BOARD OF COUNTY COMMISSIONERS

DATE: September 24, 2015
AGENDA ITEM NO. 23

Consent Agenda ☐ **Regular Agenda** ☑ **Public Hearing** ☐

County Administrator's Signature:

Subject:

Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act Draft Multiyear Implementation Plan submittal to the U.S. Treasury.

Department:

Public Works

Staff Member Responsible:

Kelli Levy, Division Manager

Recommended Action:

I RECOMMEND THE BOARD OF COUNTY COMMISSIONERS (BOARD) APPROVE SUBMITTAL OF THE RESOURCES AND ECOSYSTEMS SUSTAINABILITY, TOURIST OPPORTUNITIES, AND REVIVED ECONOMIES OF THE GULF COAST (RESTORE) ACT DRAFT MULTIYEAR IMPLEMENTATION PLAN (MYIP) TO THE U.S. TREASURY (TREASURY).

Summary Explanation/Background:

Submittal of the draft MYIP will allow the Treasury to review and approve the MYIP. The MYIP submittal includes a funding allocation for four projects through the RESTORE Act's Direct Component in the amount of $1,548,321 to Pinellas County. Once approval is received, the County can submit project specific grant requests to the Treasury.

Since late 2013, County staff has been coordinating an effort for selection of projects to be funded by the RESTORE Act's Direct Component. Previous updates to the Board have included the establishment of a citizen-based working group, the selection and ranking process for project proposals, the requirement of the MYIP submittal to the Treasury, and a summary of the draft MYIP.

The draft MYIP completed a 45-day public review and comment period on August 20, 2015. Seventy-seven public comments were received in the form of letters and emails. All comments were in strong support of one or more of the four proposed projects, with the exception of one in the form of a letter from a local environmental consultant. The consultant supported the infrastructure vulnerability and dune walkover projects, but did not support the two ocean-science projects proposed by the University of South Florida (USF). No revisions were made to any of the proposed projects, as only two were not supported by one individual. The draft MYIP was updated to reflect the public comment process and results.

Fiscal Impact/Cost/Revenue Summary:

Funding Requested:
Project 1: $ 300,000, Infrastructure Resiliency Project proposed by the County
Project 2: $ 233,934, Coastal Ocean Monitoring and Prediction System Ocean-Science Project proposed by USF
Project 3: $ 479,493, Nowcast/Forecast Model Ocean-Science Project proposed by USF
Project 4: $ 534,894, Ft. De Soto Dune Walkovers Project proposed by the County
Total: $1,548,321

Exhibits/Attachments Attached:

Fact Sheet
Draft RESTORE Act MYIP (Appendices to the MYIP and public comments available in Board Records)

FACT SHEET

BCC Agenda Item
The Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast (RESTORE) Act draft Multiyear Implementation Plan (MYIP) for submittal to the U.S. Treasury

Date: September 24, 2015

Multiyear Implementation Plan Review

Working Group and County Commission Review: County staff received input on the MYIP from the Working Group on May 27, 2015. The meeting included a presentation on each of the four proposed projects followed by a question and answer session between Working Group members and each project applicant. Some minor wording revisions resulted and the Working Group unanimously recommended that county staff present the draft MYIP to the County Commission prior to the 45-day public review and comment period. The MYIP was presented to the County Commission on June 23, 2015. The Commission responded favorably to the content of the draft MYIP as well as moving ahead with the required public review and comment period.

Public Comment and Review: Pinellas County solicited public input on the Draft MYIP from June 29 to August 20, 2015. A news release with a web link to the Plan was distributed to local media outlets on June 29, 2015 inviting the public to review and provide comments through August 20, 2015. Notices soliciting comments were sent to each of the county's 24 city government offices and to the Tampa Bay Estuary Program, who in turn, sent it to their list of e-mail addresses that encompasses numerous local and regional governments and environmental agencies as well as local chapters of non-profit organizations. The county also e-mailed notices to individuals with affiliations from over 20 organizations as listed below.

