

Brevard County
Save Our Indian River Lagoon Project Plan
Citizen Oversight Committee

December 13, 2019 – 8:30 to 11:30 am
Brevard County Government Center
2725 Judge Fran Jamieson Way
Building C, 3rd Floor, Florida Room
Viera, Florida 32940

- I. Call to Order
- II. Roll Call
- III. Approval of the Agenda
- IV. Approval of Minutes
- V. Monthly Progress and Fiscal Reports
 - a. December 2019 Progress Report – Virginia Barker
 - b. Monthly Revenue Graph – Crystal Melton, Fiscal Analyst
 - c. Quarterly Financial Statement– Crystal Melton, Fiscal Analyst
 - d. Quarterly Save Our Indian River Lagoon Project Performance Table – Terri Breeden, Associate Environmental Specialist
- VI. Other Reports and Special Presentations
 - a. Living Shoreline Monitoring – Dr. Linda Walters, Pegasus Professor of Biology, University of Central Florida, and Dr Melinda Donnelly, Postdoctoral Fellow, University of Central Florida
 - b. Preliminary Results from the Leaky Lateral Groundwater Monitoring – Dr. Claudia Listopad, G.I.S.P., Applied Ecology, Inc.
 - c. The Benefits of Smoke Testing Projects, Edward Fontanin, P.E. Director of Brevard County Utility Services
- VII. Old Business
- VIII. New Business
 - a. 2020 Meeting Calendar
 - b. 2020 Project Funding Requests
 - c. Request for Additional Funding for the City of Titusville Osprey Wastewater Treatment Facility Nutrient Removal Project
- IX. General Public Comments
- X. Final Comments by Chair and Committee Members
- XI. Adjournment

**Save Our Indian River Lagoon
Citizen Oversight Committee Meeting Minutes**

October 18, 2019 – 8:30 a.m. – 11:30 a.m.
2725 Judge Fran Jamieson Way,
Bldg. C, 3rd Floor, Florida Room
Viera, FL 32940

Members Present:

Expertise	Member	Present	Alternate	Present
Science	Lorraine Koss	No	Charles Venuto	Yes
Technology	John Luznar	No	Vinnie Taranto	Yes
Education	Stephany Eley	Yes	Melissa Martin	Yes
Finance	Courtney Barker	Yes	Todd Swingle	No
Tourism	David Lane - Chair	Yes	Laurilee Thompson	Yes
Real Estate	Vacant	No	Dennis Basile	Yes
Lagoon Advocacy	John Windsor - Vice Chair	Yes	Terry Casto	Yes

Staff Present:

Virginia Barker, Brevard County Natural Resources Management Director
Walker Dawson, Engineer III, Muck Dredging
Courtney Maier, Engineer I, Stormwater
Anthony Gubler, Environmental Specialist
Brandon Smith, Environmental Specialist
Matt Badolato, Associate Environmental Specialist
Crystal Melton, Fiscal Analyst

- I. Call to Order**
- II. Roll Call**
A quorum was established.
- III. Approval of the Agenda**
Vinnie Taranto moved to approve the Agenda as written; Seconded by John Windsor. Motion was unanimously approved.
- IV. Approval of Minutes**
John Windsor moved to approve the September 20, 2019 minutes as written; Seconded by Melissa Martin. Motion was unanimously approved.
- V. Monthly Progress and Fiscal Reports – Virginia Barker, Director**
 - a. October 2019 Progress Report**
The Monthly Progress Report was given by Virginia Barker.

Discussion ensued. The Committee's questions were answered by Ms. Barker and Matt Culver.

Virginia Barker mentioned that the ShORE Symposium in Daytona was being held on November 15, 2019, the same day as the Save Our Indian River Lagoon Citizens Oversight Committee November meeting. Ms. Barker inquired whether the Committee would consider canceling the November meeting due to the conflict.

Discussion ensued. Ms. Barker answered the Committee's questions.

John Windsor moved to cancel the November 15, 2019 Save Our Indian River Lagoon Citizens Oversight Committee Meeting so that County staff and others could attend the ShORE Symposium in Daytona; Seconded by Stephany Eley. Motion was unanimously approved.

b. **Revenue Graph**

Virginia gave a brief update on the Fiscal Report.

Discussion ensued. The Committee's questions were answered by Virginia Barker.

VI. Other Reports and Special Presentations

a. **August 2019 Half Cent Sales Tax – Save Our Indian River Lagoon Project Status Report Presented to the Brevard County Audit Committee by the county's Contracted Auditor, R.S.M. U.S. L.L.P. – Jill Reyes C.I.A., C.F.E., Director**

Jill Reyes, R.S.M. U.S. L.L.P., gave a power point presentation on the August 2019 Half Cent Sales Tax – Save Our Indian River Lagoon Project Status Report which included: 1) Current Project Plan Status; 2) Revenue Status – July 2019; 3) Inter-municipal Contracting Status; 4) Project Testing – Results; and, 5) Project Timeline Examples.

Ms. Reyes spoke briefly about next steps which included: 1) Internal Audits' continued attendance at the monthly Save Our Indian River Lagoon Citizen Oversight Committee meetings; 2) Internal Audits' continued review of management's monitoring for compliance; and 3) Internal Audit's continued review of the project monitoring reports and periodically selection of samples for testing to determine whether project-related costs are properly accumulated and disbursed through the Trust.

b. **Harvesting Nutrients from Stormwater Ponds – Jennifer Thompson, Environmental Specialist, Brevard County Stormwater Utility.**

Jennifer Thompson, Environmental Specialist, gave a power point presentation entitled Aquatic Weed Harvesting Program: Floating Vegetative Islands Versus Mechanical Harvesting. The presentation included: 1) Project Scope Goals; 2) Monitoring Parameters; 3) Plants Use on Floating Vegetative Islands; 4) Plants found naturally and mechanically harvested; 5) Plant Tissues Analytical Results; 6) Removal of Nitrogen

and Phosphorus; 7) Solar Bee; 8) Frustrations with Floating Vegetative Islands; and 8) Positive changes for stormwater ponds providing funding is available.

Discussion ensued. The Committee's questions were answered by Jennifer Thompson, Virginia Barker and Brandon Smith.

c. **Grand Canal Sediment Testing Update – Jim Langenbach, P.E., B.C.E.E., Senior Principal, Geosyntec Consultants**

Jim Langenbach, Geosyntec Consultants, gave a power point presentation on the Grand Canal Sediment Testing Update which included: 1) Previous 2015 Grand Canal Testing; 2) Arsenic/Copper Considerations; 3) 2019 Grand Canal Testing (comparison to 2015 Grand Canal Testing); 4) Additional Arsenic and Copper Testing and Results; and, 5) Next Steps.

Discussion ensued. The Committee's questions were answered by Mr. Langenbach Virginia Barker.

VII. Old Business

None

VIII. New Business

None

IX. General Public Comment

Public Comments were heard.

X. Final Comments by Chair and Committee Members

Final Comments were heard.

XI. Adjournment



Save Our Indian River Lagoon Project Plan December 2019 Progress Report

WORK COMPLETED THIS MONTH:

- Board of County Commissioners appointed Jay Moynahan to the Real Estate Member seat
- 61 new project applications were submitted to the Citizen Oversight Committee for funding recommendations - 2 Wastewater Treatment Facility Upgrades, 26 Septic Removals, 5 Sewer Lateral Rehabs, 13 Stormwater, 1 Muck Removal, 1 Interstitial Water Treatment, 5 Oyster Reefs, 6 Living Shorelines, and 2 Vegetative Harvesting Project. These projects total \$176 Million with \$119 Million of potential Lagoon Trust Fund Eligibility.
- Cone Road Septic-to-Sewer –State approved the County’s new lines. Letters were sent to the property owners notifying them of the 365-day deadline for abandoning their septic and connecting to sewer.
- Titusville Coleman Pond Managed Aquatic Plant Systems – installation complete
- Titusville South Street, St Teresa, and La Paloma Baffle Boxes – installation complete
- Grand Canal Muck Dredging – dredging paused for manatee closure period, continuing to collect dredge waivers from homeowners, and seeking permission to add the Berkeley Canal to the permit
- Cocoa Beach Muck Dredging – Phase IIb Dredged Material Management Area is complete
- University of Central Florida researchers conducted monitoring at 2 oyster sites
- Derelict Vessels – 5 additional derelict vessels removed
- Sykes Creek Zones N Septic-to-Sewer – 2nd iteration of Right of Way permit comments sent to engineer
- Merritt Island Muck Dredging – state and federal permits issued
- “Tell Us What You Think” survey closed on December 2nd. Data analyzed for December 13th meeting
- Video production bid for 3 years with 2 renewal options was advertised and opened December 2nd

WORK UNDERWAY THIS MONTH:

- Revisiting fertilizer retail facilities to check compliance with signage ordinance
- Palm Bay North Region Water Reclamation Facility - design and permitting complete, bid is posted
- Beaches Leaking Sewer Laterals – 15 repairs complete; ordinance tabled that might mandate repairs
- South Central C Septic-to-Sewer – awaiting 90% design and sketch and descriptions for land acquisition
- Sykes Creek Zone M and T- reviewing 30% design, discussing powerline & pole relocates with FPL
- Titusville Septic to Sewer - contract out for signatures
- West Melbourne Sylvan Estates Septic to Sewer - construction has started
- Micco Sewer Service Extension – grant scope and responses to agency permit questions underway
- Johns Road and Flounder Creek - permitting underway; bid documents being prepared
- Basin 1409 and 1349 – permitting and easement acquisition underway
- Cocoa Beach Muck Dredging - Phase III is ~96% complete
- Sykes Creek Muck Dredging – Phase I bid being finalized by Purchasing
- Titusville Railroad Bridge East and West –Bathymetric and muck survey data being evaluated
- NASA Causeway East–Bathymetric and muck survey data being evaluated
- Mathers Bridge Area Muck Removal – Additional Survey data being collected
- Story Map – working on a new layer to show reclaimed water areas and their nutrient content
- Brevard Zoo CIRL Oyster Project – design completion; permitting and material preparation underway



PRESENTATIONS THIS MONTH:

November 7 – Florida’s Surface Water Quality Standards Public Workshop – Virginia
November 9 – Indian River Lagoon Day – Brandon & Terri
November 12 – Oyster Restoration Permit Coordination Meeting – Virginia & Jenny
November 20 – Florida Oceans Alliance Workshop – Virginia & Dr. Windsor
November 23 – FAU Harbor Branch Lagoon Tour at Barrier Island Center – Brandon
November 25 – Indian River Lagoon Research Institute Quarterly Lagoon Research Workshop - staff
December 3 - Lagoon and Lagers, Intercoastal Brewing Company – Brandon & Terri

UPCOMING LAGOON SCIENCE FORUMS AND PUBLIC EVENTS:

2/13-14, Indian River Lagoon Symposium <http://www.indianriverlagoon.org/symposium.html>
12/14, Satellite Beach Composting Workshop <https://www.facebook.com/GoGreenSB>

UPCOMING VOLUNTEER PARTICIPATION OPPORTUNITIES:

Brevard Zoo – Oyster Reef Monitoring, 12/7 - <https://restoreourshores.org/volunteer-we-need-you/>
Keep Brevard Beautiful – Plastic Brigade Cleanup, 12/9 - <https://plasticbrigade.com/>
Lagoon Friendly Lawns – contact Kaylyn Palmer of Keep Brevard Beautiful at 321-631-0501
Fish Kill Response Cleanup: contact Desiree Lesko of Keep Brevard Beautiful at 321-631-0501
Marine Resources Council – Brown Bag Lunch: North Atlantic Right Whale Update, 12/3
Lagoon Watch, Mangrove, or Lagoon Literacy - <https://savetheirl.org/volunteer/>

WEBSITE AND SOCIAL MEDIA LINKS:

Outreach and Engagement Landing Page: <https://lagoonloyal.com/>
Website: <http://www.brevardfl.gov/SaveOurLagoon>
Facebook: <https://www.facebook.com/BrevardCountySaveOurLagoon>;
Instagram: <https://www.instagram.com/saveourlagoon/>
YouTube: <https://goo.gl/GBh6xU>

FUTURE TOPICS FOR SPECIAL PRESENTATIONS:

1. A Day in the Life of the Indian River Lagoon – Missy Weiss
2. Water Less with St Johns River Water Management District – Dr. Jennifer Mitchell
3. Tourism + Lagoon grant projects – Using Super Clams for Restocking Efforts
4. Ongoing Research on Charismatic Critters of the Lagoon – Hubbs SeaWorld Research Institute
5. New Enhanced Ocean Inflow Research – Florida Tech Research Initiative
6. Enhanced Lagoon Circulation Environmental Response Model – St Johns River Water Management District
7. Indian River Lagoon Research News: TechCon, ShORE, and Harbor Branch Symposium Highlights
8. Completed and Ongoing Muck Research – Florida Tech Research Initiative & Dr. Drew Palmer
9. Coordinating Spoil Management with Florida Inland Navigation District
10. Water Technology Conference/Industry Day – Economic Development and National Estuary Program
11. Re-use/Reclaimed Water – Nutrient Loading Impacts and Opportunities
12. Surface Water Remediation – AquaFiber, D.T.G., Aqualutions, Chemical Tech, Phosphorus Free
13. Pollution and Algal Bloom Mapping via Satellite Imagery Interpretation- Gybe
14. Lagoon Fish and Fisheries Research – Dr. Grant Gilmore
15. Low Impact Development – Local examples
16. Project Monitoring Results
17. Package Plants

