IRL COUNCIL
STEM ADVISORY COMMITTEE

This meeting is open to the public

February 6, 2024

1:30 PM – 4:30 PM

Historic Sebastian Elementary School 1235 Main Street, Sebastian, FL 32958

The order of items appearing on the agenda is subject to change during the meeting and is at the discretion of the presiding officer. Anyone wishing to speak on any item is requested to complete a speaker's card.

1. **Call to Order and Pledge of Allegiance** (Dr. Chuck Jacoby, Chair)
2. **Introductions** (Dr. Chuck Jacoby, Chair)
3. **Election of Officers** (Kathy Hill)
   Requested Action: Elect Chair and Vice Chair for Calendar Year 2024 for the STEM Advisory Committee.
4. **Agenda Revisions** (Chair)
   Note any known changes and inquire if any members have suggested revisions.
5. **Consent Agenda** (Chair)
   a. Approve November 14, 2023, STEM minutes
   b. Approve revised MOA with Brevard Zoo "Dollar for Conservation"
   c. Approve Fiscal Year 2024 Budget Amendment
   d. Approve Fiscal Year 2025 EPA Workplan
   e. Approve Fiscal Year 2025 Tentative Budget
   Requested Action: Motion to approve the Consent Agenda

   Minutes
   MOA
   24 Budget
   EPA
   25 Budget
6. **Public Comment**
7. **Water Quality Reports**
   a. Northern and Central IRL (Lauren Hall, SJRWMD)
   b. Southern IRL (Melanie Parker, SFWMD)
8. **Presentation**
   The Indian River Lagoon Species Inventory: 30 Years of Cataloging Biodiversity
   Dr. Holly Sweat, Smithsonian Marine Station

9. **Old Business**

Science 2030 Document (Duane De Freese)

Requested Action: For Discussion only.

10. **New Business**

a. Fiscal Year 2025 Water Quality RFP (Daniel Kolodny) **Water Quality**

Requested Action: Motion to recommend that the IRL Council Board of Directors accept the IRLNEP STEM Advisory Committee recommendations and approve the final ranked list of FY 2025 Water Quality proposals; fund the top proposals contingent and consistent with available funds and budgetary authority; and authorize staff to negotiate and enter into contracts with those applicants.

b. Fiscal Year 2025 Habitat Restoration RFP (Daniel Kolodny) **Habitat Rest**

Requested Action: Motion to recommend that the IRL Council Board of Directors accept the IRLNEP STEM Advisory Committee recommendations and approve the final ranked list of FY 2025 Habitat Restoration proposals; fund the top proposals contingent and consistent with available funds and budgetary authority; and authorize staff to negotiate and enter into contracts with those applicants.

c. Fiscal Year 2025 Community-Based Restoration RFP (Daniel Kolodny) **Comm-Based**

Requested Action: Motion to recommend that the IRL Council Board of Directors accept the IRLNEP STEM Advisory Committee recommendations and approve the final ranked list of FY 2025 Community-Based Restoration proposals; fund the top proposals contingent and consistent with available funds and budgetary authority; and authorize staff to negotiate and enter into contracts with those applicants.

d. Fiscal Year 2025 Science and Innovation RFP (Daniel Kolodny) **S & I**

Requested Action: Motion to recommend that the IRL Council Board of Directors accept the IRLNEP STEM Advisory Committee recommendations and approve the final ranked list of FY 2025 Science and Innovation proposals; fund the top proposals contingent and consistent with available funds and budgetary authority; and authorize staff to negotiate and enter into contracts with those applicants.

11. **IRLNEP Staff Reports**

a. Community Engagement Update (Kathy Hill)

b. Information Technology and Data Science Update (KJ Ayres-Guerra)

c. IRL Project Update (Daniel Kolodny)

d. Executive Director Report (Duane De Freese)

Requested Action: No motion is required. Information only.

12. **Final Comments (Committee, Staff, Public)**

13. **Next Meeting**

    Tuesday, May 7, 2024, at 1:30 p.m.
    Historic Sebastian Elementary School 1235 Main Street, Sebastian, FL 32958

14. **Adjourn**

Projects

Financial Docs

NOTE: If a person decides to appeal any decision made by the Board with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. Section 286.0105, Florida Statutes (2014).

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 48 hours before the workshop/meeting by contacting: Erin Bergman at (314) 347-5854. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800) 955-8771 (TDD) or 1(800) 955-8770 (Voice). For more information, you may contact: Erin Bergman, IRL Council, 1235 Main St, Sebastian, FL 32958, (314) 347-5854, or by email at bergman@irlcouncil.org .

IRL COUNCIL
STEM ADVISORY COMMITTEE

Minutes from the meeting of

November 14, 2023

1:30 PM

Up the Creek Farms, 3590 Valkaria Road, Grant-Valkaria, FL 32950

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Attendance: Aaron Adams, Anne Birch, Kyle Bartow, Erin Cartmill, Bob Day, Chuck Jacoby, Lisa Krimsky, Dan Macchiarella, Dale McGinnis, Wendy Noke-Durden, Rich Paperno, Melanie Parker, Valerie Paul, Emily Ralston, Mitch Roffer, Leesa Souto, Megan Stolen, Kelly Young

Guests: Elizabeth Kelly, Lauren Hall, Doug Scheidt, Derek Tremain, Ashley Lingwood, Olivia Escandell, Tyler Provoncha, Jeff Eble

1. **Call to Order and Pledge of Allegiance** (Dr. Chuck Jacoby, Chair)
   Dr. Jacoby called the meeting to order at 1:31 p.m. and led the group in the Pledge of Allegiance.
2. **Introductions** (Dr. Chuck Jacoby, Chair)
   Dr. Jacoby led the introduction of those in attendance.
3. **Agenda Revisions** (Dr. Chuck Jacoby, Chair)
   No agenda revisions were brought forward.
4. **Consent Agenda** (Dr. Chuck Jacoby, Chair)
   a. Approval of Minutes from the STEM meeting on August 8, 2023.
   b. 2024 Legislative Priorities
   Requested Action: Motion to approve the Consent Agenda.

   MOTION WAS MADE BY BOB DAY TO APPROVE THE CONSENT AGENDA. MOTION WAS SECONDED BY ANNE BIRCH. MOTION PASSED UNANIMOUSLY.
5. **Public Comment**
   No public comments were made.
6. **Water Quality Reports**
   a. Northern and Central IRL (Dr. Chuck Jacoby, SJRWMD)

   Dr. Chuck Jacoby reported that the sondes at Mosquito Lagoon suffered a malfunction and did not record data. The water depth throughout remained stable, with a slight increase in October due to a rain event. The water temperature is dropping into the 70's; the cooling temperature has reduced the chlorophyll. The salinity remains in the brackish range. Dissolved oxygen remains stable.

Ms. Lauren Hall supplied information on how the southern Mosquito Lagoon is experiencing an algal bloom. The water appears turbid and cloudy with a mixed assemblage containing picoeukaryotes, picocyanos, nanoeukaryotes and *Aureoumbra lagumensis.* The levels are not exceptionally high. The seagrass in this area is substantial and in shallow water. The northern end of Mosquito Lagoon is clear.

b. Southern IRL (Dr. Melanie Parker, SFWMD)

The most freshwater flow in the past weeks has been from the Tidal Basin; no inflow from Lake Okeechobee into the estuary has occurred since mid-April. The total inflow into the St. Lucie Estuary is lower than what was reported in August. In the last seven days, salinity has increased at all monitoring sites, optimal at HR1 and US1 Bridge. The A1A Bridge site was in the upper stressful range. The salinities had briefly fallen into the lower stressful range in early October at the US1 site but recovered quickly. Oyster spat recruitment shows a slight peak in October. Seagrass monitoring at St. Lucie Inlet and Willoughby Creek has been increasing steadily at both sites since 2021; both sites have experienced favorable salinities.

7. Presentations

Brevard County Seagrass Restoration Protocol

Jennifer Hansen, an Environmental Scientist at Brevard County Natural Resources Management, discussed the Brevard County Seagrass Restoration Protocol. Ms. Hansen explained the purpose, objectives, and conceptualization of the protocol. The methods involved gathering relevant data on seagrass growth and survival, assessing the risks, and developing a relative suitability map based on the criteria. The goal of the risk-based experimentation was to plant seagrasses successfully.

NOAA Restoration Center BIL Funding Updates

Kris Kaufman from the Restoration Center of NOAA Fisheries discussed the Office of Habitat Competitive Funding Opportunities, which is supported by the Bipartisan Infrastructure Law & Inflation Reduction Act. The update covered the history of partnering on habitat conservation and provided an overview of the Bipartisan Infrastructure Law and Inflation Reduction Act. The first round of awards has been completed, and the second round is now open. Ms. Kaufman also provided an overview of the four competitions in round two and shared a website where people can learn more about the opportunities available.

8. Old Business

None

9. New Business

a. MOA with Brevard Zoo (Duane De Freese)

During the discussion, Dr. De Freese outlined the terms of the agreement. The plan is to collect one dollar from each admission ticket sale at the proposed aquarium to generate funds for an IRLNEP Request for Proposal (RFP). The guests of the aquarium will have input on how the dollar will be used (habitat, restoration, species recovery, etc.) Members suggested that this RFP be integrated into the current schedule deadline to make it easier for the proposal

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reviewers and staff as well as for those submitting proposals. Additionally, ten percent of the funds will be allocated to administrative costs.

Requested Action: Motion to recommend the IRL Council Board of Directors accept the Memorandum of Agreement between the IRL Council and the Brevard Zoo providing for the development and implementation of the "Dollar for Conservation" program.

MOTION WAS MADE BY AARON ADAMS TO RECOMMEND THE IRL COUNCIL BOARD OF DIRECTORS ACCEPT THE MEMORANDUM OF AGREEMENT BETWEEN THE IRL COUNCIL AND THE BREVARD ZOO PROVIDING FOR THE DEVELOPMENT AND IMPLEMENTATION OF THE "DOLLAR FOR CONSERVATION" PROGRAM. MOTION WAS SECONDED BY MITCH ROFFER. MOTION PASSED UNANIMOUSLY.

b. Science Priorities 2030 (Duane De Freese and Chuck Jacoby)

Dr. De Freese discussed the plan to reintroduce the Science Priorities 2030 document with the help of Dr. Jacoby. The primary focus of the document will be on research. The committee members expressed their support for this initiative. Drs. De Freese and Jacoby will collaborate on a draft to present to the committee in December.

Requested Action: No action is required. Discussion only.

c. 2024 IRL Council Meeting Calendar

Ms. Erin Bergman presented the tentative dates and explained the date choices. The meetings will take place in the Historic Elementary School in Sebastian, which currently houses the office of the IRL Council.

Requested Action: Motion to recommend that the IRL Council Board of Directors review and adopt the proposed 2024 Meeting Calendar.

MOTION WAS MADE BY VALERIE PAUL TO RECOMMEND THAT THE IRL COUNCIL BOARD OF DIRECTORS REVIEW AND ADOPT THE PROPOSED 2024 MEETING CALENDAR. SECONDED BY KELLY YOUNG. MOTION PASSED UNANIMOUSLY.

10. IRLNEP Staff Reports

a. Community Engagement Report (Kathy Hill)

Ms. Kathy Hill shared the metrics on this quarter's social media accounts. The metrics revealed the amount of time viewers spent watching videos. There was a 66% drop in views from 3-second views to 15-second views, and only eight viewers watched a 1-minute video. The Community Engagement Coordinators continue to serve the IRL Council by attending meetings and events, participating in fieldwork and projects, and providing outreach.

b. Information Technology and Data Science Update (Kathy Hill)

Ms. Kathy Hill presented on behalf of KJ Ayers-Guerra. The IRLNEP Master Project List Interactive Web Application has been completed. The tool houses all projects completed by the IRLNEP from 2016 forward and will be available to the public. Information on each project has been included.

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c. IRL Project Update (Daniel Kolodny)

Mr. Dan Kolodny listed the twenty-two projects/activities completed in FY 2023. Mr. Kolodny presented project highlights for Indian River County: Phase 4 Restoration for Lost Tree Islands Conservation Area, Brevard Zoo: Restore Our Shores: Community-Based Seagrass Restoration in the Indian River Lagoon and Florida Institute of Technology: Suffocating Sand; Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes in the IRL and University of Central Florida: Unintended Consequences: Are Non-plastic Materials now used in Coastal Restoration Always Better for the Indian River Lagoon?

d. Executive Director Report (Duane De Freese)

Dr. Duane De Freese gave an overview of his participation in presentations and activities. He shared the final statistics of the 2023 NOAA Transformational Habitat Restoration and Coastal Resilience Grants Program Proposal and gave a reminder of the 2025 RFP schedule due dates. Dr. De Freese thanked Tom Carey of Volusia County and Rich Paperno of FWC for their time served at the Management Conference and wished them well in retirement. Also noted was the affiliation change for Dr. Chuck Jacoby from St. John's River Water Management District to the University of South Florida Flood Hub. Discussions with FDEP revealed opportunities for Dr. Jacoby to work on IRLNEP and FDEP projects.

11. Final Comments (Committee, Staff, Public)

Mr. Dan Kolodny announced that two upcoming webinars, Small Grants and RFP Q & A, will take place.

Dr. Duane De Freese asked for webinar ideas.

Ms. Lauren Hall announced that the job posting for Dr. Chuck Jacoby's past position is open.

12. Next Meeting

Tentative: Tuesday, February 6, 2024, at 1:30 p.m.
Historic Sebastian Elementary School, 1235 Main St., Sebastian, FL 32958

13. Adjourn

The meeting was adjourned by Dr. Chuck Jacoby at 3:31 p.m.

NOTE: If a person decides to appeal any decision made by the Board with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. Section 286.0105, Florida Statutes (2014).

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Memorandum of Agreement
between
IRL Council, an Independent Special District of Florida
and
East Coast Zoological Society of Florida Inc. (d.b.a. Brevard Zoo)

THIS AGREEMENT ("Agreement") is entered into by and between the IRL COUNCIL, as the administrator and fiscal agent of the Indian River Lagoon National Estuary Program, whose address is 1235 Main Street, Sebastian, Florida 32958, and the EAST COAST ZOOLOGICAL SOCIETY OF FLORIDA, INC. D/B/A BREVARD ZOO, whose address is 8225 N. Wickham Road, Melbourne, Florida 32940-7924. All references to the parties hereto include the parties, their officers, directors, employees, agents, successors, and assigns.

I. PURPOSE AND SCOPE

This Memorandum of Agreement (MOA) provides for the development and implementation of the "Dollar for Conservation" program to be delivered as a joint initiative between the IRL Council, host agency of the Indian River Lagoon National Estuary Program ("IRLNEP") and the East Coast Zoological Society of Florida Inc. d/b/a Brevard Zoo ("Brevard Zoo"). Hereinafter referred to as the "Parties".

The Parties will work together to design, develop and implement a lagoon-wide conservation initiative at the Brevard Zoo Aquarium (hereafter referred to as the "Aquarium") to be located on 14 acres along the shoreline of the Banana River at Port Canaveral, Brevard County, Florida (Exhibit "A"). The initiative will include, but not be limited to the following broad actions and outcomes:

1. The Parties will communicate, coordinate and collaborate on programs and projects that benefit the Indian River Lagoon and the stated Mission and Goals of both Parties.

2. The Parties will work cooperatively to design and administer the Aquarium "Dollars for Conservation" program. The Brevard Zoo Aquarium will serve as the lead organization for the program. The IRL Council will serve as a formal organizational partner to develop and administer the Aquarium "Dollar for Conservation" competitive grants program through an annual Request for Proposal (RFP) process.

3. Brevard Zoo will dedicate $1.00 from every paid Aquarium admission to go directly into the "Dollars for Conservation" program. Revenues will be tracked for the "Dollar for Conservation" program for at least 12 months after the Aquarium opens before the first distribution can take place. The first distribution of funds to the IRL Council will occur in the first quarter of each calendar year thereafter. Brevard Zoo will disburse revenues collected from the "Dollar for Conservation" Program to the IRL Council in a lump sum payment

reflecting the actual funds collected less permissible expenses . The IRL Council will work with Brevard Zoo to develop and issue an annual Request for Proposals to be announced to the public in the Fall of each calendar year.

4. The "Dollar for Conservation" program will fund habitat restoration, species recovery, clean water initiatives and scientific research projects across the entire watershed of the Indian River Lagoon as defined by the IRLNEP watershed and project boundaries recognized in the IRL Comprehensive Conservation and Management Plan adopted by the IRL Council and certified by the U.S. Environmental Protection Agency in 2019 (Exhibit "B").

5. The Parties will work together to align activities associated with the Aquarium "Dollars for Conservation" program with the vision and goals of the IRLNEP Regional Restoration Center Network as defined in a MOA adopted in November 2021 by the IRL Council, Brevard Zoo, Marine Discovery Center, Florida Atlantic University – Harbor Branch Oceanographic Institute, and Florida Oceanographic Society as well as other scientific research, conservation, education and community outreach programs and projects that provide mutual benefits within the Aquarium and the "*Dr. Duane De Freese Coastal Conservation Hub*".

II. RESPONSIBILITIES

A. Brevard Zoo shall use reasonable efforts to:

1. Implement a "Dollar for Conservation" program at the Aquarium entrance through an interactive display kiosk that connects Aquarium visitors to IRL conservation efforts, empowers conservation engagement and educates the next generation of conservation stewards.

2. Share the data gathered from Aquarium visitors at the "Dollar for Conservation" kiosk to help guide priorities for annual RFP development.

3. Actively participate in efforts to guide annual priorities based on visitor engagements at the "Dollar for Conservation" kiosk.

4. Communicate the environmental value of the Aquarium "Dollar for Conservation" program to promote visitor engagement and continue to build community awareness, trust and investment in the Brevard Zoo Aquarium conservation initiatives.

IRL Council shall use reasonable efforts to:

1. Design and deliver an annual competitive grants program on behalf of the Aquarium that delivers significant environmental benefits.

2. Develop policies and procedures for annual RFP development, review of proposals received through the RFP process, and prioritize annual funding recommendations using an objective and well-designed scoring process. The IRL Council will work with Brevard Zoo to revise and update RFP language and prioritize funding categories annually.

3. Administer all project contracts and oversee project progress through required quarterly reports, annual reports and final reports from each funded project.

4. Deliver an annual programmatic and financial report to the IRL Council Board of Directors and Brevard Zoo Board of Directors.

5. Include annual revenues and expenditures associated with the "Dollar for Conservation" program as part of the IRL Council annual, independent financial audit. Provide a copy of that audit to the Brevard Zoo Board of Directors.

The Parties shall use reasonable efforts to:

1. Communicate "Dollar for Conservation" project activities, progress and benefits to include development and distribution of community outreach products to include, but not be limited to, videos, webcasts, social media communications, educational displays and print materials as appropriate.

2. Implement the "Dollar for Conservation" program to deliver transformational benefits to the Indian River Lagoon and Florida's coastal resources to promote public awareness, active engagement and empowerment for Aquarium visitors.

3. Create and sustain a "Dollar for Conservation" Advisory Committee composed of Brevard Zoo and IRL Council staff, Board members or key stakeholders to the Aquarium to serve in an advisory role. The size of the Advisory Committee shall not exceed 7 members with three members being selected by the Membership on the Advisory Committee shall be proposed by the IRL Council and three by the Brevard Zoo CEO with review and adoption by the Brevard Zoo and IRL Council Board of Directors. The seventh member will be selected by one organization one year and the other organization the next year so that tiebreaking ability on the committee

alternates. The Advisory Committee will assemble at least once each year to review RFP language and funding priorities before RFPs are released. If a non-legal or non-financial disagreement between the Parties arises, the Advisory Committee will be responsible for resolving disputes. If no resolution is attained, Parties agree to seek a mutually agreeable 3rd party for non-binding mediation.

III. GENERAL CONSIDERATIONS

A. Specific Terms of Agreement

1. The Parties agree that IRL Council shall receive financial compensation to administer the "Dollar for Conservation" RFP and grants program at an annual rate of 10% of the annual revenues received. Such compensation shall be paid from the annual revenues received and will be reviewed every five years after the first distribution of funds to the IRL Council. Prior to distribution to the IRL Council, Brevard Zoo can use funds for reasonable expenses related to establishing and maintaining the program on their end (i.e. advertising, promotional displays, etc.).

    1. Use of the IRLNEP, IRL Council, Brevard Zoo, Brevard Zoo Aquarium and other protected Names and/or Property (including logos, marks or tag lines) for public use shall require written permissions from the owners of such Names and/or Property.

    2. If any articles, such as clothing with logos, signs, or other such items are to be manufactured for the purpose of education, marketing programs or raising funds, the Parties shall, before authorizing such manufacture and before placing any orders with the proposed manufacturer obtain appropriate approvals.

    3. Each Party agrees to share draft documents, publications, photos, social media posts and other communication collaterals to secure prior authorization from both Parties before public release of said documents.

    4. The Parties will collaborate to develop a policy regarding the ownership of documents, reports, deliverables, inventions, etc. that may arise out of this Agreement and partnership prior to the first distribution of funds to the IRL Council.

    5. To the extent permitted by law, the IRL Council agrees to indemnify, defend, and hold harmless the Brevard Zoo from and against any and all suits, claims, actions, proceedings, losses, damages, liabilities, costs and expenses (including attorneys' fees) arising out of or connected with this Agreement and caused by the negligent or wrongful act or omission of an IRL Council employee while acting within the course and scope of his or her employment. Nothing contained in this Agreement shall be construed or

interpreted as consent by the IRL Council to be sued nor as a waiver of sovereign immunity beyond the waiver and limits set forth in Section 768.28, Florida Statutes, as amended from time to time. To the extent permitted by law, the Brevard Zoo shall indemnify, defend and hold harmless the IRL Council, its officials, employees, and agents, from and against any and all suits, claims, actions, proceedings, losses, damages, liabilities, costs and expenses (including all attorneys' fees) arising out of or connected with (i.) actions of the Brevard Zoo staff, officials, contractors, agents, or any other individual or entity engaged by the Brevard Zoo to perform under this Agreement, (ii.) actions that may arise from activities conducted at the Brevard Zoo facilities and (iii.) any breach of this Agreement by the Brevard Zoo, its officials, employees, or agents. Neither Party shall be responsible for the negligence of the other Party. The provisions and limitation of Section 768.28, Florida Statutes, are deemed to apply to this Agreement to claims or actions arising in tort and/or contract.

6. The Parties further agree that where other consultants or contractors are employed in work related to the Agreement herein, each Party will not hold the other responsible for loss, damage or injury caused by any fault or negligence of such other consultants or contractors. Both Parties agree that they will look solely to said consultants or contractors for recovery from them, or any of them, for any such damage or injury.

7. Project reports, data derived from funded projects and all support documentation from projects will be archived and tracked by the IRL Council and shared with Brevard Zoo. All documents produced by the program within the IRLNEP are recognized as public documents pursuant to Florida's Public Records Law.

8. This Agreement constitutes the entire Agreement between the Parties with respect to the subject matter of this Agreement, supersedes any and all prior and contemporaneous negotiations, understandings or agreements in regard to such subject matter and is intended as a final expression of their Agreement.

9. This Agreement may be amended only by written instrument expressly referring to this Agreement, setting forth such amendment and signed by the Parties. No Party may assign its right thereunder or the Agreement itself without the prior written consent of the other parties. Any amendments or modifications to the Agreement must be signed by each Party.

10. This Agreement will be deemed to have been executed in the State of Florida and will be construed and interpreted according to the laws of that State without regard to its conflicts of law principles or rules. The Parties consent

to the personal jurisdiction of Florida state and Federal courts, agrees to accept service of process by mail and hereby waives any jurisdictional or venue defenses otherwise available to it. Any and all legal action, including mediation, necessary to enforce this Agreement will be held in Brevard County, Florida.

11. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or further exercise thereof. If any legal action or proceeding is brought for the enforcement of the Agreement, or because of an alleged dispute, breach, default, or misrepresentation in connection with any provisions of the Agreement, the parties agree that each party shall be responsible for its own attorneys' fees. EACH PARTY ALSO AGREES TO WAIVE ANY AND ALL RIGHTS TO A TRIAL BY JURY FOR ANY AND ALL DISPUTES OR CLAIMS WHICH MAY BE RELATED TO OR ARISE OUT OF THIS AGREEMENT.