- Audubon Florida Coastal Islands Sanctuary
- Audubon Society of Clearwater & St. Petersburg
- Clearwater Marine Aquarium
- Environmental Protection Commission of Hillsborough County
- FDEP Southwest District office
- Fish & Wildlife Research Institute (St. Petersburg)
- Florida Dept. of Transportation (Tampa office)
- Florida Native Plant Society
- Friends of Brooker Creek Preserve
- Friends of Ft. De Soto Park
- Friends of Island Parks (Honeymoon & Caladesi)
- Gulf Restoration Network
- Keep Pinellas Beautiful
- NOAA National Fisheries Service Southeast Regional Office
- Restore America's Estuaries
- Sierra Club Suncoast Group
- Tampa Bay Water
- U.S. Army Corps of Engineers,
- U.S. Environmental Protection Agency
- United States Geological Service (St. Petersburg)
- University of South Florida Coastal Research Laboratory

Seventy-seven comments were received as either letters or e-mails. There was very strong public support for the projects proposed. All those sending in comments were in favor of one or more MYIP projects with one exception. The one exception was from a local environmental consultant who supported the infrastructure vulnerability/resiliency and dune walkover projects but opposed inclusion of the two USF ocean-science projects (Projects 2 and 3). The four proposed projects are listed below followed by a table summarizing the public comments received for each proposed project.

PROJECT 1. **PINELLAS COUNTY ASSESSMENT OF VULNERABILITY TO THE IMPACTS OF SEA LEVEL RISE & INFRASTRUCTURE RESILIENCY PLAN**
Pinellas County Planning Dept
$300,000

PROJECT 2. **COASTAL OCEAN MONITORING & PREDICTION SYSTEM (COMPS)**
USF College of Marine Science
$233,934

PROJECT 3. **A VERY HIGH RESOLUTION ESTUARY CIRCULATION NOWCAST/FORECAST MODEL FOR TAMPA BAY & VICINITY**
USF College of Marine Science
$479,493

PROJECT 4. **FT. DE SOTO PARK DUNE WALKOVERS**
Pinellas County Office of Management & Budget
$534,894

Table 2. Public comments received in support (Y), and not in support (N), of the proposed MYIP projects.

Comments Received	Source of Comment	Project 1	Project 2	Project 3	Project 4
69	Tampa Bay area members of the National Wildlife Federation	Y	Y	Y	Y
*1	Coalition of conservation organizations	Y	Y	Y	Y
1	Florida Policy Specialist of the National Wildlife Federation	Y	Y	Y	Y
1	Joint letter by: Fish & Wildlife Research Institute (St. Petersburg) of the Florida Fish & Wildlife Conservation Commission, and non-profit (Info Technology)	--	Y	Y	--
1	Boat Builder (Catalina Yachts)	--	Y	Y	--
1	Charter Boat Captain	--	Y	Y	--
1	National Weather Service (Tampa Bay Area) Science & Operations Officer	--	Y	--	--
1	Planning Consultant	Y	--	--	--
1	Local Environmental Consultant	Y	N	N	Y

* Coalition includes: Audubon Florida, Florida Wildlife Federation, National Wildlife Federation, Ocean Conservancy, The Nature Conservancy, and Defenders of Wildlife

Natural Resources Division

D R A F T (revisions in red font)

PINELLAS COUNTY

RESTORE ACT

MULTIYEAR IMPLEMENTATION PLAN

September 2015

EXECUTIVE SUMMARY

The Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act of 2012 (RESTORE Act) allocates 80% of the Clean Water Act penalties from the Deepwater Horizon oil spill to the Gulf Coast Restoration Trust Fund. The Trust Fund is allocated to five funding components including the Direct Component allocation that provides funds directly to each of 23 Gulf coast Florida counties. As of March 2015, Pinellas County had received a Direct Component allocation of $1,548,321 available to fund projects.

Each of the 23 eligible Florida counties, including Pinellas, must submit a Multiyear Implementation Plan (MYIP) with proposed projects to the U.S. Treasury for approval prior to receiving project-specific Direct Component grant funding. This document includes the requirements for Pinellas County's MYIP as published in the RESTORE Act Direct Component Guidance and Application to Receive Federal Financial Assistance, which can be found at http://www.pinellascounty.org/restore/pdf/Treasury-Direct-Component-Guidance_August-2014.pdf. Upon approval of the MYIP by the Treasury, county staff working with the project applicants will submit Direct Component Financial Assistance (grant) Applications to the Treasury for each project proposed in an MYIP.

Pinellas County's MYIP was developed by county staff with assistance from a citizen-based Working Group over several months and meetings since January 2014. The planning effort involved establishing the Working Group; developing county-specific project goals, priorities, and project selection and ranking criteria; and ranking of 17 submitted project proposals by a subcommittee of county staff and Working Group members. Periodic updates were provided to the County Commission throughout MYIP development including an overwhelming majority of public comments in support of the proposed projects. On _____, 2015, the County Commission approved submittal of this MYIP to the U.S. Treasury for their review and comments.