Save Our Indian River Lagoon Performance Table

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard County	Denitrification Retrofit of Johns Rd Pond (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	90%	Leveraged Funds	Leveraged Funds
Brevard County	Denitrification Retrofit of Johns Rd Pond (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Brevard County	Kingsmill-Aurora Phase 2 of 2 (Land Acquisition)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Kingsmill-Aurora Phase 2 of 2 (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete		Leveraged Funds	Leveraged Funds
Brevard County	Kingsmill-Aurora Phase 2 of 2 (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2020/21						
Brevard County	Denitrification Retrofit of Huntington Pond (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	90%	Leveraged Funds	Leveraged Funds
Brevard County	Denitrification Retrofit of Huntington Pond (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Brevard County	Denitrification Retrofit of Flounder Creek Pond (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	90%	Leveraged Funds	Leveraged Funds
Brevard County	Denitrification Retrofit of Flounder Creek Pond (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Brevard County	Basin 1349 (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	90%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 1349 (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 1409 (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	90%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 1409 (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 989 (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete				
Brevard County	Basin 989 (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard County	Basin 1298 Bioreactor (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	50%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 1298 Bioreactor (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 1304 Bioreactor (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	50%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 1304 Bioreactor (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 832 Broadway Pond Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 832 Broadway Pond (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 100 Burkholm Road Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 100 Burkholm Road (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 115 Carter Road Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 115 Carter Road Biosportion Activated Media (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 2134 Fleming Grant Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 2134 Fleming Grant Biosportion Activated Media (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 51 Johns Road Pond Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard County	Basin 51 Johns Road Pond Biosportion Activated Media (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Basin 193 Wiley Road Biosportion Activated Media (Engineering)	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Basin 193 Wiley Road Biosportion Activated Media (Construction)	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Brevard County	Mims Muck Removal: Outflow Water Nutrient Removal (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	N/A	N/A
Brevard County	Mims Muck Removal: Outflow Water Nutrient Removal (Construction)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	N/A	N/A
Brevard County	Grand Canal Muck Dredging (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Grand Canal Muck Dredging (Construction)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	2%	8.52%	8.52%
Brevard County	Sykes Creek Muck Dredging (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	Leveraged Funds	Leveraged Funds
Brevard County	Sykes Creek Muck Dredging (Construction)	Muck Removal & Interstitial Treatment	Complete	Expected Fiscal Year 2019/20						
Brevard County	Muck Re-dredging in Turkey Creek (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard County	Muck Re-dredging in Turkey Creek (Construction)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard County	Muck Interstitial Water Treatment for Turkey Creek	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard County	Merritt Island Muck Removal, Phase 1 of 2 (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	40%	Leveraged Funds	Leveraged Funds
Brevard County	Merritt Island Muck Removal, Ph 1 of 2 (Construction)	Muck Removal & Interstitial Treatment	Complete	Expected Fiscal Year 2018/19						
Brevard County	Titusville Area Muck Removal, (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	20%	0.58%	0.58%
Brevard County	Titusville Area Muck Removal (Construction)	Muck Removal & Interstitial Treatment	Complete	Expected Fiscal Year 2019/20						
Brevard County	Eau Gallie Area Muck Dredging (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	98%	0.31%	0.31%
Brevard County	Eau Gallie Area Muck Dredging (Construction)	Muck Removal & Interstitial Treatment	Complete	Expected Fiscal Year 2018/19						
Brevard County	Rockledge Area Muck Dredging (Engineering)	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	10%		
Brevard County	Rockledge Area Muck Dredging (Construction)	Muck Removal & Interstitial Treatment	Complete	Expected Fiscal Year 2019/20						
Brevard County	Sewer Lateral Replacement Repair - Sat. Bch Pilot (Construction)	Sewer Upgrades	Complete	Expected Fiscal Year 2018/19						
Brevard County	Sykes Creek - Zone N (Engineering)	Septic Removal	Complete	Complete	Complete	Complete	Complete	100%	3.38%	3.23%
Brevard County	Sykes Creek - Zone N (Construction)	Septic Removal	Complete	Expected Fiscal Year 2018/19						
Brevard County	Sykes Creek - Zone M (Engineering)	Septic Removal	Complete	Complete	Complete	Complete	Complete	30%	5.17%	4.48%

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard County	Sykes Creek - Zone M (Construction)	Septic Removal	Complete	Expected Fiscal Year 2019/20						
Brevard County	Sykes Creek - Zone T (Engineering)	Septic Removal	Complete	Complete	Complete	Complete	Complete	30%	3.37%	2.90%
Brevard County	South Central - Zone C (Engineering)	Septic Removal	Complete	Complete	Complete	Complete	Complete	30%	5.48%	5.48%
Brevard County	Micco Sewer Line Extension (Engineering)	Septic Removal	Complete	Complete	Complete	Complete	Complete	95%	11.85%	11.85%
Brevard County	Micco Sewer Line Extension (Construction)	Septic Removal	Complete	Expected Fiscal Year 2018/19						
Brevard County	Long Point Park Upgrade	Septic Upgrade	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard County	Riverview Senior Resort (Engineering)	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard County	Riverview Senior Resort (Construction)	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard County	Indian River Drive (Engineering)	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Brevard County	Indian River Drive (Construction)	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Brevard County	Fertilizer Public Education	Education Outreach	Complete	Complete	Complete	Complete	Complete	20%	19.83%	19.83%
Brevard County	Septic Public Education	Education Outreach	Complete	Complete	Complete	Complete	Complete	8%	8.18%	8.18%
Brevard Zoo	Marina Isles	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	0.00%
Brevard Zoo	Bettinger	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard Zoo	Gitlin	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard Zoo	Coconut Pt/EELS	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
Brevard Zoo	Wexford	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Brevard Zoo	Bomalaski	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Brevard Zoo	Oliver	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Brevard Zoo	Banana River Lagoon - Oysters	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Brevard Zoo	Banana River Lagoon - Plants	Living Shoreline - Plants	Complete	Complete	Complete	Complete	Complete			
Brevard Zoo	North Indian River Lagoon - Oysters	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete			
Brevard Zoo	North Indian River Lagoon - Plants	Living Shoreline - Plants	Complete	Complete	Complete	Complete	Complete			
Brevard Zoo	Central Indian River Lagoon - Oysters	Living Shoreline - Oyster	Complete	Complete	Complete	Complete	Complete	53%	41.00%	41.00%
Cape Canaveral	Cocoa Palms LID	Stormwater Traditional	Complete	Expected Fiscal Year 2017/2018						
Cape Canaveral	Carver Cover Swales	Stormwater Traditional	Complete	Expected Fiscal Year 2017/2018						
Cape Canaveral	Central Blvd Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Cape Canaveral	Cape Shores Swales	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Cape Canaveral	Justamere Rd. Swale	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Cape Canaveral	Hitching Post Berms	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Cocoa	Church Street Type II Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	23.69%	23.69%

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Cocoa Beach	Stormwater LID Convair Cove 1 Blakey Blvd	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Cocoa Beach	Stormwater LID Convair Cove 2 Demsey Drive	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Cocoa Beach	Cocoa Beach Muck Dredging-Phase III	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	82%	75.16%	75.16%
Cocoa Beach	Cocoa Beach Muck Dredging Phase IIb	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete	5%		
Cocoa Beach	Cocoa Beach Water Reclamation Facility Upgrades	Wastewater Treatment Facility Upgrades	Complete	Complete	Complete	Complete	Complete	14%		
Cocoa Beach	McNabb Park	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Cocoa Beach	McNabb Park - Plants	Living Shoreline - Plants	Complete	Expected Fiscal Year 2018/19						
Indian Harbour Beach	Gleason Park Reuse	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Indian Harbour Beach	Muck Removal of IHB Canals	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete			
Indian Harbour Beach	Muck Interstitial Water Treatment for IHB Canals	Muck Removal & Interstitial Treatment	Complete	Complete	Complete	Complete	Complete			
Indian Harbour Beach	Big Muddy @ Cynthia Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete			
Marine Resources Council	Grass Clippings Campaign	Education Outreach	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Marine Resources Council	Grass Clippings Campaign Phase II	Education Outreach	Complete	Complete	Complete	Complete	Complete	9%	8.62%	8.62%
Marine Resources Council	Cocoa Beach Country Club	Living Shoreline - Plants	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%

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Marine Resources Council	Lagoon House Shoreline Restoration Planting	Living Shoreline - Plants	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Melbourne	Hoag Sewer Conversion	Septic Removal	Complete	Complete	Complete	Complete	Complete	85%	15.71%	15.71%
Melbourne	Pennwood Sewer Conversion	Septic Removal	Complete	Complete	Complete	Complete	Complete	85%	42.02%	42.02%
Melbourne	Cliff Creek Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	50%		
Melbourne	Thrush Drive Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	30%		
Melbourne	Stewart Road Dry Retrofit	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Melbourne	Spring Creek Baffle Box	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Melbourne	Cherry Street Baffle Box	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Melbourne	Espanola Baffle Box	Stormwater Traditional	Complete	Expected Fiscal Year 2019/20						
Melbourne	Grant Street WRF Nutrient Removal Improvements	WWTF Upgrades	Complete	Complete	Complete	Complete	Complete			
Melbourne	Riverside Drive Septic Removal Conversion	Septic Removal	Complete	Complete	Complete	Complete	Complete	50%	5.84%	5.84%
Melbourne	Roxy Avenue Septic Removal Conversion	Septic Removal	Complete	Expected Fiscal Year 2018/19						
Melbourne	Grant Place Baffle Box	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Melbourne	Apollo/GA Baffle Box	Stormwater Traditional	Complete	Expected Fiscal Year 2018/19						
Melbourne	Riverview Park	Living Shoreline - Oyster	Complete	Expected Fiscal Year 2018/19						
Melbourne	Riverview Park	Living Shoreline - Plants	Complete	Expected Fiscal Year 2018/19						

Responsible Entity	Project Name	Project Type	Grant Confirmation Notice Sent	Scope of Work Received	Contract Prepared	Executed By County	Executed By Grantee	Project Complete	Requested Save Our Indian River Lagoon Funds	Sent Save Our Indian River Lagoon Funds
MIRA	MIRA Septic Removal Phase 1 of 2	Septic Removal	Complete	Complete	Complete	Complete	Complete	100%	33.93%	33.93%
MIRA	MIRA Septic Removal Phase 2 of 2	Septic Removal	Complete	Complete	Complete	Complete	Complete	0%		
Palm Bay	Bayfront Stormwater Project	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%	100.00%	100.00%
Palm Bay	Turkey Creek Shoreline Restoration	Living Shoreline	Complete	Complete	Complete					
Palm Bay	North Region WRF	WWTF Upgrades	Complete	Complete	Complete	Complete	Complete	66%	10.09%	10.09%
Palm Bay	Septic Removal - Palm Bay B	Septic Removal	Complete	Expected Fiscal Year 2018/19						
Rockledge	Breeze Swept Septic Removal	Septic Removal	Complete	Complete	Complete	Complete	Complete	Complete	100.00%	100.00%
SJRWMD	Crane Creek/M-1 Canal Flow Restoration	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	10%		
Titusville	St. Teresa Basin Treatment	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%		
Titusville	South St. Basin Treatment	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%		
Titusville	La Paloma Basin Treatment	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%		
Titusville	Titusville High School Baffle Box	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	19%		
Titusville	Coleman Ponds Managed Aquatic Plant System	Stormwater Traditional	Complete	Complete	Complete	Complete	Complete	100%		
Titusville	Osprey WWTF	WWTF Upgrades	Complete	Complete	Complete	Complete	Complete	10%	5.18%	5.18%
Titusville	Sewer Lateral Repair Project	Sewer Lateral Rehab	Complete	Complete	Complete	Complete	Complete	9%		
West Melbourne	Sylvan Estates Septic Removal Conversion	Septic Removal	Complete	Complete	Complete	Complete	Complete	66%	6.79%	6.79%

