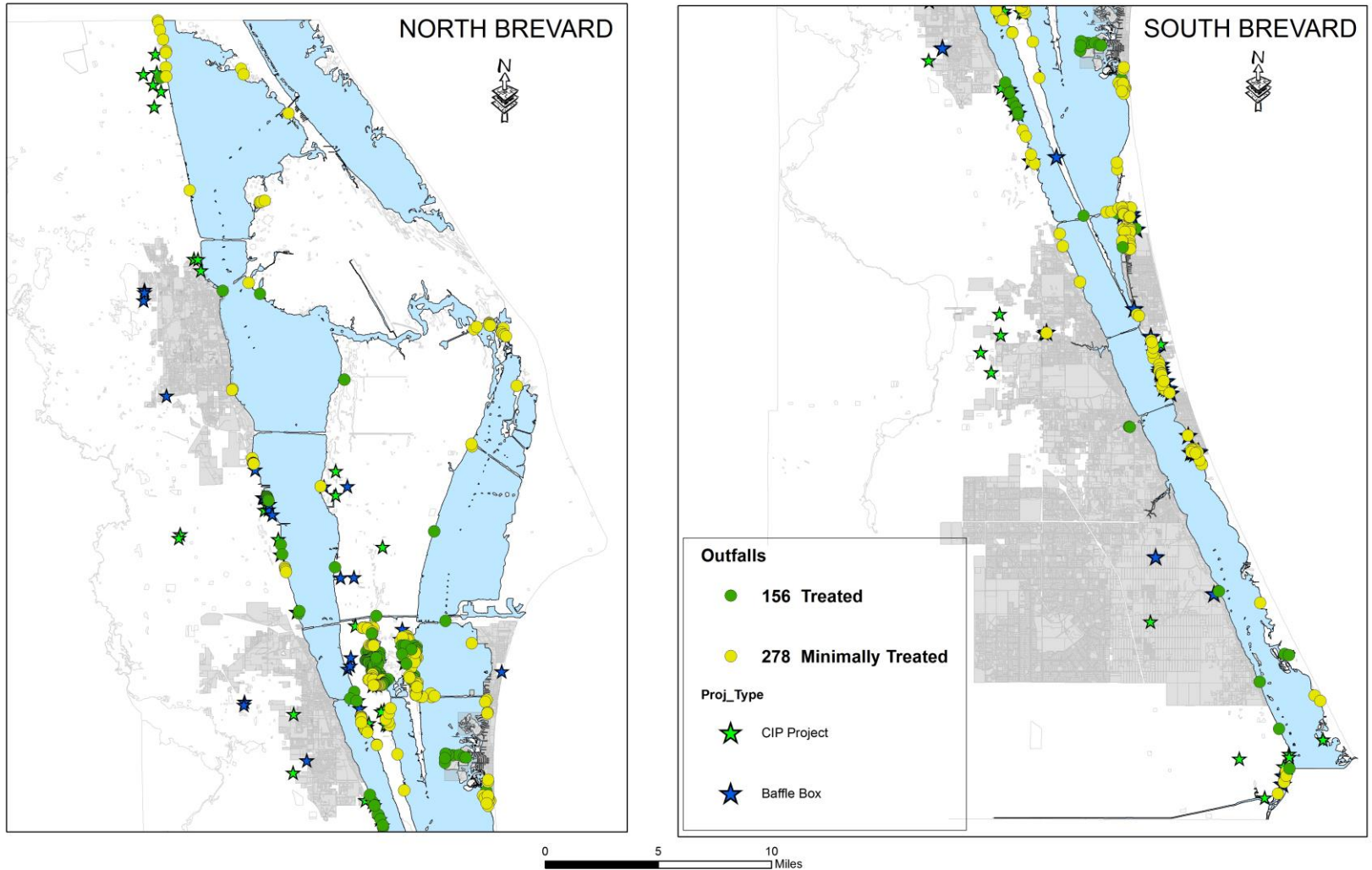
23

- ✓ Fertilizer
- ✓ Point sources - reclaimed water
- ✓ Septic systems
- ✓ Stormwater
- ✓ Muck flux
- Atmospheric



Existing Treatment

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Save Our Lagoon Project Plan



REDUCE
Pollution Inputs



REMOVE
Detrimental
Muck



RESPOND



RESTORE
Oysters, Clams and
Wetlands

Save Our Lagoon

26

Impacts of Environmental Muck Dredging

Dr. John Windsor
Professor Emeritus

Oceanography and Environmental Science
Florida Institute of Technology



What is the most important threat to Lagoon health?

27

- Fertilizer
- Point sources - reclaimed water
- Septic systems
- Stormwater
- Muck flux
- Atmospheric



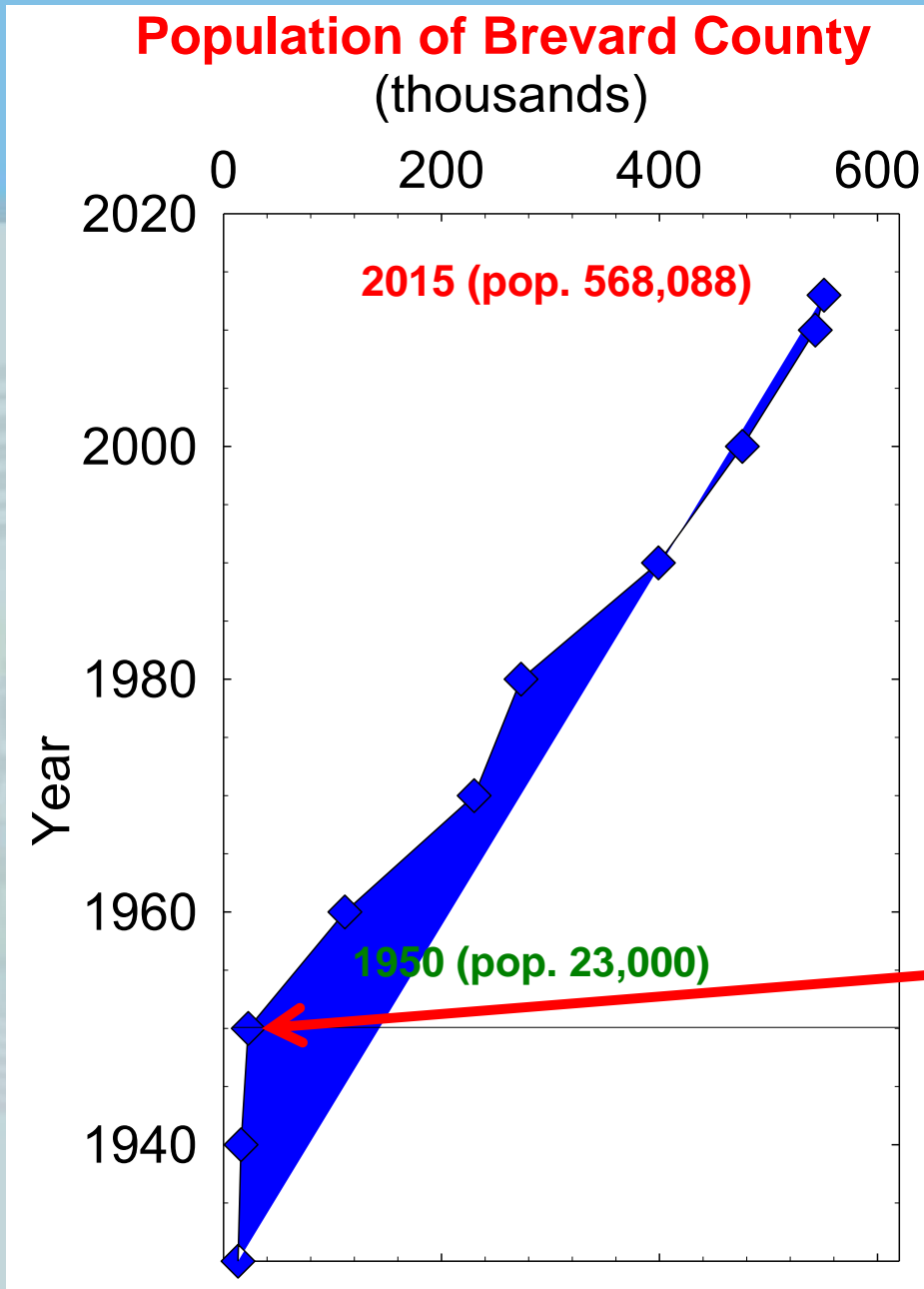


What is Indian River Lagoon muck?