Pinellas County's MYIP includes proposed funding of four projects:

- **Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise & Infrastructure Resiliency Plan,** *by Pinellas County Planning Dept,* **$300,000,**
- **Coastal Ocean Monitoring & Prediction System (COMPS),** *by USF College of Marine Science,* **$233,934,**
- **A Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay & Vicinity,** *by USF College of Marine Science,* **$479,493,**
- **Ft. De Soto Park Dune Walkovers,** *by Pinellas County Office of Management & Budget,* **$534,894.**

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APPENDICES

1.0 RESTORE ACT

The Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act of 2012 (RESTORE Act) was passed by Congress on June 29, 2012 and signed into law by President Obama on July 6, 2012. The RESTORE Act allocates 80% of the Clean Water Act (CWA) penalties from the Deepwater Horizon oil spill to the Gulf Coast Restoration Trust Fund (Trust Fund).

CWA administrative and civil penalties related to the oil spill will go into the Trust Fund based on the following allocation:

- (35%) Direct Component – 35% to be split equally among the five Gulf Coast States. For Florida:
  - 75% will go to the eight disproportionately affected counties (Escambia to Wakulla).
  - 25% will go to the 15 non-disproportionately affected counties, including Pinellas. *(Note: Pinellas County will receive 2.75% of the total amount of Trust Funds coming to Florida.)*

- (30%) Council –Selected Restoration Component – 30% to the Gulf Coast Restoration Council to develop and implement the Comprehensive Plan applicable to all five states.

- (30%) Spill Impact Component – 30% to the Gulf Coast States.
  - Florida will develop a State Expenditure Plan (currently ongoing).

- (2.5%) Research, Observation, and Monitoring Component – 2.5% to the National Oceanic and Atmospheric Administration Gulf Restoration Science Program.

- (2.5%) Centers of Excellence Research Grants Component – For Florida, 0.5% to the Florida Institute of Oceanography to administer competitive grants.

Pinellas County requested and received ideas and proposals for Direct Component funded projects within the County and/or its adjacent bay, coastal and Gulf waters that will benefit the Gulf of Mexico ecosystem. Funded projects will be used to restore the environment and economy of the Gulf coast above and beyond the environmental and economic impacts associated with the oil spill. The total amount of Direct Component funding available to Pinellas in March, 2015 was $1,548,321. Additional funds are expected to become available and will not be known until the amount owed by British Petroleum is determined.

The county has been accepting both project ideas since June 2014, as well as project proposals (Nov 6, 2014 – Feb 6, 2015). To date, 25 project ideas and 17 project proposals have been received. The county continues to accept project ideas (to be

considered for future funding). Project ideas and proposals can be found on the county's RESTORE Act web page: http://www.pinellascounty.org/restore).

2.0 DIRECT COMPONENT MULTI-YEAR IMPLEMENTATION PLAN REQUIREMENTS

The U.S. Department of Treasury (Treasury) Interim Final Rule issuing regulations for the Trust Fund became effective October 14, 2014. The Interim Final Rule can be viewed at: http://www.pinellascounty.org/restore/pdf/Final-Rule-2014-19324.pdf. The Direct Component activity grant application, at a minimum (per 31 CFR Part 34.303, Application procedure) will:

a. Submit a Multiyear Implementation Plan (MYIP) describing each activity it seeks to fund.
b. For each activity, the plan must include a narrative description demonstrating:
    1) the need, purpose, and objectives;
    2) how the activity meets all funding eligibility requirements;
    3) the activity location, budget, milestones, and projected completion dates;
    4) criteria used to evaluate success criteria;
    5) how at least a 45-day public review and comment period was provided; and
    6) how each activity was adopted following public input.
c. Include supporting information in each grant application that:
    1) proposed activities meet statutory eligibility requirements, and
    2) each activity to protect or restore natural resources is based on best available science.
d. For activities carried out before July 6, 2012, the applicant must demonstrate that specific requirements of 31 CFR Part 34 have been satisfied.

3.0 COUNTY ACTIONS

3.1 RESTORE Act Working Group

On November 19, 2013, county staff presented a RESTORE Act update to the Board of County Commissioners (Board) with a summary of Direct Component related activities accomplished to date. Activities included reference to meetings beginning in summer 2012 with an in-house advisory committee of department directors and senior-level staff to develop draft county goals and priorities for RESTORE Direct Component funded projects. In late 2012, staff also met with city managers to provide an update on the RESTORE Act and the anticipated funds expected to be available to the county.

During the November 2013 meeting, the Board approved the composition of a proposed 17-member RESTORE Act Working Group to assist staff to:

1) refine county-specific goals and priorities drafted by the in-house advisory committee,

2) develop a project selection and ranking process, and
3) select and rank a set of recommended projects to county staff to include in the MYIP.