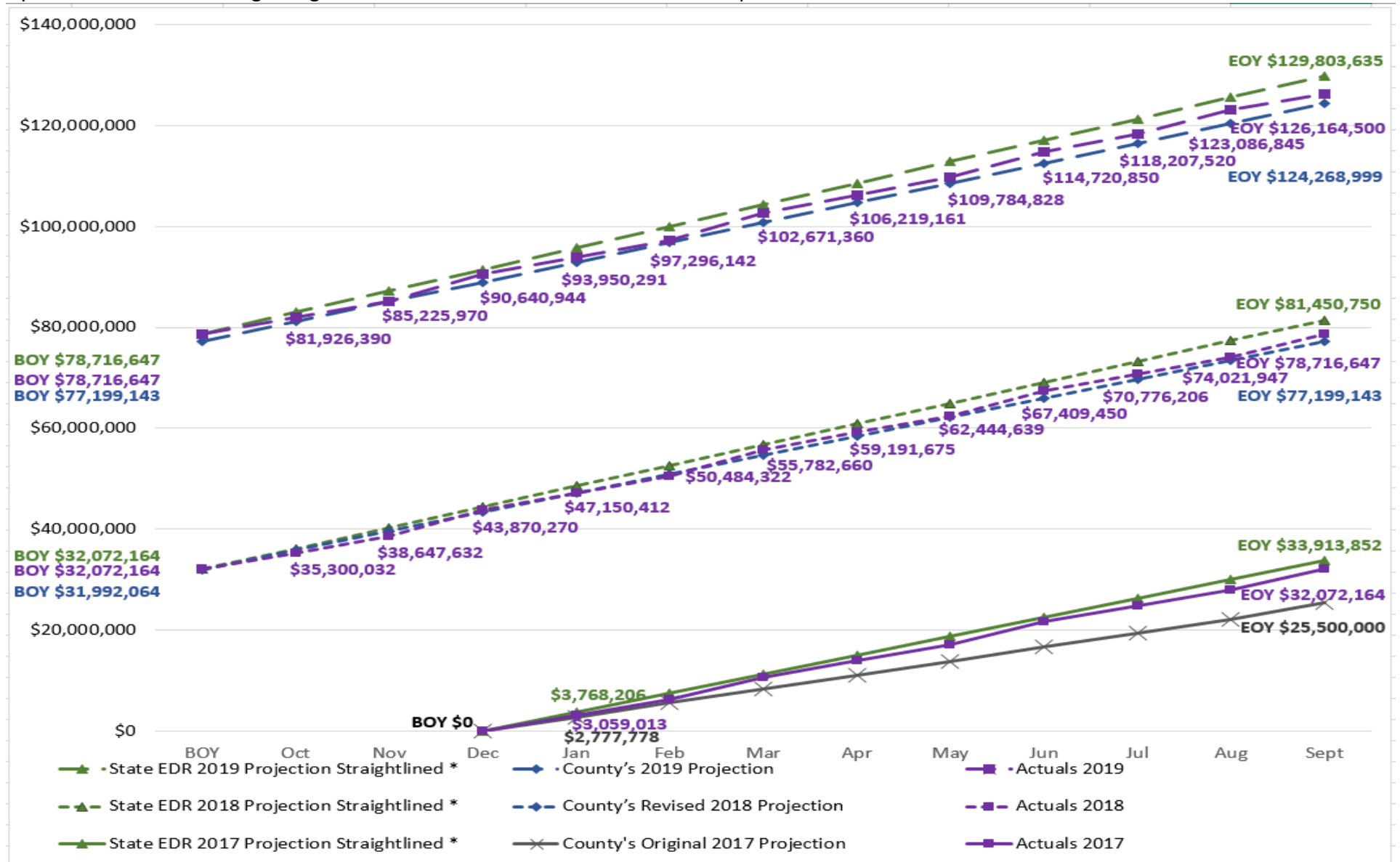
Previous Quarter Grant Confirmation Notice Sent Total	Previous Quarter Scope of Work Received Total	Previous Quarter Contract Prepared Total	Previous Quarter Executed by County Total	Previous Quarter Executed by Grantee Total	Previous Quarter Project Complete Total	Previous Quarter Reimbursement Requested Total	Previous Quarter Reimbursement Sent Total
128	72	72	68	67	27	48	45

Current Quarter Grant Confirmation Notice Sent Total	Current Quarter Scope of Work Received Total	Current Quarter Contract Prepared Total	Current Quarter Executed by County Total	Current Quarter Executed by Grantee Total	Current Quarter Project Complete Total	Current Quarter Reimbursement Requested Total	Current Quarter Reimbursement Sent Total
129	79	79	78	77	30	51	51

Save Our Indian River Lagoon Revenues Cumulative Graph Fiscal Year 16-17 to Current Fiscal Year

* Economic and Demographic Research Data is sourced from Florida's Office of Economic & Demographic Research using their Estimation of Realized and Unrealized Tax Revenues Table

- Projected and Actual Data is from Systems, Applications and Products program
- EDR-Economic and Demographic Research Data, BOY-Beginning of Year, EOY-End of Year
- For Screen Readers use the Save Our Indian River Lagoon Revenues Cumulative Chart Fiscal Year 16-17 to Current Fiscal Year Table
- Updated the State EDR Beginning Of Year to match Actuals End Of Year to the prior Fiscal Years



Save Our Indian River Lagoon Revenues Cumulative Chart

Fiscal Year 16-17 to Current Fiscal Year

* Economic and Demographic Research Data is sourced from Florida's Office of Economic & Demographic Research using their Estimation of Realized and Unrealized Tax Revenues Table

- Projected and Actual Data is from Systems, Applications and Products program
- EDR-Economic and Demographic Research Data, BOY-Beginning of Year, EOY-End of Year

Month	State EDR 2019 Projection Straightlined *	County's 2019 Projection	Actuals 2019	State EDR 2018 Projection Straightlined *	County's Revised 2018 Projection	Actuals 2018	State EDR 2017 Projection Straightlined *	County's Original 2017 Projection	Actuals 2017
BOY	\$78,716,647	\$77,199,143	\$78,716,647	\$32,072,164	\$31,992,064	\$32,072,164	0	0	0
Oct	\$82,973,896	\$81,121,631	\$81,926,390	\$36,187,046	\$35,832,746	\$35,300,032	0	0	0
Nov	\$87,231,145	\$85,044,119	\$85,225,970	\$40,301,929	\$39,593,327	\$38,647,632	0	0	0
Dec	\$91,488,394	\$88,966,607	\$90,640,944	\$44,416,811	\$43,353,909	\$43,870,270	0	0	0
Jan	\$95,745,643	\$92,889,095	\$93,950,291	\$48,531,693	\$47,114,490	\$47,150,412	\$3,768,206	\$2,777,778	\$3,059,013
Feb	\$100,002,892	\$96,811,583	\$97,296,142	\$52,646,575	\$50,875,072	\$50,484,322	\$7,536,412	\$5,555,556	\$6,217,230
Mar	\$104,260,141	\$100,734,071	\$102,671,360	\$56,761,457	\$54,635,653	\$55,782,660	\$11,304,617	\$8,333,334	\$10,686,395
Apr	\$108,517,390	\$104,656,559	\$106,219,161	\$60,876,340	\$58,396,235	\$59,191,675	\$15,072,823	\$11,111,112	\$13,941,510
May	\$112,774,639	\$108,579,047	\$109,784,828	\$64,991,222	\$62,156,817	\$62,444,639	\$18,841,029	\$13,888,890	\$17,177,137
Jun	\$117,031,888	\$112,501,535	\$114,720,850	\$69,106,104	\$65,917,398	\$67,409,450	\$22,609,235	\$16,666,668	\$21,754,009
Jul	\$121,289,137	\$116,424,023	\$118,207,520	\$73,220,986	\$69,677,980	\$70,776,206	\$26,377,441	\$19,444,446	\$24,898,729
Aug	\$125,546,386	\$120,346,511	\$123,086,845	\$77,335,868	\$73,438,561	\$74,021,947	\$30,145,647	\$22,222,224	\$27,890,034
Sept	\$129,803,635	\$124,268,999	\$126,164,500	\$81,450,750	\$77,199,143	\$78,716,647	\$33,913,852	\$25,500,000	\$32,072,164

Save Our Indian River Lagoon - FY 2019

Quarterly Financial Statement

Date Range 09 August 2019 - 08 November 2019

Fund 1260

*Total Assigned YTD-Year to Date, includes all stages of accounting for expenditures, with data derived from Systems, Applications and Products program; **Contracted with Municipalities data is derived from Contract Management System; ***Reimbursement requests expected in later fiscal years; SOIRL-Save Our Indian River Lagoon; CM-Contract Management System; BRL-Banana River Lagoon; NIRL-North Indian River Lagoon; CIRL-Central Indian River Lagoon

Revenues	Budget	Total Assigned YTD*	% Earned
Taxes	\$ 46,088,184	\$ 39,490,872	85.69%
Interest Earned	\$ 1,404,635	\$ 1,960,861	139.60%
Sale of Surplus County Furniture and Equipment	\$ -	\$ 2,063	
Insurance Claims	\$ -	\$ -	
Federal Grants	\$ 1,357,269	\$ -	
State Grants	\$ 226,212	\$ -	
Cost Sharing	\$ -	\$ -	
Statutory Reduction	\$ (2,453,815)	\$ -	
Balance Forward	\$ 75,618,341	\$ 75,618,341	
Total	\$ 122,240,826	\$ 117,072,136	

Expenditures (Roll-Up)	Budget	Total Assigned YTD*	Actuals
Compensation & Benefits	\$ 460,338	\$ 368,328	\$ 368,328
Operating Expenses	\$ 221,803	\$ 159,247	\$ 144,780
Capital Outlay	\$ 5,774	\$ -	\$ -
Transfers	\$ -	\$ -	\$ -
SOIRL Projects funded under Operating Expenses	\$ 4,764,012	\$ 802,060	\$ 567,696
SOIRL Projects funded under Capital Improvement	\$ 32,197,452	\$ 2,423,001	\$ 1,562,204
SOIRL Projects funded under Aid to Gov't Agencies	\$ 40,860,222	\$ 5,515,669	\$ 1,703,034
SOIRL Projects funded under Aid to Private Organizations	\$ 2,279,366	\$ -	\$ 95,029
Contingency	\$ 5,509,896	\$ -	\$ -
Reserves for Cash Forward	\$ 1,865,662	\$ -	
Reserves	\$ 34,076,301	\$ -	\$ -
Total	\$ 122,240,826	\$ 9,268,305	\$ 4,441,071

*Total Assigned YTD-Year to Date, includes all stages of accounting for expenditures, with data derived from Systems, Applications and Products program; **Contracted with Municipalities data is derived from Contract Management System; ***Reimbursement requests expected in later fiscal years; SOIRL-Save Our Indian River Lagoon; CM-Contract Management System; BRL-Banana River Lagoon; NIRL-North Indian River Lagoon; CIRL-Central Indian River Lagoon

Project Title SOIRL Projects funded under Operating Expenses	Contracted**	Budget	Total Assigned YTD*	Actuals
Project Monitoring (Respond) CM's: 3972, 3971, 3959, 3690, 3979, 3973, 4047, 4101	\$ 591,944	\$ 1,951,462	\$ 591,944	\$ 363,802
Community Awareness Initiatives	\$ 15,000	\$ 46,147	\$ 15,163	\$ 14,563
Fertilizer Management Public Education	\$ 147,138	\$ 176,625	\$ 147,138	\$ 141,516
Grass Clippings Public Education CM-3969	\$ 20,000	\$ 40,650	\$ 20,000	\$ 20,000
Septic System Maintenance Public Education	\$ 27,815	\$ 100,813	\$ 27,815	\$ 27,815
Septic Quick Connects-NIRL	\$ -	\$ 155,340	\$ -	\$ -
Septic Upgrades-BRL-45 Upgrades	\$ -	\$ 764,325	\$ -	\$ -
Septic Upgrades-NIRL-45 Upgrades	\$ -	\$ 764,325	\$ -	\$ -
Septic Upgrades-CIRL- 45 Upgrades	\$ -	\$ 764,325	\$ -	\$ -
<i>SOIRL Projects funded under Operating Expenses Subtotal</i>	\$ 801,897	\$ 4,764,012	\$ 802,060	\$ 567,696

Project Title SOIRL Projects funded under Capital Improvement	Contracted**	Budget	Total Assigned YTD*	Actuals
Sewer Laterals Pilot Project - Satellite Beach	\$ -	\$ 840,000	\$ -	\$ -
Septic Removal-BRL-Sykes Creek M CM-3838	\$ 188,000	\$ 1,899,044	\$ 188,000	\$ 53,600
Septic Removal-BRL-Sykes Creek N CM-3830	\$ 47,090	\$ 3,007,390	\$ 47,090	\$ 32,911
Septic Removal-BRL-Sykes Creek T CM-3839	\$ 223,500	\$ 243,500	\$ 223,500	\$ 97,500
Septic Removal-NIRL-South Central C CM-3840	\$ 373,255	\$ 4,219,488	\$ 373,255	\$ 142,218
Septic Removal-CIRL-Micco Sewer Line Extension CM-3831, CM-3709,	\$ 72,965	\$ 1,766,225	\$ 72,965	\$ 20,115
Stormwater Projects-BRL-Basin 1304 Seagull Bioreactor	\$ -	\$ 92,925		\$ -
Stormwater Projects-BRL-Basin 989 Denitrification	\$ -	\$ 100,000	\$ -	\$ -
Stormwater Projects-BRL-Basin 1349 Denitrification CM-4273	\$ -	\$ 100,000	\$ -	\$ -
Stormwater Projects-BRL-Basin 1409 Denitrification CM-4274	\$ -	\$ 100,000	\$ -	\$ -