29

- More than 75% water by weight
- More than 90% water by volume
- 76-99% silt and clay
- 11-22% organic matter
 - 4-7% organic carbon
 - 0.4-0.8% organic nitrogen





Courtesy Dr. John Trefry

Why is IRL muck important?

31

1. Increases turbidity and inhibits seagrass growth.
2. Depletes oxygen in sediment and water.
3. Covers the natural bottom and destroys natural biological habitats.
4. Stores and releases nutrients



Should muck be removed?

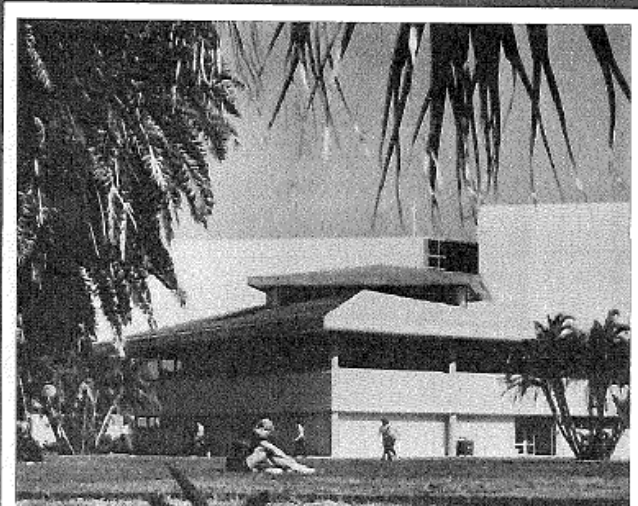
32

1. Decrease turbidity and enhance seagrass growth.
2. Increases oxygen in water.
3. Restores natural bottom.
4. No longer a source for nutrients!
5. IRL Muck can be moved by storms



1980s

F. I. T. SPEAKERS



Let's Get the Muck Off the Bottom
of the Indian River Lagoon
John H. Trefry



Scuba Diving

Robert Fronk

Tidal Inlet Phenomena

Lee E. Harris

Those Bloomin' Red Tide Organisms

Dean R. Norris

Coastal Oceanography

Ronnal P. Reichard

How to Prevent Barnacles

The Offshore Oil Industry

Geoffrey W. Swain

Deep Sea Oases: The Oceanographic Discovery of the Century

John H. Trefry

Marine Biological Dredging Along Florida's East Coast

Richard L. Turner

POLLUTION

Global Environmental Problems

Iver Duedall

Stormwater Runoff from Highways and Its Effect on the Natural Environment

John L. Leslie, III

Waste into Reefs

Walter Nelson

Why Is It So Important to Keep Our Groundwater Clean?

Ashok Pandit

Let's Get the Muck Off the Bottom of the Indian River Lagoon

John H. Trefry

Marine Pollution in Florida

Pollution: The Historical Perspective

Water Quality of the Indian River Lagoon

John G. Windsor, Jr.

Should muck be removed?

34

Muck is targeted in management plans:

IRLNEP Comprehensive Conservation and Management Plan (CCMP)

FSD-6 Reduce impacts of muck on Indian River Lagoon

IRL Surface Water Improvement and Management (SWIM)

IR-1-105D Muck Identification and Control

Brevard Comprehensive Maritime Management Master Plan (CM3P)

1B1-b Remove Muck from Interior Waterways



What is muck dredging?

35



Courtesy Dr. John Trefry

Is muck dredging perfect?

36

1. Current hydraulic dredging and dewatering practices are not perfect, although they are the best option available now - and good enough to get us started.
2. A dedicated funding source should drive innovation and production of better tools and techniques.
3. FIT is already testing potential draghead and dewatering improvements on a small scale in a canal.



What is the FIT Environmental Muck Dredging Research Project?

37

Research Goal:

To determine impacts of environmental muck dredging in Indian River Lagoon.

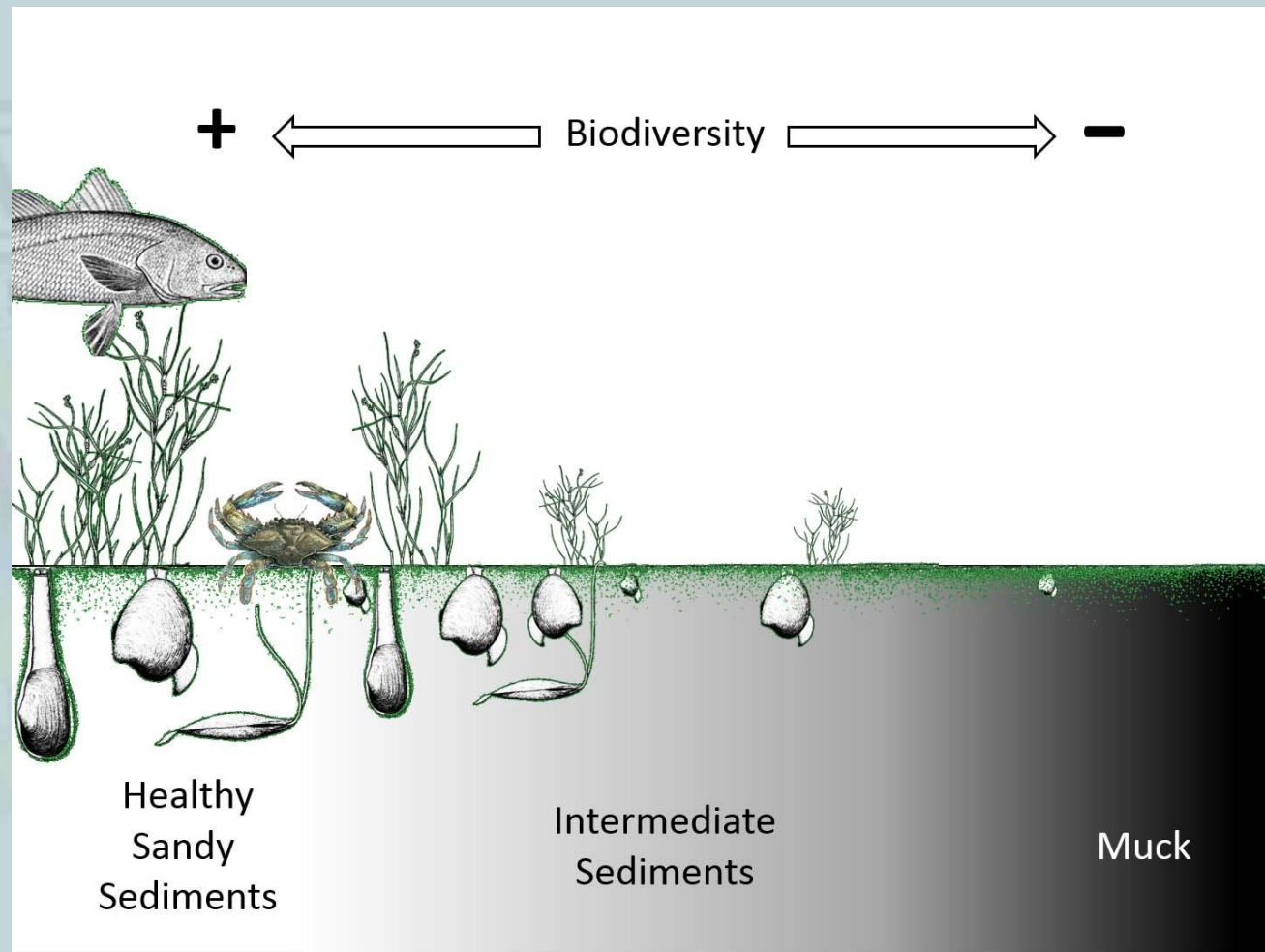
The Multidisciplinary Team:

- 10 Faculty
- 6 Research Staff
- Dozens of graduate/undergraduate students
- Collaboration with County staff, SJRWMD, FDEP, and external reviewers



What has FIT-EMD learned?