12. IN NO EVENT, WILL EITHER PARTY, THEIR RESPECTIVE OFFICERS, EMPLOYEES, OR AGENTS BE LIABLE TO EITHER PARTY OR ANY THIRD PARTY FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, SPECIAL, OR PUNITIVE DAMAGES, INCLUDING LOST PROFIT, LOST REVENUE, LOSS OF DATA, OR OTHER DAMAGES ARISING FROM EITHER'S USE OF THE SITE, EVEN IF THE PARTIES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

13. Any provision of this Agreement which is of a continuing nature or imposes an obligation which extends beyond the term of the Agreement shall survive its expiration or earlier termination. If any term or provision of the Agreement, or the application thereof to any person or circumstances shall, to the extent, be held invalid or unenforceable, the remainder of the Agreement, or the application of such terms and provisions, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision shall be deemed valid and enforceable to the extent permitted by law. Failure of a party to enforce or exercise any of its rights under this Agreement shall not be deemed a waiver of that party's right to enforce or exercise said rights at any time thereafter.

14. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

15. Term of Agreement and Effective Date: This Agreement shall become effective upon the date last executed by the authorized representatives of the Parties and shall continue until terminated by either party by thirty (30) days prior written notice. The Advisory Board shall develop any relevant guidelines for termination regarding unspent dollars, partially-funded grants, communications and future grant programs prior to the first distribution of funds to the IRL Council

B. Points of Contact

Keith Winsten, Chief Executive Officer, Brevard Zoo. Phone: (321) 254-9453 ex 223. Email: kwinsten@brevardzoo.org. Address: 8225 N. Wickham Road, Melbourne FL 32940.

Duane De Freese, Executive Director, IRL Council and Indian River Lagoon National Estuary Program. Phone: (321) 313-0764. Email: ddefreese@irlcouncil.org. 1235 Main St. Sebastian, FL 32958.

IN WITNESS THEREOF, the Parties have adopted this MOA on the day and year last executed below.

IRL COUNCIL

_____ _____

Jeff Brower, Chair Date
IRL Council Board of Directors

Approved as to legal form and sufficiency:

_____

Glen J. Torcivia
IRL Council Legal Counsel

15. Term of Agreement and Effective Date: This Agreement shall become effective upon the date last executed by the authorized representatives of the Parties and shall continue until terminated by either party by thirty (30) days prior written notice. The Advisory Board shall develop any relevant guidelines for termination regarding unspent dollars, partially-funded grants, communications and future grant programs prior to the first distribution of funds to the IRL Council

B. Points of Contact

Keith Winsten, Chief Executive Officer, Brevard Zoo. Phone: (321) 254-9453 ex 223. Email: kwinsten@brevardzoo.org. Address: 8225 N. Wickham Road, Melbourne FL 32940.

Duane De Freese, Executive Director, IRL Council and Indian River Lagoon National Estuary Program. Phone: (321) 313-0764. Email: ddefreese@irlcouncil.org. 1235 Main St. Sebastian, FL 32958.

IN WITNESS THEREOF, the Parties have adopted this MOA on the day and year last executed below.

IRL COUNCIL

_____ _____

Jeff Brower, Chair — Date
IRL Council Board of Directors

Approved as to legal form and sufficiency:

_____

Glen J. Torcivia
IRL Council Legal Counsel

EAST COAST ZOOLOGICAL SOCIETY OF FL, INC.

Beth J. Gitlin 1.24.2024

Beth Gitlin — Date
President ECZS Board of Directors

EXHIBIT "A"
Brevard Zoo Aquarium at Port Canaveral

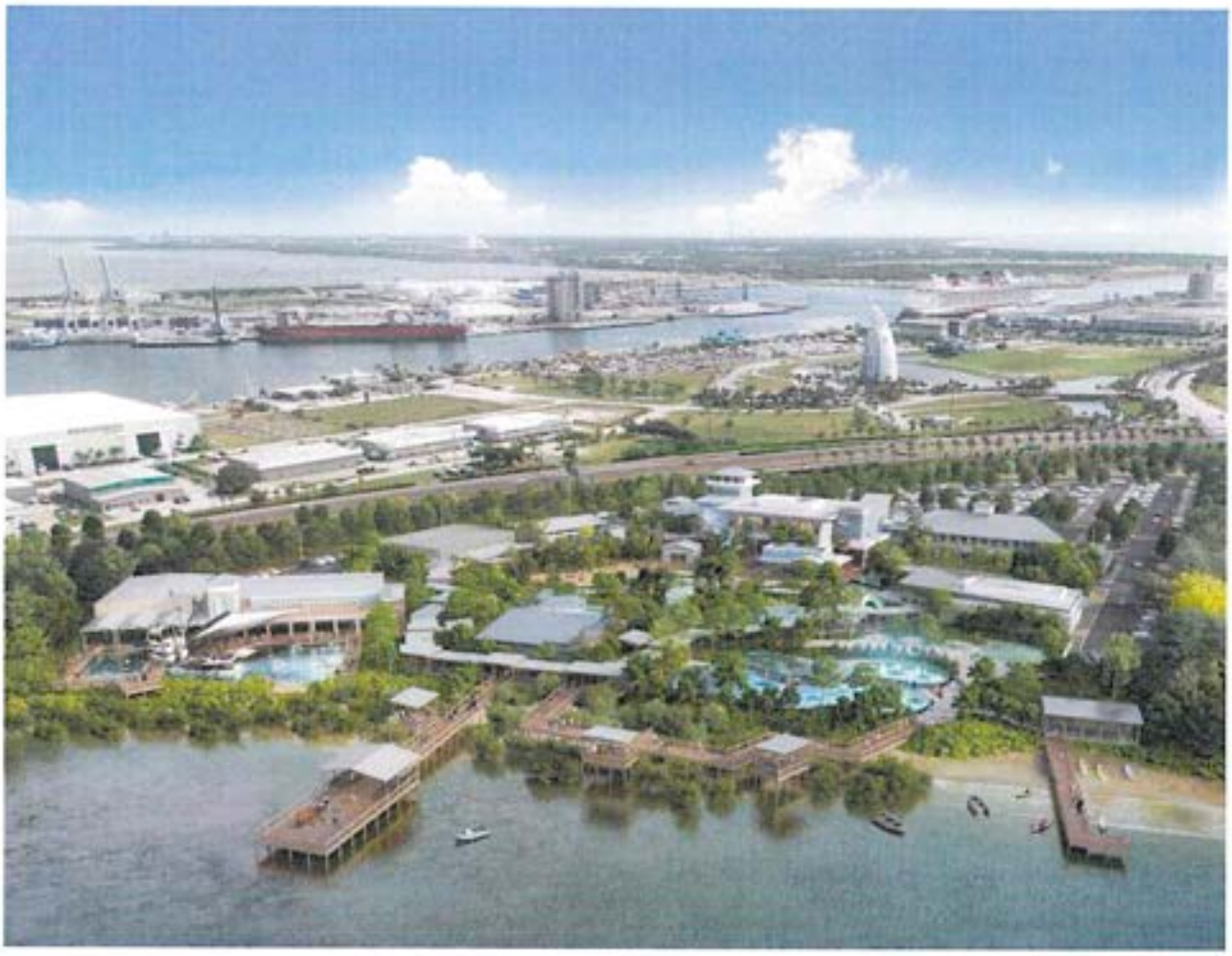
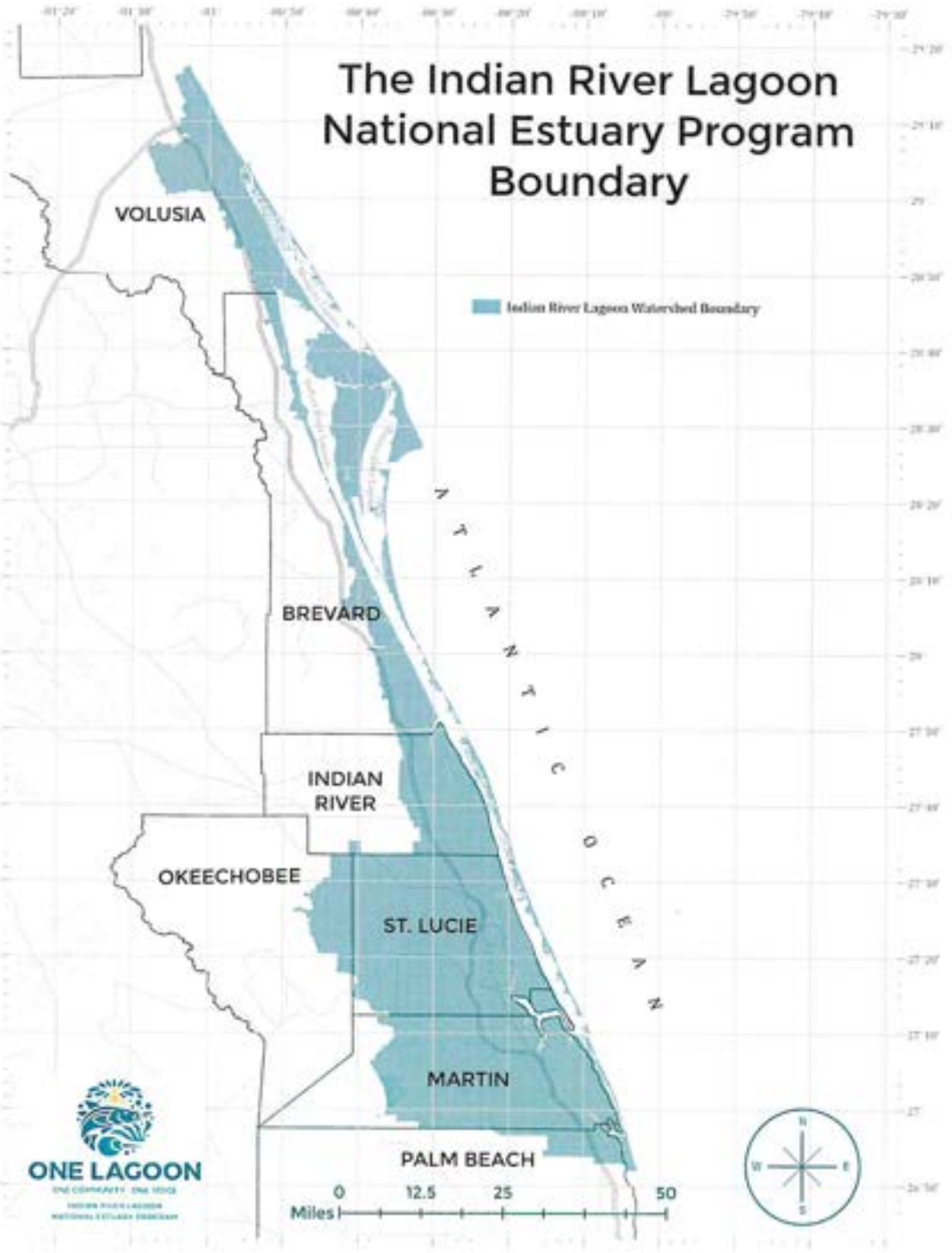


EXHIBIT "B"
IRLNEP Watershed Boundary Area for Aquarium-Funded Projects



RESOLUTION NO. 2024-02

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRL COUNCIL ADOPTING THE FINAL BUDGET FOR THE 2024 FISCAL YEAR

WHEREAS, the IRL Council was created via Interlocal Agreement to carry out the goals of the Indian River Lagoon National Estuary Program; and

WHEREAS, the IRL Council previously amended the Final Budget for Fiscal Year 2024 on August 11, 2023; and

WHEREAS, the IRL Council finds it necessary and essential to amend the Budget for the 2024 Fiscal Year as set forth in this Resolution; and

WHEREAS, adoption of the 2024 Fiscal Year budget amendments set forth in this Resolution serves a valid public purpose.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE IRL COUNCIL, THAT:

Section 1. The above recitals are ratified and incorporated into this resolution.

Section 2. The funds and available resources and revenues that are set out in Exhibit "A" and incorporated herein by reference, are appropriated to provide the monies to be used to pay the necessary operating and other expenses of the IRL Council.

Section 3. Except as amended in Exhibit "A" the remainder of the Budget for the 2024 Fiscal Year remains in full force and effect.

Section 4. This Resolution shall become effective immediately upon passage.

DONE at_____, Florida, this_____day of_____,2024.

By: _____
Jeff Brower, IRL Council Chair

ATTEST:

_____
Stacey Hetherington, IRL Council Secretary

Approved as to legal form and sufficiency:

_____
Glen J. Torcivia
IRL Council, Legal Counsel

IRL Council
FY 2024 Amended Budget
Exhibit A

REVENUES	
Federal Section 320	$ 850,000
Federal Infrastructure Investment and Jobs Law	$ 909,800
IRL License Plate	$ 125,000
Member Contributions	$1,500,000
TOTAL REVENUES	$3,384,800
EXPENDITURES	
Other Expenditures	$2,480,875
IRL Council Strategic Program, IRLNEP 2024 EPA 320 Work Plan, IRLNEP 2024 Infrastructure Work Plan, Unplanned Contingency Reserve	
Salaries & Benefits	$ 669,020
Facilities Expenses	$ 40,500
Rent, Utilities, Equipment Maintenance, Communications	
Administrative Costs	$ 71,000
Postage, Office Supplies, Insurance, Printing, Travel, Licenses & Subscriptions, Dues, Professional Development	
Administrative Services	$ 123,405
Legal, Accounting, Auditing, IT Services, Legal Ads	
TOTAL EXPENDITURES	$3,384,800
Agency Balance Beginning of Year	$ 0
Fund Balance - Beginning of Year	$ 758,395
Fund Balance – End of Year	$ 758,395

FY 2024 Amended Budget	Approved 8/11/2023	**FY 2024 Amended Budget**	Pending	Higher / Lower	(Notes)
REVENUES		**REVENUES**			
Federal EPA 320	$ 850,000	Federal EPA 320	$ 850,000		
IRL License Plate	$ 125,000	IRL License Plate	$ 125,000		
Member Contributions	$1,500,000	Member Contributions	$1,500,000		
Federal Infrastructure	$ 909,800	Federal Infrastructure	$ 909,800		
TOTAL REVENUES	$3,384,800	TOTAL REVENUES	$3,384,800		
EXPENDITURES		**EXPENDITURES**			
Other Expenditures	$2,497,509	Other Expenditures	$2,480,875	$16,634	(1)
IRL Council Strategic Program, IRLNEP FY2024 EPA 320 Work Plan, IRLNEP FY2024 EPA Infrastructure Work Plan, Unplanned Contingency Reserve		IRL Council Strategic Program, IRLNEP FY2024 EPA 320 Work Plan, IRLNEP FY2024 EPA Infrastructure Work Plan, Unplanned Contingency Reserve			
Salaries & Benefits	$ 642,386	Salaries & Benefits	$ 669,020	$26,634	(2)
Facilities Expenses	$ 50,500	Facilities Expenses	$ 40,500	$10,000	(3)
Rent, Utilities, Equipment Maintenance, Communications		Rent, Utilities, Equipment Maintenance, Communications			
Administrative Costs	$ 71,000	Administrative Costs	$ 71,000		
Postage, Office Supplies, Insurance, Printing, Travel, Licenses & Subscriptions, Dues, Professional Development		Postage, Office Supplies, Insurance, Printing, Travel, Licenses & Subscriptions, Dues, Professional Development			
Administrative Services Legal, Accounting, Auditing, IT Services, Legal Ads	$ 123,405	Administrative Services Legal, Accounting, Auditing, IT Services, Legal Ads	$ 123,405		
TOTAL EXPENDITURES	$ 3,384,800	TOTAL EXPENDITURES	$ 3,384,800		
Agency Balance Beginning of Year	$ 0	Agency Balance Beginning of Year	$ 0		
Fund Balance Beginning of Year	$ 758,395	Fund Balance Beginning of Year	$ 758,395		
Fund Balance – End of Year	$ 758,395	Fund Balance – End of Year	$ 758,395		

FY 2024 Amended Budget Detail (Narrative)

(1) Decrease "Other Expenditures" by $16,634 from $2,497,509 to $2,480,875. This decrease is from the Unplanned Contingency Reserve to cover the increase in Salaries and Benefits, item 2 below.

(2) Increase "Salaries and Benefits" by $26,634 from $642,386 to $669,020. This increase reflects the decision made by Council at the November 17, 2023 meeting to increase all staff salaries for the 2024 Fiscal year by 8% from their respective FY 2023 salaries.

(3) Decrease "Facilities Expenses" by $10,000 from $50,500 to $40,500. This decrease is in response to the actual lease amount negotiated with the City of Sebastian and approved at the November 17, 2023 IRL Council Board of Directors Meeting.

Tentative 2025 EPA Section 320 Workplan Projects and Activities List:

1. Communication Support: Service contracts for web/graphics/design support, scientific and other publications, other contract support as needed, and expanded social media and support for communication intern. Includes service contracts with IDEAS, Brandt Ronat, Firefly, and O'Hara.
   Funding Amount: $110,000

2. Atmospheric Deposition Monitoring of three (3) Stations: Contract with WSP USA Environment and Infrastructure, Inc. or TBD.
   Funding Amount: $90,000

3. Biodiversity Inventory: Contract with Smithsonian Marine Institute or TBD
   Funding Amount: $25,000

4. Grant Writing Support: Contracts with Natua Strategies, Angie Brewer and Associates, and T. Pinney.
   Funding Amount: $30,000

5. Harmful Algal Bloom Monitoring Lagoonwide: contracts with Florida Atlantic University and University of Florida or TBD.
   Funding Amount: $150,000

6. Science and Innovation RFP: (TBD)
   Funding Amount: $200,000

7. CCMP project inventory, prioritization and update services: Contracts with Tetra Tech and the Balmoral group.
   Funding Amount: $12,375

8. Community Engagement Coordinators salary: three (3) indivduals.
   Funding Amount: $212,625

9. Travel (Mandatory).
   Funding Amount: $20,000

Total Funding: $850,000

RESOLUTION NO. 2024-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRL COUNCIL ADOPTING THE TENTATIVE BUDGET FOR THE 2025 FISCAL YEAR

WHEREAS, the IRL Council was created via Interlocal Agreement to carry out the goals of the Indian River Lagoon National Estuary Program; and

WHEREAS, the IRL Council held a public hearing to consider the tentative Budget;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE IRL COUNCIL, THAT:

Section 1. The Fiscal Year 2025 Tentative Budget is attached as Exhibit "A".

Section 2. The Fiscal Year 2025 Tentative Budget is hereby adopted.

Section 3. This Resolution shall become effective immediately upon passage.

DONE at_____, Florida, this_____day of_____,2024.

By: _____
Jeff Brower, IRL Council Chair

ATTEST:

_____
Stacey Hetherington, IRL Council Secretary

Approved as to legal form and sufficiency:

_____
Glen J. Torcivia
IRL Council, Legal Counsel

IRL Council
FY 2025 Tentative Budget
Exhibit A

REVENUES	
Federal Section 320	$ 850,000
Federal Infrastructure Investment and Jobs Law	$ 909,800
IRL License Plate	$ 125,000
Member Contributions	$1,500,000
TOTAL REVENUES	$3,384,800
EXPENDITURES	
Other Expenditures	$2,445,223
IRL Council Strategic Program, IRLNEP 2025 EPA 320 Work Plan, IRLNEP 2025 Infrastructure Work Plan, Unplanned Contingency Reserve	
Salaries & Benefits	$ 693,777
Facilities Expenses	$ 38,000
Rent, Utilities, Equipment Maintenance, Communications	
Administrative Costs	$ 84,000
Postage, Office Supplies, Insurance, Printing, Travel, Licenses & Subscriptions, Dues, Professional Development	
Administrative Services	$ 123,800
Legal, Accounting, Auditing, IT Services, Legal Ads	
TOTAL EXPENDITURES	$3,384,800
Agency Balance Beginning of Year	$ 0
Fund Balance - Beginning of Year	$ 0
Fund Balance – End of Year	$ 0

FY 2025 Tentative Budget Expenditure Detail (Narrative)

- OTHER EXPENDITURES ($2,445,223)
    1. IRL Council Strategic Program ($675,000) includes the following:
        a. Water Quality Restoration Project(s) - $350,000
        b. Habitat Restoration Project(s) -$150,000
        c. Science and Innovation Project(s) - $125,000
        d. Small grants program - $25,000
        e. IRLNEP Technical Support of Conferences and Workshops - $25,000
    2. IRLNEP FY2024 EPA Workplan ($850,000) includes the following:
        a. Science and Innovation RFP - $200,000
        b. Communication Support: Service contracts for web/graphics/design support, scientific and other publications, other contract support as needed, and expanded social media and support for communication intern. Includes service contracts with IDEAS, Brandt Ronat, Firefly, and O'Hara - $110,000
        c. Biodiversity Inventory - $25,000
        d. 3 Atmospheric Deposition Monitoring Stations - $90,000
        e. 3 Community Engagement coordinators (Salary Only) - $212,625
        f. Harmful Algal Bloom Monitoring Contracts - $150,000
        g. EPA Travel (mandatory) - $20,000
        h. CCMP project inventory and prioritization service contract(s) - $12,375
        i. Grant Writing Support - $30,000
    3. IRLNEP FEDERAL INFRASTRUCTURE INVESTMENT AND JOBS LAW Workplan ($909,800)
        a. Underserved and Underrepresented Community Restoration Project(s) - $360,800
        b. Seagrass Nursery Network - $500,000
        c. JEDI Support: Service Contract with Diversity of Thought - $49,000
    4. Unplanned Contingency Reserve - $10,423

- SALARIES AND BENEFITS ($693,777)
    1. Salaries and 35% fringe rate for the Executive Director, Deputy Director, Chief Operating Officer, Administrative Coordinator, and GIS/IT Scientist.
    2. 35% fringe rate only for the 3 Community engagement coordinators

- FACILITIES EXPENSES ($38,000)
    1. Rent and Leases - $20,000
    2. Equipment Maintenance - $3,000
    3. Equipment and Communications - $15,000

- ADMINISTRATIVE COSTS ($84,000)
    1. Travel General - $25,000
    2. Postage and Mailing - $1,000
    3. Office Supplies - $5,000
    4. Dues, Licenses, and Subscriptions - $25,000
    5. Printing - $10,000

6. Insurance - $13,000
7. Staff Training and Professional Development - $5,000

- ADMINISTRATIVE SERVICES ($123,800)
    1. Legal - $65,000
    2. Accounting - $36,000
    3. Auditing - $19,800
    4. IT Services and Compliance - $2,500
    5. Legal Ads - $500

CATEGORY 1: WATER QUALITY RESTORATION										Funding Amount	Category Total Remaining
Rank	Applicant	Project	Requested Funding	Cost Share Match	Match %	Total Project Cost	Score	Above 70%?	Eligible?		$350,000.00
T1	City of Port Saint Lucie	Reconstruction of A-14 Water Control Structure in Port St. Lucie, FL	$100,000	$800,000	89	$900,000	192	87%	Y	$100,000	$250,000
T1	Clean Water Coalition of Indian River County	Assisting Priority Area Homeowners in Connecting to Sewer	$199,500	$309,000	61	$508,500	192	87%	Y	$199,500	$50,500
3	City of Port Saint Lucie	Septic to Sewer Conversions to Reduce Nitrogen Pollution in Known Hot Spots in the City of Port St. Lucie	$350,000	$350,000	50	$700,000	185	84%	Y	$50,500	$0
4	Fort Pierce Utilities Authority	Improving Water Quality in the Indian River Lagoon through Septic-to-Sewer Conversions	$293,250	$612,583	68	$905,833	180	82%	Y	$0	$0
5	Martin County	Martin County Connect-To-Protect Program Residential Sewer Connection Nutrient Removal Project	$200,000	$800,000	80	$1,000,000	171	78%	Y	$0	$0
6	City of Stuart	City of Stuart SW Dyer Drive / S Manor Drive Water Quality Improvement Project	$100,000	$217,854	69	$317,854	170	77%	Y	$0	$0
7	Brevard County	Brevard County – Central Indian River Lagoon, 50 Quick Connects to Sewer	$300,000	$588,520	66	$888,520	164	75%	Y	$0	$0
8	City of Stuart	City of Stuart SE Lonita Street / SE Villas Street Water Quality Improvement Project	$100,000	$317,854	76	$417,854	160	73%	Y	$0	$0
9	Town of Sewall's Point	South Sewall's Point Septic to Sewer Phase 1 Concurrence with Resiliency and Water Quality Improvement Reconstruction	$169,000	$1,998,500	92	$2,167,500	146	66%	N		

Category 1 Water Quality Restoration – Executive Summary

Title of Project	Reconstruction of A-14 Water Control Structure in Port St. Lucie, FL
Lead Organization and Partners	City of Port St. Lucie (lead organization), Florida Department of Environmental Protection (partner)
Project Location	The project location is located along Darwin Boulevard at the E-84 Canal that empties into the North Fork of the St. Lucie River. The project area is approximately 2,917 acres. Latitude: 27.21877576212304, Longitude: -80.35608560544465.
Key CCMP Vital Sign(s)	Impaired Waters, Stormwater, Monitoring and Data Sharing
IRLNEP Contribution and Source	$100,000, IRL Council
Partner Match	$525,000 (funding from Florida Department of Environmental Protection for State Water-quality Assistance Grant) plus $ 175,000 (match for State Water-quality Assistance Grant) plus $ 100,000 (new match for One Lagoon grant)
Total Project Cost	$900,000

Project Description

Port St. Lucie has identified a critical drainage structure in need of being replaced due to deterioration over the years. The A-14 Drainage Control Structure has been observed to be in poor condition and no longer functioning as originally designed. Constructed in the 1980's, the existing A-14 control structure also does not provide the upstream basin with any water quality benefits. The City seeks to remove and replace the structure with a similar, fixed-crested weir. The proposed structure will be reconfigured to provide increased water quality treatment for the upstream basin.