The Board-approved Working Group (Appendix A) was composed of individuals as follows:

- two (2) members from the largest two cities in the county (one member from St. Petersburg, one member from Clearwater),
- one (1) member, the Mayor of the City of Treasure Island, who is also the president of the Barrier Islands Governmental Council (BIG-C) composed of the 11 Pinellas County Gulf coast cities (http://barrierislandscouncil.com/),
- eight (8) members from non-governmental organizations (environmental, fishing-industry, and policy-oriented non-profits),
- three (3) members from academia (one from the University of South Florida (USF), Dept. of Geography, and two from the USF College of Marine Science),
- one (1) member from the Florida Dept. of Environmental Protection, Tampa Bay Aquatic Preserves,
- one (1) member from the Baystar Restaurant Group, and
- one (1) member from a public utility, Tampa Bay Water.

Seven public meetings between county staff and the Working Group were held from January through May 2014 to establish project goals and priorities and a project selection and ranking process. Meeting agendas, handouts, and summaries are available on the county's RESTORE Act web page. Accomplishments by meeting are summarized below:

- January 8, 2014 (full Working Group):
  - A draft Working Group Charter developed by staff was reviewed and discussed.
  - Selection and ranking process for the Southwest Florida Regional Ecosystem Restoration Plan was reviewed and discussed.
  - The Direct Component project goals and priorities were discussed.
- February 5, 2014 (full Working Group):
  - Working Group Charter was approved (see Appendix A).
  - County Attorney's Office staff summarized Sunshine Law.
  - County Planning Department summarized Comprehensive Plan Elements related to RESTORE Act goals.
  - Overarching Direct Component Project Goals were approved.
- March 5, 2014 (full Working Group):
  - County Economic Development Department Director briefed the Working Group on economic development priorities believed to be consistent with RESTORE Act goals, including a proposed small business revolving loan fund concept using RESTORE Act funds.
  - An initial lengthy discussion of project categories and priorities as well as the project selection and ranking process began.

- A Working Group Subcommittee was established to develop draft project priorities and a draft project selection and ranking process for later consideration by the full Working Group.

- March 19, 2014 (Working Group Subcommittee):
  - A set of preliminary project priorities was developed for further refinement by staff to be presented at the next subcommittee meeting.
  - A conceptual selection and ranking process was approved for further refinement by staff to be presented at the next subcommittee meeting.
- April 2, 2014 (Working Group Subcommittee):
  - The subcommittee reviewed, discussed, and approved a set of project priorities as well as a project selection and ranking process for consideration by the full Working Group.
- April 23, 2014 (full Working Group):
  - Working Group approved the RESTORE Act goals and priorities to be recommended to the Board on May 20, 2014.
  - Working Group approved the project selection and ranking process for Board consideration on May 20, 2014.
    - The Board approved the recommended project selection and ranking process at their May 20, 2014 meeting.
- May 28, 2014 (full Working Group):
  - County Attorney's Office provided an overview of the RESTORE Act and the draft U.S. Treasury rules.
  - Discussion and clarification of upcoming Pinellas County RESTORE Act Direct Component proposal submittals and general Working Group concurrence with staff that a 3-month proposal submittal period is appropriate and recommended.

3.2 Project Goals, Eligible Activities, and Priorities

The county goals for Direct Component projects include the five goals of the Gulf Coast Ecosystem Restoration Council's Restoration Plan (Restoring the Gulf Coast's Ecosystem & Economy, August 2013). The required county eligible activities are the same as those required for Direct Component funds per 31 CFR Part 34.201 of the RESTORE Act Interim final rule. The final set of county goals and priorities developed by an in-house county staff advisory committee during 2012 were finalized during a series of staff and Working Group meetings in 2014 as summarized in Section 3.1. The final set of county goals and priorities approved by the Board on May 20, 2014 along with eligible activities for Pinellas County Direct Component funding are shown below.

County RESTORE Act Project Goals

The Pinellas County Board of County Commission has adopted the following goals for use of RESTORE Act Direct Component funds. Projects and programs to implement these goals, to the extent feasible, should (1) provide and/or contribute to countywide and/or regional environmental and/or economic

benefits, and (2) utilize a collaborative approach emphasizing environmental stewardship and sustainable practices.

1. All projects must benefit the Gulf of Mexico ecosystem through one or more of the Gulf Coast Ecosystem Restoration Council's five goals:
    A. Restore and Conserve Habitat,
    B. Restore Water Quality,
    C. Replenish and Protect Living Coastal and Marine Resources,
    D. Enhance Community Resilience,
    E. Build and Revitalize the Gulf Economy.