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Project Title SOIRL Projects funded under Capital Improvement Cont'd	Contracted**	Budget	Total Assigned YTD*	Actuals
Unfunded 1-Stormwater Projects-BRL-Basin 1071 Denitrification	\$ -	\$ 100,000	\$ -	\$ -
Unfunded 1-Stormwater Projects-BRL-Basin 1172 Denitrification	\$ -	\$ 100,000	\$ -	\$ -
Stormwater Projects-NIRL-Kingsmill-Aurora Phase II ***	\$ -	\$ -	\$ -	\$ -
Stormwater Projects-NIRL-Basin 1298 Public Works Bioreactor	\$ -	\$ 88,999	\$ -	\$ -
Stormwater Projects-NIRL-Huntington Pond Denitrification CM-4015	\$ -	\$ 104,720	\$ -	\$ -
Stormwater Projects-NIRL-John Roads Pond CM-3906	\$ 7,117	\$ 94,042	\$ 7,118	\$ 6,320
Stormwater Projects-NIRL-Flounder Creek Pond CM-3907	\$ -	\$ 59,581	\$ -	\$ -
Stormwater Projects-NIRL-Basin 100 Burkholm Rd Denitrification	\$ -	\$ 66,483	\$ -	\$ -
Stormwater Projects-NIRL-Basin 51 Johns Road Pond Retrofit	\$ -	\$ 23,778	\$ -	\$ -
Stormwater Projects-NIRL-Basin 115 Carter Rd Denitrification	\$ -	\$ 64,542	\$ -	\$ -
Stormwater Projects-NIRL-Basin 193 Wiley Road Denitrification	\$ -	\$ 85,424	\$ -	\$ -
Stormwater Projects-NIRL-Basin 832 Broadway Pond Denitrification	\$ -	\$ 44,257	\$ -	\$ -
Stormwater Projects-NIRL-Basin 2134 Fleming Grant	\$ -	\$ 17,346	\$ -	\$ -
Unfunded 1-Stormwater Projects-NIRL-Basin 1318 Denitrification	\$ -	\$ 100,000	\$ -	\$ -
Muck Removal-BRL-Merritt Island Canals Muck Dredging	\$ 8,728	\$ 1,018,783	\$ 8,728	\$ -
Muck Removal-BRL-Sykes Creek Muck Dredging CM-3833	\$ 208,728	\$ 2,018,783	\$ 8,728	\$ -
Muck Removal-NIRL-Grand Canal Muck Dredging	\$ 1,219,970	\$ 1,500,000	\$ 1,219,970	\$ 1,060,449
Muck Removal-NIRL-Eau Gallie Muck Dredging CM-3975	\$ -	\$ 5,378,852	\$ -	\$ -
Muck Removal-NIRL-Titusville East Muck Dredging CM-3975	\$ 110,856	\$ 151,530	\$ 110,856	\$ 41,456
Muck Removal-NIRL-Titusville West Muck Dredging CM-3976	\$ 18,267	\$ 36,074	\$ 18,267	\$ 18,261
Muck Removal-NIRL-National Aeronautics and Space Administration East Muck Dredging CM-3977	\$ 34,912	\$ 114,234	\$ 34,912	\$ 34,912

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Project Title SOIRL Projects funded under Capital Improvement Cont'd	Contracted**	Budget	Total Assigned YTD*	Actuals
Muck Removal-CIRL-Turkey Creek Muck Dredging CM-3966, 3967, COMPLETE	\$ 109,614	\$ 240,136	\$ 109,614	\$ 54,462
Unfunded A1-Muck Removal-IRL- Melbourne Causeway Muck Dredging	\$ -	\$ 12,471	\$ -	\$ -
Unfunded 2-Muck Removal-BRL-8% Canals Muck Dredging	\$ -	\$ 4,600,000	\$ -	\$ -
Unfunded 2-Muck Removal-BRL- Mathers Area Muck Dredging	\$ -	\$ 3,000,000	\$ -	\$ -
Oyster Reef Living Shoreline-BRL- Brevard	\$ -	\$ 47,350	\$ -	\$ -
Oyster Reef Living Shoreline-NIRL- Indian River Drive	\$ -	\$ 179,930	\$ -	\$ -
Oyster Reef Living Shoreline-NIRL	\$ -	\$ 488,210	\$ -	\$ -
Oyster Reef Living Shoreline-CIRL	\$ -	\$ 91,115	\$ -	\$ -
Plants Living Shoreline-NIRL-Indian River Drive	\$ -	\$ 2,240	\$ -	\$ -
<i>SOIRL Projects funded under Capital Improvement Subtotal</i>	\$ 2,623,002	\$ 32,197,452	\$ 2,423,001	\$ 1,562,204

*Total Assigned YTD-Year to Date, includes all stages of accounting for expenditures, with data derived from Systems, Applications and Products program; **Contracted with Municipalities data is derived from Contract Management System; ***Reimbursement requests expected in later fiscal years; SOIRL-Save Our Indian River Lagoon; CM-Contract Management System; BRL-Banana River Lagoon; NIRL-North Indian River Lagoon; CIRL-Central Indian River Lagoon

Project Title SOIRL Projects funded under Aid to Gov't Agencies	Contracted**	Budget	Total Assigned YTD*	Actuals
Waste Water Treatment Facility Upgrades-BRL-Cocoa Beach	\$ -	\$ 1,015,361	\$ -	\$ -
Waste Water Treatment Facility Upgrades-NIRL-Titusville Osprey CM-3627	\$ 909,414	\$ 8,104,844	\$ 909,414	\$ 333,705
Waste Water Treatment Upgrade-CIRL-Palm Bay CM-3934	\$ 876,427	\$ 1,395,427	\$ 876,427	\$ 101,679
Waste Water Treatment -CIRL-Melbourne Grant Street	\$ -	\$ 7,937,963	\$ -	\$ -
Sewer Lateral Pilot Project - Titusville Osprey	\$ -	\$ 206,500	\$ -	\$ -
Septic to Sewer-NIRL-MIRA	\$ 191,126	\$ 191,126	\$ 191,126	\$ -
Septic to Sewer-CIRL-Melbourne-Riverside Drive	\$ 15,524	\$ 274,604	\$ 15,524	\$ 15,524
Septic Removal-NIRL-Cocoa K	\$ -	\$ 1,240,437	\$ -	\$ -
Septic to Sewer-NIRL-West Melbourne-Roxy Avenue	\$ -	\$ 91,835	\$ -	\$ -
Septic Removal-CIRL-Melbourne-Hoag Sewer Conversion CM-3932	\$ 86,061	\$ 86,031	\$ 86,061	\$ 13,520
Septic Removal-CIRL-Melbourne-Penwood Sewer Conversion CM-3789	\$ 17,075	\$ 40,632	\$ 17,075	\$ 17,074
Septic Removal-CIRL-Palm Bay B	\$ -	\$ 4,700,000	\$ -	\$ -
Septic to Sewer-CIRL-West Melbourne-Sylvan Estates CM-3985	\$ 916,540	\$ 1,542,098	\$ 916,540	\$ 86,928
Withdrew SO-Stormwater Project-BRL-Cape Canaveral-Cocoa Palms LID	\$ -	\$ 1,144	\$ -	\$ -
Stormwater Projects-BRL-Cape Canaveral Projects-Cape Shores Swale	\$ -	\$ 2,746	\$ -	\$ -
Stormwater Project-BRL-Cape Canaveral-Carver Cove Swale	\$ -	\$ 2,816	\$ -	\$ -
Stormwater Projects-BRL-Cape Canaveral Projects-Justamere Road Swale	\$ -	\$ 528	\$ -	\$ -
Stormwater Projects-BRL-Cape Canaveral Projects-Hitching Post Berms Swale	\$ -	\$ 2,552	\$ -	\$ -
Stormwater Project-BRL-Indian Harbour Beach-Big Muddy Baffle Box	\$ -	\$ 68,372	\$ -	\$ -
Stormwater Project-BLR-Cocoa Beach-Blakey Blvd	\$ -	\$ 4,801	\$ -	\$ -

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Project Title SOIRL Projects funded under Aid to Gov't Agencies Cont'd	Contracted**	Budget	Total Assigned YTD*	Actuals
Stormwater Project-BLR-Cocoa Beach-Dempsey	\$ -	\$ 4,641	\$ -	\$ -
Stormwater Project-NIRL-Cocoa-Church St Type II Baffle Box CM-4169	\$ 20,856	\$ 88,045	\$ 20,856	\$ 20,856
Stormwater Projects-NIRL-Titusville-St Teresa Basin CM-3929	\$ 322,200	\$ 272,800	\$ 322,200	\$ -
Stormwater Projects-NIRL-Titusville High School Baffle Box	\$ -	\$ 115,447	\$ -	\$ -
Stormwater Projects-NIRL-Titusville-South Street Basin CM-3908	\$ 86,856	\$ 86,856	\$ 86,856	\$ -
Stormwater Projects-NIRL-Titusville-Coleman Pond Managed Aquatic Plant System	\$ -	\$ 36,138	\$ -	\$ -
Stormwater Projects-NIRL-Titusville-La Paloma Basin CM-3933 ***	\$ 208,296	\$ 208,296	\$ 208,296	\$ -
Stormwater Projects-NIRL-Melbourne-Cliff Creek Baffle Box CM-3931 ***	\$ 347,781	\$ 347,781	\$ 347,781	\$ -
Stormwater Projects-CIRL-Melbourne-Apollo/GA Baffle Box	\$ -	\$ 307,191	\$ -	\$ -
Stormwater Projects-NIRL-Melbourne-Thrush Drive Baffle Box CM-3930 ***	\$ 322,200	\$ 322,200	\$ 322,200	\$ -
Stormwater Projects-NIRL-Melbourne-Cherry Street Baffle Box	\$ -	\$ 95,114	\$ -	\$ -
Stormwater Projects-CIRL-Melbourne-Stewart Rd Dry Retrofit	\$ -	\$ 18,345	\$ -	\$ -
Stormwater Projects-CIRL-Melbourne-Spring Creek Baffle Box	\$ -	\$ 102,587	\$ -	\$ -
Stormwater Projects-CIRL-Melbourne-Grant Place Baffle Box	\$ -	\$ 85,162	\$ -	\$ -
Stormwater Projects-CIRL-Melbourne-Grant Place Baffle Box	\$ -	\$ 108,605	\$ -	\$ -
Stormwater Projects-CIRL-SJRWMD-Melbourne-Crane Creek/M-1 Canal	\$ 241,743	\$ 2,100,047	\$ 241,743	\$ 65,949
Muck Removal-BLR-Cocoa Beach Phase III Muck Dredging & Interstitial CM-3986	\$ 953,570	\$ 1,618,794	\$ 953,570	\$ 708,458
Muck Removal-BLR-Cocoa Beach Phase II-B Muck Dredging	\$ -	\$ -	\$ -	\$ 339,340
Muck Removal-BLR-Indian Harbour Beach Muck Dredging & Interstitial	\$ -	\$ 7,718,255	\$ -	\$ -

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Project Title SOIRL Projects funded under Aid to Gov't Agencies Cont'd	Contracted**	Budget	Total Assigned YTD*	Actuals
Oyster/Living Shorelines-BRL-Cocoa Beach-McNabb	\$ -	\$ 34,056	\$ -	\$ -
Oyster/Living Shorelines-NIRL-Melbourne-Riverview Park	\$ -	\$ 108,790	\$ -	\$ -
Oyster/Living Shorelines-CIRL-Palm Bay-Turkey Creek Shoreline Restoration	\$ -	\$ 122,055	\$ -	\$ -
Plants/Living Shorelines-BRL-Cocoa Beach-McNabb	\$ -	\$ 5,760	\$ -	\$ -
Plants/Living Shorelines-NIRL-Melbourne-Riverview Park	\$ -	\$ 18,480	\$ -	\$ -
Plants/Living Shorelines-CIRL-Palm Bay-Turkey Creek Shoreline Restoration	\$ -	\$ 24,960	\$ -	\$ -
<i>SOIRL Projects funded under Aid to Gov't Agencies Subtotal</i>	<i>\$ 5,515,669</i>	<i>\$ 40,860,222</i>	<i>\$ 5,515,669</i>	<i>\$ 1,703,034</i>

*Total Assigned YTD-Year to Date, includes all stages of accounting for expenditures, with data derived from Systems, Applications and Products program; **Contracted with Municipalities data is derived from Contract Management System; ***Reimbursement requests expected in later fiscal years; SOIRL-Save Our Indian River Lagoon; CM-Contract Management System; BRL-Banana River Lagoon; NIRL-North Indian River Lagoon; CIRL-Central Indian River Lagoon

Project Title SOIRL Projects funded under Aid to Private Organizations	Contracted**	Budget	Total Assigned YTD*	Actuals
Sewer Lateral Pilot Project - Indian River Shores Trailer Park	\$ -	\$ 39,385	\$ -	\$ -
Septic Quick Connects-NIRL-Private Reimbursements	\$ -	\$ 155,340	\$ -	\$ -
Septic Upgrades-BRL-45 Upgrades-Private Reimbursements	\$ -	\$ 72,000	\$ -	\$ -
Septic Upgrades-NIRL-45 Upgrades-Private Reimbursements	\$ -	\$ 72,000	\$ -	\$ -
Septic Upgrades-CIRL- 45 Upgrades-Private Reimbursements	\$ -	\$ 72,000	\$ -	\$ -
Septic Removal-CIRL-Micco Sewer Line Extension-Private Reimbursements	\$ -	\$ 60,000	\$ -	\$ -
Oyster/Living Shorelines-BRL-Zoo-Merritt Island-Eden Isles Lane	\$ -	\$ 21,805	\$ -	\$ -
Oyster/Living Shorelines-BRL-Zoo-Indian Harbour Beach-Marina Isles	\$ -	\$ 26,700	\$ -	\$ -
Oyster/Living Shorelines-BRL-Zoo-Cocoa Beach-Bettinger CM-4272 COMPLETE	\$ 10,680	\$ 10,680	\$ 10,680	\$ 10,680
Oyster/Living Shorelines-BRL-Zoo-Gitlin CM4441 COMPLETE	\$ 16,020	\$ 16,020	\$ 16,020	\$ 16,020
Oyster/Living Shorelines-BRL-Zoo-Banana River	\$ -	\$ 601,968	\$ -	\$ -
Oyster/Living Shorelines-NIRL-Zoo-Merritt Island-Oliver	\$ -	\$ 51,620	\$ -	\$ -
Oyster/Living Shorelines-NIRL-Zoo-North IRL	\$ -	\$ 352,372	\$ -	\$ -
Oyster/Living Shorelines-CIRL-Zoo-Coconut Point/EELS	\$ -	\$ 509,950	\$ -	\$ -
Oyster/Living Shorelines-CIRL-Zoo-Melbourne Beach-Wexford	\$ -	\$ 31,150	\$ -	\$ -
Oyster/Living Shorelines-CIRL-Zoo-Central IRL CM4452	\$ 68,329	\$ 166,398	\$ 68,329	\$ 68,329
Plants/Living Shorelines-BRL-Zoo-Banana River	\$ -	\$ 3,221	\$ -	\$ -
Plants/Living Shorelines-CIRL-Zoo-Central IRL	\$ -	\$ 743	\$ -	\$ -
Plants/Living Shorelines-BRL-MRC-Cocoa Beach Country Club CM-4002 Completed Year 1, Fiscal Year 17/18	\$ -	\$ 16,014	\$ -	\$ -
<i>SOIRL Projects funded under Aid to Private Organizations</i>	\$ 95,029	\$ 2,279,366	\$ -	\$ 95,029
SOIRL Projects Total	\$ 9,035,596	\$ 80,101,052	\$ 8,740,730	\$ 3,927,963



Save Our Indian River Lagoon
Citizen Oversight Committee
December 13, 2019

Agenda Item:

VIII. a. New Business

Title:

2020 Meeting Calendar

Requested Action:

Motion to recommend adoption of the attached meeting schedule for 2020.