IRLNEP funding will enable the City of Port St. Lucie to reconstruct the water control structure. The proposed project will reduce nutrient pollution, protect against toxic algal blooms, decrease stormwater discharge into the North Fork of the St. Lucie River, and minimize flooding risk to the Port St. Lucie community. The project is expected to benefit the Indian River Lagoon by removing 7,032 pounds of total nitrogen and 3,407 pounds of total phosphorous annually. Nutrient pollution is the main cause of toxic algal blooms in the Indian River Lagoon system, so fewer algal blooms from reduced nutrient pollution will protect marine life and preserve key habitat.

Map and Photos

See attached.

Key Outputs (Deliverables)

Treat runoff and nutrient pollution from 2,917 acres of tributary drainage basins; and elimination of 7,302 pounds of total nitrogen and 3,407 pounds of total phosphorous each year.

Key Outcomes (Benefits to the IRL)

Short-term benefits: Initial nutrient reductions
Mid-term benefits: Significant ongoing nutrient reductions (15% reduction of TN and 44% reduction of TP); and better Indian River Lagoon protection
Long-term benefits: Fewer algal blooms; habitat improvements; and restoration of biological diversity

Executive Summary (1 page limit)

Project Title:	Assisting Priority Area Homeowners Connect to Sewer
Project Location:	Within the City Limits of Vero Beach
Key CCMP Vital Signs:	Wastewater
IRLNEP Contribution/Source:	$199,500 from local contributions made by IRL Council
Partner Match:	$309,000
Total Project Cost:	$508,500

Project Description: (not to exceed 250 words)
A pilot project was executed in 2023 that determined households earning less than three times the Federal poverty level would not be able to afford $15,000 to connect their failing septic systems to sewer. The targeted area consisted of older homes with property values between $125,000 and $250,000, family incomes between $12,000 and $55,000. The area residents are described by United Way as ALICE – Asset Limited, Income Constrained, Employed - one emergency away from poverty. The new mandate to connect to sewer might be that emergency.

The CWC project assists homesteaded properties only. The first program step will establish which properties are homesteaded to be followed by the creation of the potential list of applicants

Through the pilot program, a successful process was developed. The Clean Water Coalition coordinated with the City Utility Department to define the incentives offered to targeted residents, altered relevant ordinances through City Council, defined the application process for residents, managed competitive bids for packages of five plumbing installations from seven authorized contractors and developed an internal process for approving and making payments. The Economics Opportunities Council (EOC) assisted by handling the outreach to residents and performing financial qualifications. EOC and the City Utility Staff coordinated the paperwork completion for residents.

This process worked well and will continue with new funding. The delivery area for services will simply expand into other areas of the City that are also targeted as Priority Areas and within close proximity to the Lagoon or a tributary.

Key Outputs (Deliverables):
35 legacy septic systems will be connected to City's STEP Hybrid Sewer System.
The City assumes responsibility for the maintenance and repair of the STEP System.

Key Outcomes (Benefits to the Lagoon):
Reducing nutrient loads from entering the Lagoon by converting traditional septic systems to central sewer is a high priority for the CCMP. Each decommissioned septic system reduces the total nitrogen input to the groundwater by 23.7 Lb/year. Additionally, bacterial contamination will be reduced helping to restore fisheries that are currently closed due to fecal contamination. Improving water quality is a vital step in toward restoring the Lagoon habitat and all the life that depends on it. In the long term, human health and economic prosperity are dependent on a healthy lagoon.

Category 1 Water Quality Restoration - Executive Summary

Title of Project	Septic to Sewer Conversions to Reduce Nitrogen Pollution in Known Hot Spots in the City of Port St. Lucie
Lead Organization and Partners	City of Port St. Lucie (lead organization), Harbor Branch Oceanographic Institute-Florida Atlantic University (partner)
Project Location	The project location is in central Port St. Lucie near the Sagamore Waterway, Elkcam Waterway and Monterrey Waterway, which all empty into the North Fork of the St. Lucie River. The project area is approximately 4,301 acres. Latitude: 27.293690, Longitude: -80.353317.
Key CCMP Vital Sign(s)	Impaired Waters, Wastewater, Monitoring and Data Sharing, Citizen Engagement and Education
IRLNEP Contribution and Source	$350,000, IRL Council
Partner Match	$350,000 cash from known Hot Spot property owners
Total Project Cost	$700,000

Project Description

To determine sources of degraded water quality in the North Fork of the St. Lucie Estuary, the City of Port St. Lucie contracted with Harbor Branch Oceanographic Institute / Florida Atlantic University to conduct the 2018-2020 *Microbial Source Tracking of Bacteria Pollution in the St. Lucie River* study. That study confirmed elevated fecal coliform levels and nutrient concentrations in certain Hot Spots. The greatest concentrations consistently occurred in dense urbanized areas encompassing the Sagamore, Elkcam, and Monterrey drainage basins all of which directly drain into like named waterways discharging into the North Fork of the St. Lucie River. Aging residential septic systems in those areas are believed to contribute to nutrient concentrations and coliform bacterial count pollution.

IRLNEP funding will enable Port St. Lucie to expand its septic to sewer conversion program. The proposed Hot Spot Septic Grant Program will support the conversion of 112 residential septic systems in the target areas to Port St. Lucie's low-pressure sanitary sewer system. Targeted property owners within the known Hot Spots will be eligible to participate in the septic grant program covering 50% of the sewer conversion cost. The City will also offer 10-year interest-free connection fee loans to all participating septic owners to cover the balance of their conversion costs. The project is expected to benefit the Indian River Lagoon by removing 6.15 pounds of total nitrogen per septic system annually. Nutrient pollution is the main cause of toxic algal blooms in the Indian River Lagoon system. Fewer Algal blooms will protect marine life and preserve key habitat.

Map and Photos

See attached.

Key Outputs (Deliverables)

112 homes converted from aging septic systems to City's sanitary sewer system; elimination of a combined total of 688.8 pounds annually of nitrogen

Key Outcomes (Benefits to the IRL)

Short-term benefits: Enhanced community understanding in the Hot Spot neighborhoods; initial nutrient reductions

Mid-term benefits: Incentivizing the conversion of 112 septic systems in the Hot Spot neighborhoods; significant nutrient reductions; improved protection of the Indian River Lagoon

Long-term benefits: Fewer algal blooms; habitat improvements; restoration of biological diversity

Executive Summary

Title of Project:	Improving Water Quality in the Indian River Lagoon through Septic-to-Sewer Conversions
Lead Organization and Partners:	Fort Pierce Utilities Authority
Project Location:	This project will be carried out throughout FPUA's wastewater territory in Fort Pierce, Florida - 27° 27' 0.9576'' N 80° 20' 23.8236'' W
Key CCMP Vital Sign(s):	Wastewater, Impaired Waters, Stormwater
IRLNEP Contribution and Source:	**$293,250**, IRL Council
FPUA Match:	**$612,583,** FPUA (Sewer lining grant funds)
Total Project Cost:	**$905,833**

Project Description:

This project aims to improve the overall environmental health of our community by eliminating **510** lbs. of nitrogen/year from reaching the Indian River Lagoon. This particular project consists of eliminating **30** septic systems throughout FPUA's wastewater service territory. Additionally, FPUA will enhance its wastewater infrastructure by lining **2.65 miles** of wastewater pipes with Cured-in-Place PVC lining. This PVC lining will rectify the problems caused by untreated sewage leaking into the soil and groundwater flows to the IRL, caused by cracks in the aging, vitrified clay pipes.

Key Outputs (Deliverables)

1. The removal of **30** aging septic systems.
2. Reduction of **510** lbs. of nitrogen/year[1] and **6** lbs./gallon of phosphorus/year[2] leached into the environment by septic systems.
3. The addition of **2.65** miles of sewer lined by Cured-in-Place-Piping PVC lining.

Key Outcomes (Benefits)

1. The short-term benefit aligns with the IRL CCMP and is to reduce the density of septic systems in the IRL watershed. Reducing the use of septic system infrastructure will also reduce nutrient and other pollutant loads, caused by aging and failing septic systems. In addition, the Cured-in-Place PVC lining will seal and restore the sewer pipes' infrastructure, and eliminate the risk of untreated sewage from entering the IRL.
2. The medium-term benefit is continued reduction of septic system density, and reduction in nutrient and pollutant loads discharges into the IRL caused by aging and failing septic systems and wastewater infrastructure, therefore increasing the water quality in the IRL.
3. The long-term benefit is an improvement to the health of the IRL as pollutant loads, caused in part by failing septic systems, are drastically reduced. Lining the pipes will eliminate sewer seepage to groundwater and the IRL, and improve public and environmental health conditions for residents, tourists, avian and aquatic animals. This project will contribute to the broader collaborative effort to remove the IRL from the Impaired Waters list.

[1] Wakulla County Septic Tank Study, Task 2-Evaluate the Ground Water Flow Pathway from the Woodville Area (floridadep.gov)
[2] The Groundwater Project, 7.3 Phosphorus Fate – Septic System Impacts on Groundwater Quality (gw-project.org)

EXECUTIVE SUMMARY

Title of Project	Martin County Connect-To-Protect Program Residential Sewer Connection Nutrient Removal Project
Lead Organization and Partners:	Martin County Board of County Commissioners/No partners
Project Location:	Nine (9) grinder pump station areas in Martin County's service area. The latitude and longitude of each community are listed in **Attachment A - Project Map**
Key CCMP Vital Sign(s):	Seagrasses, filter feeders, harmful algae blooms, impaired waters, wastewater, and contaminants
IRLNEP Contribution and Source:	$ 200,000 Grant Request, IRL Council
Partner Match:	$ 800,000 (80% Match) Martin County Utilities
Total Project Cost:	$ 1,000,000

PROJECT DESCRIPTION

The Martin County Board of County Commissioners adopted a 10-year Septic-to-Sewer Program to eliminate over 10,000 on-site septic systems. Septic-to-sewer projects are prioritized based on their impact on the Indian River Lagoon (IRL). FY 2025 IRLNEP grant funds are requested to reduce costs related to grinder pump station and service line installation for 100 homeowners to connect to Martin County's sewer system, known as the Connect-to-Protect Program. Eliminating 100 septic tanks will significantly reduce the Total Nitrogen (TN) and Total Phosphorous (TP) concentrations entering the IRL. Based on the cited literature, the estimated project load reduction for TN is 2,700 lbs/yr and 415 lbs/yr for TP. Work will include service laterals, installing grinder pump stations, and abandoning septic tanks for 100 homes in areas where force main infrastructure has been completed as part of the County's Septic-to-Sewer Conversion Program. Martin County will complete the work within 12 months, as the grant program requires. The County has established an innovative turnkey connection process using pre-selected contractors to ensure homeowners get quality installations at the best cost.

The total project cost to connect 100 homes is $1,000,000 ($10,000 per connection). Martin County Utilities (MCU) project funding match is $800,000 (80% project funding match). The funding request is $200,000 (20% project grant funding). If awarded, this grant would reduce the connection cost by $2,000 on a first-come, first-served basis for each 100 homeowners or $8,000 per connection.

KEY OUTPUTS (DELIVERABLES)

Force main infrastructure has been completed in nine (9) Connect-to-Protect Program neighborhoods, providing shovel-ready connection availability to the County's central sewer system. Martin County will obtain 100 connections on a first-come, first-served basis before the end of FY 2025. Deliverable documentation will be submitted as quarterly and final report summaries to the IRL Council. The estimated nutrient reduction per connection is 27 lbs/yr TN[2] and 4.15 lbs/yr TP[3].

KEY OUTCOMES (BENEFITS TO THE IRL)

Short-term benefit: The proposed septic tank removal will reduce the amount of nitrogen, phosphorus, and fecal coliform leached into the IRL.

Medium benefit: Reduction in nutrient contribution decreases the potential for harmful algae blooms and massive fish kills.

Long-term Benefit: The project will reduce contribution to nutrient-related algal growth, improve water clarity, support seagrass photosynthesis, and increase habitat and lagoon health.

I. Executive Summary

Title of Project	City of Stuart SW Dyer Drive / S Manor Drive Water Quality Improvement Project
Lead Organization and Partners:	City of Stuart
Project Location:	SW Dyer Drive and S Manor Drive, west of Kanner Highway in the City of Stuart Latitude 27° 11' 5.06"N Longitude 80° 15' 35.00"W
Key CCMP Vital Signs(s)	Impaired Waters and Stormwater
IRLNEP Contribution and Source:	$100,000, IRL Council
Partner Match:	$217,854 (69%) Match
Total Project Cost:	$317,854

Project Description:
The project is in the City of Stuart, Florida (Latitude 27°11'5.06"N, Longitude 80°15'35.00"W) in the South Fork drainage basin. Stormwater runoff from a 27.39-acre urban residential development currently discharges directly to the St. Lucie River with only a 1st Generation Baffle Box as treatment. This project proposes to construct exfiltration trenches and a new 2nd Generation Baffle Box to treat runoff prior to discharge. The project will remove nutrients and sediment and provide stormwater retention and is important for the City of Stuart to continue progress towards meeting BMAP requirements for the St. Lucie River. An annual reduction estimate is 13.15 pounds of TN and 1.94 pounds of TP. The design of this project is complete, and it qualifies for a General Permit from SFWMD; therefore, it is construction ready. A Project Location Map and Photo are attached to this application.

Key Outputs (Deliverables):
Stormwater runoff will be directed to a treatment train, where exfiltration and a 2nd Generation Baffle Box will provide nutrient and sediment removal prior to discharge to the St. Lucie River. It is estimated that 13.15 pounds per year of TN and 1.94 pounds per year of TP will be removed because of this project (*Source: BMP Trains*). The project will meet the four criteria that are critical to managing dispersed stormwater runoff. Volume and peak discharge will be addressed by routing the existing urban runoff to a bioswale for retention prior to discharge. Water quality will be improved by nutrient removal in the exfiltration trenches and baffle box, and the baffle box will provide sediment removal.

Key Outputs Benefits:
Short-term (1-2 years): The City continues implementing strategies to improve the quality of runoff entering the St. Lucie River and to advance toward BMAP goals.
Medium-term (3-4 years): The City of Stuart reaches the required 5-year nutrient reduction targets specified in the St. Lucie River and Estuary BMAP.
Long-term (5-10+ years): The City reduces nutrient and sediment loads to the St. Lucie River, whereby removing the St. Lucie River from the Impaired Waters designation list. The project will reduce nutrient and sediment loads to the St. Lucie River, decreasing stormwater pollution to the IRL system.

Executive Summary

Title of Project	*Brevard County – Central Indian River Lagoon, 50 Quick Connects to Sewer*
Lead Organization and Partners:	**Lead Organization:** Save Our Indian River Lagoon Program – Brevard County, Natural Resources Management Department **Partner:** Property owners of at least 50 septic properties within the Indian River Lagoon watershed; City of Palm Bay Utilities Department
Project Locations:	Central Indian River Lagoon, Brevard County 50 Quick Connects to Sewer
Key CCMP Vital Sign(s):	***Impaired Waters and Wastewater***
IRLNEP Contribution and Source:	$300,000 (scalable), IRL Council
Partner Match:	$588,520, 66%
Total Project Cost:	$888,520

Project Description: This project will provide funding to convert at least 50 septic properties within the Central Indian River Lagoon watershed to sanitary sewer. The Project was selected due to (a) its proximity to the Central IRL, (b) the significant number of residential properties on septic within the BMAP that contribute large amounts of nutrients to the Central IRL through septic drain field contributions to groundwater, and (c) demonstrated willingness of Brevard County residents to take part in the program. Grants will be offered to homeowners who agree to connect to gravity sewer, if available, in proximity, and if the nearest treatment plant has available capacity. Connections will be funded up to $12,000 for gravity mains. The project is scalable; for example, to connect 25 properties, the requested funding would be half.

Key Outputs (Deliverables): Brevard County will provide funds for qualified plumbing and septic contractors to abandon septic systems and connect private properties to sanitary sewer. Funds will cover the costs associated with abandonment of deactivated septic systems, connection to sanitary sewer, and site restoration. The County will submit proof of contracts with homeowners, itemized invoices for each connection, and final utility/building department inspection reports showing the connections were made properly and legally.

Key Outcomes (Benefits to the IRL): The short-term benefits of the 50 Quick Connects to Sewer Project will result in the immediate elimination of 375 lbs-TN/year to the Central Indian River Lagoon watershed. Medium-to-long term benefits to the IRL include (a) a sustained increase in civic awareness and engagement with IRL issues, (b) a sustained reduction in groundwater pollution to the IRL as the removed septic systems will no longer contribute to pollution to the watershed, and (c) a reduction of risks to human health and marine life by eliminating potential pathogen contamination from failing septic systems.

I. Executive Summary

Title of Project	City of Stuart SE Lonita Street / SE Villas Street Water Quality Improvement Project
Lead Organization and Partners:	City of Stuart
Project Location:	SE Lonita St and SW Villas St, southwest of US 1, east of Kanner Highway in the City of Stuart Latitude 27° 11' 14.92"N Longitude 80° 15' 4.51"W
Key CCMP Vital Signs(s)	Impaired Waters and Stormwater
IRLNEP Contribution and Source:	$100,000.00, IRL Council
Partner Match:	$317,592.00 (76%) Match
Total Project Cost:	$417,592.00

Project Description:
The project is in the City of Stuart, Florida (Latitude 27°11'14.92"N, Longitude 80°15'4.51"W) in the City of Stuart Poppleton Creek drainage basin. Stormwater runoff from a 15.04-acre urban residential development currently discharges to the St. Lucie River via Poppleton Creek with only a CDS Hydrodynamic Separator Baffle Box as treatment. This project proposes to construct exfiltration trenches and a new 2nd Generation Baffle Box to treat runoff prior to discharge. The project will remove nutrients and sediment and provide stormwater retention and is important for the City of Stuart to continue progress towards meeting BMAP requirements for the St. Lucie River. An annual reduction estimate is 8.31 pounds of TN and 1.59 pounds of TP. The design of this project is complete, and it qualifies for a General Permit from SFWMD; therefore, it is construction ready. A Project Location Map and Photo are attached to this application.

Key Outputs (Deliverables):
Stormwater runoff will be directed to a treatment train, where exfiltration and a 2nd Generation Baffle Box will provide nutrient removal prior to discharge to Poppleton Creek and the St. Lucie River. It is estimated that 8.31 pounds per year of TN and 1.59 pounds per year of TP will be removed because of this project (*Source: BMP Trains*). The project will meet the four criteria that are critical to managing dispersed stormwater runoff. Volume and peak discharge will be addressed by routing the existing urban runoff to a bioswale for retention prior to discharge. Water quality will be improved by nutrient removal in the exfiltration trenches and baffle box, and the baffle box will provide sediment removal.

Key Outputs Benefits:
Short-term (1-2 years): The City continues implementing strategies to improve the quality of runoff entering the St. Lucie River and to advance toward BMAP goals.
Medium-term (3-4 years): The City of Stuart reaches the required 5-year nutrient reduction targets specified in the St. Lucie River and Estuary BMAP.
Long-term (5-10+ years): The City reduces nutrient and sediment loads to the St. Lucie River, whereby removing the St. Lucie River from the Impaired Waters designation list. The project will reduce nutrient and sediment loads to the St. Lucie River, decreasing stormwater pollution to the IRL system.

Executive Summary

South Sewall's Point Septic to Sewer *Phase 1 Concurrence with Resiliency and Water Quality Improvement Reconstruction* **(Category 1 – Water Quality Restoration Projects)**	
Lead Organization and Partners:	Town of Sewall's Point
Project Location	27.185608/ -80.189232 latitude and longitude
Key CCMP Vital Sign(s):	Water Quality, Living Resources, Healthy Communities, and Communicate, Collaborate, and Coordinate
Top Outputs and Outcomes	Design, Permitting, Construction, and a Final Report for the entire project.
IRLNEP Contribution and Source:	$169,000 (7.84%) IRL Council
Partner Match:	$1,985,750 (92.16%) – Florida Department of Environmental Protection (FDEP)
Total Project Cost:	$3,712,492

South Sewall's Point Road Septic to Sewer Conversion is the first phase of the Town's plan to provide septic to sewer connection to 706 homes on the Town of Sewall's Point. This project proposal is to assist residents by reducing connection costs by at least $1,000 per unit as an incentive to connect. This phase provides 169 homes with septic to sewer conversion on the Town peninsula that is surrounded by the St. Lucie River and the Indian River Lagoon. This is project will create resiliency for the Town's waste disposal and reduce nutrient loads into the Indian River Lagoon. This project will also allow the installation of utility lines concurrent with the South Sewall's Point Road Reconstruction Projects. The project is located where the St. Lucie Estuary meets the impaired waterbody, the Indian River Lagoon, on the peninsula that is the Town, specifically at **27.185608/ -80.189232 latitude and longitude.**

Key Outputs (Deliverables) and Key Outcomes

This project proposal is for the Customer Connection Package and the goal of this proposal is the reduce connection costs from approximately $11,893.57 per resident to $10,893.57. The most significant deliverable is the construction of this entire project that includes the installation of the regional sewer line and the removal of the septic tanks discharge into the Indian River Lagoon. The Town will also be competing a final report that summarizes the results of the project including all tasks in the grant work plan as a deliverable outcome. This project is concurrent with the road reconstruction project that the Town is implementing that includes stormwater nutrient load reductions as well as septic to sewer nutrient reductions calculated by the Town Engineer. The Stormwater component will include a reduction of Nitrogen by 71.2 percent and Phosphorus by 79.6 percent. The Septic to Sewer nutrient reductions specific to project proposal are a reduction of Nitrogen by 19lbs multiplied by 169 ERCs and Phosphorus by 1.9lbs multiplied by 169 ERCs.