2. Projects may also support, further, or implement goals as identified in the Future Land Use and Quality Communities; Natural Resource Conservation and Management; Coastal Management; Recreation, Open Space and Culture; and Economic Elements of the Pinellas County Comprehensive Plan http://www.pinellascounty.org/Plan/comp_plan/comp-plan.pdf.

RESTORE Act Eligible Activities

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
2. Mitigation of damage to fish, wildlife, and natural resources.
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring.
4. Workforce development and job creation.
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill.
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.
7. Coastal flood protection and related infrastructure.
8. Promotion of Gulf Coast Region tourism, including recreational fishing.
9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region.
10. Planning assistance.

County RESTORE Act Project Priorities (not in order of priority)

a. Protect and restore native habitats.
b. Provide stormwater quality improvements.
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages.
d. Protect against future environmental and/or economic vulnerability.
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement.
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels.

g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan.
h. Diversify and improve the economy including tourism.
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts.

3.3 Project Selection and Ranking Criteria

The project selection and ranking criteria (Appendix B) were drafted by a Working Group subcommittee during two meetings held on March 19, 2014, and April 2, 2014. The county Direct Component project goals and priorities were incorporated into the selection and ranking criteria. Eleven criteria were selected with a point range assigned to each for a total number of possible points of 6-27.

The criteria are listed below.

1. Value of project in meeting Restoration Council goal(s).
2. Number of Restoration Council goals clearly addressed.
3. Value of project in meeting RESTORE Act eligible activity(ies).
4. Number of RESTORE Act eligible activities clearly addressed.
5. Value of project in meeting RESTORE Act Pinellas County priority(ies).
6. Number of RESTORE Act county priorities clearly addressed.
7. Provide countywide and/or regional benefits?
8. Utilizes a collaborative approach incorporating partnerships.
9. Will strongly support and further County Comprehensive Plan Element goal attainment as identified in the overarching project goals.
10. Long-term project benefits.
11. Matching Funds.

3.4 Solicitation of Project Ideas

Beginning in July 2014, the county solicited input on the RESTORE website for any person to submit one or more project ideas to county staff. The following link directs individuals to submit a project idea: http://www.pinellascounty.org/restore/intro.htm. As of February 6, 2015, 25 project ideas have been submitted to the county. County staff did not develop any of the ideas into project proposal submittals. The main reasons were the lack of detail in the idea description, lack of available funds, and that staff could not support funding the project. The project idea web portal remains active and staff periodically checks for new submittals.

3.5 Project Proposal Submittals and Ranking Process

County staff met with the working on October, 22, 2014 to provide an update on RESTORE Act activities and potential Direct Component project submittals by the County. The meeting also included a discussion of project ideas submitted to the county and the upcoming 90-day project proposal submittal process.

3.5.1 Proposals Received

The county received 17 project proposals during a three-month submittal window from November 6, 2014 through February 6, 2015. The invitation to submit proposals was posted on the county's RESTORE Act web page, sent to local media outlets through a "News Release" from the county's Communications department, and sent to every city manager. Those submitting projects responded to 29 questions (see Appendix C). Twelve projects were from cities, two from Pinellas County, two from the University of South Florida's College of Marine Science, and one from the Tampa Bay Estuary Program. The funding requested from all projects totaled $9,289,082 compared to $1,548,321 available for projects. Project proposals can be viewed at: http://www.pinellascounty.org/restore/proposals.htm.

3.5.2 Ranking Process

A ranking subcommittee consisting of five Working Group members and three county staff members met twice (March 16 and 23, 2015) to rank the projects based on the 11 criteria listed in Section 3.3. Prior to ranking projects on March 16, 2015, the subcommittee was given a set of guidelines (Appendix D). One guideline stipulated that projects not achieving at least a mean score of 12.0 may not be recommended for funding. The final mean score for each of the 17 project proposals can be viewed in Appendix E.

3.5.3 Projects Recommended for Funding

The subcommittee recommended five projects for funding with the two highest ranked projects to be fully funded, and the third through fifth ranked projects for partial funding as shown in the Table 1 (Project Rankings and Proposed Funding Levels).

The number one ranked project by the subcommittee was a proposal by the Tampa Bay Estuary Program (TBEP) to fund $100,000 of a future Tampa Bay Environmental Restoration Fund (TBERF) project. The U.S. Treasury informed county staff that they would not accept a MYIP unless the project is identified and details are clearly described, such as specific milestones, costs, and success criteria. Consequently, staff could not recommend funding this project since the specific project would not be known until 2016 after the TBERF project selection approval process is complete. Given this information, it became clear this proposed project could not be included in the MYIP.