Summary Explanation and Background:

Since inception in 2016, the Citizen Oversight Committee has met monthly. For the last several years, the Committee has followed the lead of the County Commission and not met during the month of June. Meetings may be cancelled if not needed or pose significant conflicts, however selecting a full year schedule allows for securing meeting rooms and space on the calendar of all participants. A proposed schedule is attached.



SAVE OUR INDIAN RIVER LAGOON CITIZEN OVERSIGHT COMMITTEE 2020 MEETING SCHEDULE

Regular Meetings
8:30 a.m. – 11:30 a.m.
Brevard County Government Center
2725 Judge Fran Jamieson Way
Building C, 3rd Floor, Florida Room
Viera, Florida 32940

January 17, 2020 (Commission Room)

February 21, 2020

March 20, 2020

April 17, 2020

May 15, 2020

June Break

July 17, 2020

August 21, 2020

September, 18, 2020

October 16, 2020

November 20, 2020

December 18, 2020

Committee Executive Secretary
Carol Gerundo
(321) 633-2016
Email: Carol.Gerundo@brevardfl.gov



Save Our Indian River Lagoon
Citizen Oversight Committee
December 13, 2019

Agenda Item:

VIII. b. New Business

Title:

Project Funding Requests to include in the recommended 2020 Plan Update

Requested Action:

Motion to recommend modification of the *Save Our Indian River Lagoon Project Plan* to include all the projects listed in the 2020 Project Funding Requests List with the exception of Project(s) Numbered [project numbers to be included], which are not recommended for inclusion and Project(s) Numbered [project numbers to be included], which are returned to staff for further review and Committee reconsideration at a later date.

Summary Explanation and Background:

Each year, new project ideas and funding requests are accepted for consideration by the Citizen Oversight Committee to be included and recommended for funding in the next annual update of the Save Our Indian River Lagoon Project Plan.

The Committee's recommendations are presented to the Board of County Commissioners for their inclusion, modification and inclusion, or non-inclusion in the next annual plan update. Per the enabling ordinance for the surtax, the Board shall not act on the Committee's recommendations any sooner than 15 days after posting of the draft plan update on the County's Save Our Indian River Lagoon website.

Upon County Commission approval, a project or projects that deliver comparable nutrient removal benefits may be added to the listed Save Our Indian River Lagoon Project Plan or substituted for funding allocated to other projects in the same sub-lagoon. Unless otherwise agreed to by the County Commission, if a substituted project costs more than the project previously included in the Plan, the requesting partner must provide the balance of costs.

Sixty-one new or revised project requests are provided for consideration by the Committee. These projects have an estimated total cost of \$175,995,967 for which \$115,498,066 is potentially eligible for surtax funding.

Save Our Indian River Lagoon Funding Application Short Form: Osprey Nutrient Removal Upgrade Phase 2

Project Details

Entity Name: City of Titusville

Project Type: WWTF Upgrades for Reclaimed Water

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 1105 Buffalo Road, Titusville, FL 32796

Brief Project Description: The intent of Phase 1 of the Nutrient Removal Upgrade Project was to develop and construct biological, chemical and physical process upgrades throughout the Osprey Water Reclamation Facility directed toward an effluent total nitrogen (TN) concentration of 6 mg/ L and an effluent total phosphorus concentration of 1 mg/ L. During the design of Phase 1 it was discovered that with the addition of an internal recirculation process, the Nitrogen in the reclaimed water can reliably be lowered from 6 mg/L to 3 mg/L as an annual average. Phase 2 of the project will consist of the construction and implementation of the internal recirculation process during the construction of Phase 1.

Provide Information on Education and Outreach Associated with Project: The progress of the project will be reported on quarterly by the City

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 3,626

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$300,000

Estimated Cost per Pound Total Nitrogen Removed: \$83

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$300,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$1,919,750

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: Local Cost Share is from Phase 1 of the project.

Save Our Indian River Lagoon Funding Application Short Form: Draa Field Vegetation Harvesting

Project Details

Entity Name: City of Titusville

Project Type: Vegetation Harvesting

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28°37'07"N; 80°49'14"W; 230 N Dixie Ave, Titusville, FL 32796

Brief Project Description: Vegetation harvesting within a 3 acre pond that leads to the Indian River Lagoon. Removal of invasive and nuisance plant species within the pond. The harvest of aquatic vegetation removes nutrients from the waterbody rather than recycling them through decomposition and sedimentation of the plant material into the sediment. Most fresh water plants do not tolerate the salinity of the IRL and upon release to the lagoon from tributaries will die and decompose adding a nutrient load directly to the Lagoon.

Provide Information on Education and Outreach Associated with Project: Information on the project will be included in the annual stormwater newsletter which is mailed to approx. 20,000 citizens within their utility bills and also on the City's website.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 574

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$50,000

Estimated Cost per Pound Total Nitrogen Removed: \$87

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$50,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: The harvest of aquatic vegetation removes nutrients from the waterbody rather than recycling them through decomposition and sedimentation of the plant material into the sediment. Most fresh water plants do not tolerate the salinity of the IRL and upon release to the lagoon from tributaries will die and decompose adding a nutrient load directly to the Lagoon. The exact amount of nitrogen and phosphorus removal can't be calculated until after the harvesting is complete and weighed and sampled.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Osprey Plant Pond MAPS

Project Details

Entity Name: City of Titusville

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28°37'22"N; 80°48'53"W; 1105 Buffalo Rd, Titusville, FL 32796

Brief Project Description: Installation of floating islands within a 2.3 acre City owned pond located within the Marina Basin.

Provide Information on Education and Outreach Associated with Project: Information on the project will be included in the annual stormwater newsletter which is mailed to approximately 20,000 citizens within their utility bills and also on the City's website.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 606

Total Phosphorus Reduction (lbs/yr): 88

Costs

Total Cost: \$60,000

Estimated Cost per Pound Total Nitrogen Removed: \$99

Estimated Cost per Pound Total Phosphorus Removed: \$679

Eligible Tax Funding Cost Share: \$60,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Floating Islands/Managed Aquatic Plant Systems

Save Our Indian River Lagoon Funding Application Short Form: County Wide Stormwater Pond Harvesting

Project Details

Entity Name: Brevard County Stormwater

Project Type: Vegetation Harvesting

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location:

Brief Project Description: Mechanical harvesting of 30 stormwater ponds

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 140

Total Phosphorus Reduction (lbs/yr): 28

Costs

Total Cost: \$125,000

Estimated Cost per Pound Total Nitrogen Removed: \$893

Estimated Cost per Pound Total Phosphorus Removed: \$3,125

Eligible Tax Funding Cost Share: \$14,000

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$73,500

Dollar Amount of Secured Grant(s): \$37,500

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Satellite Beach Interstitial Water Treatment

Project Details

Entity Name: City of Satellite Beach

Project Type: Treatment Interstitial Water

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: 28.184086, -80.610735 - Satellite Beach Portion of Grand Canal and finger canals

Brief Project Description: Alongside the dredging of the City of Satellite Beach portion of the Grand Canal and finger canals, interstitial water treatment will play a vital role in the health of the IRL. A permitted county spoil site exists in the area to deposit the muck and treat the interstitial water from the operations.

Provide Information on Education and Outreach Associated with Project: Education and outreach will include articles in the local newsletter the Beach Caster, public social media posts, signs on site, and time in public meetings to provide information on the importance of the health of the Lagoon, as well as the City's role in the muck dredging operations, interstitial water treatment, and providing for questions and comments from city residents.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 29,978

Total Phosphorus Reduction (lbs/yr): 3,059

Costs

Total Cost: \$4,076,940

Estimated Cost per Pound Total Nitrogen Removed: \$136

Estimated Cost per Pound Total Phosphorus Removed: \$1,333

Eligible Tax Funding Cost Share: \$3,057,756

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,019,184

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: The expected benefit of this project is a healthier IRL, meaning better surface water quality, less fish kills, more marine biodiversity, improved sea-grass health, increased recreational use, increased tourism, increased quality of life, and increased resiliency in the community.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Barefoot Bay Lateral Smoke Testing

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Sewer Lateral Rehab

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Barefoot Bay

Brief Project Description: Smoke testing of the Barefoot Bay collection system.

Provide Information on Education and Outreach Associated with Project: Press release notifying public.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 864

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$90,000

Estimated Cost per Pound Total Nitrogen Removed: \$104

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$90,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Reduce bacteria from wastewater entering bodies of water

Supplemental Comments: 5,402 lots

Save Our Indian River Lagoon Funding Application Short Form: South Beaches Lateral Smoke Testing

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Sewer Lateral Rehab

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: South Beaches

Brief Project Description: Smoke testing of the South Beaches collection system.

Provide Information on Education and Outreach Associated with Project: Press release notifying public.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,662

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$200,000

Estimated Cost per Pound Total Nitrogen Removed: \$120

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$200,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Reduce bacteria from wastewater entering bodies of water

Supplemental Comments: 10,385 lots

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island Lateral Smoke Testing

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Sewer Lateral Rehab

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Merritt Island

Brief Project Description: Smoke testing of the Merritt Island collection system.

Provide Information on Education and Outreach Associated with Project: Press release notifying public.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 2,042

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$250,000

Estimated Cost per Pound Total Nitrogen Removed: \$122

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$250,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Reduce bacteria from wastewater entering bodies of water

Supplemental Comments: 12,760 lots

Save Our Indian River Lagoon Funding Application Short Form: Basin 10 County Line Road Woodchip Bioreactor

Project Details

Entity Name: Brevard County Stormwater

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28.791279° lat, -80.865261° lon

Brief Project Description: This project will incorporate a check dam to divert existing water flow in the ditch through a woodchip bioreactor capable of reducing nutrient loading.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 597

Total Phosphorus Reduction (lbs/yr): 90

Costs

Total Cost: \$128,225

Estimated Cost per Pound Total Nitrogen Removed: \$215

Estimated Cost per Pound Total Phosphorus Removed: \$1,034

Eligible Tax Funding Cost Share: \$72,773

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$20,452

Dollar Amount of Secured Grant(s): \$35,000

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Woodchip Bioreactor

Save Our Indian River Lagoon Funding Application Short Form: Basin 26 Sunset Road Serenity Park Woodchip Bioreactor

Project Details

Entity Name: Brevard County Stormwater

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28.772461° lat, -80.860861° lon

Brief Project Description: This project will incorporate a check dam to divert existing water flow in the ditch through a woodchip bioreactor capable of reducing nutrient loading.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 605

Total Phosphorus Reduction (lbs/yr): 92

Costs

Total Cost: \$130,062

Estimated Cost per Pound Total Nitrogen Removed: \$215

Estimated Cost per Pound Total Phosphorus Removed: \$1,035

Eligible Tax Funding Cost Share: \$73,810

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$21,252

Dollar Amount of Secured Grant(s): \$35,000

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Woodchip Bioreactor

Save Our Indian River Lagoon Funding Application Short Form: Basin 141 Irwin Avenue Woodchip Bioreactor

Project Details

Entity Name: Brevard County Stormwater

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28.695738° lat, -80.844160° lon

Brief Project Description: This project will incorporate a check dam to divert existing water flow in the ditch through a woodchip bioreactor capable of reducing nutrient loading.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 567

Total Phosphorus Reduction (lbs/yr): 86

Costs

Total Cost: \$124,626

Estimated Cost per Pound Total Nitrogen Removed: \$220

Estimated Cost per Pound Total Phosphorus Removed: \$1,045

Eligible Tax Funding Cost Share: \$69,174

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$20,452

Dollar Amount of Secured Grant(s): \$35,000

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Woodchip Bioreactor

Save Our Indian River Lagoon Funding Application Short Form: Draa Field Pond MAPS

Project Details

Entity Name: City of Titusville

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28°37'07"N; 80°49'14"W; 230 N Dixie Ave, Titusville, FL 32796

Brief Project Description: Installation of floating islands within a 3 acre City owned pond located within the Draa Field basin, which is part of the overall Marina Basin.