CATEGORY 2: HABITAT RESTORATION										Funding Amount	Category Total Remaining
Rank	Applicant	Project	Requested Funding	Cost Share Match	Match %	Total Project Cost	Score	Above 70%?	Eligible?		$150,000.00
T1	Riverside Conservancy	One-Mile Living Shoreline Enhancement in Volusia County	$100,000	$190,000	66	$290,000	163	74%	Y	$100,000	$50,000
T1	Florida Oceanographic Society	Monitoring Mature Oyster Restoration Projects in the Indian River Lagoon and St. Lucie Estuary for Practitioner Application	$67,840	$73,322	52	$141,162	163	74%	Y	$50,000	$0
3	St. Lucie County	North Fork St. Lucie River Multi-Agency Habitat Restoration & Reconnection	$100,000	$400,000	80	$500,000	162	74%	Y	$0	$0

additional $17,840 needed to fund both projects

FY 2025 IRL Council and Indian River Lagoon National Estuary Program

CATEGORY 2: Habitat Restoration Projects

EXECUTIVE SUMMARY

One-Mile Living Shoreline Enhancement in Volusia County	
Lead Organization	Riverside Conservancy; Bethune-Cookman University (project partner)
Project Location	1413 S. Riverside Drive, Edgewater, FL 32132 Latitude: 28°58' 44.78"N; Longitude: 80°53'43"W (multiple sites)
Key CCMP Vital Sign(s):	Impaired Waters, Seagrasses, Filter Feeders, Living Shorelines, Spoil Islands, Land Conservation, Biodiversity, Species of Concern, Climate Ready Estuary, Monitoring and Data Sharing, Citizen Engagement and Education, and Federal, State, and Local Policy Opportunities.
Top Outputs and Outcomes	Outputs: Creation of 250 oyster reef breaks and planting one mile of shoreline. Outcomes/Value to IRL: Provide scalable solutions to shoreline enhancement with solutions that mitigate the effects of climate change and provide tangible examples of community resiliency.
IRLNEP Contribution	$100,000
Partner Match:	$190,000 In-Kind from Riverside Conservancy (funded by SJRWMD/FDEP)
Total Project Cost:	$290,000 Total

Project Description:
Funding will be used to 1) create Oyster Reef Breaks (ORBs) that will serve as substrate for oyster reef growth and "planters" for mangroves and salt marsh grasses, 2) plant one mile of shoreline within Volusia County, and 3) create a pilot project including seagrass (Ruppia maritima) near a canal outfall into the Mosquito Lagoon. Riverside Conservancy has received $190,000 from the SJRWMD and FDEP for shoreline planting. A match grant from the IRL NEP would allow increased use of oyster reef enhancement and student participation.

Map and Photo(s): *See* attached.

Key Outputs (Deliverables):
1) Creation of 250 oyster reef breaks; 2) planting one mile of shoreline in Volusia County; and 3) create a pilot project including seagrass (Ruppia maritima) near a canal outfall into the Mosquito Lagoon. These living shoreline projects are estimated to reduce nutrient pollution by 2% and the associated educational activities can contribute up to a 6% reduction in the baseline anthropogenic load for both total nitrogen (TN) and total phosphorous (TP) throughout the basins. (See, FINAL North Indian River Lagoon Basin Management Action Plan – 2013, p. 38 and Mosquito Lagoon Reasonable Assurance Plan (RAP) Pollutant Load-Reduction Projects Report, February 2018, p. 2-33.)

Key Outcomes (Benefits to the IRL):
- Short-Term Outcome: Completion of projects within the IRLNEP Comprehensive Project List (planting and enhancing one mile of shoreline).
- Medium-Term Outcomes: Support the creation of a supply chain for shoreline retrofits into living shoreline.
- Long-Term Outcomes: Mitigate the effects of climate change and provide tangible examples of community resiliency. Living shorelines in this area will improve habitat for at least 14 protected species.

Title of Project	Monitoring Mature Oyster Restoration Projects in the Indian River Lagoon and St. Lucie Estuary for Practitioner Application
Lead Organization and Partners:	**Lead Organization:** Florida Oceanographic Society, **Partners:** University of Florida, Florida Department of Environmental Protection Indian River Lagoon Aquatic Preserves
Project Location:	Multiple sites throughout the St. Lucie Estuary and Indian River Lagoon; Martin County, FL.
Key CCMP Vital Sign(s):	(Level 1) Seagrasses; (Level 2) Filter Feeding, Biodiversity, Living Shorelines, and Monitoring and Data Sharing; and (Level 3) Science, Technology, and Innovation.
IRLNEP Contribution and Source:	$67,840; IRL Council
Match:	Dollars and total percent match for all partners: $17,280 (FOS, 12%) + $40,466 (UF, 29%) + $15,576 (IRLAP, 11%) = $73,322 (52%)
Total Project Cost:	$141,162

Project Description

Oyster reefs are a living resource that contribute to coastal resilience by providing valuable ecosystem services including water quality improvement and protection for coastal ecosystems, shorelines, and waterfront communities[1,2]. Anthropogenic stressors, including hydrologic alterations, eutrophication, warming, acidification, and overharvesting have resulted in the deterioration and loss of oyster reefs globally[3,4]. In Florida, freshwater diversion from upland watersheds has contributed to the loss of over 90% of historic oyster beds on the Atlantic coast[4]. To combat the loss of oyster reef area and maintain reef services, managers and institutions have heavily invested in the restoration of these ecosystems through construction of human-made reefs[5]. While human-made reefs can eventually provide key ecosystem services on relatively short timescales (*i.e.*, 0-3 years)[6], there is less certainty around the development and persistence of ecosystem services as restored reefs age[5], due to a lack of long-term monitoring. The overarching objectives of this study are to 1) assess reef restoration development and persistence by measuring key ecosystem services (*i.e.*, oyster health, wave attenuation, and habitat quality) in new, young, and mature restored reefs; and 2) enhance reef monitoring and management efforts across the Indian River Lagoon (IRL) and St. Lucie Estuary (SLE) by developing and distributing a Quick Assessment Monitoring Guide for restoration practitioners based off of objective 1.

Key Outputs (Deliverables) and Outcomes (Benefits to the IRL)

Deliverables will include 1) evaluation of ecosystem service recovery in restored oyster reefs in the IRL and SLE and 2) a Quick Assessment Monitoring Guide for restoration practitioners and coastal managers. The guide will provide consistent monitoring protocols and success criteria for end users looking to evaluate their aging restoration projects, which can be expanded to include lagoon wide restoration plans. Baseline quantification of ecosystem services in aging oyster reef restoration projects is an important, yet understudied form of coastal protection and water quality control (*mid- to long-term benefit*). Collation of success criteria and monitoring protocols (*short- to mid-term benefit*) will lead to the optimization and standardization of long-term reef restoration procedures, which will promote practitioner collaboration specifically through data sharing (*long-term benefit*).

EXECUTIVE SUMMARY

Title of Project	North Fork St. Lucie River Multi-Agency Habitat Restoration & Reconnection
Lead Organization and Partners:	**St. Lucie County (Lead)** U.S. Army Corps of Engineers, Jacksonville Office Florida Fish & Wildlife Conservation Commission, Alyssa Jordan Florida Dept. of Environmental Protection, Irene Arpayoglou and Matthew Anderson North St. Lucie River Water Control District, Patrick Helms Ducks Unlimited, Jeff Beal St. Lucie Resilience Steering Committee
Project Location:	Eastern St. Lucie County; North Fork St. Lucie River – Latitude: 27.198889 degrees N, Longitude 80.208056 degrees W
Key CCMP Vital Sign(s):	Seagrass (1): Living Shorelines (2); Invasive Species (2); Biodiversity (2); Species of Special Concern (2); Forage Fishes (2); Commercial and Recreational Fisheries (2)
IRLNEP Contribution and Source:	**$100,000, IRL Council – Habitat Restoration RFP**
Partner Match:	**$400,000; 80%**
Total Project Cost:	**$500,000**

Project Description:

This large, complex, multi-agency, multi-year proposal aims to restore critical areas of the North Fork St. Lucie River and its tributaries by utilizing nature-based and / or hybrid strategies. The proposal includes an assessment that will fill gaps in previous and on-going assessments to guide future restoration projects. The NFSLR Feasibility Study that will integrate scientific literature and expanded GIS data, including Hydrologic and Hydraulic studies, social and economic data, and greenhouse gas inventory. Cutting-edge modeling tools will be used to model current and future conditions based on projected sea-level and land-use change impacts to the system. A special focus on under-resourced and Priority Communities will be part of the Feasibility Study, assessing risks and benefits to these communities.

This proposal is part of a St. Lucie County - Army Corp of Engineers' (ACOE) cost-share agreement that commits the Corps to invest up to $10 million to conduct an Integrated Feasibility Study and NEPA analysis, and develop 100% design, attain permits and implement priority projects. Due to the critical need for significant investment in restoration of the NFSLR, this project presents a time-sensitive opportunity to build collaborative partnerships, coordinate efforts and make a real difference in the North Fork St. Lucie River, St. Lucie Estuary and Indian River Lagoon.

Key Outputs (Deliverables):

Phase I (FY24-25) Integrated Feasibility Study utilizing extensive peer reviewed research, updating past studies with expanded data layers (including social vulnerability data, fish and other species data, H&H studies, etc.) and cutting-edge modeling tools.

Phase II (FY25-26): NEPA based evaluations (including Cost Effectiveness / Incremental Cost Analysis, National Ecosystem Restoration benefits, National Economic Development, Regional Economic Development, and Other Social Effects);project prioritization list, 100% design and permitting.

Phase III (FY26-27): Implementation of minimum of two projects based; 3-year monitoring plan; 50-year adaptive management plan.

Key Outcomes

The Phase I Feasibility Study will update and greatly expand upon past assessments and facilitate project integration into several management plans. Support Resilience Vulnerability Assessments & Regional Resilience Plan.

Phase II will aid in updating the St. Lucie Basin Management Plan Project List, the St. Lucie Local Mitigation Strategy (LMS), Stormwater Master Plans, as well as numerous multi-agency plans in which the North Fork is a component; and also aid in budgeting and funding partnerships.

Phase III: improved water quality / clarity, re-establishment of niche habitats, sediment and nutrient reduction all of which are expected to support seagrasses, biodiversity, threatened and endangered species, as well as foraging, sport and unique fish species found within the NFSLR.

CATEGORY 3: COMMUNITY-BASED HABITAT RESTORATION										Funding Amount	Category Total Remaining
Rank	Applicant	Project	Requested Funding	Cost Share Match	Match %	Total Project Cost	Score	Above 70%?	Eligible?		$150,000.00
1	Brevard Zoo	Restore Our Shores: Community-Based Buffer Zone Installation in the Indian River Lagoon	$63,765	$23,914	27.3	$87,679	203	85%	Y	$63,765.00	$86,235.00
2	Brevard County	Developing a Citizen Science/Outreach Program for Homeowners Associations (HOAs) to Improve Stormwater Pond Management and Reduce Stormwater Pollution Entering the Indian River Lagoon (IRL)	$33,250	$51,484	60.7	$84,734	198	83%	Y	$33,250.00	$52,985.00
3	Ocean Research and Conservation Association, Inc.	Buffered & Living Shoreline Demonstration Project: Engaging the Public in Habitat Restoration	$64,959	$26,912	29.3	$91,871	197.4	82%	Y	$52,985.00	$0
4	Coastal Connections, Inc.	Reducing Debris in the IRL Revitalization of the Monofilament Recycling Program Across Indian River County	$36,500	$80,084	68.7	$116,584	197.1	82%	Y		

$11,974 needed to fully fund project 3.

Executive Summary

Title of Project:	Restore Our Shores: Community-Based Buffer Zone Installation in the Indian River Lagoon
Lead Organization and Partners:	**Lead**: East Coast Zoological Society of Florida Inc d/b/a Brevard Zoo (ECZS) **Partners**: Dr. Austin Fox, Florida Tech
Project Location:	Buffer Zones will be installed at four to-be-determined sites throughout the Indian River Lagoon, chosen based on existing nitrogen levels to ensure greatest level of accuracy for nutrient removal study. The project location is listed as Brevard Zoo (28.225380, -80.714844), which will serve as the project homebase.
Key CCMP Vital Sign(s):	"Living Shorelines" (Level 2: Serious); "Citizen Engagement and Education" (Level 2: Serious); "Distinctive Lagoon Communities" (Level 3: Undetermined)
IRLNEP Contribution and Source:	$63,765, One Lagoon
Partner Match:	ECZS - $23,913.80 (27.2%)
Total Project Cost:	$87,678.80

Project Description:
East Coast Zoological Society of Florida (ECZS) will impact regional efforts to address living shorelines through the installation of four buffer zone demonstration sites, constructed with the help of volunteers, throughout the Brevard County portion of the Indian River Lagoon (IRL). These sites will be utilized to conduct a nutrient removal study in partnership with Florida Tech to guide future restoration efforts in the lagoon. As part of this project, ECZS will engage community members in the benefits of buffer zones via workshops, tabling events, outreach, and presentations. Additionally, this project will engage elementary-aged students at four schools in underserved areas to grow native plants to be used in buffer zone site installations.

Key Outputs (Deliverables):
- Fifty (50) adult volunteers will be engaged in 150 hours of buffer zone installation, monitoring, maintenance, and community outreach.
- Eighty (80) elementary-aged children at four Brevard County schools in underserved areas will grow native plants for buffer zone installation while learning about lagoon-friendly behaviors.
- Construction of four (4) buffer zones throughout the IRL.
- Seven thousand (7,000) Brevard County residents will engage in buffer zone education.
- Report of findings via nutrient removal study, led by Dr. Austin Fox of Florida Tech.

Key Outcomes (Benefits to the IRL):
Short-Term Benefits (1-2 years):
- 400 linear feet of living shoreline (buffer zones) restored in IRL.
- Increased community understanding of the benefits of buffer zones, increased intention to implement buffer zones on lagoon-adjacent properties, and increased community participation in volunteering activities in the IRL and lagoon-friendly behaviors.

Medium-Term Benefits (3-5 years):
- Increased adoption of buffer zones, leading to additional linear feet of shoreline restored and reduced nutrient loads in the IRL.
- Development of community action plans for key lagoon-adjacent communities.

Long-Term Benefits (5-10+ years):
- Buffer zones and lagoon-friendly behaviors applied consistently throughout the IRL.
- Significant nutrient removal enabling meaningful IRL wildlife recovery.

Executive Summary

Title of Project	*Developing a Citizen Science/Outreach Program for Homeowners Associations (HOAs) to Improve Stormwater Pond Management and Reduce Stormwater Pollution Entering the Indian River Lagoon (IRL)*
Lead Organization and Partners:	**Lead Organization:** Save Our Indian River Lagoon Program (SOIRL) – Brevard County, Natural Resources Management Department **Partner:** Ernesto Lasso de la Vega (Pond Watch Founder and Director, Lee County Hyacinth Control District)
Project Locations:	IRL Watershed, Brevard County Multiple HOAs and their associated stormwater ponds (*TBD)*
Key CCMP Vital Sign(s):	***Citizen Engagement and Education*** (Level 2), ***Stormwater*** (Level 1), and ***Connected Waters and Watersheds*** (Level 2)
IRLNEP Contribution and Source:	$33,250, IRL Council
Partner Match:	$51,484.20, 61% SOIRL
Total Project Cost:	$84,734.20

Project Description: Reducing nutrient inputs to the Indian River Lagoon (IRL) is a critical component of many ongoing and proposed projects to improve water quality and restore lagoon health. In Brevard, approximately 35% of the nutrient pollution reaching the lagoon each year is conveyed by stormwater. Nearly half of the estimated 4,400 stormwater ponds in Brevard County are managed by HOAs. While everyone in the lagoon watershed shares the responsibility of reducing nutrient pollution, a few neighborhood heroes can play an oversized role in reducing stormwater pollution from their entire community. This project aims to increase citizen awareness and engagement in reducing stormwater pollution in the IRL by 1.) developing an education outreach/citizen science water quality monitoring program to monitor conditions in HOA stormwater ponds, 2.) helping HOAs identify and implement best management practices (BMPs) to improve pond function and reduce stormwater pollution reaching the IRL, 3.) helping citizens recognize their role in improving lagoon health, and 4.) developing strategies to expand the program to include additional HOAs. HOA ponds contribute significant pollution loads to the lagoon, making it imperative to engage HOA members in responsible stormwater pond management to reduce pollution reaching the IRL.

Key Outputs (Deliverables): 1.) Survey results to quantify pre/post-pilot program educational and behavioral outcomes, 2.) A copy of educational and training materials, 3.) Stormwater pond assessments (i.e., water quality data and a list of BMPs implemented, including quantifiable buffer and littoral zone improvements/restorations, 4.) An assessment of community contribution (volunteer time), and 5.) Results from the final evaluation of project success and strategies for program expansion.

Key Outcomes (Benefits to the IRL): Short-term: 1.) An increase in public awareness and engagement in stormwater pond management and BMPs, 2.) Improved stormwater pond function and reductions in nutrient loading reaching the IRL, 3.) Increased civic awareness and engagement in IRL health. Long-term: 1.) Expanding the program to include additional HOAs/ponds, 2.) Continued improvements in stormwater pond management through implementation of BMPs, 3.) The development of a comprehensive stormwater pond water quality database to detect trends, monitor the effectiveness of BMPs, and quantify nutrient reductions to the IRL, 4.) A sustained increase in civic awareness and engagement with IRL health, and 5.) Sustained reductions in stormwater pollution to the IRL.

EXECUTIVE SUMMARY

Title of Project: Buffered & Living Shoreline Demonstration Project: Engaging the Public in Habitat Restoration	
Lead Organization and Partners:	Ocean Research & Conservation Association, Inc. (ORCA)
Project Location:	Riverview Park Kayak Launch (27°48'32"N 80°27'48"W)
Key CCMP Vital Sign(s):	Stormwater, Impaired Waters, Living Shorelines, Harmful Algae Blooms, Biodiversity, Citizen Engagement, Monitoring & Data
IRLNEP Contribution and Source:	64,959 from IRL Council
Match:	$26,912 from funds received through grants to ORCA from The Cronin Nature Fund, Bernard A. Egan Foundation, Scotts Miracle Gro Foundation; in-kind contributions from UF/IFAS horticulture agent ($1,000), City of Sebastian ($1300), and volunteer time = 30%
Total Project Cost:	$91,871

Project Description: not to exceed 250 words

ORCA is proposing a high profile, scientifically monitored, buffered and living shoreline demonstration project in the City of Sebastian's Riverview Park, Florida with the assistance of community members. Coastal habitat enhancement techniques, like buffered shorelines are transformative in that they dramatically reduce the amount of pollutants that enter the water from land. The riparian plantings provide nutrient removal as they act as both chemical and physical barriers from existing stormwater runoff. Living shorelines also demonstrate numerous benefits. Once installed, they protect against erosion and maximize shoreline stabilization and coastal resiliency. They have also been shown to increase biodiversity and improve water quality. The proposed project aims to quantifiably demonstrate the benefits of buffered shorelines to encourage government agencies and private landowners to install similar living and buffered shorelines throughout the Indian River Lagoon (IRL). Community volunteers and trained citizen scientist will be incorporated in all components of the project including both installation and scientific monitoring.

Key Outputs (Deliverables):

Deliverables will include: 1) Quarterly/ final reports, 2) Buffered shoreline: conversion of 127 linear feet or 1,079 ft^2 of turf grass to vegetative buffer using approximately 160 native riparian plants, 3) Living shoreline: installation of 265 linear feet or 2,650 ft^2 living shoreline using 550 oyster reef balls and shoreline plants, 4) Scientific pre and post-monitoring of buffered and living shorelines with approximately 160 community members (citizen scientists and volunteers), and 5) Documentation of participation and effectiveness of training workshops and education programs.

Key Outcomes (Benefits to the IRL):

Short term (1-2 years): Serve as a demonstration site for future living and buffered shoreline projects within the City of Sebastian. It is part of the City of Sebastian's Sustainability Plan, an on-going effort to implement strategies to improve the quality of runoff entering the IRL.

Medium-term (3-4 years): Continue to provide erosion protection and restore natural shoreline habitat, filter nutrients from stormwater runoff, and serve as a model project for future living and buffered shoreline projects.

Long-term (5-10+ years): Continue to provide erosion control benefits, shoreline stabilization and habitat, and nutrient reduction from runoff; Serve as a model project for other City of Sebastian living and buffered projects.

Executive Summary

Project Title:	**Reducing Debris in the IRL: Revitalization of the Monofilament Recycling Program Across Indian River County**
Lead Organization and Partners:	**Lead Organization:** Coastal Connections, Inc. (CCinc) **Partners:** Florida Fish and Wildlife Conservation Commission and Surfing's Evolution and Preservation Foundation
Project Location:	40+ bin locations across Indian River County, with multiple bins serving priority communities: Gifford (27.67786° N, 80.38716° W), Vero Beach (27.63885° N, 80.39484° W), and Florida Ridge (27.58673° N, 80.37794° W)
CCMP Vital Signs:	Trash-Free Waters (Healthy Communities), Citizen Engagement (Communicate-Collaborate-Coordinate), Species of Concern (Living Resources)
IRL-NEP Contribution and Source:	$36,500 IRL Council
Partner Match:	$10,000 + $1,500 (15% Indirect) = $11,500 from Surfing's Evolution and Preservation Foundation (20.8% Match) $68,583 = Volunteer In-Kind Match (142% Match)
Total Project Cost:	$48,000

Project Description:

The state-wide Monofilament Recovery and Recycling Program is overseen and managed by the Florida Fish and Wildlife Conservation Commission (FWC) to create a coordinated and strategic effort to remove marine debris in the form of fishing line from waterways to reduce harmful and preventable wildlife entanglements and habitat degradation. CCinc was recently recognized by FWC as a reliable, knowledgeable, and experienced partner to revitalize the neglected and forgotten monofilament recycling program in Indian River County. As part of this process, bins need to be updated and added to critical locations across the Indian River Lagoon, Sebastian Inlet, and beach accesses. Plus, a community monitoring and collection program needs to be created to reduce monofilament waste in our environment and regenerate new materials from former fishing waste. With the help of the IRL Council, CCinc will be able to bring a new life to used and recycled fishing line, involve the community in the restoration of the lagoon, and help federally protected sea turtles survive and thrive in their Indian River Lagoon home.

Key Outputs:

As a community restoration project, the revitalization of the "Fishing Line Recycling'' program in Indian River County is primarily focused on involving the community, in small ways, to make a big difference for the health of the Lagoon and all who call it home. Throughout the timeline of this project, CCinc will develop a GIS Storymap for use by project partners and stakeholders to identify all of the fishing line recycling bin locations in IRC, and acknowledge all project partners and future community bin sponsors. The project will include hundreds of community members through five different volunteer roles, and CCinc will educate people of all ages about the importance of the lagoon and recycling fishing line as a way to help save sea turtles and restore the lagoon through numerous school and community presentations.

Key Outcomes:

There will be many Short-term, Mid-term, and Long-term benefits made from revitalizing this program, but none are more notable than the number of community members that will be educated and included in restoring the IRL. This will be done through volunteer engagement serving approximately 2,332 service hours a year, educating hundreds of local students through the development of a new school program that integrates hands-on learning and volunteering while teaching required state testing standards regarding recycling and renewable materials, and reporting a decrease in entanglement-related sea turtle stranding events in Indian River County and the IRL due to a reduction in fishing related debris along the shoreline and in the water.