The subcommittee recommended funding amount of $476,493 for the fourth ranked project was adjusted slightly. Staff recalculated a revised funding level of $479,493 to align with the ranking subcommittee's recommendation to fund the first two phases (years 1-3) and to adjust the "administrative" percentage from 10% to 3% per the RESTORE Act.

The subcommittee's funding level recommended for all projects, excluding the top ranked TBEP project, still exceeded the available funding amount of $1,548,321. Consequently, staff lowered the fifth ranked project's funding recommendation from $617,402 to $534,894 such that the total funding available for the Direct Component allocation was not exceeded. Full proposals of these five projects can be viewed in Appendices F-1, F-2, F-3, F-4, and F-5.

Table 1. Project Rankings and Proposed Funding Levels

RANK	PROJECT NAME *Submitting Organization*	MEAN SCORE	FUNDING REQUEST $	SUBCOMMITEE FUNDING RECOMMENDATION $	STAFF REVISED FUNDING RECOMENDATION $
1	**2016 TAMPA BAY ENVIRONMENTAL RESTORATION FUND** *Tampa Bay Estuary Program*	25.57	100,000	100,000	Does not meet MYIP Treasury requirements
2	**PINELLAS COUNTY ASSESSMENT OF VULNERABILITY TO THE IMPACTS OF SEA LEVEL RISE & INFRASTRUCTURE RESILIENCY PLAN** *Pinellas County Planning Dept.*	22.00	300,000	300,000	300,000
3	**COASTAL OCEAN MONITORING & PREDICTION SYSTEM (COMPS)** *USF College of Marine Science*	21.86	415,910	233,934	233,934
4	**A VERY HIGH RESOLUTION ESTUARY CIRCULATION NOWCAST/FORECAST MODEL FOR TAMPA BAY & VICINITY** *USF College of Marine Science*	21.14	942,646	476,493	479,493
5	**FT. DE SOTO PARK DUNE WALKOVERS** *Pinellas County Office of Management & Budget*	20.80	1,117,043	617,042	534,894
	TOTAL	--	**2,875,599**	**1,730,469**	**1,548,321**

With the exclusion of the Tampa Bay Estuary Program submittal, county staff is recommending 4 projects for funding as listed below.

PROJECT 1. **PINELLAS COUNTY ASSESSMENT OF VULNERABILITY TO THE IMPACTS OF SEA LEVEL RISE & INFRASTRUCTURE RESILIENCY PLAN**
Pinellas County Planning Dept
$300,000

PROJECT 2. **COASTAL OCEAN MONITORING & PREDICTION SYSTEM (COMPS)**
USF College of Marine Science
$233,934

PROJECT 3. **A VERY HIGH RESOLUTION ESTUARY CIRCULATION NOWCAST/FORECAST MODEL FOR TAMPA BAY & VICINITY**
USF College of Marine Science
$479,493

PROJECT 4. **FT. DE SOTO PARK DUNE WALKOVERS**
Pinellas County Office of Management & Budget
$534,894

3.6 Multiyear Implementation Plan Review

3.6.1 Working Group and County Commission Review

County staff received input on the MYIP from the Working Group on May 27, 2015. The meeting included a presentation on each of the four proposed projects followed by a question and answer session between each project applicant and Working Group members. Some minor wording revisions resulted and the Working Group unanimously recommended that county staff present the draft MYIP to the County Commission prior to the 45-day public review and comment period.

The MYIP was presented to the County Commission on June 23, 2015. The Commission responded favorably to the content of the draft MYIP as well as moving ahead with a 45-day period for public review and comment of the MYIP.

3.6.2 Public Comment and Review

Pinellas County solicited public input on the Draft Multiyear Implementation Plan from June 29 to August 20, 2015. A news release with a web link to the Plan was distributed to local media outlets on June 29, 2015 inviting the public to review and provide comments through August 20, 2015. Notices soliciting comments were sent to each of the county's 24 city government offices and to the Tampa Bay Estuary Program's listserv e-mail addresses that encompasses numerous local and regional governments and environmental agencies as well as local chapters of non-profit organizations. The county also e-mailed notices to individuals including affiliations from over 20 organizations as listed in Section 5.2.

Seventy-seven comments were received as either letters or e-mails. There was very strong public support for the projects proposed. All those sending in comments were in favor of one or more MYIP projects with one exception. The one exception was from a local environmental consultant who supported the resiliency and dune walkover projects (Projects 1 and 4 as listed above in Section 3.5.3) but opposed inclusion of the two USF ocean-science projects (Projects 2 and 3). A table summarizing the comments received is shown below.