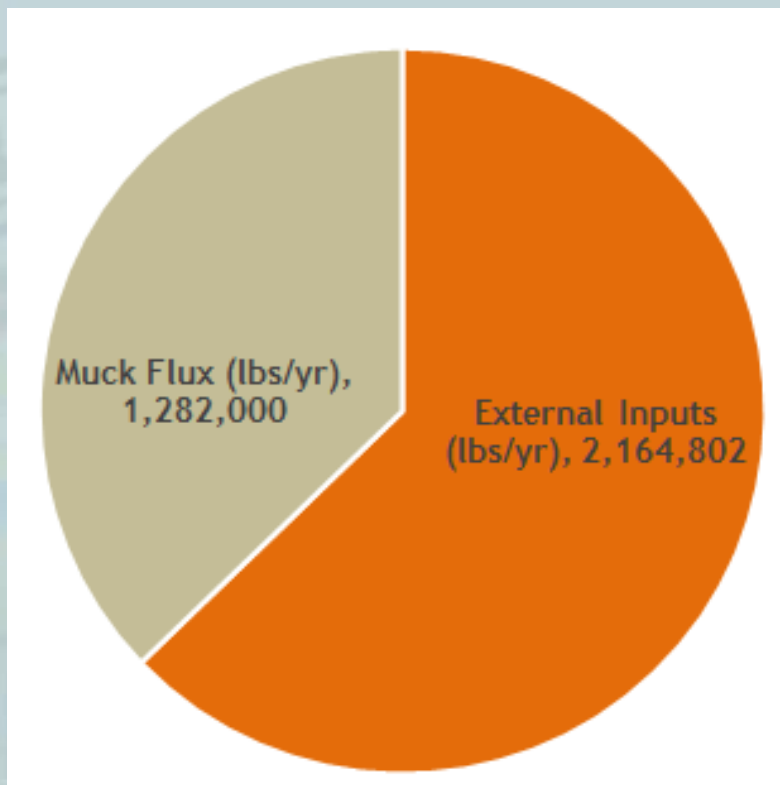
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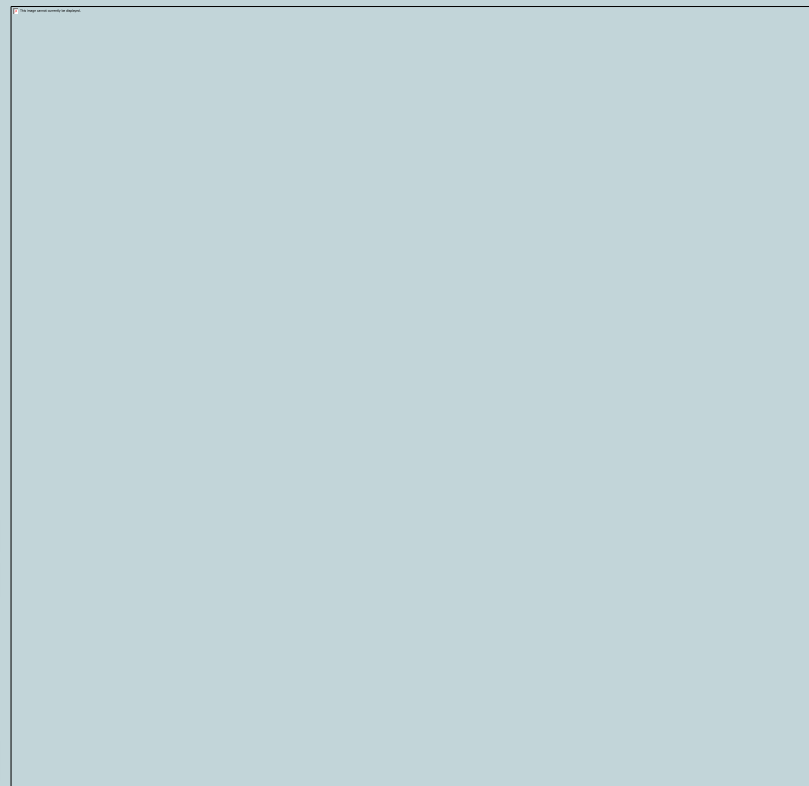
Courtesy Dr. Kevin Johnson

External Pollution Sources Versus Muck Flux in the IRL

Nitrogen Sources



Phosphorus Sources

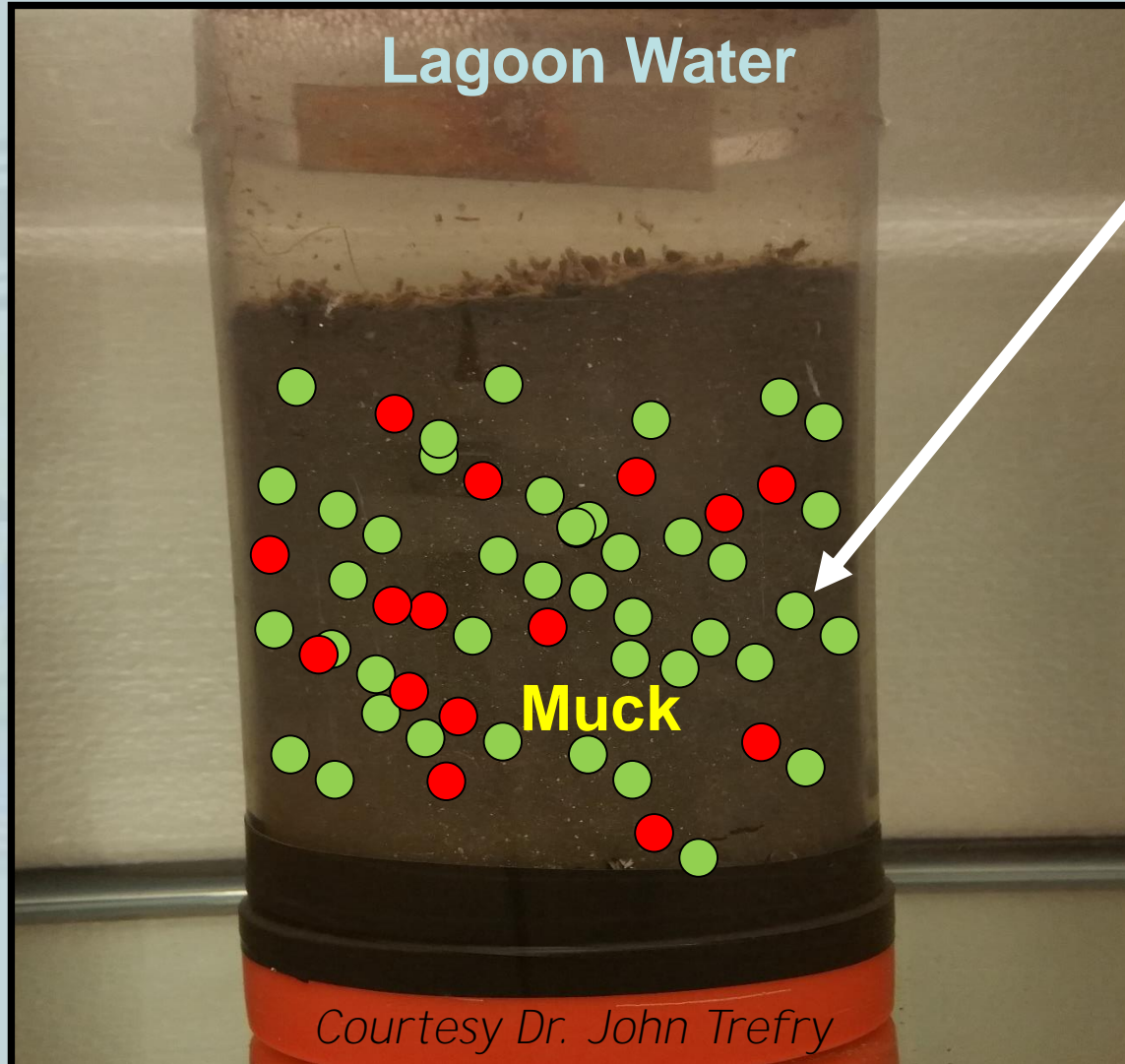


Source: Personal Communication with Dr. John Trefry, 2016



What is muck flux?