CATEGORY 4: SCIENCE AND INNOVATION										Funding Amount	Category Total Remaining
Rank	Applicant	Project	Requested Funding	Cost Share Match	Match %	Total Project Cost	Score	Above 70%?	Eligible?		$200,000.00
1	University of Maryland, Baltimore County	Development of a rapid diagnostic assay for detecting Paralytic Shellfish Toxins in populations of the harmful algal bloom species *Pyrodinium bahamense* in the Indian River Lagoon	$12,605	$4,500	26%	$17,105	192	87%	Y	$12,605	$187,395
2	Florida Institute of Technology	Suffocating Sand: Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes and Sediment Chemistry in IRL. Year 3	$76,895	$68,838	47%	$145,733	189	86%	Y	$76,895	$110,500
3	Lagoon Solutions, LLC	Leveraging mosquito impoundments for water quality improvements and nutrient removal	$49,772	$139,000	74%	$188,772	183.1	83%	Y	$49,772	$60,728
4	Florida Institute of Technology	Understanding changes in sediment chemistry to improve seagrass restoration success: Developing sediment-based habitat suitability criteria for restoration.	$62,940	$26,878	30%	$89,818	183.0	83%	Y	$60,728	$0
5	Bethune-Cookman University	Enhancing Reproductive Success and Seed Production of Seagrass *Ruppia maritima* through Nursery Experiments	$55,540	$40,435	42%	$95,975	167	76%	Y	$0	$0
6	Ocean Research and Conservation Association, Inc.	Incorporating Sentinel Bioindicators: Enhancing Established Water Quality Monitoring Programs	$63,186	$29,893	32%	$93,079	162	74%	Y	$0	$0
7	Embry Riddle University	Remotely Piloted and Autonomous Technologies for Predicting and Mediating Harmful Algal Blooms	$23,056	$7,684	25%	$30,740	141	64%	N		
8	University of Florida	Strategic Brazilian peppertree management to restore biodiversity and water quality in the Indian River Lagoon	$57,288	$19,096	25%	$76,384	136	62%	N		
9	Sea and Shoreline, LLC	Flexible SAV Engineering & Water Quality BMP Study	$100,000	$37,242	27%	$137,242	134	61%	N		

$2,212 needed to fully fund project 4

EXECUTIVE SUMMARY

Title of Project	Development of a rapid diagnostic assay for detecting Paralytic Shellfish Toxins in populations of the harmful algal bloom species *Pyrodinium bahamense* in the Indian River Lagoon
Lead Organization and Partners	University of Maryland Baltimore County; Ocean Research & Conservation Association (ORCA)
Project Location	Northern Indian River Lagoon
Key CCMP Vital Sign(s):	Harmful Algal Blooms; Citizen Engagement; Science, Technology and Innovation; Monitoring and Data Sharing
IRLNEP Contribution and Source:	$12, 605.00 (Cash)
Partner Match:	$4,500.00
Total Project Cost:	$17.105.00

Project Description: The work being proposed is the development of a simple, diagnostic assay for *Pyrodinium* saxitoxin (STX) monitoring. It is guided by two aims: 1. Develop an isothermal Apta-NASBA assay to detect *Pyrodinium sxtA*4 (toxin gene) transcripts and 2. Engage and train volunteers in sample collection and processing. *SxtA*4 is a key gene in the STX biosynthesis pathway that is essential for toxin synthesis; isothermal means the assay can be run at one temperature and so does not require sophisticated equipment. Coupling it with a fluorescent dye provides a binary yes/no toxin presence read-out. Apta-NASBA utilizes fluorescent aptamers, so the end result is a fluorescent signal that can be read using a variety of simple instruments. The benefits of the assay are two-fold: 1. since it is species-specific for the *Pyrodinium stxA*4 gene, it will inform as to *Pyrodinium* presence; 2. since it is based on expression of a toxin gene, it will inform as to whether that population/bloom is toxic. The assay will be applied to samples collected from various sites within the northern IRL prone to *Pyrodinium* blooms. Tentative sample sites include: Diamond Bay and Kelly Park (Banana River); Haulover Canal (Indian River); and Beacon 42 (Mosquito Lagoon).

Key Outputs (Deliverables):
1. Transformative impacts of a new technology: Development of a simple diagnostic molecular assay (Apta-NASBA) for assessing *Pyrodinium* bloom toxicity.
2. Citizen engagement and education. (a) Training of volunteers for water sample collection from multiple sites in northern IRL. (b) Training of volunteers in nucleic acid (total RNA) extraction from field (=water samples containing *Pyrodinium*) samples.
3. Assessment of toxicity of field samples via ELISA. Bloom samples will be analyzed for STX via ELISA and compared with the new assay. Toxin results will be freely distributed to other labs/agencies.
4. Submission of Apta-NASBA method to peer-reviewed journal (J. Micro. Methods or Harmful Algae).
Key Outcomes (Benefits to the IRL):
Vital Signs: HABs; Sci, Tech, & Innov; Monitoring & Data Sharing. The expected short-term benefits are the development of a simple diagnostic assay for assessment toxicity of *Pyrodinium* populations. Medium-term, being isothermal and with a binary (yes/no based on fluorescence) output, it can be used by multiple labs/agencies, as it does not require sophisticated equipment, and will enhance and improve consistent HAB toxin monitoring. Long-term, we will seek its development into a portable field tool for real-time on-site assessment of bloom toxicity.
Vital Sign: Citizen Engagement. The short-term benefit is the education of volunteers in both HAB ecology and hands-on science methods. Medium- and long-term benefits build on this, as the engagement of volunteers throughout the IRL watershed ensure consistent HAB/water quality monitoring that generates data on the extent of toxic *Pyrodinium* blooms.

Title of Project	Title: Suffocating Sand: Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes and Sediment Chemistry in IRL.
Lead Organization and Partners:	**Lead Organization**: Florida Tech (Austin Fox Ph.D). **Partners (match):** Brevard County Department of Natural Resources (V. Barker and M. Culver). **Partners (Logistics and Advising):** FWC, SJRWMD, Brevard Zoo, Cocoa Beach, Satellite Beach, Cape Canaveral (LOS available by request).
Project Location	This project will be carried out in the IRL/BRL between the Eau Gallie and the A1A causeways (Figure ES1, Attachment A). Project centered at 28˚17'50"N, -80˚38'25"W.
Key CCMP Vital Signs:	Legacy Loads and Healthy Sediments, Filter Feeders, Harmful Algal Blooms, 21st Century Communities, Monitoring, Science & Technology Innovation
IRLNEP Contribution and Source:	$ 76,895 IRL Council
Partner Match:	$5,388 (FIT) + $63,450 (Brevard County) = (47% of total)
Total Project Cost:	$145,733

Project Description:

Hypoxia and altered sediment chemistry degrade habitats, increase sulfide concentrations and impact nutrient cycling, yet few data are available to quantify hypoxia and biogeochemical consequences in this system. Sediment sulfide has been attributed to large-scale losses of seagrasses and mortality of benthic fauna, with labile iron (Fe) able to buffer against toxicity. Beyond some threshold, hypoxia can deplete sediments of oxidized Fe making areas more susceptible to negative impacts of sulfide, with Fe speciation serving as an indicator of sediment health. This study will track DO and hypoxia and compare trends against ratios of sediment Fe/S versus organic matter (OM) content to locate areas where sediments may be degraded from chronic hypoxia. Using a relatively low-cost network of continuous monitoring stations, DO will be tracked with sediment grabs and benthic chambers used to measure nutrient fluxes plus sediment and porewater composition. This study will focus on degraded areas between the Eau-Gallie and A1A Causeways, supporting listed water quality monitoring efforts (nutrient and DO) within the Central IRL and Banana River BMAPs (WBID 2963C and 3057). Leveraging partner and cost-share projects, collective datasets will be used to evaluate trends for DO plus sediment Fe and sulfide against variations in lagoon morphology, muck distribution and circulation patterns. These synergistic efforts plus high-resolution data and interpretations will help project partners, managers and other stakeholders to select restoration sites with higher probabilities of success towards survival and nutrient removal. Improved outcomes promote coastal resilience and improved water quality while addressing IRLNEP 2025 priorities, action items and 2030 CCMP priority areas and monitoring incorporated into BMAPs and TMDLs.

Key Outputs (Deliverables):

Publicly available datasets for DO and reports showing the extent and duration of hypoxia, benthic fluxes of N and P, plus sediment composition including Fe/S in relation to lagoon morphology.

Key Outcomes (Benefits to the IRL):

Short term: Quantified spatial-temporal extent of hypoxia over a multi-year period showing impacts to sediment quality and nutrient cycling. **Medium term:** Enhanced site selection for restoration (e.g., improving metrics for HSI). **Long term:** Improved water, sediment and habitat quality plus improved public perception resulting from informed placement and enhanced success of restoration projects. Science-based management tools including improved sediment-based criteria for habitat suitability indices (HSI) and site selection.

Executive Summary

Title of Project	Category 4 Science and Innovation Proposal: Leveraging mosquito impoundments for water quality improvements and nutrient removal
Lead Organization and Partners:	Lagoon Solutions LLC (lead), Sea Redwine Preservation, University of Florida, Brevard County
Project Location:	Ulumay Wildlife Sanctuary (28.387209 N -80.681524 W)
Key CCMP Vital Sign(s):	Comm., Collab., Coord. - *Science, Tech., and Innovation* Water Quality - *Impaired Waters* Water Quality - *Contaminants* Living Resources - *HABs* Habitats - *Seagrasses*
IRLNEP Contribution and Source:	$49,772, IRL Council
Partner Match:	Lagoon Solutions ($2000) Sea Redwine Preservation ($3000) University of Florida ($134000) TOTAL MATCH RATE (73.6%)
Total Project Cost:	$188,772

Project Description:

Treatment wetlands are a widely accepted and cost-effective strategy for water treatment that harnesses natural bacteria, flora, soils, managed hydrology, and the biogeochemical processes inherent to them to reduce excess nutrients and pollutants in surface waters. Here, we propose a pilot study to determine the nutrient removing potential of varying hydrologic regimes within a mosquito impoundment with the express purpose of improving water quality in the Indian River Lagoon. Rotational impoundment management techniques are currently implemented in many modern mosquito impoundments, but little research has been done to study the optimal hydrologic schemes to maximize nutrient removal whilst maintaining mosquito population control. Water flow will be manipulated over the course of the study to calculate water residence time and the resulting nutrient mass balances between water inflow and outflow. Ultimately, the nutrient mass balance and hydrological data will be used to estimate the overall ability for these systems to mitigate the nutrient loading situation occurring in the Indian River Lagoon.

Key Outputs (Deliverables):

The proposed pilot study will provide the following deliverables: (1) long-term nutrient and water quality monitoring to understand nutrient reduction potential and biogeochemical response to hydrologic alteration throughout the study, (2) survey of soils in flow ways of Ulumay Wildlife Sanctuary study site, (3) hydrologic regime test to understand the effects of varying flow way patterns on nutrient retention and water quality characteristics, such as turbidity and chlorophyll-a, and (4) a hydrologic tracer study to understand residence times and nutrient retention potential.

Key Outcomes (Benefits to the IRL):

This project is anticipated to provide the following quantifiable outcomes:
(1) decreased nitrogen and phosphorus, (2) increased water clarity, and (3) decreased algal biomass. Together, these benefits will mediate harmful algal blooms and improve the overall water quality of the Indian River Lagoon. This project will ultimately inform best management practices of mosquito impoundments, with the intention of reducing nutrients and improving Lagoon-wide water quality.

Title of Project	Understanding changes in sediment chemistry to improve seagrass restoration success: Developing sediment-based habitat suitability criteria for restoration.
Lead Organization and Partners	**Lead organization:** Florida Tech (Austin Fox PhD, Sean Crowley) **Partners:** Brevard Zoo (Tyler Provoncha)
Project Location	Regional – Northern IRL, Banana River Project centered at 28°16'10"N, 80°40'50"W Florida Tech Aqualab and Brevard Zoo Seagrass Nursery
Key CCMP Vital Sign(s)	Seagrasses, Biodiversity, Species of Concern, Distinct Lagoon Communities, Monitoring and Data, Science and Tech Innovation, Policy Considerations.
IRLNEP Contribution and Source	$62,940 IRL Council
Partner Match	$15,702 (Florida Tech) + $11,175.8 Brevard Zoo = (30% of total)
Total Project Cost	Total: $89,817.8

Project Description:

With record investment in seagrass restoration, project success has varied at least partially due to a limited understanding of seagrass-sediment ecology. Efforts are underway to further develop site selection criteria; however, at present, there are no robust sediment-based criteria for seagrass restoration. This project addresses the seagrass-sediment ecological knowledge gap in the IRL by examining variations in sediment characteristics in the context of lagoon seagrasses including, grain size, porosity, organic matter, carbonate, and iron contents plus porewater sulfide, salinity and nutrient concentrations. Sediment and porewater samples will be collected to supplement seagrass cover parameters at 19 seagrass restoration sites maintained by Brevard Zoo in a quarterly monitoring regime. Additionally, leveraging knowledge from similar systems, this project will conduct laboratory experiments in the Florida Tech Aqualab and at the Brevard Zoo Nursery to develop habitat suitability criteria based on sediment composition and chemistry including tolerance to hydrogen sulfide. Findings that deepen knowledge of seagrass-sediment ecology can in turn be used to improve restoration site selection criteria, and improve nursery production thereby increasing restoration success, saving funds lost to project failures, facilitating a healthier ecosystem, and guiding seagrass restoration in analogous ecosystems. Collectively these efforts address both the 2025 IRLNEP priorities and contribute towards the 2030 CCMP.

Key Outputs (Deliverables): Reports including analysis of seagrass cover parameters relative to sediment characteristics from restoration sites, as well as laboratory results regarding sulfide tolerance with different sediment compositions. Novel sediment restoration site selection criteria.

Key Outcomes (Benefits to IRL): Short term: improved restoration site selection criteria via increased knowledge of seagrass-sediment ecology. Medium term: greater restoration success via improved site selection, Funds saved via reduced project failure. Long term: increased ecosystem health and biodiversity; Increases in successful seagrass restoration will benefit the lagoon by increasing nursery and primary habitat for fauna, stabilizing sediments, producing local sources of oxygen, removing CO2, and providing food for herbivorous megafauna.

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM FY 2025
PROPOSAL APPLICATION (Cat-4 Science and Innovation)
EXECUTIVE SUMMARY

Title of Project	Enhancing Reproductive Success and Seed Production of Seagrass *Ruppia maritima* through Nursery Experiments
Lead Organization and Partners:	Bethune-Cookman Univ. (BCU), Marine Discovery Center (MDC)
Project Location	BCU, Daytona Beach and MDC Seagrass Nursery, New Smyrna Beach
Key CCMP Vital Sign(s):	Seagrasses, Connected Waters, Species of Concern, Biodiversity, Science & Technology Innovation, State of The Lagoon, Monitoring and Data
IRLNEP Contribution and Source:	$55,540, IRL Council
Partner Match:	Total $40,435 (42.1% in-kind)
Total Project Cost:	$95,975

Project Description: This project will investigate several questions crucial for sexual reproduction and seed production of a seagrass *Ruppia maritima*: (1) effectiveness of seed production in nurseries; (2) determine optimal temperature for flowering and seed production; (3) determine the impact of water level on induction of flowering and seed production; (4) determine the impact of exogenous gibberellic acid and its optimal concentration on flowering and seed production. Success measures will be made through estimating production of reproductive shoots, flowers, and seeds by cultivated plants in applied growth conditions.

Map and Photo(s): Attached.

Key Outputs (Deliverables):

(1) Improved methods of cultivation of Ruppia maritima for seed production. This project will establish optima for several factors: temperature, water level, concentration of exogenous gibberellic acid, for induction of flowering and seed production of *Ruppia martima*, one of the seven seagrass species of IRL.

(2) Protocol and Technical transfer for improved seagrass rearing in nursery for field restoration: The knowledge gained from this study will be used to develop techniques and a protocol for nursery conditions that enhances *R. maritima* sexual reproduction and seed production. A protocol will be published electronically, which will be also shared through a workshop & invited lectures to seagrass nursery and restoration practitioners through the IRLNEP Seagrass Nursery Network. The results will also be shared at conferences (e.g. IRL Symposium and CERF) and a journal publication.

(3) Education and Outreach: Two BS and one MS students of BCU; MDC lecture series

Key Outcomes (Benefits to the IRL): *Ruppia* tolerates all salinity zones within the IRL system; it often is the only seagrass species in oligohaline to mesohaline conditions within the system. Nursery-grown *Ruppia* seeds and reproductive shoots can be broadcast in a protected, low salinity backwaters and can be released into the estuary proper (short- and medium-benefits). Sexual reproduction also enhances genetic diversity, promoting resilience to stochastic events (medium- and long-term benefits). BCU collaborates with MDC to utilize the MDC seagrass nursery (that is funded through the IRLNEP Seagrass Nursery Network) and also to share the knowledge gained from this study to broader communities through the MDC's current lecture and outreach programs. The protocol and technique developed will be applicable in the seagrass nurseries for broader adoption and implementation (short-, medium- and long-term benefits).

EXECUTIVE SUMMARY: (1-page limit)

Title of Project	Incorporating Sentinel Bioindicators: Enhancing Established Water Quality Monitoring Programs
Lead Organization and Partners:	Ocean Research & Conservation Association, Inc.
Project Location	Sampling sites throughout IRL. Confirmed sites listed below. Bethel Creek: 27.66645, -80.36730; Vero Isles: 27.64120, -80.37787; Riverside Café: 27.65292, -80.37104; Melbourne Beach: 27.91042, -80.47818; Sewall's Point: 27.21754, -80.21596; Hobart Landing: 27.73809, -80.42260
Key CCMP Vital Sign(s):	Impaired Waters, Contaminants of Concern, Filter Feeders, Monitoring and Data Sharing, Science, Technology & Innovation, Citizen Engagement and Education
IRLNEP Contribution and Source:	$63,186
Applicant Match:	$29,892.82 In-kind (47.3% match)
Total Project Cost:	$93,078.82

Project Description:
Water quality in the Indian River Lagoon (IRL) has declined as Florida's population has grown exponentially. The increased nutrient loading, pollutants, and contaminants have resulted in more frequent algal blooms, aquatic organism die-offs, and loss of habitat that have far-reaching consequences. This project proposes that contaminants of emerging concern in the IRL be monitored using water samples, that give a snapshot of environmental conditions, and filter-feeding native oysters, which provide a more integrated concentration of contaminants and biotoxins. These sentinel bioindicators accumulate particles in their environment and thus can provide an early warning of exposure for other aquatic organisms and humans. Oyster beds have dramatically decreased in the Indian River Lagoon and current restoration efforts have been hindered by water quality. Previous research in the IRL has focused more on physical parameters and basic water quality to increase success of oyster restoration. This project will expand on that by incorporating emerging, complex contaminants within the water column and the oysters. Results of oyster growth and survival will contribute to current understanding of oyster health and restoration.

Key Outputs (Deliverables):
Train citizen scientists to perform sampling, data entry, sample processing; Monitor oysters and water column monthly at eight sites and complete further analyses in the laboratory; Interim and final project reports that analyze seasonal variation, accumulation or depuration of contaminants, and which environmental conditions most affect oyster success; Publicize results via our website as a standalone writeup; Present research to public and stakeholders via webinars

Key Outcomes (Benefits to the IRL):
Short-term: Quantifying contaminants in IRL oyster tissue and the water column, Identifying stressors on filter feeders, Classifying conditions for enhanced oyster survival and growth, Identifying pollutants that other aquatic organisms and humans are being exposed to in the IRL; **Mid-term**: Enhanced site selection for oyster restoration; **Long-term**: Research-based placement and increased success of oyster restoration projects leading to improved water quality, more available habitat, reduced erosion, and increased biodiversity

PROPOSAL APPLICATION

INDIAN RIVER LAGOON NATIONAL ESTUARY PROGRAM
FY 2025 PROPOSAL APPLICATION

Title of Project:	Remotely Piloted and Autonomous Technologies for Predicting and Mediating Harmful Algal Blooms
Lead Organization and Partners:	Embry-Riddle Aeronautical University
Project Location:	Mosquito Lagoon to the northern boundary located at High Bridge. 29°24'29"N 81°06'02"W.
Key CCMP Vital Sign(s):	Science & Technology Innovation – Monitoring and Data – Harmful Algal Blooms – Atmospheric Deposition
IRLNEP Contribution and Source:	$23,056
Partner Match:	$7,684
Total Project Cost:	$30,740

Project Description:

This project demonstrates the capability of uncrewed aircraft systems (UAS) to host newly developed cutting-edge water sampling and aerosolized particle sampling technologies. In alignment with the latest Comprehensive Conservation and Management Plan (CCMP) goals, this capability seeks to both complement and fill monitoring gaps and provide critical information needed for predicting and mediating harmful algal blooms (HABs).

Key Outputs (Deliverables):

The deliverables for the project include the development of a water sampling system and an aerosolized particle sampler that can, each, be hosted on a UAS. Within the one-year period of performance, each instrumentation package will be developed, integrated on a UAS, and demonstrated through deployment in the IRL.

Key Outcomes (Benefits to the IRL):

Implementation of UAS-hosted monitoring equipment will complement activities outlined in the One Lagoon Monitoring Plan with the aim of improving spatial and temporal resolution of collected data specifically related to HABs. Monitoring with these systems is adaptable and can support emergencies.

Executive Summary

Title of Project	Strategic Brazilian peppertree management to restore biodiversity and water quality in the Indian River Lagoon
Lead Organization and Partners:	Project director: Carey R. Minteer; Co-PI: Kenneth Gioeli
Project Location	North Fork Saint Lucie River (27.3682281, -80.3434734), Indian River Drive (27.3594241, -80.2840968), Harbor Branch Oceanographic Institute (7.534291, -80.349203), Round Island Riverside Park (27.5620227, -80.3279365), and The Savannahs Recreation Area (27.396028, -80.312274)
Key CCMP Vital Sign(s):	Exotic & Invasive (serious), Species of concern (serious), Biodiversity (serious), Wetlands (serious), Living Shorelines (serious), Seagrasses (critical), Contaminants (undetermined), and Citizen Engagement (serious)
IRLNEP Contribution and Source:	$57,288, IRL Council
Partner Match:	$19,096, 25%
Total Project Cost:	$76,384

Project Description: This is a Science and Innovation Project. The adverse impact of invasive species on natural areas and wetlands ecosystems is undeniable in the whole world. Brazilian peppertree is one of the most aggressive invasive species in Florida that jeopardizes native biodiversity and ecosystem health. Previous control methods, such as chemical and mechanical approaches, proved costly and environmentally harmful for sensitive habitats. To counter this, our project advocates the use of classical biological control through the introduction of *Pseudophilothrips ichini* as a sustainable solution. The mass production and strategic distribution of thrips are expected to manage Brazilian peppertree growth, preserving native vegetation such as mangroves and seagrasses within a few years. This approach promotes a balanced and resilient food chain, positively impacting aquatic invertebrates. The reduction in BP seedlings, fruit production, and herbicide usage protects mangroves from erosion and habitat destruction, which indirectly affects water quality and contributes to a healthier aquatic environment. The classical biological control approach is not only cost-effective but also sustainable, minimizing the environmental risks associated with chemical interventions and ensuring the long-term health of native species. Through public education initiatives, the project aims to raise awareness about the positive impacts of biological control on invasive species management, fostering community involvement and support. The focus of our study is to leverage biocontrol agents to manage the Brazilian peppertree in a sustainable and cost-effective manner, ultimately restoring ecological balance in the Indian River Lagoon and peninsular Florida.

Key Outputs	**Key Outcomes**		
Activities/Participants	Short Term	Medium Term	Long Term
• Mass production and release of biological control in IRL regions that have not been previously exposed • Strategic distribution for biodiversity enhancement • Publicizing the invasive Brazilian peppertree issue with citizens and homeowners in regions through ongoing outreach and extension	• Better understanding of the persistence of biological control agents in field • Reduce Brazilian peppertree seedling recruitment • Understand the effectiveness of biological control	• Minimizes harm to non-target species and the environment • lowers the economic costs for management of this invasive weed • Reduce water contamination • Educate public about invasive species control strategies.	• Introduce sustainable biological control in the field to minimize the negative impact on non-target species • Slowing down spread by persistence of biological control in IRL • Provide best management practices for Brazilian peppertree

Executive Summary

Title of Project	Flexible SAV Engineering & Water Quality BMP Study
Lead Organization & Partners	Sea & Shoreline LLC. (Lead) Indian River State College (Partner) Ecological Associates Inc (Partner)
Project Location	IRSC Lab (500 NW California Blvd. Port St. Lucie, FL) Martin County Pilot Site (27°09'24.4"N 80°14'44.3"W)
Key CCMP Vital Signs	See Section 1.C
IRLNEP Contribution and Source	$100,000 - IRL Council
Partner Match	$37,241.91 (total) 13% Indian River State College 10% Sea and Shoreline LLC. 2% Ecological Associates Inc.
Total Project Costs:	$137,241.91

Project Description

This science and innovation project will collect data that may be used to support the establishment of a BMP for nutrient reduction and provide data that will be used for submitting the findings to scientific and environmental engineering journals.

Two parallel experiments will be conducted.