Provide Information on Education and Outreach Associated with Project: Information on the project will be included in the annual stormwater newsletter which is mailed to approx. 20,000 citizens within their utility bills and also on the City's website.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 256

Total Phosphorus Reduction (lbs/yr): 38

Costs

Total Cost: \$60,000

Estimated Cost per Pound Total Nitrogen Removed: \$234

Estimated Cost per Pound Total Phosphorus Removed: \$1,563

Eligible Tax Funding Cost Share: \$31,281

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$28,719

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Floating Islands/Managed Aquatic Plant Systems

Save Our Indian River Lagoon Funding Application Short Form: Basin 2258 Babcock Road Woodchip Bioreactor

Project Details

Entity Name: Brevard County Stormwater

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: 27.827804° lat, -80.611043° lon

Brief Project Description: This project will incorporate a check dam to divert existing water flow in the ditch through a woodchip bioreactor capable of reducing nutrient loading.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 412

Total Phosphorus Reduction (lbs/yr): 62

Costs

Total Cost: \$99,980

Estimated Cost per Pound Total Nitrogen Removed: \$243

Estimated Cost per Pound Total Phosphorus Removed: \$1,046

Eligible Tax Funding Cost Share: \$50,203

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$14,777

Dollar Amount of Secured Grant(s): \$35,000

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Woodchip Bioreactor

Save Our Indian River Lagoon Funding Application Short Form: Basin 22 Hunting Road Serenity Park Woodchip Bioreactor

Project Details

Entity Name: Brevard County Stormwater

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 28.771504° lat, -80.845154° lon

Brief Project Description: This project will incorporate a check dam to divert existing water flow in the ditch through a woodchip bioreactor capable of reducing nutrient loading.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 329

Total Phosphorus Reduction (lbs/yr): 50

Costs

Total Cost: \$103,852

Estimated Cost per Pound Total Nitrogen Removed: \$316

Estimated Cost per Pound Total Phosphorus Removed: \$1,391

Eligible Tax Funding Cost Share: \$40,077

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$28,775

Dollar Amount of Secured Grant(s): \$35,000

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Woodchip Bioreactor

Save Our Indian River Lagoon Funding Application Short Form: Ray Bullard WRF Stormwater Management Area

Project Details

Entity Name: City of West Melbourne

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Coordinates: 28°04'6.37" N, 80°38'34.45"W, Street Address: 1415 Henry Avenue, West Melbourne, FL 32904

Brief Project Description: The City of West Melbourne's Canal C1E conveys stormwater from an upstream basin totaling approximately 450 acres (refer to the figure e-mailed as part of the application). The majority of the 450-acre basin is composed of older, single-family residential subdivisions that were constructed without stormwater treatment systems. The runoff from this 450-acre basin flows to the City's canals and eventually to the Indian River Lagoon. Currently, the runoff flows to the lagoon without undergoing any type of stormwater treatment.

This project proposes to construct a new wet detention pond that will intercept the first flush of stormwater flows from the downstream end of Canal C1E. The new wet detention pond will be constructed at the City's wastewater treatment facility, in place of the existing lined reclaim water pond. The lined pond, and the surrounding areas, are no longer in use and currently serve no purpose.

This project is conveniently located where Canal C1E splits into Canals C10 and C11 (see figure). This allows the new system to intercept the entirety of flows from the upstream 450-acre basin prior to the flows splitting into two separate canals (both of which flow to the Central IRL). Two concrete diversion structures will be constructed at the upstream ends of Canals C10 and C11 as shown on the 60% design plans (also submitted as part of this application). This will divert the first flush of stormwater flow into the new wet detention pond. Check valves will be installed on the intake piping for the wet detention pond to prevent backflow of the first flush into the canal system. The new wet detention pond will allow for treatment of TN and TP as shown in the attached calculations. An added benefit is the new pond will also provide additional stormwater storage, which will aid with flooding of upstream areas during heavy rainfall events.

Provide Information on Education and Outreach Associated with Project: None, but the City is willing to work with the County on any requested outreach or support

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 800

Total Phosphorus Reduction (lbs/yr): 366

Costs

Total Cost: \$1,704,160

Estimated Cost per Pound Total Nitrogen Removed: \$2,130

Estimated Cost per Pound Total Phosphorus Removed: \$4,656

Eligible Tax Funding Cost Share: \$97,600

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,606,560

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: N/A

Supplemental Comments: BMP: Wet detention pond

Save Our Indian River Lagoon Funding Application Short Form: Floating Wetlands to Existing Stormwater Ponds

Project Details

Entity Name: City of Cocoa

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Polaris Pond off Polaris Street in Cocoa, FL

Brief Project Description: Add floating wetlands in various locations to be determined around the City of Cocoa in different stormwater ponds.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 12

Total Phosphorus Reduction (lbs/yr): 3

Costs

Total Cost: \$50,000

Estimated Cost per Pound Total Nitrogen Removed: \$4,075

Estimated Cost per Pound Total Phosphorus Removed: \$16,453

Eligible Tax Funding Cost Share: \$1,497

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$48,503

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Floating Islands / Managed Aquatic Plant Systems

Save Our Indian River Lagoon Funding Application Short Form: Diamond Square Stormwater Pond

Project Details

Entity Name: City of Cocoa

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: On a lot east of W Railroad Ave. and E Street

Brief Project Description: A wet pond to be excavated East of the Diamond Square CRA. This project is an essential component for improving the drainage abilities of Diamond Square and thus address flooding issues that have been experienced in the past.

Provide Information on Education and Outreach Associated with Project:

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 85

Total Phosphorus Reduction (lbs/yr): 23

Costs

Total Cost: \$549,643

Estimated Cost per Pound Total Nitrogen Removed: \$6,458

Estimated Cost per Pound Total Phosphorus Removed: \$24,224

Eligible Tax Funding Cost Share: \$10,383

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$539,260

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Wet Off-line Detention Pond

Save Our Indian River Lagoon Funding Application Short Form: South Central Lateral Smoke Testing

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Sewer Lateral Rehab

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: South Central

Brief Project Description: Smoke testing of the South Central collection system.

Provide Information on Education and Outreach Associated with Project: Press release notifying public.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 4,108

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$515,000

Estimated Cost per Pound Total Nitrogen Removed: \$125

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$515,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Reduce bacteria from wastewater entering bodies of water

Supplemental Comments: 10,382 lots; excluding West Cocoa

Save Our Indian River Lagoon Funding Application Short Form: Basin 5 Dry Retention

Project Details

Entity Name: Town of Indialantic

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: 2nd Avenue and Riverside Drive, Indialantic

Brief Project Description: Construct new dry retention facility and diversion structure near outfall

Provide Information on Education and Outreach Associated with Project: Interpretive signage will be placed at the project to explain its function and benefits

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 113

Total Phosphorus Reduction (lbs/yr): 18

Costs

Total Cost: \$67,700

Estimated Cost per Pound Total Nitrogen Removed: \$601

Estimated Cost per Pound Total Phosphorus Removed: \$3,782

Eligible Tax Funding Cost Share: \$16,680

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$51,020

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments: BMP: Dry Retention

Save Our Indian River Lagoon Funding Application Short Form: Jackson Ct. Stormwater Treatment Facility

Project Details

Entity Name: City of Satellite Beach

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: City of Satellite Beach 28°11'2.33"N 80°36'24.40"W

Brief Project Description: A treatment train approach for reducing nutrient loading from 3 basins. Runoff will flow from dry retention in the form of swales or exfiltration, to a wet detention pond, and through a nutrient removal filter structure before discharging to the river.

Provide Information on Education and Outreach Associated with Project: Education and outreach will include articles in the local newsletter the Beach Caster, public social media posts, signs on site, and time in public meetings to provide information on the importance of the health of the Lagoon, as well as the City's role in the stormwater pollution control operations, what residents and businesses can do to assist, informational brochures at certain City functions, and providing for questions and comments from city residents.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 56

Total Phosphorus Reduction (lbs/yr): 8

Costs

Total Cost: \$394,133

Estimated Cost per Pound Total Nitrogen Removed: \$7,057

Estimated Cost per Pound Total Phosphorus Removed: \$46,809

Eligible Tax Funding Cost Share: \$8,266

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$385,867

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: The expected benefit of this project is a healthier IRL, meaning better surface water quality, less fish kills, more marine biodiversity, improved sea-grass health, increased recreational use, increased tourism, increased quality of life, and increased resiliency in the community.

Supplemental Comments: BMP: Dry retention; wet retention; exfiltration; nutrient removal filter structure

Save Our Indian River Lagoon Funding Application Short Form: Forrest Ave. 72-inch Outfall Baseflow Capture / Treatment

Project Details

Entity Name: City of Cocoa

Project Type: Stormwater Projects

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Lot East of Forrest Ave. and US1 intersection in Cocoa, FL.

Brief Project Description: A dry detention pond in a vacant lot. The pond will have a BAM underdrain filtration system to prevent infiltration of water in the area despite an increase in the volume of water being stored for treatment. The project would simultaneously treat baseflow from Bracco as well as effluent from the adjacent drainage basin and reduce infiltration in the immediate area.

Provide Information on Education and Outreach Associated with Project: Anticipate amenities in the area after construction to include signage.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 94

Total Phosphorus Reduction (lbs/yr): 12

Costs

Total Cost: \$1,216,663

Estimated Cost per Pound Total Nitrogen Removed: \$12,902

Estimated Cost per Pound Total Phosphorus Removed: \$96,993

Eligible Tax Funding Cost Share: \$13,956

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,202,707

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: The City has concerns with infiltrating waters near the site causing damage to the roadways.

Supplemental Comments: BMP: Dry Detention Pond and Biosorption Activated Media

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo North IRL Plant Project 2

Project Details

Entity Name: Brevard Zoo

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Unable to upload, see attachment for proposed sites. Substitution sites to be used if necessary.

Brief Project Description: Brevard Zoo intends to plant 610 linear feet of qualifying shoreline vegetation in the North IRL.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including living shorelines. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 41

Total Phosphorus Reduction (lbs/yr): 14

Costs

Total Cost: \$9,840

Estimated Cost per Pound Total Nitrogen Removed: \$240

Estimated Cost per Pound Total Phosphorus Removed: \$703

Eligible Tax Funding Cost Share: \$9,840

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, living shorelines provide sediment stabilization and habitat for an abundance of species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Central IRL Plant Project

Project Details

Entity Name: Brevard Zoo

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Unable to enter addresses due to submission failure. Addresses are attached. Will use substitution addresses if necessary.

Brief Project Description: Brevard Zoo intends to plant 124 linear feet of qualifying shoreline vegetation in the Central IRL.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including living shorelines. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 8

Total Phosphorus Reduction (lbs/yr): 3

Costs

Total Cost: \$1,920

Estimated Cost per Pound Total Nitrogen Removed: \$240

Estimated Cost per Pound Total Phosphorus Removed: \$640

Eligible Tax Funding Cost Share: \$1,920

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, living shorelines provide sediment stabilization and habitat for an abundance of species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Banana River Plant Project 2

Project Details

Entity Name: Brevard Zoo

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: The following is the proposed site for this project. If for any reason we can not move forward with this site a substitution site will be selected. Proposed site: 1410 South Banana River Dr. Merritt Island, FL 32952

Brief Project Description: Brevard Zoo intends to plant 25 linear feet of qualifying shoreline vegetation in the Banana River.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including living shorelines. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 2

Total Phosphorus Reduction (lbs/yr): 1

Costs

Total Cost: \$480

Estimated Cost per Pound Total Nitrogen Removed: \$240

Estimated Cost per Pound Total Phosphorus Removed: \$480

Eligible Tax Funding Cost Share: \$480

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, living shorelines provide sediment stabilization and habitat for an abundance of species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Fisherman's Landing

Project Details

Entity Name: Marine Resources Council

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: 5795 S, US-1, Grant-Valkaria, FL 32949

Brief Project Description: Mangroves will be planted along the north section of Fisherman's Landing which has approximately 500 feet of lagoon front shoreline. Some existing vegetation exists with open pockets of shoreline that will be filled in with 60 mangroves.

Provide Information on Education and Outreach Associated with Project: Volunteer support will be utilized to prepare and transport 60 mangroves to the site as well as complete the planting with supervision from MRC staff. The nutrient reduction and enhancements that are beneficial to living shorelines will be discussed prior to engaging volunteer support. Educational workshops are conducted monthly to maintain mangroves at the Lagoon House and at our nursery located in Vero Beach. Mangroves are also utilized in schools as an educational tool to engage children in kinesthetic learning activities.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 20

Total Phosphorus Reduction (lbs/yr): 7

Costs

Total Cost: \$5,000

Estimated Cost per Pound Total Nitrogen Removed: \$250

Estimated Cost per Pound Total Phosphorus Removed: \$714

Eligible Tax Funding Cost Share: \$4,800

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$200

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient reduction, mangroves will also enhance coastal resiliency, improve water quality and enhance wildlife habitat. The project will also provide an educational benefit to the lagoon by educating the volunteers involved about the value of living shorelines.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Riverside Landing

Project Details

Entity Name: Marine Resources Council

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Island Drive-Riverside Landing, Melbourne Beach

Brief Project Description: Mangroves will be planted along the property line of five homes that are all connected by approximately 500 feet of lagoon front shoreline. Some existing vegetation exists with open pockets of shoreline that can be filled in with mangroves.

Provide Information on Education and Outreach Associated with Project: During the site visit homeowners discussed with MRC staff the water quality enhancement and erosion control benefits of living shorelines. Volunteer support will be utilized to prepare and transport 60 mangroves to the site as well as complete the planting with supervision from MRC staff. Educational workshops are conducted monthly to maintain mangroves at the Lagoon House and at our nursery located in Vero Beach. Mangroves are also utilized in schools as an educational tool to engage children in kinesthetic learning activities.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 20

Total Phosphorus Reduction (lbs/yr): 7

Costs

Total Cost: \$5,000

Estimated Cost per Pound Total Nitrogen Removed: \$250

Estimated Cost per Pound Total Phosphorus Removed: \$714

Eligible Tax Funding Cost Share: \$4,800

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$200

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient reduction, mangroves will also enhance coastal resiliency, improve water quality and enhance wildlife habitat. The project will also provide an educational benefit to the lagoon by educating the volunteers and homeowners involved about the value of living shorelines.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Rotary Park

Project Details

Entity Name: Marine Resources Council

Project Type: Living Shorelines

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Island Drive-Riverside Landing, Melbourne Beach

Brief Project Description: Mangroves will be planted along the north section of Suntree Rotary Park which has approximately 500 feet of lagoon front shoreline. Some existing vegetation exists with open pockets of shoreline that will be filled in with 60 mangroves.