40



Billions of molecules of dissolved N and P are diffusing from the muck into the lagoon water.

Courtesy Dr. John Trefry



FIT Muck Research Team



the inputs
that form
muck.



Courtesy Dr. John Trefry

Save Our Lagoon Project Plan

42

Data Driven Project Selection for the Indian River Lagoon

Marcy Frick, Senior Water Resources Engineer
Tetra Tech Inc.



Project Selection


43

Projects were selected to:

- Maximize nutrient reductions
- Minimize cost
- Shorten lag time
- Reduce risk
- Optimize return on investment



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Reduce - Fertilizer

45

- Fertilizer ordinance compliance
- Reductions have occurred to date

Parameter	FY2013-14 lbs after Attenuation: Pre-Ordinance	FY2014-15 lbs after Attenuation: Post-Ordinance	Reductions from Ordinance to Date (lbs/yr)
TN	127,540	81,644	45,896
TP	12,640	3,252	9,388

BEFORE

AFTER

REDUCTION



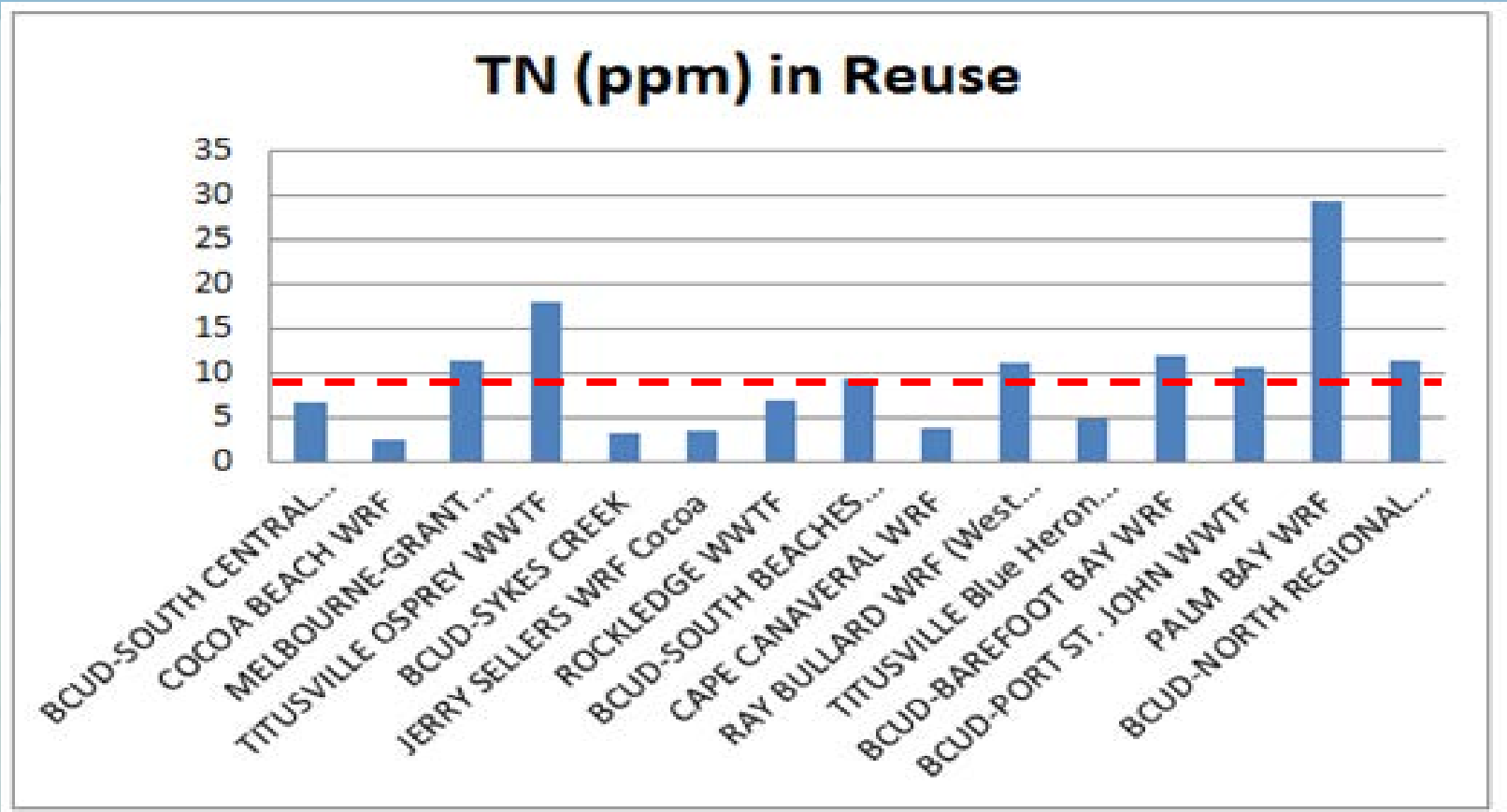
Reduce - Fertilizer

46

- Expand public education and outreach
- Increase ordinance compliance 25%
- Cost: \$625,000 (over 5 years)
- Benefit: 6,123 lbs/yr of TN and 813 lbs/yr of TP reduction
- Efficiency: \$102/lb of TN/yr



Reduce - Reclaimed Water Nutrients



9 ppm (mg/L): Nitrogen concentration that supports maximum turfgrass **growth**. **Don't excessively irrigate.**
(2014 IFAS study: AE479)

Reduce - Nutrients in Reclaimed Water

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- Higher concentrations leach more nutrients into the groundwater
- Upgrade treatment at WWTFs to reduce nutrients in reclaimed water

Facility	Cost to Upgrade	TN Removed after Attenuation (lbs/yr)	Cost/lb/yr of TN Removed
City of Palm Bay WRF	\$1,400,000	17,790	\$79
City of Titusville Osprey WWTF	\$8,000,000	22,988	\$348
City of West Melbourne Ray Bullard WRF	\$6,000,000	5,368	\$1,118
Barefoot Bay WRF	\$6,000,000	3,507	\$1,711
North Regional WWTF	\$6,000,000	1,739	\$3,451
Port St. John WWTF	\$6,000,000	2,037	\$2,946
City of Melbourne Grant Street WWTF	\$6,000,000	1,498	\$4,004

Reduce - Nutrients Leaching from Septic Systems

- The Florida Department of Health has permitted over 90,000 septic systems in Brevard County
- About 10% have been removed
- Almost 60,000 are in the IRL Basin
- Connecting or upgrading all 60,000 is not cost-effective
- Focus on highest risk situations

Cost for Septic System Removal

Septic System Distance from Surface Water	Number of Septic Systems	TN (lbs/yr/system)	TN (lbs/yr)	Total Cost	Cost/lb/yr of TN
Less than 55 yards	15,090	27.095	408,863	\$301,800,000	\$738
Between 55 and 219 yards	25,987	6.865	178,395	\$519,740,000	\$2,913
Greater than 219 yards	18,361	0.0005	10	\$367,220,000	\$37,624,010
<i>Total in IRL Basin</i>	<i>59,438</i>	<i>N/A</i>	<i>587,268</i>	<i>\$1,188,760,000</i>	<i>\$2,024 (average)</i>