Table 2. Public comments received in support (Y), and not in support (N), of the proposed MYIP projects. See Section 3.5.3 above for full project name and proposed funding amount.

Comments Received	Source of Comment	Project 1	Project 2	Project 3	Project 4
69	Tampa Bay area members of the National Wildlife Federation	Y	Y	Y	Y
*1	Coalition of conservation organizations	Y	Y	Y	Y
1	Florida Policy Specialist of the National Wildlife Federation	Y	Y	Y	Y
1	Joint letter by: Fish & Wildlife Research Institute (St. Petersburg) of the Florida Fish & Wildlife Conservation Commission, and non-profit (Info Technology)	--	Y	Y	--
1	Boat Builder (Catalina Yachts)	--	Y	Y	--
1	Charter Boat Captain	--	Y	Y	--
1	National Weather Service (Tampa Bay Area) Science & Operations Officer	--	Y	--	--
1	Planning Consultant	Y	--	--	--
1	Local Environmental Consultant	Y	N	N	Y

* Coalition includes: Audubon Florida, Florida Wildlife Federation, National Wildlife Federation, Ocean Conservancy, The Nature Conservancy, and Defenders of Wildlife

3.6.3 County Commission Approval of MYIP

On _____, 2015, the County Commission approved submittal of this MYIP to the U.S. Treasury for their review and comments.

4.0 RESTORE ACT DIRECT COMPONENT MULTIYEAR PLAN MATRIX

The RESTORE Act Direct Component Guidance and Application to Receive Federal Financial Assistance (August 2014) developed by the U.S. Treasury requires the submission of MYIP matrix. The MYIP matrix can be found in Appendix G and is a required deliverable as part of the MYIP submittal to the U.S. Treasury.

5.0 RESTORE ACT DIRECT COMPONENT MULTIYEAR PLAN NARRATIVE

As with the MYIP Matrix, this Section covering the "RESTORE Act Direct Component Multiyear Plan Narrative" for the four proposed projects follows the U.S. Treasury's Direct Component Guidance Application to Receive Federal Assistance. The RESTORE Act Direct Component Multiyear Plan Narrative form is in Appendix H and is a required deliverable as part of the MYIP submittal to the U.S. Treasury.

A. General Information

Eligible Applicant Name: Pinellas County Government

POC Name: Andrew P. Squires
POC Title: Environmental Services Manager
POC Email: ASquires@pinellascounty.org
POC Phone: (727) 464-4633

B. Provide Brief Narrative That Demonstrates:

5.1 The need, purpose, and objectives for each activity, including a detailed description of each activity.

Project 1: Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan (funds requested: $300,000)

The ranking subcommittee ranked this project second highest with a mean score of 22.00 and recommended it for full funding at $300,000 as proposed. The first ranked project did not meet MYIP guidelines as discussed in Section 3.5.3.

General Project Description:

Essential elements of the project include building upon previous resiliency planning work performed in the region, eventually facilitating the systematic incorporation of climate risk and resiliency information into local and countywide infrastructure planning and investment processes. Specifically, this project will involve, among several tasks, the creation of a Geographic Information System (GIS) that utilizes an agreed-upon sea level rise projection methodology for various time scales and scenarios, the latest topographic data (DEM/LiDAR) and the location of existing and planned transportation, utilities and public safety infrastructure in Pinellas County [i.e., for the unincorporated county, municipal data and relevant infrastructure data from other stakeholders (e.g., FDOT)]. This GIS-based decision support tool will be used to generate scenarios related to timelines and change, and facilitate assessment of realistic adaptation and mitigation strategies. Additionally, the planned economic analysis will facilitate long-

term/sustainability and cost-benefit-driven decision-making and prioritization by local governments, including the opportunity to identify key projects that may be eligible for infrastructure sales tax funding.

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POC Organization:	Pinellas County Planning Department
POC Title:	Planning Division Manager
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POC Phone:	727-464-8200

Project Need: To fill an information gap in the ability to assess the vulnerability of significant county existing and planned infrastructure assets to climate change and sea level rise and to formulate adaptation/mitigation strategies to better protect those assets.

Project Purpose: To develop a comprehensive geographic information system-based decision support tool to generate scenarios related to timelines and change, and to help assess realistic adaptation and mitigation strategies.