Provide Information on Education and Outreach Associated with Project: Volunteer support will be utilized to prepare and transport 60 mangroves to the site as well as complete the planting with supervision from MRC staff. The nutrient reduction and enhancements that are beneficial to living shorelines will be discussed prior to engaging volunteer support. Educational workshops are conducted monthly to maintain mangroves at the Lagoon House and at our nursery located in Vero Beach. Mangroves are also utilized in schools as an educational tool to engage children in kinesthetic learning activities.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 20

Total Phosphorus Reduction (lbs/yr): 7

Costs

Total Cost: \$5,000

Estimated Cost per Pound Total Nitrogen Removed: \$250

Estimated Cost per Pound Total Phosphorus Removed: \$714

Eligible Tax Funding Cost Share: \$4,800

Project Funding

Is Local Project Match in Adopted Budget: Yes

Dollar Amount of Local Cost Share: \$200

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient reduction, mangroves will also enhance coastal resiliency, improve water quality and enhance wildlife habitat. The project will also provide an educational benefit to the lagoon by educating the volunteers and homeowners involved about the value of living shorelines.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Port St John Lateral Smoke Testing

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Sewer Lateral Rehab

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Port St John

Brief Project Description: Smoke testing of the Port St John collection system.

Provide Information on Education and Outreach Associated with Project: Press release notifying public.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 194

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$55,000

Estimated Cost per Pound Total Nitrogen Removed: \$284

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$55,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Reduce bacteria from wastewater entering bodies of water

Supplemental Comments: 1,212 lots

Save Our Indian River Lagoon Funding Application Short Form: Ray Bullard WRF Biological Nutrient Removal Upgrades

Project Details

Entity Name: City of West Melbourne

Project Type: WWTF Upgrades for Reclaimed Water

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Coordinates: 28°04'12.67" N, 80°38'42.01" W, Street Address: 1415 Henry Avenue, West Melbourne, FL 32904

Brief Project Description: The City of West Melbourne's Ray Bullard Water Reclamation Facility (WRF) is a 3.0 million gallon per day (MGD) annual average daily flow (AADF) rated capacity conventional secondary wastewater treatment facility. The facility includes influent mechanical screening, grit removal, complete mix activated sludge aeration, secondary clarifiers, chemical feed, filtration, and chlorination. The facility is permitted to discharge treated effluent to either a 3.0 MGD AADF Class I deep injection well and/or to a 2.48 MGD AADF slow rate public access reuse system. The facility is permitted to operate under Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Operating Permit No. FLA010332 with an expiration date of October 10, 2021. The facility has no current regulatory requirements to provide nutrient removal through the treatment process for either method of effluent disposal.

The City desires to participate in the County-wide effort to reduce nutrient loadings in public access reuse water within the watershed of the Indian River Lagoon. The plan identified the Ray Bullard WRF among wastewater treatment facilities designated as having excess nitrogen in the reclaimed water effluent. The City is submitting this request with actual nutrient data and additional project specific information to the County so these nutrient removal improvements can be integrated into the plan.

The City has completed a preliminary feasibility analysis to identify an approach to implement biological nutrient removal at the Ray Bullard WRF. FDEP permit-required monthly grab sampling of the approximately 800,000 gallon per day average reclaimed water flow shows the total nitrogen concentration averaging 23.51 mg/L as N and the total phosphorus averaging 6.38 mg/L as P from January 2018 through June 2019. The City is requesting funding from the SOIRL program to modify the existing conventional activated sludge treatment system into a three-stage type biological nutrient removal (BNR) activated sludge treatment system. This process will include an anaerobic basin to provide biological phosphorus removal followed by an anoxic basin and aerobic basin with internal recycle flows (see figure submitted as part of the application). Treating the wastewater through the BNR process is expected to achieve a total nitrogen concentration of approximately 5 mg/L and a total phosphorus concentration of approximately 1 mg/L in the treated effluent. It should be noted that the customers for the City's reuse system are almost entirely residential customers, meaning additional nutrient loading from runoff is likely present (versus reuse water applied on a golf course, for example).

To properly control the performance of the biological nutrient removal (BNR) activated sludge treatment system to achieve low nutrient levels, the project will include replacement of the existing centrifugal blowers with new energy efficient hybrid blowers operated using variable frequency drives and related air piping

replacement. The blowers would be operated in such a way as to control the dissolved oxygen concentration within the aeration basins to a narrow operating range to achieve the reduced nutrient levels.

Provide Information on Education and Outreach Associated with Project: None, but the City would be happy to work with the County on any proposed outreach activities

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 11,360

Total Phosphorus Reduction (lbs/yr): 3,302

Costs

Total Cost: \$6,500,000

Estimated Cost per Pound Total Nitrogen Removed: \$572

Estimated Cost per Pound Total Phosphorus Removed: \$1,514

Eligible Tax Funding Cost Share: \$4,260,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$2,240,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: N/A

Supplemental Comments: \$1,500,000 in requested grants

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo North IRL Oyster Project 2

Project Details

Entity Name: Brevard Zoo

Project Type: Oyster Reef

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: Unable to enter addresses due to submission problem. Addresses are attached. Substitution sites will be used if necessary.

Brief Project Description: Brevard Zoo intends to construct 21,030 square feet of oyster projects in the North IRL. We have reached out to property owners in the locations we intend to put these projects and have their support to move forward. The design will be site specific and will be approved by the County before construction begins. We will consult with the County to determine whether or not live oysters need to be added to each specific location.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including oyster projects. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 841

Total Phosphorus Reduction (lbs/yr): 21

Costs

Total Cost: \$336,400

Estimated Cost per Pound Total Nitrogen Removed: \$400

Estimated Cost per Pound Total Phosphorus Removed: \$16,019

Eligible Tax Funding Cost Share: \$336,400

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, oyster reefs provide sediment stabilization, wave attenuation and habitat for a wide range of aquatic species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Central IRL Oyster Project 2

Project Details

Entity Name: Brevard Zoo

Project Type: Oyster Reef

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Unable to enter addresses due to submission failure. Addresses are attached. Substitution sites will be used if necessary.

Brief Project Description: Brevard Zoo intends to construct 16932 square feet of oyster projects in the Central IRL. We have reached out to property owners in the locations we intend to put these projects and have their support to move forward. The design will be site specific and will be approved by the County before construction begins. We will consult with the County to determine whether or not live oysters need to be added to each specific location.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including oyster projects. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 677

Total Phosphorus Reduction (lbs/yr): 17

Costs

Total Cost: \$270,800

Estimated Cost per Pound Total Nitrogen Removed: \$400

Estimated Cost per Pound Total Phosphorus Removed: \$15,929

Eligible Tax Funding Cost Share: \$270,800

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits:

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Banana River Oyster Project 2

Project Details

Entity Name: Brevard Zoo

Project Type: Oyster Reef

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: Unable to enter addresses due to submission failure. Addresses attached. Substitution sites will be used if necessary.

Brief Project Description: Brevard Zoo intends to construct 16,560 square feet of oyster projects in the Banana River Basin of the IRL. We have reached out to property owners in the locations we intend to put these projects and have their support to move forward. The design will be site specific and will be approved by the County before construction begins. We will consult with the County to determine whether or not live oysters need to be added to each specific location.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including oyster projects. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 662

Total Phosphorus Reduction (lbs/yr): 17

Costs

Total Cost: \$264,800

Estimated Cost per Pound Total Nitrogen Removed: \$400

Estimated Cost per Pound Total Phosphorus Removed: \$15,576

Eligible Tax Funding Cost Share: \$264,800

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, oyster reefs provide sediment stabilization, wave attenuation and habitat for a wide range of aquatic species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Oyster Reef Adjustments North IRL

Project Details

Entity Name: Brevard Zoo

Project Type: Oyster Reef

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: The project will take place at Nicol Park, located at 6660 N Cocoa Blvd. Port St. John, FL 32927.

Brief Project Description: Brevard Zoo intends to make adjustments to 1,700 square feet of already existing oyster reef in the North IRL. The design will be site specific and will be approved by the County before construction begins. We will consult with the County to determine whether or not live oysters need to be added to each specific location.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including oyster projects. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 68

Total Phosphorus Reduction (lbs/yr): 2

Costs

Total Cost: \$27,200

Estimated Cost per Pound Total Nitrogen Removed: \$400

Estimated Cost per Pound Total Phosphorus Removed: \$13,600

Eligible Tax Funding Cost Share: \$27,200

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, oyster reefs provide sediment stabilization, wave attenuation and habitat for a wide range of aquatic species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Brevard Zoo Oyster Reef Adjustments Banana River

Project Details

Entity Name: Brevard Zoo

Project Type: Oyster Reef

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: The project will take place at Riverpoint Program Center, located at 2250 Newfound Harbor Drive Merritt Island, FL 32952.

Brief Project Description: Brevard Zoo intends to make adjustments to 800 square feet of already existing oyster reef in the Banana River. The design will be site specific and will be approved by the County before construction begins. We will consult with the County to determine whether or not live oysters need to be added to each specific location.

Provide Information on Education and Outreach Associated with Project: Brevard Zoo regularly engages the community in restoration efforts and education. We attend community events, hold presentations in schools, host volunteer opportunities and bring people into the Zoo to learn about the state of the lagoon and current conservation efforts, including oyster projects. We are not asking for any additional funding to continue this effort.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 32

Total Phosphorus Reduction (lbs/yr): 1

Costs

Total Cost: \$12,800

Estimated Cost per Pound Total Nitrogen Removed: \$400

Estimated Cost per Pound Total Phosphorus Removed: \$12,800

Eligible Tax Funding Cost Share: \$12,800

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: In addition to nutrient removal, oyster reefs provide sediment stabilization, wave attenuation and habitat for a wide range of aquatic species.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Satellite Beach Muck Dredging

Project Details

Entity Name: City of Satellite Beach

Project Type: MuckRemoval

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: 28.184086, -80.610735 - Satellite Beach portion of the Grant Canal and finger canals

Brief Project Description: By removing the muck via hydraulic dredging from the Grand Canal along the City of Satellite Beach, this project will alleviate an estimated 37 acres of muck from the Satellite Beach portion of the Grand Canal and its finger canals in the Lagoon. A permitted county spoil site exists in the area to deposit the muck and treat the interstitial water from the operations.

Provide Information on Education and Outreach Associated with Project: Education and outreach will include articles in the local newsletter the Beach Caster, public social media posts, signs on site, and time in public meetings to provide information on the importance of the health of the Lagoon, as well as the City's role in the muck dredging operations, interstitial water treatment, and providing for questions and comments from city residents.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 3,885

Total Phosphorus Reduction (lbs/yr): 518

Costs

Total Cost: \$4,222,500

Estimated Cost per Pound Total Nitrogen Removed: \$1,087

Estimated Cost per Pound Total Phosphorus Removed: \$8,152

Eligible Tax Funding Cost Share: \$1,884,225

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$2,338,275

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: The expected benefit of this project is a healthier IRL, meaning better surface water quality, less fish kills, more marine biodiversity, improved sea-grass health, increased recreational use, increased tourism, increased quality of life, and increased resiliency in the community.

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island F

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1465397.748, 763197.5406

Brief Project Description: Septic to sewer conversion of 71 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,292

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,100,000

Estimated Cost per Pound Total Nitrogen Removed: \$851

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,100,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments:

Save Our Indian River Lagoon Funding Application Short Form: South Central C

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates: 1421322.413, 760243.4288

Brief Project Description: Septic to sewer conversion of 142 parcels. Project includes: gravity sewer, connections, and force main.

Provide Information on Education and Outreach Associated with Project: Press release.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 5,146

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$4,900,000

Estimated Cost per Pound Total Nitrogen Removed: \$952

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$4,900,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Removal of bacteria into bodies of water.

Supplemental Comments: 142 lots

Save Our Indian River Lagoon Funding Application Short Form: Micco B

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: Little Hollywood area

Brief Project Description: Septic to sewer conversion of 540 parcels. Project includes: gravity sewer, connections, and force main.

Provide Information on Education and Outreach Associated with Project: Press release.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 8,687

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$9,000,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,036

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$9,000,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: Removal of bacteria into bodies of water.

Supplemental Comments: 540 lots

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island C

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1469374.408, 762839.4772

Brief Project Description: Septic to sewer conversion of 43 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,419

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,580,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,113

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,580,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$550,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 43 lots

Save Our Indian River Lagoon Funding Application Short Form: Micco Sewer Line Extension - Phase II

Project Details

Entity Name: Brevard County

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Central Indian River Lagoon

Location: 27°52'4.22"N, 80°29'39.88"W, 8705 U.S. 1 to 8855 U.S. 1 Micco FL

Brief Project Description: The original Micco Sewer Line Extension Project (Micco Project) was originally submitted and accepted as a substitute project for the 2017 SOIRL Plan Update.

In order to capture additional waterfront septic systems and capitalize on sewer line expansion in the Micco area, an additional 13 residential properties are submitted as a Phase II to the original Micco Sewer Line Extension Project.