Estimated TN load per year per system based on data from a St. Lucie study

Estimated cost of \$20,000 each per County's Utility Services Department

Example Prioritization

- Focus on neighborhoods that could be connected to sewer for less than \$1,200/lb TN

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

Reduce - Use of Septic Systems

53

- Remove 3.9% of septic systems within the IRL Basin by connecting to central sewer

Sub-lagoon	Number of Lots	Cost	TN Reductions (lbs/yr)	Average Cost/lb/yr of TN
Banana River Lagoon	613	\$12,260,000	13,736	\$898
North IRL	641	\$12,820,000	14,029	\$875
Central IRL	1,093	\$16,684,000	28,744	\$746
<i>Total</i>	<i>2,347</i>	<i>\$41,764,000</i>	<i>56,509</i>	<i>\$840</i>



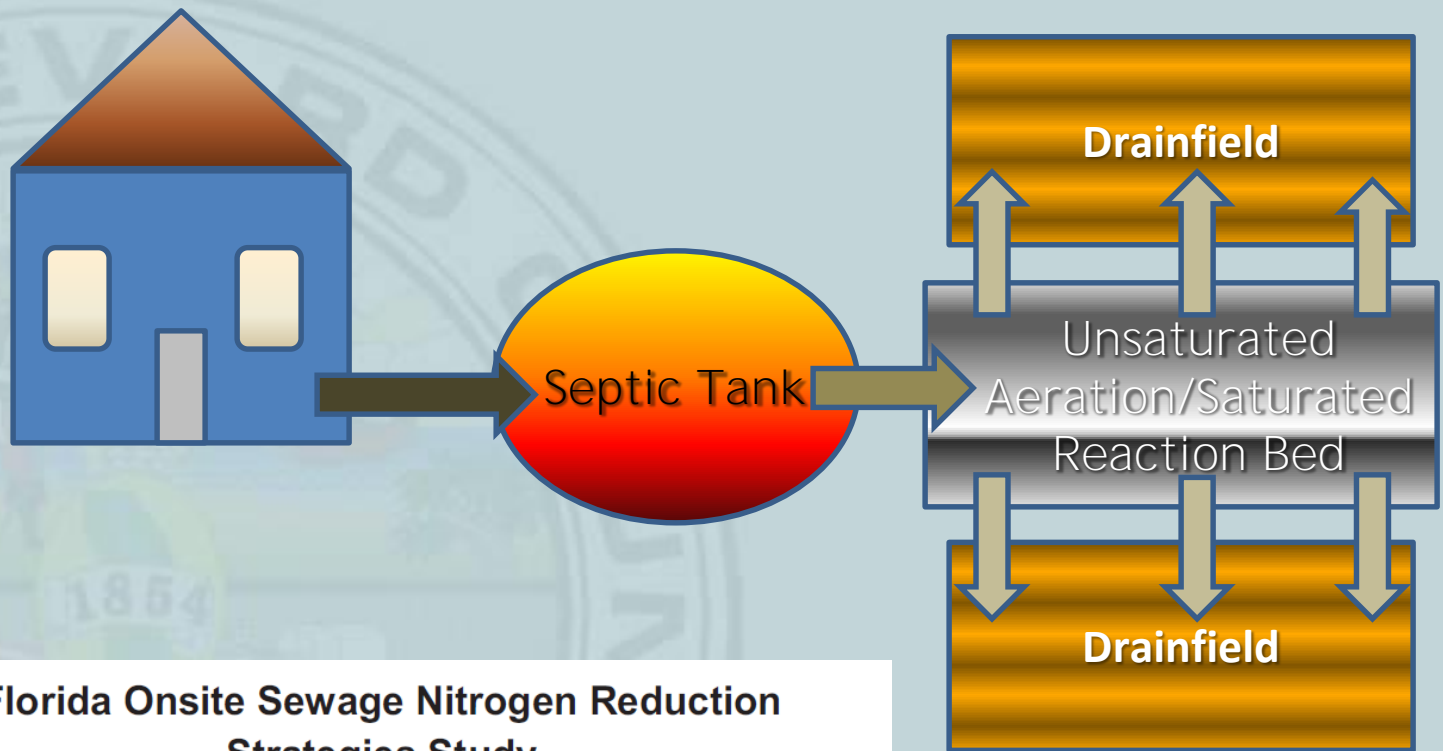
Septic System Prioritization

54

- Criteria:
 - Age of System
 - Soil Type
 - Depth to Groundwater
 - Septic System Density
 - Proximity to Surface Waters
- Prioritize worst conditions that pose highest risk to Lagoon water quality



Reduce - Septic Drainfield Leaching



**Florida Onsite Sewage Nitrogen Reduction
Strategies Study**

Final Report

December 31, 2015

Reduce - Septic Drainfield Leaching

57

- Plan includes upgrade of the worst 2.3% of remaining systems within the IRL Basin

Sub-lagoon	Number of Lots	Cost	TN Reductions (lbs/yr)
Banana River Lagoon	258	\$4,128,000	5,145
North IRL	515	\$8,240,000	10,270
Central IRL	614	\$9,824,000	12,244
<i>Total</i>	<i>1,387</i>	<i>\$22,192,000</i>	<i>27,659</i>



Reduce - Stormwater Loading

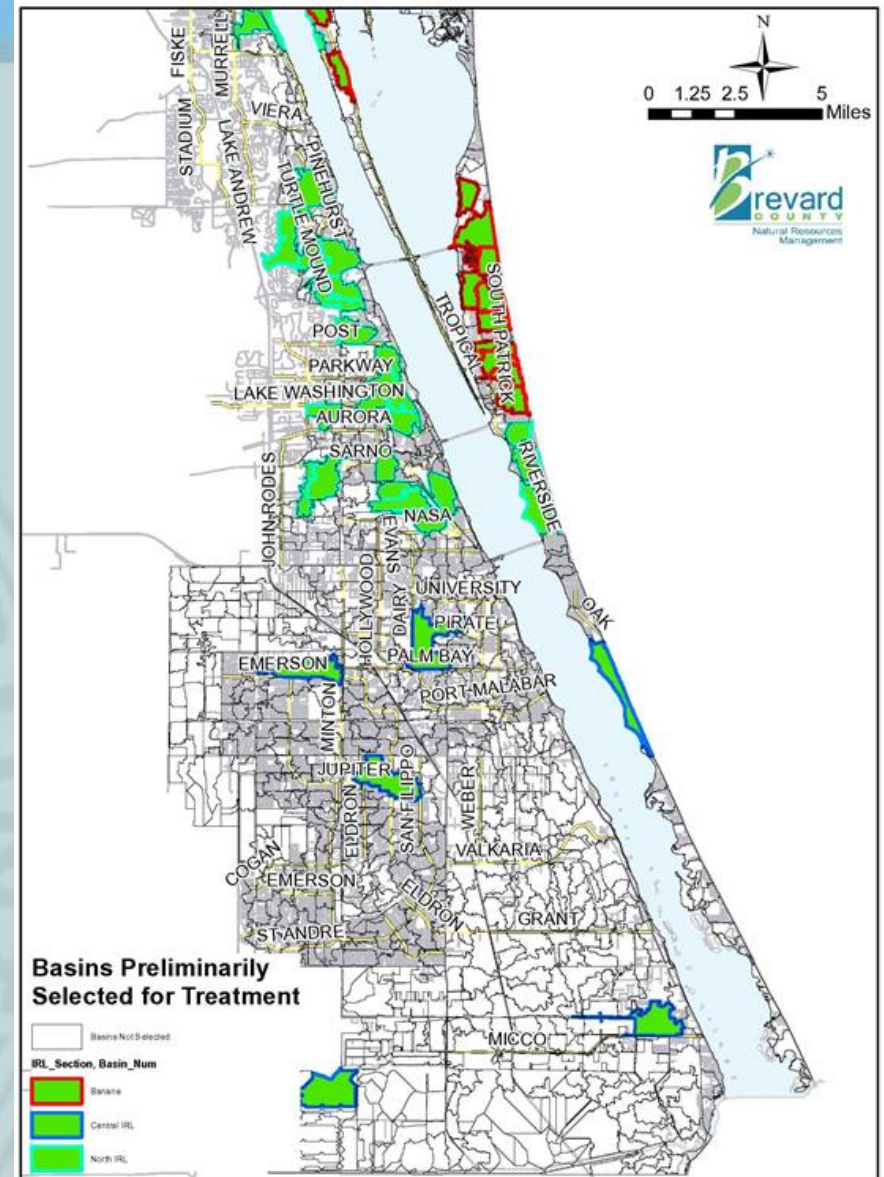
58

- Ditch denitrification is the most cost-effective treatment for dry season flow
- Add biosorption activated media (BAM) to improve nutrient removal efficiency