A. Manning Coefficient Evaluation: This experiment will identify the impacts to water flow in terms of Manning Coefficient for different flow speed and water depth. The Manning Coefficient is a commonly used civil engineering coefficient put into water shed modelling and used for determination of open channel flow. Different vegetation performs differently; therefore, evaluation of local beneficial vegetation will occur with this experiment. This experiment will be performed within the wave tank at Indian River State College. This experiment will evaluate Vallisneria Americana and Rupia Maritima.
B. Water Quality Evaluation: This experiment will be performed by collecting upstream and downstream water quality and flow measurements at the vegetated pilot project site, located in Martin County. The site has been functioning since 2021, but additional data collection is needed. This pilot project won the 2023 Stormwater Project Excellence Award from Florida Stormwater Association.

Key outputs (Deliverables)

- Water quality data report & habitat evaluation of the nature-based engineering concept.
- Engineering Report and evaluation of the nature-based engineering concept.
- Scientific Journal publication to be submitted following this project.

Key Outcomes (Benefits to the IRL)

Short term outcomes will be to maintain, monitor and document water quality for the largest urban drainage basin in Martin County. This flows directly to the St. Lucie Estuary BMAP and then into the Indian River Lagoon.

Medium term will be to present this data locally and through scientific journals. The manning coefficient data can be used for designing and modelling nature-based water quality improvements with local beneficial submerged aquatic vegetation (Vallisneria americana & Rupia maritima)

Long term benefits will support getting this type of engineering with nature solution approved at the state level for use as a water quality nutrient reduction credit for TSS, TN, & TP.

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2015-2016			
Channel Denitrification Treatment (Brevard County)	2015-2016	Complete	$32,000.00
Intertidal Oyster Reefs in IRL (Brevard Zoo)	2015-2016	Complete	$69,375.00
Wilbur By The Sea Drainage Improvement Project (Volusia)	2015-2016	Complete	$80,000.00
Sebastian Oyster Mats (Indian River County) Lic.Plate $23,598	2015-2016	Complete	$24,000.00
Shoreline Management Plan & Restoration Project (UCF, Brevard County)	2015-2016	Complete	$40,610.00
Lagoon Shoreline Restoration Project (FDEP)	2015-2016	Complete	$53,052.00
Drones to Characterize Water Quality (Indian River State College)	2015-2016	Withdrawn	$0.00
Be Floridian in the IRL; Landscape Fertilizer Awareness (MRC -IRL all counties)	2015-2016	Complete	$53,000.00
Habitat Through Outreach H2O/Marine Discovery Center (Volusia County)	2015-2016	Complete	$44,474.95
IRL Education Program Coordinator (all 5 counties)	2015-2016	Complete	$69,192.00
Today's Leaves and Grass Clippings (Brevard County)	2015-2016	Complete	$11,000.00
IRL NEP: IRL Science Symposiums	2015-2016	Complete	$6,200.00
Lagoon Life Education Program (St. Lucie County)	2015-2016	Complete	$29,469.00
Capacity Building - Grants & Proposals	2015-2016	Complete	$60,000.00
Paradise Park Stormwater Project (IRLNEP RFP 2016-2017) (St. Lucie)	2015-2016	Complete	$125,000.00
St. Lucie Basin Septic to Central Wastewater Collection (SLRIT 2016-2017) (Martin)	2015-2016	Complete	$485,000.00
Florida Oceanographic Oyster/Seagrass/Shoreline Restoration Program (Martin)	2015-2016	Complete	$60,000.00
Wesley's Island Native Planting Project (fromFY16-17) (St. Lucie Co)	2015-2016	Complete	$15,000.00
Establish BMP's for Spoil Island Shoreline Restoration (FOSI) (fromFY16-17)	2015-2016	Complete	$25,000.00
		18	$1,282,372.95

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2016-2017			
Restore Our Shores (Brevard Zoo)	2016-2017	Complete	$49,500.00
FY2016-17 Grant Writing Support for Local Governments (CCS)	2016-2017	Complete	$60,000.00
Manatee Creek Technology Assessment Project (Martin County)	2016-2017	Complete	$100,000.00
Indian River Lagoon Comprehensive Canal Study (ORCA)	2016-2017	Complete	$105,000.00
Bivalves at Work: Determining effects of oyster reef restoration on water quality in the S IRL (Smithsonian)	2016-2017	Complete	$29,400.00
Modeling ecosystem dynamics in the IRL (Harbor Branch Oceanographic Institute)	2016-2017	Complete	$34,758.00
Educating Titusville: Developing a Living Shorelines Outreach Program Targeted to Specific (Titusville)	2016-2017	Complete	$12,000.00
Livin' for the Lagoon Homeowner's Assn Education Program Expansion (ELC)	2016-2017	Complete	$30,635.00
Creating a new, more diverse generation of advocates for the Indian River Lagoon (IRL) through education programs that raise public awareness of the lagoon's decline (Pelican Island Audubon Society -)	2016-2017	Complete	$62,500.00
Project H2O Phase Two: Integrating Technology and the Project H2O Academy (Marine Discovery Center)	2016-2017	Complete	$47,432.05
Comprehensive Conservation & Management Plan Revision (Tetra Tech, Inc.)	2016-2017	Complete	$45,000.00
IRL Health/Report Card	2016-2017	Complete	$69,311.00
Marketing - IndyPrint Calendar Printing	2016-2017	Complete	
Indian River - FDEP Shoreline Restoration ($50,000)	2016-2017	Complete	$50,000.00
Volusia - Oyster Restoration - Shuck/n/Share (MDC) ($50,000)	2016-2017	Complete	$50,000.00
Paul's Island Living Shoreline Restoration Project (FDEP)	2016-2017	Complete	$7,042.00
Boston Road Stormwater Improvements (Edgewater)	2016-2017	Complete	$68,862.00
Shoreline Habitat Restoration and Mgmt Plan Ph-I (Brevard Co)	2016-2017	Complete	$99,877.00
Vero Isles Permeable Pavement Inlet Retrofit & CIPP (Vero Beach)	2016-2017	Complete	$122,000.00
Sebastian Septic to Sewer Grant Incentive Program (Sebastian)	2016-2017	Complete	$100,000.00
Savannas Regional Restoration Project – Phase I (Martin Co)	2016-2017	Complete	$100,000.00
San Lucie Drainage Improvements Phase 2 (St. Lucie Co) SLRIT	2016-2017	Complete	$200,000.00
Indian Hills Habitat Restoration (St. Lucie Co) SLRIT	2016-2017	Complete	$25,000.00
Sponsored Programs (ANEP $4,500; FOA $500; IRL Envirothon $1,200; IRL Symposium $2,500)	2016-2017	Complete	$8,700.00
University of Florida - IRL Survey (Canaveral $50K)	2016-2017	Complete	$49,300.00
Williamee Memorial Project (Brevard Zoo)	2016-2017	withdrawn	$0.00
Veterans Memorial Stormwater Retrofit	2016-2017	Withdrawn	$0.00
Small Grants	2016-2017	Withdrawn	$0.00
IDEAS Branding & Website	2016-2017	Complete	$49,390.00
		26	$1,575,707.05

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2017-2018			
RWParkinson Consulting, Inc.: Resilient Coastal Communities Planning Project	2017-2018	Complete	$24,700.00
Ocean Research and Conservation Association ORCA: The Living Lagoon	2017-2018	Complete	$37,434.00
Marine Resources Council: Building Capacity for Citizen Engagement with the Indian River LagoonWatch Network	2017-2018	Complete	$28,788.00
University of Florida: Source and Concentration of Surface Water Nutrients from Residential Waterfront Homes in Brevard County, Florida	2017-2018	Complete	$27,401.00
University of Central Florida: Developing a Shoreline Restoration Suitability Model, Phase 1: Evaluation of shoreline characteristics in the northern Indian River and Mosquito Lagoon	2017-2018	Complete	$41,454.00
Florida Institute of Technology: The Efficacy of Sediment Aeration as a Complement to Muck Dredging in the Indian River Lagoon	2017-2018	Complete	$120,000.00
Applied Ecology Inc.: Development of the State of the Indian River Lagoon Web Application (SIRLAP) and Ecological Health Gap Analyses	2017-2018	Complete	$42,590.00
Hubbs-Seaworld Research Institute: Linking Wildlife Health to Ecological Factors in the Heavily Impacted Indian River Lagoon	2017-2018	Complete	$66,000.00
Tetra Tech, Inc.: CCMP Technical Support & Data Management	2017-2018	Complete	$100,000.00
IRLNEP Comprehensive Conservation & Management Plan External Communication with Stakeholders	2017-2018	Complete	$40,000.00
IDEAS: IRLNEP Brand Activation & Implementation	2017-2018	Complete	$86,633.00
Coastal Adaptation Planning	2017-2018	Complete	$52,000.00
Brevard: Brevard Zoo: Restore Our Shores: Engaging Brevard Public Schools to Restore Our Shoreline	2017-2018	Complete	$81,280.00
Angie Brewer & Assoc: Grant Writing Support for IRL	2017-2018	Withdrawn	$0.00
Natua Strategies: Grant Writing Support for IRL	2017-2018	Withdrawn	$0.00
T. Pinney & Assoc: Grant Writing Support for IRL	2017-2018	Withdrawn	$0.00
UCF: Living Shoreline & Oyster Reef Restoration Mosquito Lagoon	2017-2018	Complete	$82,770.00
SJRWMD: Atomospheric Deposition Monitoring	2017-2018	Complete	$50,000.00
Indian River Lagoon Aquatic Preserves: Indian River Lagoon Shoreline Restoration Project	2017-2018	Complete	$52,425.00
Florida Oceanographic Society: Enhancing seagrass restoration success in the Indian River Lagoon by incorporating genetic diversity from an established nursery source	2017-2018	Complete	$43,048.00
City of Satellite Beach: Desoto Parkway Drainage Basin Stormwater Enhancement Project	2017-2018	Complete	$33,000.00
Town of Ocean Breeze: Ocean Breeze Treatment Train Retrofit	2017-2018	Complete	$180,000.00
Bethune Cookman University: Reed Canal Basin Stormwater Improvement through Treatment Wetland Construction in South Daytona, FL	2017-2018	Complete	$181,148.00
Town of Sewall's Point: Mandalay Marguerita Stormwater Improvements	2017-2018	Complete	$180,000.00
IDEAS: IRLNEP Brand Activation & Implementation	2017-2018	Complete	$13,367.00
Small Grants Program	2017-2018	Complete	$50,000.00
Technical Support of Conferences & Workshops	2017-2018	Complete	$23,000.00
		23	$1,637,038.00

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2018-2019			
FAU-Harbor Branch: Harmful Algal Blooms in the IRL (Lagoonwide)	2018-2019	Complete	$40,480.00
Angie Brewer & Assoc: Grant Writing Support for IRL	2018-2019	Complete	$16,666.00
Natua Strategies: Grant Writing Support for IRL	2018-2019	Complete	$16,667.00
T. Pinney & Assoc: Grant Writing Support for IRL	2018-2019	Complete	$16,667.00
University of Florida: Harmful Algal Blooms in the IRL (Lagoonwide)	2018-2019	Complete	$40,413.00
Florida Tech: Efficacy of sediment Aeration Phase II (Brevard)	2018-2019	Complete	inc
UCF: Microplastics, Oysters and the IRL (Lagoonwide)	2018-2019	Complete	$99,797.00
St. Lucie County: St. Lucie Water Champions Initiative (St. Lucie)	2018-2019	Complete	$28,026.00
Florida Oceanographic: FLOORED - Oyster Restoration, Education and Discovery	2018-2019	Complete	$19,751.00
Pelican Island Audubon - Audubon Advocates (Indian River)	2018-2019	Complete	$25,000.00
Brevard Zoo: Restore Our Shores	2018-2019	Complete	$86,120.00
CCMP Technical Support and Data Management - (contract renewal TetraTech)	2018-2019	Complete	$50,000.00
IRLNEP "One Community - One Voice Initiative" (contract renewal IDEAS)	2018-2019	Complete	$50,000.00
Brevard: FDEP Aquatic Preserves IRL Shoreline Restoration	2018-2019	Complete	$52,452.00
Indian River County Wetland Restoration at Jones Pier	2018-2019	Complete	$61,000.00
UCF Tomoka State Park Living Shoreline Restoration	2018-2019	Complete	$37,847.00
Willoughby Creek Stormwater Improvement Project (Martin)	2018-2019	Complete	$260,000.00
FAU/Harbor Branch: Pilot-Scale Demonstration of Seagrass Restoration (St. Lucie)	2018-2019	Complete	$80,283.00
Port St. Lucie: McCarty Ranch Dispersed Water Management Area 2 (St. Lucie)	2018-2019	Complete	$300,000.00
UCF: Developing a Shoreline Suitability model for the north IRL (Volusia/Brevard)	2018-2019	Complete	$117,546.00
Indian River: West Wabasso Septic to Sewer Phase II	2018-2019	Complete	$200,000.00
Marine Discovery Center: shuck and Share Oyster Recyling Program (Volusia)	2018-2019	Complete	$50,000.00
City of Fellsmere: Micro-basin Treatment Phase I (Indian River)	2018-2019	Withdrawn	$0.00
IRLNEP Small Grants program (Lagoon Wide)	2018-2019	Withdrawn	$0.00
IRLNEP Support for Science and Technology Conferences, Workshops and Events	2018-2019	Complete	$15,000.00
		23	$1,663,715.00

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2019-2020			
Sea and Shoreline: Restoration, Maintenance and Conservation of Seagrass in the IRL	2019-2020	Complete	$95,872.00
Smithsonian Marine Station: IRL Biodiversity and the IRL Species Inventory Update	2019-2020	Complete	$25,000.00
Brevard County: Micco Sewer Line Extension	2019-2020	Active	$111,600.00
Coastal Resources Group: Pelican Island Phase V Restoration	2019-2020	Complete	$35,000.00
Volusia County: Indian Harbor Estates Sewer Retrofit D&E	2019-2020	Complete	$100,000.00
UF: Restoration of Clam Populations in the IRL for WQ improvement	2019-2020	Complete	$103,322.00
FIT: The Efficacy of adding highly concentrated DO to enhance muck removal	2019-2020	Complete	$82,950.00
Volusia County: Gabordy Canal 10th Streeet Stormwater Treatment D&E	2019-2020	Complete	$100,000.00
City of Sebastian: Sebastian CRA Septic to Sewer	2019-2020	Complete	$100,000.00
UCF: Living Shoreline stabilization and oyster reef restoration in ML	2019-2020	Complete	$88,585.00
MRC: Water Quality Monitoring Network: informing habitat restoration	2019-2020	Complete	$10,942.00
Brevard Zoo: Restore Our Shore 19-20	2019-2020	Complete	$61,740.00
City of Satellite Beach: Samsons Island Submerged Lands Restoration	2019-2020	Complete	$65,549.00
Indian River County: Lost Tree Islands Conservation Area Ecological Enhancement D&E	2019-2020	Complete	$65,000.00
ORCA: Buffered Shoreline Demonstration Project	2019-2020	Complete	$40,000.00
FDEP: IRL Shoreline Restoration	2019-2020	Complete	$47,452.00
Riverside Conservancy: Riverside Restoration	2019-2020	Complete	$15,000.00
MRC: One Lagoon Boaters Guide	2019-2020	Complete	$75,000.00
Applied Ecology: State of the Lagoon Technical Report	2019-2020	Complete	$50,000.00
Tetra Tech, Inc: One Lagoon Habitat Restoration plan	2019-2020	Complete	$50,000.00
FAU-HBOI: One Lagoon Monitoring Plan	2019-2020	Complete	$50,000.00
Applied Ecology: One Lagoon Asset Mapping	2019-2020	Complete	$25,000.00
IRLNEP: Harmful Algal Bloom Science Coordination	2019-2020	Active	$25,000.00
IRLNEP: Special Projects Coordinator	2019-2020	Complete	$60,000.00
IRLNEP: Small Grants 19-20	2019-2020	Complete	$25,000.00
Grant writing (3 service contractors)	2019-2020	Complete	$50,000.00
IRLNEP: Technical Support for Science Symposia, workshops, and conferences	2019-2020	Complete	$25,000.00
Wood: Atmospheric Deposition of Nutrients Monitoring	2019-2020	Complete	$25,000.00
UF: HAB Monitoring North sites	2019-2020	Complete	$50,000.00
FAU-HBOI: HAB Monitoring South Sites	2019-2020	Complete	$50,000.00
IDEAS: One Community One Voice Initiative	2019-2020	Complete	$75,000.00

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2020-2021			
Martin County: Connect to Protect Septic to Sewer Nutrient Removal	2020-2021	Complete	$150,000.00
Kashi: Kashi Church Foundation Septic to Sewer	2020-2021	Complete	$89,956.00
Sea & Shoreline: The Tucker Cove Seagrass Restoration	2020-2021	Active	$85,000.00
IRC: North Sebastian Phase 2 Septic to Sewer	2020-2021	Complete	$204,017.69
UF: Restoration of Clam Population in the IRL for WQ improvement	2020-2021	Complete	$122,020.00
IRLT: Validation of Inexpensive and Effective Modifications of Mosquito Impoundment Management Strategies to Increase Their Value as Vital Fish Nurseries	2020-2021	Complete	$73,950.00
UCF: Examining Microbial Dynamics and Sources of Microplastics in the IRL	2020-2021	Complete	$56,941.00
Sewalls Point: Stormwater Treatment and Storage	2020-2021	Complete	$150,000.00
Wood: Atmospheric Deposition Monitoring	2020-2021	Complete	$27,000.00
UCF: Improving ML Oyster Reef and Living Shoreline Restoration by using only Biodegradeable Materials.	2020-2021	Complete	$99,233.00
FOS: Developing Plastic Free Alternatives for Community-Based Oyster Restoration in the IRL	2020-2021	Complete	$22,364.00
BC: Testing Steel Gabions and Concrete CORE Modules for use in Oyster Bars in the IRL	2020-2021	Complete	$1,750.00
Tetra Tech: One Lagoon Habitat Restoration Plan addendum	2020-2021	Complete	$25,000.00
UF: HAB Monitoring North	2020-2021	Complete	$50,000.00
FAU: HAB Monitoring South	2020-2021	Complete	$50,000.00
FAU: Monitoring Prevalance of Microcystin Toxins Using SPATT	2020-2021	Complete	$94,580.00
Smithsonian: Biodiversity Inventory Update	2020-2021	Complete	$25,000.00
Grant Writing (3 contractors)	2020-2021	Active	$40,000.00
FAU: One Lagoon Monitoring Plan Y2	2020-2021	Complete	$25,000.00
Applied Ecology: Asset Mapping	2020-2021	Complete	$29,980.00
Applied Ecology: SOTLTR	2020-2021	Complete	$75,295.00
IRLNEP/IDEAS: One Voice Directive	2020-2021	Complete	$205,225.00
Small grants	2020-2021	Complete	$25,000.00
IRLNEP: Technical Support of Conferences and Workshops	2020-2021	Complete	$30,000.00
		24	$ 1,757,311.69

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
2021-2022			
Martin County: Connect to Protect Septic to Sewer Nutrient Removal Y2	2021-2022	Complete	$150,000.00
Martin County: Hobe-Heights Jimmy Graham Stormwater Park	2021-2022	Active	$150,000.00
City of Stuart: Tressler Drive Water Quality Improvement Project	2021-2022	Complete	$80,000.00
City of Port St. Lucie: Septic to Sewer Conversion Along Elkcam Waterway	2021-2022	Complete	$100,000.00
UF: Restoration of Clam Population in the IRL for WQ improvement Y3	2021-2022	Complete	$199,994.00
IRLT: Validation of Inexpensive and Effective Modifications of Mosquito Impoundment Management Strategies to Increase Their Value as Vital Fish Nurseries Y2	2021-2022	Complete	$61,500.00
FIT: Optimization of an Environmentally-Friendly Biological Denitrofication System for Water	2021-2022	Complete	$86,500.00
Wood: Atmospheric Deposition Monitoring Y3	2021-2022	Complete	$28,000.00
MDC: Expanding the Scope of Non-Plastic Restoration Materials in ML and Tomoka Basin	2021-2022	Complete	$55,000.00
FWC: Monitoring Improved Hydrology, Water Quality, and Mangrove Recovery in the Jensen Beach Impoundment	2021-2022	Complete	$42,520.00
FAU: Sampling to Assess Toxins Produced by Harmful Algal Blooms in the Indian River Lagoon	2021-2022	Complete	$68,267.00
UF: HAB Monitoring North Y3	2021-2022	Complete	$75,000.00
FAU: HAB Monitoring South Y3	2021-2022	Complete	$75,000.00
CCMP Project Inventory and Support for CCMP Implementation	2021-2022	Active	$66,775.00
Smithsonian: Biodiversity Inventory Update Y3	2021-2022	Complete	$25,000.00
Applied Ecology: SOTLTR Y3	2021-2022	Complete	$75,000.00
IRLNEP/IDEAS: One Voice Directive	2021-2022	Complete	$205,225.00
Small grants	2021-2022	Complete	$25,000.00
IRLNEP: Technical Support of Conferences and Workshops	2021-2022	Complete	$30,000.00
FAU: Seagrass Capacity Year 1	2021-2022	Active	$81,960.00
FOS: Seagrass Capacity Year 1	2021-2022	Active	$81,960.00
S&S: Seagrass Capacity Year 1	2021-2022	Complete	$81,960.00
Brevard Zoo: Seagrass Capacity Year 1	2021-2022	Complete	$81,960.00
MDC: Seagrass Capacity Year 1	2021-2022	Complete	$81,960.00
		23	$1,680,741.00

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
Martin County: Connect to Protect Septic to Sewer Year 3	2022-2023	Active	$200,000.00
FIT: Continued Application and Optimization of an Environmentally Friendly, Biological Denitrification Bioreactor Developed for Use in the Indian River Lagoon Using Repurposed Materials.	2022-2023	Complete	$74,865.00
City of Cocoa: Dixon Blvd at Indian River Drive WQ and Resiliency Project, D&E	2022-2023	Active	$40,000.00
UF: Restoration of Clam Populations in the Indian River Lagoon for Water Quality Improvement Year 4	2022-2023	Complete	$197,892.00
City of Stuart: SE Illinois Avenue Living Shoreline Project	2022-2023	Active	$85,000.00
IRC: Phase 4 Restoration for the Lost Tree Island Conservation Area	2022-2023	Complete	$50,000.00
BCU: IRL Seagrass Restoration using Mosquito Control Impoundment	2022-2023	Active	$32,500.00
MDC: Enhancement of Habitat and Biodiversity with Non-Plastic Restoration Materials in Mosquito Lagoon	2022-2023	Complete	$99,000.00
Brevard Zoo: Restore Our Shores: Community-Based Seagrass Restoration in the Indian River Lagoon	2022-2023	Complete	$60,000.00
UF: Enhancing Living Shorelines: How can we manipulate Spartina alterniflora plantings to improve impaired waters by stabilizing sediment and reducing nutrients?	2022-2023	Complete	$99,618.00
UCF: Unintended Consequences: Are Non-Plastic Materials Now Used in Coastal Restoration Always Better for the Indian River Lagoon?	2022-2023	Complete	$60,435.00
MOEC: Manatee Observation and Education Center Seagrass Restoration Project	2022-2023	Complete	$39,875.00
FIT: A Preliminary Characterization of Microcystin in Coastal-Dwelling Mammals in the Indian River Lagoon, Florida	2022-2023	Active	$30,039.00
FIT: Suffocating Sand; Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes in the IRL	2022-2023	Complete	$73,898.00
UCF: Mosquito Lagoon Charge On Habitat Restoration	2022-2023	Active	$127,713.00
St. Lucie County: Sheraton Plaza STA	2022-2023	Active	$100,000.00
IRLNEP: Boat Capital Purchase	2022-2023	Active	$60,000.00
Wood: Atmospheric Deposition Monitoring Y4	2022-2023	Complete	$29,000.00
Wood: Atmospheric Deposition Monitoring NEW stations	2022-2023	Pending	$110,000.00
UF: HAB Monitoring North Y4	2022-2023	Complete	$75,000.00
FAU: HAB Monitoring South Y4	2022-2023	Complete	$75,000.00
CCMP Project Inventory and Support for CCMP Implementation	2022-2023	Active	$18,000.00
Smithsonian: Biodiversity Inventory Update Y4	2022-2023	Complete	$25,000.00
Applied Ecology: SOTLTR Y4	2022-2023	Active	$116,000.00
IRLNEP/IDEAS: One Voice Directive	2022-2023	Active	$118,000.00
Small grants	2022-2023	Active	$36,135.00
IRLNEP: Technical Support of Conferences and Workshops	2022-2023	Complete	$25,000.00
FAU: Seagrass Capacity Year 2	2022-2023	Active	$100,000.00
FOS: Seagrass Capacity Year 2	2022-2023	Active	$100,000.00
S&S: Seagrass Capacity Year 2	2022-2023	Complete	$100,000.00
Brevard Zoo: Seagrass Capacity Year 2	2022-2023	Active	$100,000.00
MDC: Seagrass Capacity Year 2	2022-2023	Active	$100,000.00
Community Engagement Coordinators	2022-2023	Complete	$165,000.00
Diversity of thought	2022-2023	Complete	$49,000.00
		28	$2,771,970.00