Provide Information on Education and Outreach Associated with Project: None

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 618

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$709,745

Estimated Cost per Pound Total Nitrogen Removed: \$1,148

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$709,745

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: pathogens

Supplemental Comments: 13 additional lots

Save Our Indian River Lagoon Funding Application Short Form: Sykes Creek R

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1449606.408, 757383.9577

Brief Project Description: Septic to sewer conversion of 192 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 2,925

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$3,500,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,197

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$3,500,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 192 lots

Save Our Indian River Lagoon Funding Application Short Form: South Central D

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates: 1398375.088, 768743.0292

Brief Project Description: Septic to sewer for 94 lots. Project includes: force main, gravity sewer, connections.

Provide Information on Education and Outreach Associated with Project: Press release

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 3,387

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$4,774,500

Estimated Cost per Pound Total Nitrogen Removed: \$1,410

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$4,774,500

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: removal of bacteria

Supplemental Comments: 94 lots

Save Our Indian River Lagoon Funding Application Short Form: North Merritt Island E

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1493271.275, 745989.4049

Brief Project Description: Septic to sewer conversion of 195 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 2,541

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$3,635,000

Estimated Cost per Pound Total Nitrogen Removed: \$1431

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$3,635,000

Project Funding

Is Local Project Match in Adopted Budget: No local match required

Dollar Amount of Local Cost Share: \$0

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 195 lots

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island G

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1439827.142, 760290.5094

Brief Project Description: Septic to sewer conversion of 1146 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 11,078

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$18,000,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,625

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$16,617,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,383,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 1,146 lots

Save Our Indian River Lagoon Funding Application Short Form: Sharpes B

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: US-1 south of FPL power plant

Brief Project Description: Septic to sewer conversion of 136 lots. Project includes: gravity sewer, force main, connections and lift stations.

Provide Information on Education and Outreach Associated with Project: Press release

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 2,692

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$4,400,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,634

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$4,038,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$362,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: removal of bacteria from wastewater.

Supplemental Comments: 136 lots

Save Our Indian River Lagoon Funding Application Short Form: Cocoa C

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: US-1 south of FPL power plant

Brief Project Description: Septic to sewer conversion of 273 lots. Project includes: gravity sewer, force main, connections and lift stations.

Provide Information on Education and Outreach Associated with Project: Press release

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 3,499

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$6,000,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,715

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$5,248,500

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$751,500

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: removal of bacteria from wastewater.

Supplemental Comments: 273 lots

Save Our Indian River Lagoon Funding Application Short Form: Sykes Creek II

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates central of this service area: 1470667.254, 748248.4054

Brief Project Description: Septic to sewer conversion of 77 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,028

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,900,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,848

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,542,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$358,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 77 lots

Save Our Indian River Lagoon Funding Application Short Form: North Merritt Island F

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1490749.971, 752006.3543

Brief Project Description: Septic to sewer conversion of 34 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 830

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,550,000

Estimated Cost per Pound Total Nitrogen Removed: \$1867

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,245,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$305,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 34 lots

Save Our Indian River Lagoon Funding Application Short Form: North Merritt Island D

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1496187.963, 751156.8571

Brief Project Description: Septic to sewer conversion of 29 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 685

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,293,000

Estimated Cost per Pound Total Nitrogen Removed: \$1888

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,027,500

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$265,500

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 29 lots

Save Our Indian River Lagoon Funding Application Short Form: South Central AB

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates central of this service area: 1435470.297, 754914.6306

Brief Project Description: Septic to sewer conversion of 280 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 7,308

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$13,932,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,906

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$10,962,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$2,970,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 280 lots

Save Our Indian River Lagoon Funding Application Short Form: Pineda

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates central of this service area: 1410306.951, 763774.2695

Brief Project Description: Septic to sewer conversion of 27 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 644

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,257,000

Estimated Cost per Pound Total Nitrogen Removed: \$1,952

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$966,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$291,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 27 lots

Save Our Indian River Lagoon Funding Application Short Form: South Central BC

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates central of this service area: 1426033.239, 758268.8913

Brief Project Description: Septic to sewer conversion of 13 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 582

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$1,222,000

Estimated Cost per Pound Total Nitrogen Removed: \$2,100

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$873,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$349,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 13 lots

Save Our Indian River Lagoon Funding Application Short Form: South Banana A

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1457666.006, 765117.6872

Brief Project Description: Septic to sewer conversion of 88 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,418

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$3,025,000

Estimated Cost per Pound Total Nitrogen Removed: \$2,133

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$2,127,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$898,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 88 lots

Save Our Indian River Lagoon Funding Application Short Form: North Merritt Island A

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1498714.137, 750727.9522

Brief Project Description: Septic to sewer conversion of 107 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,821

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$4,245,000

Estimated Cost per Pound Total Nitrogen Removed: \$2331

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$2,731,500

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,513,500

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 107 lots

Save Our Indian River Lagoon Funding Application Short Form: South Central I

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: NE coordinates central of this service area: 1402843.336, 765472.9651

Brief Project Description: Septic to sewer conversion of 72 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 772

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$2,170,000

Estimated Cost per Pound Total Nitrogen Removed: \$2811

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,158,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$1,012,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 72 lots

Save Our Indian River Lagoon Funding Application Short Form: Sharpes A

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: North Indian River Lagoon

Location: US-1 south of FPL power plant

Brief Project Description: Septic to sewer conversion of 186 lots. Project includes: gravity sewer, force main, connections and lift stations.

Provide Information on Education and Outreach Associated with Project: Press release

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 5,248

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$14,900,000

Estimated Cost per Pound Total Nitrogen Removed: \$2,839

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$7,872,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$7,028,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: removal of bacteria from wastewater.

Supplemental Comments: 186 lots

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island H

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1422169.164, 766405.2632

Brief Project Description: Septic to sewer conversion of 307 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 5,464

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$22,500,000

Estimated Cost per Pound Total Nitrogen Removed: \$4118

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$8,196,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$14,304,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 307 lots

Save Our Indian River Lagoon Funding Application Short Form: Sykes Creek S

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1447811.242, 757988.5612

Brief Project Description: Septic to sewer conversion of 160 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,584

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$6,600,000

Estimated Cost per Pound Total Nitrogen Removed: \$4,167

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$2,376,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$4,224,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 160 lots

Save Our Indian River Lagoon Funding Application Short Form: North Merritt Island B

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1501973.329, 752208.0088

Brief Project Description: Septic to sewer conversion of 56 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 1,066

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$4,690,000

Estimated Cost per Pound Total Nitrogen Removed: \$4,400

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$1,599,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$3,091,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 56 lots

Save Our Indian River Lagoon Funding Application Short Form: Merritt Island A

Project Details

Entity Name: Brevard County Utility Services Department

Project Type: Septic System Removal Extend

Segment of the Indian River Lagoon Where This Project Located: Banana River Lagoon

Location: NE coordinates central of this service area: 1399318.904, 776859.4665

Brief Project Description: Septic to sewer conversion of 249 lots. Project includes: gravity sewer, connections, force main connection to County system.

Provide Information on Education and Outreach Associated with Project: Press release on project status.

Estimated Water Quality Benefits

Total Nitrogen Reduction (lbs/yr): 3,440

Total Phosphorus Reduction (lbs/yr): 0

Costs

Total Cost: \$16,700,000

Estimated Cost per Pound Total Nitrogen Removed: \$4,855

Estimated Cost per Pound Total Phosphorus Removed: \$0

Eligible Tax Funding Cost Share: \$5,160,000

Project Funding

Is Local Project Match in Adopted Budget: Requested

Dollar Amount of Local Cost Share: \$11,540,000

Dollar Amount of Secured Grant(s): \$0

Addition Information

List other Indian River Lagoon Benefits: reduce risk of overflow bacteria, increase DO of lagoon

Supplemental Comments: 249 lots



Save Our Indian River Lagoon
Citizen Oversight Committee
December 13, 2019

Agenda Item:

VIII. C. New Business

Title:

Request for Additional Funding for the City of Titusville Osprey Wastewater Treatment Facility Nutrient Removal Project

Requested Action:

Motion to recommend to the Brevard County Commission approval of additional funding for the Titusville Osprey Wastewater Treatment Facility Nutrient Removal Project

Summary Explanation and Background:

Upgrade of the Titusville Osprey Wastewater Treatment Facility Nutrient Removal Project was included in the original 2016 Save Our Indian River Lagoon Project Plan. At that time, the best available cost estimate was a conceptual cost of \$8,000,000 to reduce nitrogen concentrations in the reclaimed water from 12.7 mg/L to 6.0 mg/L. Current nitrogen concentrations for the plant are greater than initially estimated in the plan and are reported at 17.9 mg/L. The load reduction benefit to the lagoon, after factoring in soil attenuation, is now estimated to be 14,385 pounds of nitrogen per year. The process improvements would also reduce phosphorus, but there is no reliable tool to estimate the amount of phosphorus load reduction to the lagoon.

The City of Titusville has moved forward with the project and design is 30% complete. With that progress the project cost was updated to reflect current rates for construction and materials. Some design changes were also proposed to decrease nitrogen concentrations even further from 6.0 mg/L to 3.0 mg/L thus removing an additional 3,487 pounds of nitrogen. The improved removal portion of the project was submitted as a new funding application for this year's plan update. The cost for this improvement is estimated to be only \$300,000 of the total project cost. Per the attached letter request, the total updated project cost estimate is \$11,900,000. According to the attached letter request from the City, this cost increase is due mostly to changes in the market but also challenges of updating a facility from the 1950s.

The 2019 update to the Save Our Indian River Lagoon Project Plan in Section 6.2.2 Contingency Fund Reserve allots for cost overruns and allows for an increase to the cost share of up to 10%. A 10% increase to the original project would increase the cost-share to \$8,800,000 and if the new project funding is approved would total \$9,100,000 with a revised benefit of 17,872 pounds. The City is willing to take on the \$2,800,000 remainder of the cost increase as they are dedicated to completing this project to help improve the lagoon. At a revised cost of \$509 per pound of nitrogen reduction, the project is more cost effective than septic upgrades, septic to sewer extension projects, or muck removal.



2836 GARDEN STREET
TITUSVILLE, FLORIDA 32796-3584



Water Resources Department
(321)-567-3855
Fax (321)-383-5653
www.titusville.com

December 5, 2019

Virginia Barker, Director
Brevard Natural Resources Management Office
2725 Judge Fran Jamieson Way, Building A
Viera, FL 32940

RE: Request for Save Our Indian River Lagoon (SOIRL) Funding Increase for the Osprey
Nutrient Management Upgrade Project

Dear Ms. Barker:

The original Save Our Lagoon Project Plan dated July 2016 included the upgrade of the City of Titusville's Osprey Water Reclamation Facility (WRF) for removal of nutrients. The Osprey WRF was originally commissioned in the mid 1950's and served as the first wastewater plant for the City of Titusville. The facility has gone through a number of upgrades since that time. In the mid 1990's the facility was again upgraded to produce reclaimed quality wastewater and the direct discharge to the Indian River Lagoon (IRL) was eliminated. Reclaimed water quality standards do not address nutrient content and therefore the upgrade to the plant was not intended to remove nutrients.

In an effort to improve the health of the IRL and reduce nitrogen levels in the groundwater discharged to the IRL, Brevard County and the City have partnered to upgrade the Osprey WRF so that the facility can remove nutrients, specifically Nitrogen to 6 mg/L in the reclaimed water. In 2016 the City estimated \$8,000,000 for the design and construction of the upgrades. Since that time, the City has moved forward to secure a design engineer and has reached the 30% design phase for the project. As part of the design process the Engineer of Record has estimated a current opinion of probable construction costs of \$10.1M and design costs of \$1.8M totaling \$11.9M. The cost increases are due to inflation, increased costs of construction and equipment since 2016, and all the challenges with upgrading a WRF originally commissioned in the 1950s.

During the 30% design review the City has discovered that through the addition of an internal recirculation process, the nitrogen in the reclaimed water can reliably be lowered from 6 mg/L to 3mg/L as an annual average. Compared to our original 6 mg/L nitrogen target, upgrading the Osprey WRF to produce reclaimed water with 3 mg/L of nitrogen significantly reduces nutrient loadings to the IRL in specific ways. The upgraded design removes an additional 3,487 pounds of nitrogen every year from Titusville reclaimed water. With less nitrogen in the reclaimed water, less nitrogen can impact the IRL through groundwater migration, short circuiting to the storm water, emergency releases, etc.

Ms. Virginia Barker
SOIRL Funding Increase Request
Page 2 of 2
December 5, 2019

The City is requesting that the SOIRL Committee recognize the City's willingness to commit to completing a project that is well in excess of the original budget and to include a refined WRF upgrade design which will further reduce nitrogen loadings to the IRL, compared to our original design concept. Accordingly, the City requests the SOIRL Committee to approve additional funding for the Osprey Nutrient Management Upgrade Project in two ways: First, in accordance with the existing allowance to increase original award amounts by 10% to account for cost increases and inflation. The 10% allowance totals an additional \$800,000 to construct the project. Second, provide additional funding in the amount of \$300,000 for the design, purchase, and installation of the internal recirculation process to remove an additional 3 mg/L of nitrogen from the reclaimed water equating to an additional 3,487 pounds per year removed. For the reasons explained above, our proposed treatment additions will provide a greater benefit to the Lagoon by removing more nitrogen that could impact the IRL from Titusville reclaimed water.

If approved these increases would bring the total eligible SOIRL funding amount for the project from \$8,000,000 to \$9,100,000. The City appreciates this opportunity to help restore the IRL. This project would not be possible without the assistance of the County and the SOIRL Program.

Sincerely,

[Signed Copy on File]

Sean L. Stauffer, PE
Water Resources Director
City of Titusville