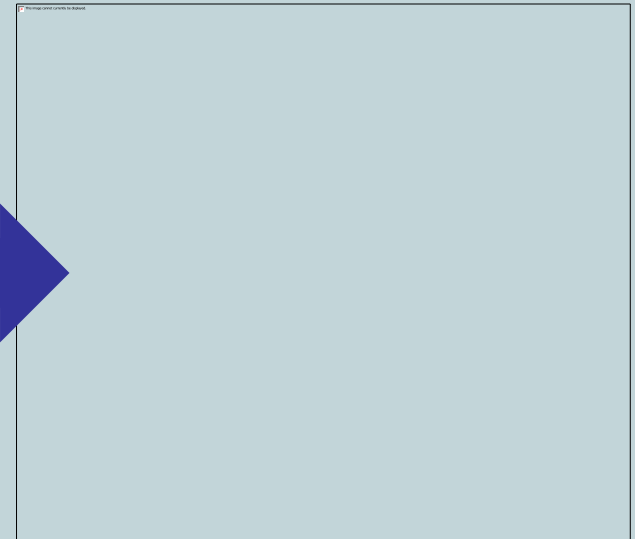
Sub-lagoon	Number of Basins	Estimated Total Project Cost	TN Reductions (lbs/yr)	Cost/lb/yr of TN	TP Reductions (lbs/yr)	Cost/lb/yr of TP
Banana River Lagoon	41	\$4,625,000	48,391	\$96	6,896	\$671
North IRL	37	\$4,850,000	52,936	\$92	7,632	\$635
Central IRL	6	\$1,325,000	17,113	\$77	2,497	\$531
<i>Total</i>	<i>84</i>	<i>\$10,800,000</i>	<i>118,440</i>	<i>\$88 (avg)</i>	<i>17,025</i>	<i>\$612 (avg)</i>



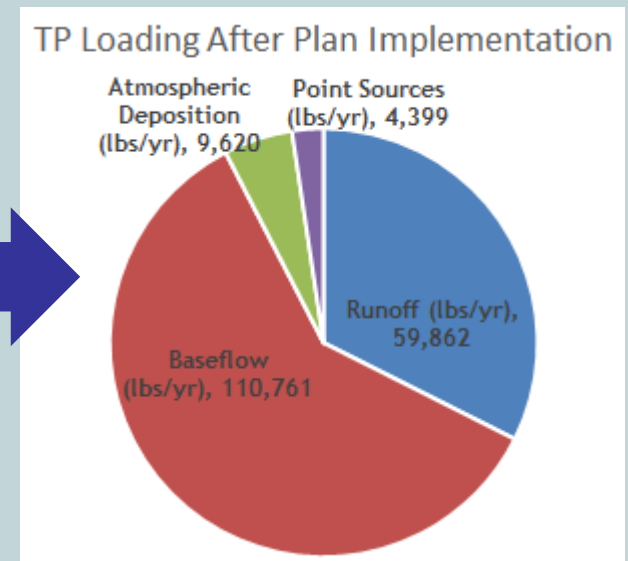
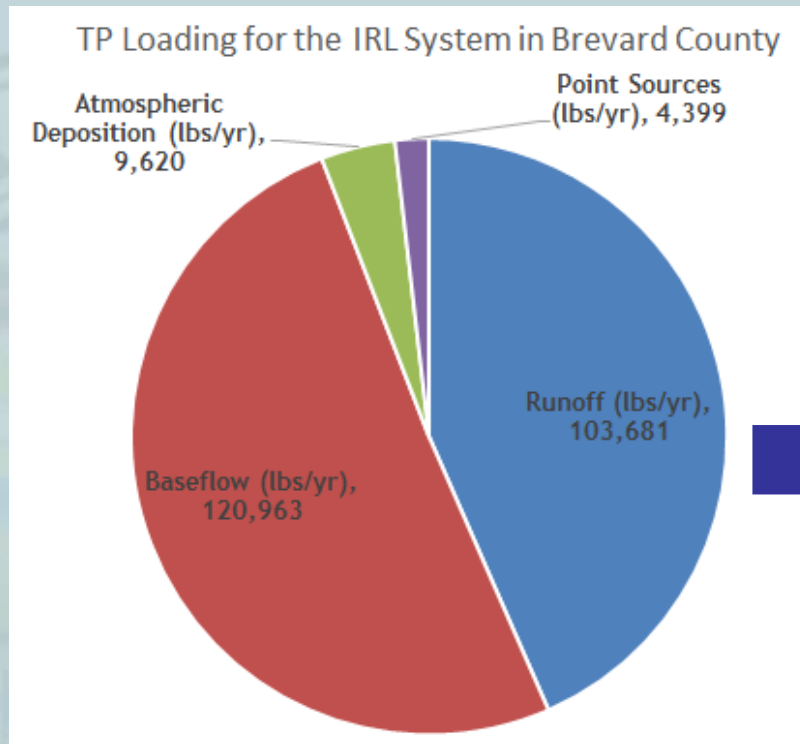
Reduce - Stormwater Loading



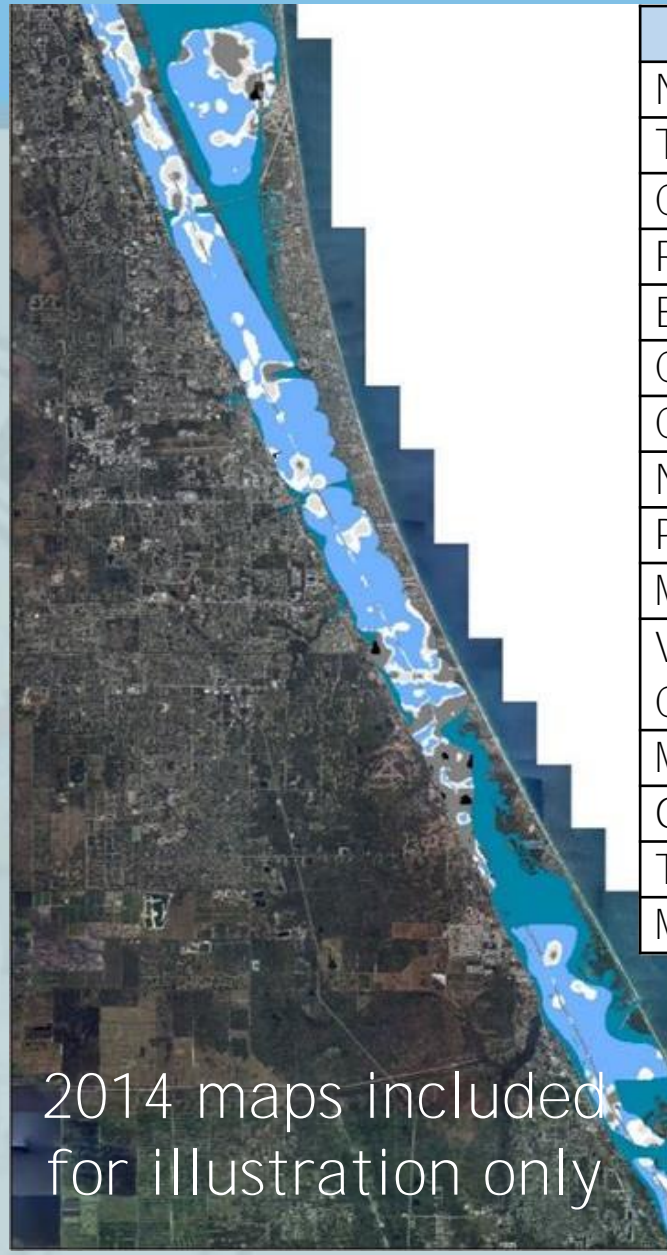
Nitrogen Loading Before and After Plan Implementation