Projects	Original Year	Completion status	Amount of IRLNEP funding to project
Martin County: STA Harvesting	2023-2024	Completed	$35,360.00
City of PSL: Septic to Sewer conversions Monterrey	2023-2024	Active	$50,000.00
FPUA: Septic to Sewer Conversions	2023-2024	Active	$364,640.00
FOS: Optimizing Syringodium filifome in a nursery	2023-2024	Active	$15,783.00
City of Stuart: SE Illinois Ave plus up	2023-2024	Active	$84,217.00
FIT: Suffocating Sand; Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes in the IRL phase 2	2023-2024	Active	$74,986.00
Mote Marine Lab: Using genetic Tools to boost restoration succcess in the IRL	2023-2024	Active	$25,014.00
Wood: Atmospheric Deposition Monitoring Y5	2023-2024	Active	$30,000.00
Wood: Atmospheric Deposition Monitoring NEW stations	2023-2024	Pending	$60,000.00
UF: HAB Monitoring North Y5	2023-2024	Active	$75,000.00
FAU: HAB Monitoring South Y5	2023-2024	Active	$75,000.00
CCMP Project Inventory and Support for CCMP Implementation	2023-2024	Active	$15,000.00
Smithsonian: Biodiversity Inventory Update Y5	2023-2024	Active	$25,000.00
Applied Ecology: SOTLTR Y5	2023-2024	Pending	$76,125.00
IRLNEP/IDEAS: One Voice Directive	2023-2024	Active	$167,000.00
Small grants (6 projects)	2023-2024	Pending	$25,000.00
TOX 3	2023-2024	Pending	$100,000.00
IRLNEP: Technical Support of Conferences and Workshops	2023-2024	Active	$25,000.00
FAU: Seagrass Capacity Year 3	2023-2024	Pending	$100,000.00
FOS: Seagrass Capacity Year 3	2023-2024	Pending	$100,000.00
S&S: Seagrass Capacity Year 3	2023-2024	Pending	$100,000.00
Brevard Zoo: Seagrass Capacity Year 3	2023-2024	Pending	$100,000.00
MDC: Seagrass Capacity Year 3	2023-2024	Pending	$100,000.00
Diversity of thought	2023-2024	Active	$49,000.00
Pending Priority Projects	2023-2025	Pending	$360,800.00
Community Engagement Coordinators	2023-2024	Active	$196,875.00
			$2,429,800.00

Active Projects only

Project Name	Contractor	Start date	Amount of project	Amount Invoiced thru end of last quarter	Amount Remaining
Brevard County: Micco Sewer Line Extension	Brevard County	10/1/2019	$111,600.00	$0.00	$111,600.00
IRLNEP: Harmful Algal Bloom Science Coordination	IRLNEP	10/1/2019	$25,000.00	$20,560.00	$4,440.00
Sea & Shoreline: The Tucker Cove Seagrass Restoration	Sea and Shoreline	10/1/2020	$85,000.00	$0.00	$85,000.00
Grant Writing FY2021	Angie Brewer & Assoc, T. Pinney & Assoc,Natua Strategies	10/1/2020	$40,000.00	$22,075.00	$17,925.00
Martin County: Hobe-Heights Jimmy Graham Stormwater Park	Martin County	10/1/2021	$150,000.00	$0.00	$150,000.00
CCMP Project Inventory and Support for CCMP Implementation	Tetra Tech/ Balmoral	10/1/2021	$66,775.00	$17,870.00	$48,905.00
small grants FY2022	multiple	5/14/2022	$25,000.00	$13,423.80	$11,576.20
Martin County: Connect to Protect Septic to Sewer Year 3	Martin County	10/1/2022	$200,000.00	$0.00	$200,000.00
City of Cocoa: Dixon Blvd at Indian River Drive WQ and Resiliency Project, D&E	City of Cocoa	10/1/2022	$40,000.00	$0.00	$40,000.00
City of Stuart: SE Illinois Avenue Living Shoreline Project	City of Stuart	10/1/2022	$85,000.00	$0.00	$85,000.00
BCU: IRL Seagrass Restoration using Mosquito Control Impoundment	Bethune Cookman University	10/1/2022	$32,500.00	$3,842.82	$28,657.18
FIT: A Preliminary Characterization of Microcystin in Coastal-Dwelling Mammals in the Indian River Lagoon, Florida	Florida Institute of Technology	10/1/2022	$30,039.00	$0.00	$30,039.00
UCF: Mosquito Lagoon Charge On Habitat Restoration	University of Central Florida	Pending	$127,713.00	$0.00	$127,713.00
St. Lucie County: Sheraton Plaza STA	St. Lucie County	10/1/2022	$100,000.00	$0.00	$100,000.00
IRLNEP: Boat Capital Purchase	IRLNEP	10/1/2022	$60,000.00	$0.00	$60,000.00
Wood: Atmospheric Deposition Monitoring NEW stations	WSP	Pending	$110,000.00	$0.00	$110,000.00
CCMP Project Inventory and Support for CCMP Implementation	Balmoral/Tetra Tech	10/1/2022	$18,000.00	$0.00	$18,000.00
Applied Ecology: SOTLTR Y4	Applied Ecology	1/20/2023	$116,270.00	$56,644.90	$59,625.10
Small grants FY23 (9 projects)	Multiple	Active	$25,000.00	$4,911.00	$20,089.00
FAU: Seagrass Capacity Year 1 and 2	Florida Atlantic University	Pending	$181,960.00	$1,850.29	$180,109.71
FOS: Seagrass Capacity Year 1 and 2	Florida Oceanographic Society	12/16/2022	$181,960.00	$18,546.13	$163,413.87
Brevard Zoo: Seagrass Capacity Year 1 and 2	Brevard Zoo	1/16/2023	$181,960.00	$81,960.00	$100,000.00
MDC: Seagrass Capacity Year 1 and 2	Marine Discovery Center	1/27/2023	$181,960.00	$97,883.03	$84,076.97
City of PSL: Septic to Sewer conversions Monterrey	City of Port St. Lucie	10/1/2023	$50,000.00	$0.00	$50,000.00
FPUA: Septic to Sewer Conversions	Fort Pierce Utilities Authority	10/1/2023	$364,640.00	$0.00	$364,640.00
FOS: Optimizing Syringodium filifome in a nursery	Florida Oceanographic Society	10/1/2023	$15,783.00	$0.00	$15,783.00
City of Stuart: SE Illinois Ave plus up	City of Stuart	10/1/2023	$84,217.00	$0.00	$84,217.00
FIT: Suffocating Sand; Mapping Hypoxia and its Impacts on Benthic Nutrient Fluxes in the IRL phase 2	FIT	10/1/2023	$74,986.00	$0.00	$74,986.00
Mote Marine Lab: Using genetic Tools to boost restoration succcess in the IRL	Mote Marine Lab	10/1/2023	$25,014.00	$0.00	$25,014.00
Wood: Atmospheric Deposition Monitoring Y5	WSP	10/1/2023	$30,000.00	$3,880.69	$26,119.31

Active Projects only

Project Name	Contractor	Start date	Amount of project	Amount Invoiced thru end of last quarter	Amount Remaining
Wood: Atmospheric Deposition Monitoring NEW stations	WSP	pending	$60,000.00	$0.00	$60,000.00
UF: HAB Monitoring North Y5	UF	10/1/2023	$75,000.00	$0.00	$75,000.00
FAU: HAB Monitoring South Y5	FAU	10/1/2023	$75,000.00	$0.00	$75,000.00
CCMP Project Inventory and Support for CCMP Implementation	Balmoral/Tetra Tech	10/1/2023	$15,000.00	$0.00	$15,000.00
Smithsonian: Biodiversity Inventory Update Y5	Smithsonian	10/1/2023	$25,000.00	$0.00	$25,000.00
Applied Ecology: SOTLTR Y4	Applied Ecology	Pending	$76,125.00	$0.00	$76,125.00
IRLNEP/IDEAS: One Voice Directive	NEP	10/1/2023	$167,000.00	$0.00	$167,000.00
Small grants	TBD	Pending	$25,000.00	$0.00	$25,000.00
TOX 3	SJRWMD	Pending	$100,000.00	$0.00	$100,000.00
IRLNEP: Technical Support of Conferences and Workshops	NEP	10/1/2023	$25,000.00	$5,000.00	$20,000.00
FAU: Seagrass Capacity Year 3	FAU	Pending	$100,000.00	$0.00	$100,000.00
FOS: Seagrass Capacity Year 3	FOS	Pending	$100,000.00	$0.00	$100,000.00
S&S: Seagrass Capacity Year 3	Sea and Shoreline	Pending	$100,000.00	$0.00	$100,000.00
Brevard Zoo: Seagrass Capacity Year 3	Brevard Zoo	Pending	$100,000.00	$0.00	$100,000.00
MDC: Seagrass Capacity Year 3	Marine Discovery Cent	Pending	$100,000.00	$0.00	$100,000.00
Diversity of thought	Diversity of Thought	10/1/2023	$49,000.00	$0.00	$49,000.00
Pending Priority Projects	TBD	Pending	$360,800.00	$0.00	$360,800.00

FY 2024 IRLNEP Budget Categories	Amendment 2 2/9/2024	Q1 Revenue	Q2 Revenue	Q3 Revenue	Q4 Revenue	Total Revenue
REVENUES						
EPA Work Plan	$ 850,000.00	$850,000.00				$850,000.00
SJRWMD	$ 500,000.00	$ 500,000.00				$500,000.00
SFWMD	$ 500,000.00					$0.00
FDEP	$ 250,000.00	$62,500.00				$62,500.00
Volusia County	$ 50,000.00	$50,000.00				$50,000.00
Brevard County	$ 50,000.00	$50,000.00				$50,000.00
Indian River County	$ 50,000.00	$50,000.00				$50,000.00
St Lucie	$ 50,000.00	$50,000.00				$50,000.00
Martin County	$ 50,000.00	$50,000.00				$50,000.00
IRL Specialty License Plate	$ 125,000.00	$41,520.00				$41,520.00
EPA Infrastructure	$ 909,800.00					$0.00
other (donations/interest)		$24,607.45				$24,607.45
						$0.00
Agency Balance Forward	$ 758,395.00	$ 758,395.00				$758,395.00
Subtotal FY Revenues	**$ 4,143,195.00**	**$ 2,487,022.45**	**$ -**	**$ -**	**$ -**	**$ 2,487,022.45**
OTHER EXPENDITURES		**Q1 Expenditures**	**Q2 Expenditures**	**Q3 Expenditures**	**Q4 Expenditures**	**Total Expenditures**
(EPA Workplan - Section 320 Funding)						$0.00
Herbicide Impact Study (TOX 3 with SJRWMD)	$ 100,000.00	$0.00				
State of the Lagoon Technical Report (Applied Ecology - Y5)	$ 76,125.00	$0.00				
Communication Support: Service contracts for web/graphics/design support, scientific and other publications, other contract support as needed, and expanded social media and support for communication intern. Includes service contracts with IDEAS, Brandt Ronat, Firefly, and O'Hara	$ 161,375.00	$39,636.43				
Biodiversity Inventory - Year 5 (Smithsonian)	$ 25,000.00	$0.00				
Atmospheric Deposition Station Y5 (Wood)	$ 30,000.00	$3,880.69				
2 NEW Atmospheric Deposition Stations	$ 60,000.00	$0.00				
Grant Writing Support (3 continuing contracts)	$ 20,000.00	$0.00				
HAB monitoring Y4 (FAU/UF)	$ 150,000.00	$0.00				
EPA Travel (mandatory EPA work plan requirement)	$ 10,000.00	$4,804.77				
CCMP project inventory and prioritization service contract(s) with Tetra Tech and Balmoral	$ 15,000.00	$0.00				
3 community engagement coordinators (salary only)	$ 202,500.00	$45,973.56				
TOTAL EPA WORKPLAN	**$ 850,000.00**	**$94,295.45**				**$0.00**
(Infrastructure Projects)		**Q1 Expenditures**	**Q2 Expenditures**	**Q3 Expenditures**	**Q4 Expenditures**	**Total Expenditures**
Seagrass nurseries	$ 500,000.00	0				
Underserved Restoration projects	$ 360,800.00	0				
Stormwater D&B (SJRWMD)	$ -					
Service contract with Diversity of Thought	$ 49,000.00	$10,080.00				
TOTAL BIL WORKPLAN	**$ 909,800.00**	**$10,080.00**				**$10,080.00**
OTHER EXPENDITURES (IRL Council Contributions and License Plate)						
Water Quality Restoration	$ 450,000.00	$31,368.00				
Habitat Restoration	$ 100,000.00	$0.00				
Community-Based Restoration	$ -					
Science and Innovation	$ 100,000.00	$0.00				
Small Grants Program	$ 25,000.00	$0.00				
IRLNEP Technical Support of Conferences and Workshops	$ 25,000.00	$5,000.00				
Economic Analysis Update (Balmoral)	$ -					
Subtotal (Restoration Projects)	**$ 700,000.00**	**$36,368.00**				**$36,368.00**

FY 2023 IRLNEP Budget Categories		Q1 Expenditures	Q2 Expenditures	Q3 Expenditures	Q4 Expenditures	Total Expenditures
Administrative Expenditure Detail						
Salaries and Benefits (5 FTEs with benefits @ 35%)						
Executive Director						
eputy Director/Chief Communications Officer						
Chief Operating Officer						
Administrative Coordinator						
GIS Coordinator						
3 community engagement coordinator benefits only						
Subtotal Salaries and Benefits	**$ 669,019.50**	**$163,351.47**				**$163,351.47**
Administrative Services						
egal (Torcivia) ($275/hr. with contract cap at $	$ 65,000.00	$3,415.00				
Accounting (Special District Services)	$ 36,000.00	$9,000.00				
Auditing (CRI)	$ 19,405.00	$3,500.00				
Personnel Services	$ -					
IT Services & Compliance	$ 2,500.00	$0.00				
Legal Ads	$ 500.00	$176.92				
Subtotal Admin Services	**$ 123,405.00**	**$ 16,091.92**				**$0.00**
Facility Expenses						
Utilities (Water, Sewer, Electric)	$ 2,500.00	$240.00				
Rent and Leases	$ 20,000.00	$19,854.22				
Equipment Maintenance	$ 3,000.00	$0.00				
Equipment (Computers/Hardware/Software/Communications)	$ 15,000.00	$3,091.96				
Subtotal Facilities Costs	**$ 40,500.00**	**$ 23,186.18**				**$0.00**
Administrative Costs						
Travel General (reimbursement)	$ 25,000.00	$2,391.64				
Postage and Mailing	$ 1,000.00	$48.62				
Office Supplies	$ 5,000.00	$662.06				
Dues, Licenses and Subscriptions	$ 10,000.00	$324.99				
Printing	$ 10,000.00	$0.00				
Insurance	$ 12,000.00	$12,272.00				
Staff Training & Professional Development	$ 8,000.00	$0.00				
Subtotal Admin Costs	**$ 71,000.00**	**$ 15,699.31**				**$0.00**
Contingency Reserve	**$ 21,075.50**	**$ 21,075.50**				$0.00
TOTAL FY 2023 EXPENDITURES	**$ 3,384,800.00**	**$ 380,147.83**				$199,719.47
BALANCE	$ 758,395.00	$ 2,106,874.62				$ 558,675.53

IRL Council
Profit & Loss Detail
October through December 2023

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
Income								
01-6100 · Federal								
01-6103 · Grant Rev - Federal (Reimb) BIL								
	Deposit	11/17/2023		EPA	Grant Rev - Federal (Reimb) BIL		313,706.15	313,706.15
Total 01-6103 · Grant Rev - Federal (Reimb) BIL						0.00	313,706.15	313,706.15
01-6101 · Grant Rev - Federal (Reimb) EPA								
	Deposit	11/16/2023		EPA	EPA grant revenue		171,071.59	171,071.59
Total 01-6101 · Grant Rev - Federal (Reimb) EPA						0.00	171,071.59	171,071.59
Total 01-6100 · Federal						0.00	484,777.74	484,777.74
01-6102 · IRL License Plate								
	Deposit	10/02/2023	436903369	Department of Financial Services	IRL License Plate		1,920.00	1,920.00
	Deposit	10/05/2023	436903390	Department of Financial Services	IRL License Plate		1,260.00	3,180.00
	Deposit	10/05/2023	436913376	Department of Financial Services	IRL License Plate		750.00	3,930.00
	Deposit	10/05/2023	436918788	Department of Financial Services	IRL License Plate		675.00	4,605.00
	Deposit	10/11/2023	436939088	Department of Financial Services	IRL License Plate		1,410.00	6,015.00
	Deposit	10/17/2023	436943401	Department of Financial Services	IRL License Plate		1,065.00	7,080.00
	Deposit	10/17/2023	436958598	Department of Financial Services	IRL License Plate		1,260.00	8,340.00
	Deposit	10/17/2023	436962827	Department of Financial Services	IRL License Plate		840.00	9,180.00
	Deposit	10/20/2023	436971365	Department of Financial Services	IRL License Plate		660.00	9,840.00
	Deposit	10/20/2023	436973942	Department of Financial Services	IRL License Plate		1,590.00	11,430.00
	Deposit	10/27/2023	436982504	Department of Financial Services	IRL License Plate		1,230.00	12,660.00
	Deposit	10/27/2023	436987468	Department of Financial Services	IRL License Plate		675.00	13,335.00
	Deposit	10/31/2023	436978985	Department of Financial Services	IRL License Plate		555.00	13,890.00
	Deposit	10/31/2023	437020747	Department of Financial Services	IRL License Plate		1,050.00	14,940.00
	Deposit	10/31/2023	436994283	Department of Financial Services	IRL License Plate		1,545.00	16,485.00
	Deposit	11/08/2023	437028779	Department of Financial Services	IRL License Plate		495.00	16,980.00
	Deposit	11/08/2023	437052761	Department of Financial Services	IRL License Plate		810.00	17,790.00
	Deposit	11/08/2023	437031652	Department of Financial Services	IRL License Plate		1,680.00	19,470.00
	Deposit	11/08/2023	437049016	Department of Financial Services	IRL License Plate		1,155.00	20,625.00
	Deposit	11/13/2023	437060326	Department of Financial Services	IRL License Plate		2,070.00	22,695.00
	Deposit	11/21/2023	437076910	Department of Financial Services	IRL License Plate		630.00	23,325.00
	Deposit	11/21/2023	437073194	Department of Financial Services	IRL License Plate		780.00	24,105.00
	Deposit	11/21/2023	437081906	Department of Financial Services	IRL License Plate		1,650.00	25,755.00
	Deposit	11/21/2023	437088096	Department of Financial Services	IRL License Plate		1,740.00	27,495.00
	Deposit	11/29/2023	437096920	Department of Financial Services	IRL License Plate		225.00	27,720.00
	Deposit	11/29/2023	437121282	Department of Financial Services	IRL License Plate		2,100.00	29,820.00
	Deposit	12/06/2023	437151743	Department of Financial Services	IRL License Plate		2,070.00	31,890.00
	Deposit	12/06/2023	437130850	Department of Financial Services	IRL License Plate		975.00	32,865.00
	Deposit	12/06/2023	437140211	Department of Financial Services	IRL License Plate		825.00	33,690.00
	Deposit	12/06/2023	437140220	Department of Financial Services	IRL License Plate		150.00	33,840.00
	Deposit	12/15/2023	437181018	Department of Financial Services	IRL License Plate 12/06/23		750.00	34,590.00
	Deposit	12/15/2023	437158565	Department of Financial Services	IRL License Plate 12/01/23		1,635.00	36,225.00
	Deposit	12/27/2023	43719068	Department of Financial Services	IRL License Plate 12/8/23		1,155.00	37,380.00
	Deposit	12/27/2023	437202998	Department of Financial Services	IRL License Plate 12/12/23		1,020.00	38,400.00
	Deposit	12/27/2023	437206968	Department of Financial Services	IRL License Plate 12/13/23		930.00	39,330.00
	Deposit	12/27/2023	437214397	Department of Financial Services	IRL License Plate 12/15/23		2,190.00	41,520.00
Total 01-6102 · IRL License Plate						0.00	41,520.00	41,520.00
01-9400 · Other Income								
01-9410 · Interest Income (GF)								
	Deposit	10/31/2023			Interest		12,464.02	12,464.02
	Deposit	11/30/2023			Interest		11,043.43	23,507.45
Total 01-9410 · Interest Income (GF)						0.00	23,507.45	23,507.45
01-9402 · Donations								
	Deposit	12/04/2023	1932	GFWC Treasure Coast Women	donation from GFWC		100.00	100.00
	Deposit	12/04/2023	943653354	Fidelity Brokerage Services	donation from fidelity		1,000.00	1,100.00
Total 01-9402 · Donations						0.00	1,100.00	1,100.00
Total 01-9400 · Other Income						0.00	24,607.45	24,607.45
Total Income						0.00	550,905.19	550,905.19
Gross Profit						0.00	550,905.19	550,905.19
Expense								
01-1902 · Miscellaneous								
	Bill	12/06/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	fees on credit card	46.70		46.70
	Bill	12/06/2023	498865915972148O	First National Bank Omaha (Duane)	fees on credit card	50.37		97.07
	Bill	12/31/2023	FAU2490623	Florida Atlantic University	IRL - Building Lagoon-Wide Capacity for IRL Se	1,201.80		1,298.87
Total 01-1902 · Miscellaneous						1,298.87	0.00	1,298.87
01-1800 · IRL Other Expenditures								
01-1601 · BIL								
01-2239 · JEDI Diversity of Thought (BIL)								
	Bill	10/31/2023	0000251	Diversity Of Thought Inc	October hours	6,480.00		6,480.00
	Bill	11/30/2023	0000252	Diversity Of Thought Inc	November hours	1,680.00		8,160.00
	Bill	12/31/2023	0000253	Diversity Of Thought Inc	December hours	1,920.00		10,080.00