Phosphorus Loading Before and After Plan Implementation



Remove - Detrimental Muck



Locations
Near Haulover Canal
Titusville Area
Cocoa Area
Rockledge Area
Eau Gallie Area
Cape Canaveral Area
Cocoa Beach Area
Newfound Harbor Area
Pineda Causeway Area
Mathers Bridge Area
Venetian Collector Canals/Channels
Melbourne Causeway Area
Goat Creek Area
Trout Creek Area
Mullet Creek Islands Area

2014 maps included
for illustration only

Remove - Detrimental Muck

63

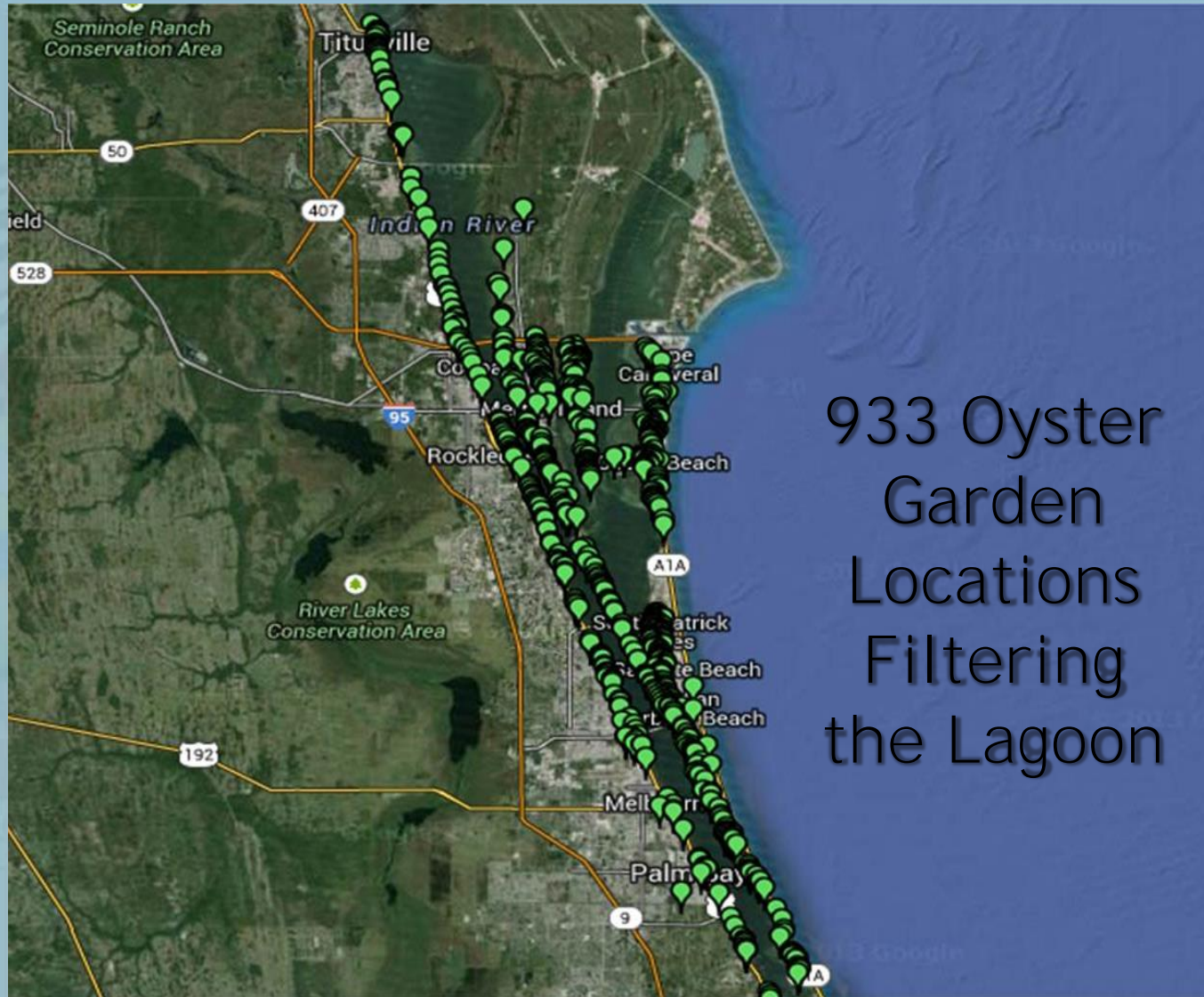
- Focus on largest muck deposits in the open waters of the lagoon

Location	TN Flux Reduction (lbs/yr)	Project Cost	Cost/lb/yr of TN Removed	TP Flux Reduction (lbs/yr)	Cost/lb/yr of TP Removed
Mosquito Lagoon	35,000	\$16,100,000	\$460	5,250	\$3,067
North IRL	231,500	\$89,250,000	\$386	34,700	\$2,572
Banana River Lagoon	165,300	\$71,750,000	\$434	24,800	\$2,893
Central IRL	59,500	\$21,000,000	\$353	8,900	\$2,400



Restore - Oyster Bars/Living Shorelines

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933 Oyster
Garden
Locations
Filtering
the Lagoon



Restore - Oyster Bars/Living Shorelines

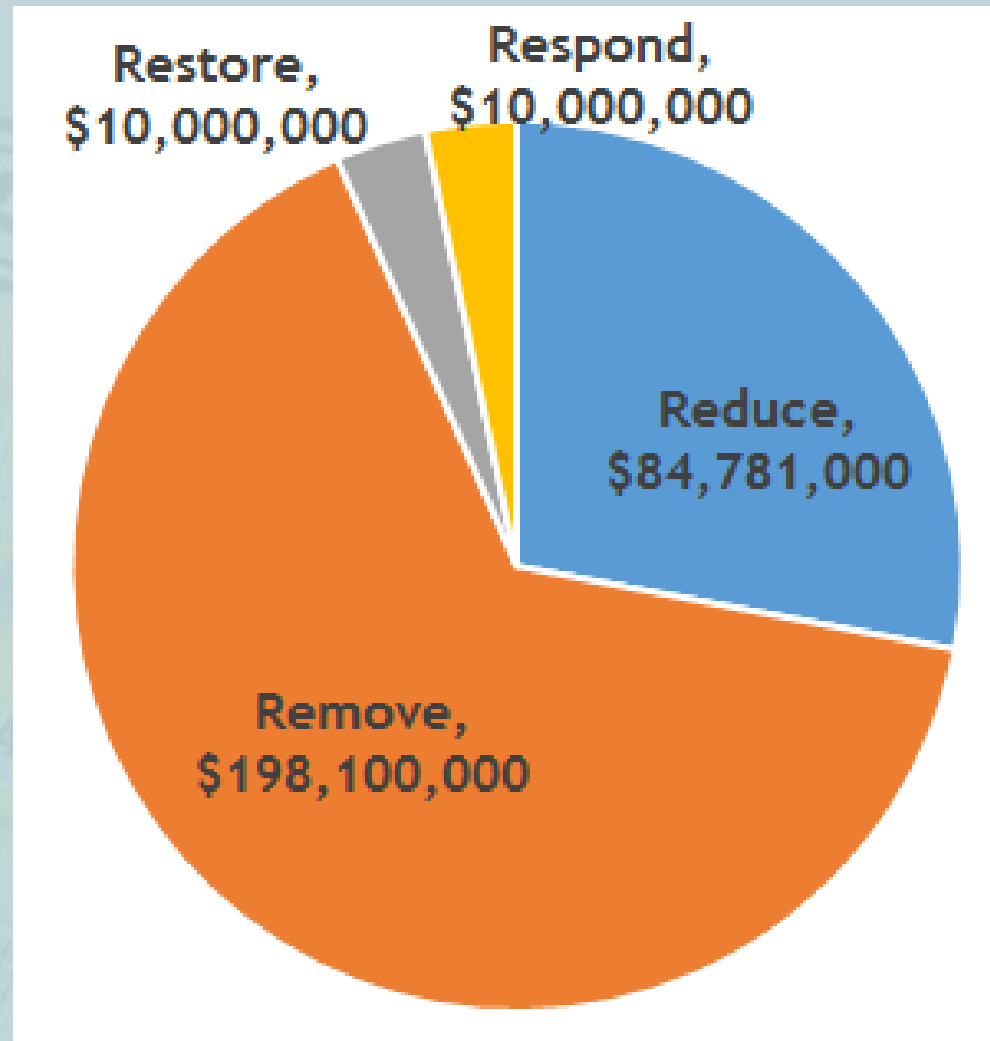
65

- 20 miles of shoreline oyster bars would filter the lagoon volume annually
- Cost: \$10 million
- Benefit: 21,120 lbs/yr of TN and 7,181 lbs/yr of TP reductions
- Efficiency: \$473/lb of TN/yr
- Estimated benefit based on information from Chesapeake Bay area
 - Benefits in IRL will likely be greater



Project Plan Expenditures

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Respond - Citizen Oversight

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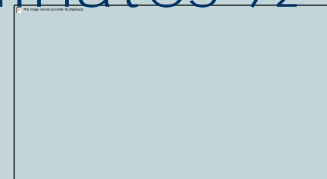
- Transparency -
 - Were projects on schedule?
- Accountability -
 - Were project cost estimates correct?
- Performance -
 - Are the projects reducing pollution, as planned?
- Responsive Management -
 - Are there better projects to go in the plan?



Respond - Adaptive Management of the Plan

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- STEAM Team - Volunteer Citizen Oversight
 - Scientists
 - Technology entrepreneurs
 - Economists/Finance
 - Real estate interests
 - Education/outreach
 - Tourism/nature-based tourism
 - Lagoon advocacy
- League of Cities nominates ½ of Team
- Board of County Commissioners nominates ½



Summary of Plan Benefits

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Project Category	Project Type	Estimated Total Project Cost	Nitrogen Reductions (lbs/yr)	Average Cost/lb/yr of TN	Phosphorus Reductions (lbs/yr)	Average Cost/lb/yr of TP
Reduce	Fertilizer Management/Public Education	\$625,000	6,123	\$102	813	\$769
	WWTF Upgrades for Reclaimed Water	\$9,400,000	40,778	\$214	TBD	TBD
	Septic System Removal	\$41,764,000	56,509	\$852	N/A	N/A
	Septic System Upgrades	\$22,192,000	27,659	\$802	N/A	N/A
	Stormwater Projects	\$10,800,000	118,440	\$88	17,026	\$612
Remove	Muck Removal	\$198,100,000	491,300	\$408	73,650	\$2,733
Restore	Oyster Reef Living Shorelines	\$10,000,000	21,120	\$473	7,181	\$1,393
Respond	Projects Monitoring	\$10,000,000	N/A	N/A	N/A	N/A
<i>Total</i>	<i>Total</i>	<i>\$302,881,000</i>	<i>761,929</i>	<i>\$398</i>	<i>98,670</i>	<i>\$1,377</i>



Summary of Plan Benefits

Flow Path to Success



Save Our Lagoon Project Plan

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Funding Options for Plan Implementation

Virginia Barker, Director
Natural Resources Management Department



How Can We Fund the Plan?

Option 1: Voter-approved County-wide Ad Valorem levy

- Save Our Lagoon Special Taxing District
- 1 mill (\$1 per \$1000 of taxable value)
- 10 year sunset
- \$32 million per year
- 10-year total of \$320 million

How Can We Fund the Plan?

Option 2: Voter-approved County-wide Ad Valorem levy

- Save Our Lagoon Special Taxing District
- 1/2 mill (50¢ per \$1000 of taxable value)
- 20 year sunset
- \$16 million per year
- 20-year total of \$320 million

How Can We Fund the Plan?

Option 3: Voter-approved County-wide Ad Valorem levy

- Save Our Lagoon Special Taxing District
- 1/2 mill (50¢ per \$1000 of taxable value)
- 10 year sunset
- \$16 million per year
- 10-year total of \$160 million
- Must leverage \$143 million from grants/Legislative appropriations

How Can We Fund the Plan?

Option 4: Voter-approved County-wide Infrastructure Sales Tax

- Save Our Lagoon Special Taxing District
 - 1/2 cent
 - 10 year sunset
 - \$34 million per year
 - 10-year total of \$340 million
 - Negotiate municipal revenue sharing agreements, not statutory formula
- Grants could accelerate schedule and benefits

How Can We Fund the Plan?

Option 5: Other combinations of

- Levies
- Timeframes
- Uses
- Matching funds

Acknowledgements

Scientist Subject Matter Experts:

Dr. Duane DeFreese, Indian River Lagoon National Estuary Program and Indian River Lagoon Council Executive Director
Dr. Richard (Grant) Gilmore, expert in Indian River Lagoon fisheries and ecology
Dr. Charles Jacoby, St. Johns River Water Management District Supervising Environmental Scientist
Dr. Kevin Johnson, Florida Institute of Technology Associate Professor, Marine and Environmental Systems
Dr. Mitchell A Roffer, Florida Institute of Technology Adjunct Professor, President Roffer's Ocean Fishing Forecasting Service, Inc.
Dr. Jonathan Shenker, Florida Institute of Technology Associate Professor of Marine Biology
Dr. John Trefry, Florida Institute of Technology Professor of Marine and Environmental Systems
Martin S. Smithson, Sebastian Inlet District Administrator
Joel Steward, St. Johns River Water Management District Supervising Environmental Scientist (Retired)
Dr. John Windsor, Florida Institute of Technology Oceanography and Environmental Science Professor Emeritus and Program Chair

Economic Impacts Subject Matter Experts:

Eric Garvey, Brevard County Tourism Development Council Executive Director
Herb Hiller, Brevard County Tourism Development Council Consultant on Ecotourism
Vince Lamb, Indian River Lagoon Council Management Board, Florida Master Naturalist, Entrepreneur
Dr. Michael H. Slotkin, Florida Institute of Technology Associate Professor, Nathan M. Bisk School of Business
Laurilee Thompson, Brevard County Tourism Development Council, Commercial Fisheries Expert, Entrepreneur
Dr. Alexander Vamosi, Florida Institute of Technology Associate Professor, Nathan M. Bisk School of Business
Jim Brandenburg, Brevard County Property Appraiser Information Technology

Agencies:

Florida Department of Environmental Protection
St. Johns River Water Management District
Florida Department of Health
Space Coast Tourism Development Council
Space Coast Association of REALTORS®
Brevard County Natural Resources Management Department
Brevard County Utility Services Department
Brevard County Property Appraiser Information Technology
Brevard County Budget Office
Canaveral Port Authority

Municipalities:

Titusville
Cocoa
Rockledge
Melbourne
West Melbourne
Palm Bay
Cape Canaveral
Cocoa Beach
Satellite Beach
County Natural Resources Management Staff

Vision of Success

Healthy Lagoon
Fiscally Responsible Plan
Science-Based
Data-Driven
Responsive
Transparent Citizen Oversight