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
Total 01-2239 · JEDI Diversity of Thought (BIL)						10,080.00	0.00	10,080.00
02-2223 · MDC-Seagrass Capacity Y2								
	Bill	12/31/2023	3979	Marine Discovery Center	Seagrass 10/1/23 - 12/31/23	12,675.94		12,675.94
Total 02-2223 · MDC-Seagrass Capacity Y2						12,675.94	0.00	12,675.94
01-2220 · FOS-Seagrass Capacity Y1								
	Bill	11/30/2023	IRL2022-22	Florida Oceanographic Society, Inc	contract IRL2022-22	305.90		305.90
Total 01-2220 · FOS-Seagrass Capacity Y1						305.90	0.00	305.90
Total 01-1601 · BIL						23,061.84	0.00	23,061.84
01-1711 · Prize money for calendar contes								
	Bill	11/17/2023		Jim Mandeville	IRL Council calendar contest winner-Congratula	500.00		500.00
	Bill	11/17/2023		Steven Van Meter	photo contest winner	100.00		600.00
	Bill	11/17/2023		Jack Rogers	Photo Contest Winner - Congratulations!	100.00		700.00
	Bill	11/17/2023		Linda Walters	Photo Contest Winner - Congratulations!	100.00		800.00
	Bill	11/17/2023		Chuck Palmer	Photo Contest Winner - Congratulations!	100.00		900.00
	Bill	11/17/2023		Marcus Cote	Photo Contest Winner - Congratulations!	100.00		1,000.00
	Bill	11/17/2023		Barbara Lyons	Photo Contest Winner - Congratulations!	100.00		1,100.00
	Bill	11/17/2023		Katherine Harris	Photo Contest Winner - Congratulations!	100.00		1,200.00
	Bill	11/17/2023		Bill Hoag	Photo Contest Winner - Congratulations!	100.00		1,300.00
	Bill	11/17/2023		Ed Irvin	Photo Contest Winner - Congratulations!	100.00		1,400.00
	Bill	11/17/2023		Lisa Engelbrecht	Photo Contest Winner - Congratulations!	100.00		1,500.00
Total 01-1711 · Prize money for calendar contes						1,500.00	0.00	1,500.00
01-1801 · Section 320 EPA								
05-1740 · WOOD-Atmospheric Deposition Y5								
	Bill	11/03/2023	F04132530	WSP USA Environment & Infrastructure	Wet/dry Dep OY4 thru 11/03/2023	2,001.93		2,001.93
	Bill	12/01/2023	F04132571	WSP USA Environment & Infrastructure	Wet/dry Dep OY4 thru 12/01/2023	1,085.99		3,087.92
	Bill	12/29/2023	F04132670	WSP USA Environment & Infrastructure	Wet/dry Dep OY4 thru 12/29/2023	792.77		3,880.69
Total 05-1740 · WOOD-Atmospheric Deposition Y5						3,880.69	0.00	3,880.69
01-2218 · Com. Engagement Coor. Salary Y1								
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	7,572.12		7,572.12
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	7,572.12		15,144.24
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	7,572.12		22,716.36
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	7,680.30		30,396.66
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	7,788.45		38,185.11
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	7,788.45		45,973.56
Total 01-2218 · Com. Engagement Coor. Salary Y1						45,973.56	0.00	45,973.56
01-2012 · IRLNEP Brand Activation & Comm.								
	Bill	11/27/2023	8722	Independent Printing	2023 IRL annual reports	4,429.00		4,429.00
	Bill	11/28/2023	23202961	Camelback Displays, Inc	final payment	3,193.48		7,622.48
	Bill	11/29/2023	AAAQ479860	International E-Z Up, Inc	4 pyramid 10' shelters	2,785.88		10,408.36
	Bill	12/06/2023	498865915972148O	First National Bank Omaha (Duane)	Amazon	151.80		10,560.16
	Bill	12/06/2023	498865915972148O	First National Bank Omaha (Duane)	Amazon	1,032.20		11,592.36
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Camelback Displays	3,193.47		14,785.83
	Bill	12/12/2023	020390	Sebastian Blinds and Shutters	blackout cellular shades	4,432.00		19,217.83
	Bill	12/29/2023	149111011	Sandy Alexander Inc	2024 IRL calendar	20,418.60		39,636.43
Total 01-2012 · IRLNEP Brand Activation & Comm.						39,636.43	0.00	39,636.43
01-1721 · MRC-One Lagoon Boater's Guide								
	Bill	11/07/2023	94598197	Environmental Systems Research Institute	Enterprise agreement fee software/maintenance	15,000.00		15,000.00
Total 01-1721 · MRC-One Lagoon Boater's Guide						15,000.00	0.00	15,000.00
01-1817 · Federal/EPA Travel								
	Bill	10/06/2023	498865918037990 2	First National Bank Omaha (Kathy)	American Air	242.20		242.20
	Bill	10/06/2023	498865918037990 2	First National Bank Omaha (Kathy)	United	308.20		550.40
	Bill	10/31/2023	Oct-23	Caleta Scott	Airbnb CERF Reservations C Scott / H Stapleto	1,469.66		2,020.06
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	CERF air BNB	864.95		2,885.01
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	CERF flight to	303.20		3,188.21
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	CERF Hotel	97.22		3,285.43
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	CERF flight from	448.20		3,733.63
	Bill	11/25/2023	Nov-23	Caleta Scott	Uber Portland (11/11 - 11/16)	222.14		3,955.77
	Bill	11/25/2023	Nov-23	Caleta Scott	GSA per diem 11/11 & 11/16	111.00		4,066.77
	Bill	11/25/2023	Nov-23	Caleta Scott	GSA per diem 11/12 - 11/15	296.00		4,362.77
	Bill	11/30/2023	Nov-23	Heather Stapleton	CERF partial travel day per diem x 2	111.00		4,473.77
	Bill	11/30/2023	Nov-23	Heather Stapleton	CERF per diem x 4	296.00		4,769.77
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	United	35.00		4,804.77
Total 01-1817 · Federal/EPA Travel						4,804.77	0.00	4,804.77
Total 01-1801 · Section 320 EPA						109,295.45	0.00	109,295.45
01-1840 · IRL License Plate Funded								
01-1893 · License Plate Marketing								
	Bill	10/09/2023	20115461	Clear Channel Outdoor	bulletin	4,450.00		4,450.00
	Bill	11/06/2023	20115826	Clear Channel Outdoor	bulletin	4,450.00		8,900.00
	Bill	12/04/2023	20116219	Clear Channel Outdoor	bulletin	4,450.00		13,350.00
Total 01-1893 · License Plate Marketing						13,350.00	0.00	13,350.00
Total 01-1840 · IRL License Plate Funded						13,350.00	0.00	13,350.00

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
01-1870 · IRL Strategic Projects								
01-1791 · IRLNEP Technical Supp. of Conf.								
	Bill	10/03/2023	004	Little Growers Inc	Make a Green Noise: A Just Transition to Clean	500.00		500.00
	Bill	10/12/2023	IRLNEP-23-1	Marine Resources Council of East Fl, Inc	MRC 2023 Low Impact Development Conferenc	1,500.00		2,000.00
	Bill	11/09/2023	NI4587A	LEAD Brevard Inc	4 under 40 sponsorship, Top 12 2024 table	3,000.00		5,000.00
Total 01-1791 · IRLNEP Technical Supp. of Conf.						5,000.00	0.00	5,000.00
01-1787 · Martin Cty-Reduc. of TN & TP								
	Bill	11/15/2023	#1 final	Martin County Board of County Comm	Beemats replacement	31,368.00		31,368.00
Total 01-1787 · Martin Cty-Reduc. of TN & TP						31,368.00	0.00	31,368.00
01-1648 · Small Grants FY 2023								
	Bill	12/22/2023	0132	Stella Maris Environmental Research	Stella's Eco Stars Project	4,911.00		4,911.00
Total 01-1648 · Small Grants FY 2023						4,911.00	0.00	4,911.00
Total 01-1870 · IRL Strategic Projects						41,279.00	0.00	41,279.00
Total 01-1800 · IRL Other Expenditures						188,486.29	0.00	188,486.29
01-6308 · Salaries & Benefits								
01-6316 · Payroll Processing Fee								
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	39.20		39.20
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	39.20		78.40
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	39.20		117.60
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	39.20		156.80
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	143.80		300.60
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	39.20		339.80
Total 01-6316 · Payroll Processing Fee						339.80	0.00	339.80
01-6311 · Emp Benefits - FRS (employer)								
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	4,205.58		4,205.58
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	4,205.58		8,411.16
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	4,205.58		12,616.74
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	4,306.37		16,923.11
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	4,407.16		21,330.27
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	4,407.16		25,737.43
Total 01-6311 · Emp Benefits - FRS (employer)						25,737.43	0.00	25,737.43
01-6310 · Employee Benefits - Health Ins								
	Bill	10/01/2023	3246186	Cigna	inv# 3246186 Oct 2023	280.29		280.29
	Bill	10/01/2023	70139599	Davis Vision	invoice # 70139599 client ID 1000000206 Octo	32.77		313.06
	Bill	10/01/2023	October2023	Brevard County BOCC (Health Ins)	October 2023	9,385.26		9,698.32
	Bill	10/01/2023	00 641728 0024	Standard Insurance Company (Life and LTD)	policy# 00 641728 0024 October 2023	181.36		9,879.68
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20/23	Insuranc	620.07	9,259.61
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03/23	Insuran	620.07	8,639.54
	Bill	11/01/2023	November2023	Brevard County BOCC (Health Ins)	November 2023	9,385.26		18,024.80
	Bill	11/01/2023	70142211	Davis Vision	invoice # 70142211 client ID 1000000206 Nov	32.77		18,057.57
	Bill	11/01/2023	3260724	Cigna	inv# 3260724 November 2023	280.29		18,337.86
	Bill	11/01/2023	641728	Standard Insurance Company (Life and LTD)	policy# 00 641728 0024 November 2023	181.36		18,519.22
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17/23	Insuran	620.07	17,899.15
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01/23	Insuran	620.07	17,279.08
	Bill	12/01/2023	70144812	Davis Vision	invoice # 70144812 client ID 1000000206 Dec	32.77		17,311.85
	Bill	12/01/2023	00 641728 0024	Standard Insurance Company (Life and LTD)	policy# 00 641728 0024 December 2023	181.36		17,493.21
	Bill	12/01/2023	3275314	Cigna	inv# 3275314 December 2023	280.29		17,773.50
	Bill	12/01/2023	December2023	Brevard County BOCC (Health Ins)	December 2023	9,385.26		27,158.76
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15/23	Insura	620.07	26,538.69
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	0.00		26,538.69
Total 01-6310 · Employee Benefits - Health Ins						29,639.04	3,100.35	26,538.69
01-6309 · Payroll Taxes								
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	1,788.65		1,788.65
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	1,788.65		3,577.30
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20/23	EE SS & M	1,788.65	1,788.65
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	2,855.10		4,643.75
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20/23	EE Fed W	2,855.14	1,788.61
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	1,788.67		3,577.28
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	1,788.67		5,365.95
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03/23	EE SS &	1,788.67	3,577.28
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	2,855.10		6,432.38
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03/23	EE Fed W	2,855.14	3,577.24
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	1,788.63		5,365.87
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	1,788.63		7,154.50
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17/23	EE SS &	1,788.63	5,365.87
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	2,855.10		8,220.97
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17/23	EE Fed W	2,855.14	5,365.83
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	1,823.85		7,189.68
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	1,823.85		9,013.53
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01/23	EE SS &	1,823.85	7,189.68
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	2,949.07		10,138.75

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01/23	EE Fed W	2,949.09	7,189.66
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	1,858.96		9,048.62
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	1,858.96		10,907.58
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15/23	EE SS &	1,858.96	9,048.62
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	3,043.06		12,091.68
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15/23	EE Fed '	3,043.07	9,048.61
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	1,899.46		10,948.07
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	1,899.46		12,847.53
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29/23	EE SS &	1,899.46	10,948.07
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	3,138.61		14,086.68
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29/23	EE Fed W	3,138.62	10,948.06
Total 01-6309 · Payroll Taxes						39,592.48	28,644.42	10,948.06
01-6308 · Salaries & Benefits - Other								
	General Journal	10/16/2023	PR 10/20/23		PR - 09/30/2023 -10/13/2023 check date 10/20	16,338.46		16,338.46
	General Journal	10/30/2023	PR 11/03/23		PR - 10/14/2023 -10/27/2023 check date 11/03	16,338.46		32,676.92
	General Journal	11/13/2023	PR 11/17/23		PR - 10/28/2023 -11/10/2023 check date 11/17	16,338.46		49,015.38
	General Journal	11/27/2023	PR 12/01/23		PR - 11/12/2023 -11/24/2023 check date 12/01	16,689.81		65,705.19
	General Journal	12/11/2023	PR 12/15/23		PR - 11/25/2023 -12/08/2023 check date 12/15	17,041.15		82,746.34
	General Journal	12/26/2023	PR 12/29/23		PR - 12/09/2023 -12/22/2023 check date 12/29	17,041.15		99,787.49
Total 01-6308 · Salaries & Benefits - Other						99,787.49	0.00	99,787.49
Total 01-6308 · Salaries & Benefits						195,096.24	31,744.77	163,351.47
01-1400 · Facilities Expenses								
01-1405 · Water, Sewer, & Electric charge								
	Bill	10/01/2023	24-05	City of Sebastian	October reimbursement for water, sewer, and e	120.00		120.00
	Bill	11/01/2023	24-31	City of Sebastian	November reimbursement for water, sewer, and	120.00		240.00
Total 01-1405 · Water, Sewer, & Electric charge						240.00	0.00	240.00
01-1404 · Communications								
	Bill	10/13/2023	8535 11 517 0184819	Comcast	acct# 8635115170184819 (10/17/23-11/16/202	272.11		272.11
	Bill	10/31/2023	Oct-23	Caleta Scott	cell phone October	38.07		310.18
	Bill	10/31/2023	Oct-23	Erin Bergman	cell phone Oct 2023	35.00		345.18
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	cell phone	50.23		395.41
	Bill	10/31/2023	Oct-23	Heather Stapleton	Cell phone	40.70		436.11
	Bill	11/07/2023	4988 6591 5972 1480	First National Bank Omaha (Duane)	Metrofax	9.95		446.06
	Bill	11/07/2023	4988 6591 5972 1480	First National Bank Omaha (Duane)	ConstantContact	81.00		527.06
	Bill	11/07/2023	4988 6591 5972 1480	First National Bank Omaha (Duane)	Siteground	200.00		727.06
	Bill	11/07/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Msft	184.00		911.06
	Bill	11/07/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Google domains	48.00		959.06
	Bill	11/07/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Google domains	12.00		971.06
	Bill	11/13/2023	8535 11 517 0184819	Comcast	acct# 8635115170184819 (11/17/23-12/16/202	272.11		1,243.17
	Bill	11/25/2023	Nov-23	Caleta Scott	cell phone Nov 2023	38.07		1,281.24
	Bill	11/30/2023	Nov-23	Heather Stapleton	Cell phone	45.70		1,326.94
	Bill	11/30/2023	Nov-23	Jessica A Blough-Wayles	cell phone	50.23		1,377.17
	Bill	11/30/2023	Nov-23	Erin Bergman	cell phone Nov 2023	35.00		1,412.17
	Bill	12/06/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Msft	184.00		1,596.17
	Bill	12/06/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Google domains	24.00		1,620.17
	Bill	12/06/2023	4988659159721480	First National Bank Omaha (Duane)	Metrofax	9.95		1,630.12
	Bill	12/06/2023	4988659159721480	First National Bank Omaha (Duane)	ConstantContact	81.00		1,711.12
	Bill	12/06/2023	4988659159721480	First National Bank Omaha (Duane)	Siteground	1,023.73		2,734.85
	Bill	12/13/2023	8535 11 517 0184819	Comcast	acct# 8635115170184819 (12/17/23-01/16/202	322.11		3,056.96
	Bill	12/31/2023	Dec-23	Erin Bergman	cell phone Dec 2023	35.00		3,091.96
Total 01-1404 · Communications						3,091.96	0.00	3,091.96
01-1401 · Rents & Leases								
	Bill	10/01/2023	24-05	City of Sebastian	October rent and reimbursement for water, sewe	256.61		256.61
	Bill	10/28/2023	152967	4774 Cubesmart Sebastian	rent 11/18/2023 - 12/17/2023	191.00		447.61
	Bill	11/01/2023	24-31	City of Sebastian	November rent	256.61		704.22
	Bill	11/15/2023	24-69	City of Sebastian	December rent	150.00		854.22
	Bill	12/01/2023	24-52	City of Sebastian	annual rent	19,000.00		19,854.22
Total 01-1401 · Rents & Leases						19,854.22	0.00	19,854.22
Total 01-1400 · Facilities Expenses						23,186.18	0.00	23,186.18
01-1300 · Administrative Costs								
01-1307 · Dues, License & Subscriptions								
	Bill	10/31/2023	Oct-23	Caleta Scott	MileIQ October	5.99		5.99
	Bill	12/06/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	DEO Special District Fee	175.00		180.99
	Bill	12/31/2023	Dec-23	Erin Bergman	Grammerly	144.00		324.99
Total 01-1307 · Dues, License & Subscriptions						324.99	0.00	324.99
01-1305 · Travel								
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 7.5 FP-ADIL	4.91		4.91
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 45.1 Martin County Day	29.55		34.46
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 2.4 FP - ANCA Peer Review	1.57		36.03
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 19.7 FP Seagrass monitoring	12.90		48.93
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 16.8 FP-UD/IFAS Advisory Board	11.00		59.93

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 60.7 IRLNEP - Diversity of Thought	39.76		99.69
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 31.3 Stuart BOCC PW and Tourism	20.50		120.19
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 3.2 FP KFPB Trash Free Waters	2.10		122.29
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 42.6 PSL Parks & Rec	27.90		150.19
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 4.2 FP Downtown Business Assoc	2.75		152.94
	Bill	10/31/2023	Oct-23	Caleta Scott	mileage 22.2 FP-UF/IFAS Discussion 4H	14.54		167.48
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	mileage 212 travel to main office	138.86		306.34
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	mileage 109 Cocoa sea grass monitoring	71.40		377.74
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	mileage 132.2 Sierra Club presentation	86.59		464.33
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	ECERT hotel	91.75		556.08
	Bill	10/31/2023	Oct-23	Jessica A Blough-Wayles	ECERT mileage 361	236.45		792.53
	Bill	10/31/2023	Oct-23	Heather Stapleton	presentation Merritt Island	100.20		892.73
	Bill	10/31/2023	Oct-23	Heather Stapleton	FOS community screening	58.95		951.68
	Bill	10/31/2023	Oct-23	Heather Stapleton	FOS seagrass monitoring	29.54		981.22
	Bill	10/31/2023	Oct-23	Heather Stapleton	Restore Our Shores	39.63		1,020.85
	Bill	10/31/2023	Oct-23	Heather Stapleton	YELC Enviro Career meet up	14.02		1,034.87
	Bill	10/31/2023	Oct-23	Heather Stapleton	Dr Indian Harbour Beach	75.98		1,110.85
	Bill	10/31/2023	Oct-23	Heather Stapleton	Meet Anesti (re task force) then presentation Sp	84.50		1,195.35
	Bill	10/31/2023	Oct-23	Heather Stapleton	Presentation Eugenia Chapter FNPS	14.02		1,209.37
	Bill	10/31/2023	Oct-23	Heather Stapleton	MRC LID Conf at Center for Collaboration	79.26		1,288.63
	Bill	10/31/2023	Oct-23	Heather Stapleton	Envirothon planning meeting	24.82		1,313.45
	Bill	10/31/2023	Oct-23	Heather Stapleton	Four County joint commissions meeting at IRSC	37.01		1,350.46
	Bill	10/31/2023	Oct-23	Heather Stapleton	Make a Green Noise at FIT	49.91		1,400.37
	Bill	10/31/2023	Oct-23	Heather Stapleton	Seminole Rest, Turtle Mound	159.17		1,559.54
	Bill	11/07/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	Racetrac	68.00		1,627.54
	Bill	11/25/2023	Nov-23	Caleta Scott	FP IRL Fest	3.21		1,630.75
	Bill	11/25/2023	Nov-23	Caleta Scott	Vero - commute to HS for Portland	11.46		1,642.21
	Bill	11/25/2023	Nov-23	Caleta Scott	Hobe Sound - Stewardship Ecotourism Listening	56.59		1,698.80
	Bill	11/25/2023	Nov-23	Caleta Scott	FP - Garden club presentation	15.73		1,714.53
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 60.5 Restore our shores	39.62		1,754.15
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 34.50 FOSS Open House	22.60		1,776.75
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 38.9 IRC & Vero Beach High	25.48		1,802.23
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 23.2 IRC EnviroLeaders at Jones Pier	15.20		1,817.43
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 69.2 Brevard County Lagoon Day at Fr	45.33		1,862.76
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 35.2 Donald MacDonald boat ramp	23.06		1,885.82
	Bill	11/30/2023	Nov-23	Heather Stapleton	mileage 38 Envirothon meeting at Marsh Landin	24.82		1,910.64
	Bill	11/30/2023	Nov-23	Jessica A Blough-Wayles	CERF 2 x partial day per diem	111.00		2,021.64
	Bill	11/30/2023	Nov-23	Jessica A Blough-Wayles	CERF 5 x per diem	370.00		2,391.64
Total 01-1305 · Travel						2,391.64	0.00	2,391.64
01-1303 · Insurance								
	Bill	10/01/2023	13739969	Risk Management Associates, Inc	policy # PK FL 1 0054993 23-10 10/1/23 - 10/1/	9,899.00		9,899.00
	Bill	10/01/2023	65835	Preferred Governmental Insurance Trust	Agmt # WC FL1 0054993 22-09 10/1/23-10/1/2	2,000.00		11,899.00
	Bill	10/06/2023	13755397	Risk Management Associates, Inc	policy # (24) 7180-49-51 (10/01/23 - 10/01/24)	373.00		12,272.00
Total 01-1303 · Insurance						12,272.00	0.00	12,272.00
01-1302 · Office Supplies								
	Check	11/06/2023		Deluxe for Business	reorder deposit slips and stamp	247.21		247.21
	Bill	11/07/2023	4988 6591 5972 1480	First National Bank Omaha (Duane)	Amazon	30.42		277.63
	Bill	11/07/2023	4988 6591 5972 1480	First National Bank Omaha (Duane)	Amazon	38.20		315.83
	Bill	11/25/2023	Nov-23	Caleta Scott	MileIQ	5.99		321.82
	Bill	11/30/2023	Nov-23	Heather Stapleton	craft suppies for Brevard Lagoon Day	35.06		356.88
	Bill	11/30/2023	Nov-23	Erin Bergman	food for November meeting	36.03		392.91
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Panera	269.15		662.06
Total 01-1302 · Office Supplies						662.06	0.00	662.06
01-1301 · Postage and Delivery								
	Bill	10/06/2023	4988659180379902	First National Bank Omaha (Kathy)	USPS	6.44		6.44
	Bill	12/06/2023	4988 6562 4962 3197	First National Bank Omaha (Daniel)	USPS	16.99		23.43
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Pack Mart	25.19		48.62
Total 01-1301 · Postage and Delivery						48.62	0.00	48.62
Total 01-1300 · Administrative Costs						15,699.31	0.00	15,699.31
01-1500 · Administrative Services								
01-1506 · Legal Ads								
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Daytona Adv	86.36		86.36
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Gannett	35.28		121.64
	Bill	12/06/2023	4988 6591 8037 9902	First National Bank Omaha (Kathy)	Gannett	55.28		176.92
Total 01-1506 · Legal Ads						176.92	0.00	176.92
01-1501 · Legal Fees								
	Bill	10/31/2023	21614	Torcivia, Donlon, Goddeau & Rubin, PA	legal services Oct 2023	2,197.50		2,197.50
	Bill	12/06/2023	21707	Torcivia, Donlon, Goddeau & Rubin, PA	legal services Nov 2023	1,172.50		3,370.00
	Bill	12/31/2023	21800	Torcivia, Donlon, Goddeau & Rubin, PA	legal services Dec 2023	45.00		3,415.00
Total 01-1501 · Legal Fees						3,415.00	0.00	3,415.00
01-1502 · Management Fees								

	Type	Date	Num	Name	Memo	Debit	Credit	Balance
	Bill	10/31/2023	2023-1341	Special District Services Inc	Management fee October 2023	3,000.00		3,000.00
	Bill	11/30/2023	2023-1678	Special District Services Inc	Management fee November 2023	3,000.00		6,000.00
	Bill	12/31/2023	2023-1928	Special District Services Inc	Management fee December 2023	3,000.00		9,000.00
Total 01-1502 · Management Fees						9,000.00	0.00	9,000.00
01-1503 · Audit Fees								
	Bill	10/30/2023	17815499	Carr Riggs Ingram LLC	Fiscal year 2022-2023 audit progress billing	3,500.00		3,500.00
Total 01-1503 · Audit Fees						3,500.00	0.00	3,500.00
Total 01-1500 · Administrative Services						16,091.92	0.00	16,091.92
Total Expense						439,858.81	31,744.77	408,114.04
Net Income						**439,858.81**	**582,649.96**	**142,791.15**