Project Objectives:

- To generate collaborative and ongoing momentum for countywide resiliency planning, including arriving at a common understanding and agreement on critical infrastructure vulnerabilities.
- To build on the post-disaster redevelopment planning work done to date and begin to link sea level and climate planning to other planning work (e.g., the Local Mitigation Strategy).
- To broadly assess the economic impact of certain infrastructure losses and scenarios in order to better plan and prioritize resiliency, mitigation and adaptation investments.
- To create a robust countywide GIS network(s) and database supporting resiliency and infrastructure planning.
- To better facilitate the allocation of finite capital over time to the key infrastructure needed to sustain (both economically and environmentally) the Pinellas community, using a systems method of planning and analysis.
- To facilitate the identification of adaptation strategies for incorporation into the Pinellas County Metropolitan Planning Organization's 2040 Long Range Transportation Plan.
- To support better understanding of the connection between infrastructure resiliency and economic development, helping to facilitate policy development and the prioritization of certain public investments, including the identification of key resiliency projects that could be funded by a Penny for Pinellas extension.

For detailed project description see Appendix F-2 (Full Proposal). The project location is the Pinellas County Peninsula comprised of 24 cities as shown in Appendix G.

Project 2: Coastal Ocean Monitoring and Prediction System (COMPS) (funds requested: $233,934)

The ranking subcommittee ranked this project third highest with a mean score of 21.86 and recommended it for partial funding at $233,934 for the first two years of the proposed 5-year project. The applicant has agreed to proceed with the recommended funding level that will result in a fully tested and functioning COMPS. A revised budget proposed for this project is shown on the last two pages of Appendix F-3.

General Project Description:

The College of Marine Science (CMS), University of South Florida (USF) initiated a Coastal Ocean Monitoring and Prediction System (COMPS) in 1998 to observe and predict coastal ocean phenomena of societal importance. COMPS observations are of surface meteorology, ocean currents, waves, temperature and salinity using moored buoys, HF-radar and robotic gliders, all supporting predictive models. COMPS utilizes a systems science approach to describing and understanding coastal ocean phenomena through the coordination of observations with models. Models are necessary as the coastal ocean is both vast and three dimensional, and observations alone are impractical to fully describe it. Similarly, models without observations for data assimilation, initialization, boundary conditions and veracity testing are insufficient. Thus, to describe the coastal ocean one must employ science based physical models coordinated with real, sustained observations. This is the essence of COMPS.

The presently proposed project will solidify funding and return to functioning status one observing station that is part of the COMPS system. This station is located 1 mile offshore of Pass-a-Grille Beach at the entrance to Pass-a-Grille channel. Measured will be winds, waves, currents, temperature, relative humidity, barometric pressure, sea surface temperature and salinity, and these data will be reported to the general public, NOAA and other agencies in near real-time via the internet and GTS. The funding request will cover years 1 and 2 of what was originally a request for 5 years of funding. New equipment will be purchased, installed, and tested in year 1, and the system will be in full operational mode throughout year 2. The intention is to sustain these measurements long-term. Given this initial proof of concept and the public utilization of data at such a very active point of access to the Gulf of Mexico, sustaining funds will be sought through other related programs.

This Pass-a-Grille Channel site, as part of the larger COMPS, coordinated observing and modeling system, will provide information necessary to address a variety of societally important matters. Examples of previous accomplishments and ongoing work include coastal inundation by hurricane storm surge and waves, harmful algal bloom tracking and prediction, explanations of gag grouper recruitment, transport of spilled oil, search and rescue, explaining water quality variations, informing fishermen regarding ocean conditions conducive to successful outings and informing the general public on

ocean and atmosphere conditions. The waves and currents data will also be germane to any future sediment transport and beach erosion studies.

POC Name:	Dr. Robert Weisberg
POC Organization:	University of South Florida, College of Marine Science
POC Title:	Distinguished University Professor
POC Email:	weisberg@usf.edu
POC Phone:	727-553-1568

Project Need: Provide real time observations of ocean currents, waves, tides, temperature, salinity and atmospheric conditions needed by tourists, beachgoers, recreational and commercial boaters, county planners, emergency managers, weather forecasters and fishermen.

Project Purpose: These observations serve a variety of needs ranging from informing pleasant outings, providing for safe and efficient navigation, informing emergency managers in the event of severe weather events, facilitating inundation, beach erosion and beach water quality studies; providing information for weather broadcasters and commercial marine weather product providers. In addition to serving the aforementioned stakeholder's needs, this best science approach will enable researchers at USF to continue to address ecosystem related issues and provide improved environmental stewardship.

Project Objectives:

- Establish and sustain a Pass-a-Grille Channel ocean-atmosphere observing site.
- Provide data in real time to the general public, NOAA and other agencies and the private sector.
- Utilize the data as part of the COMPS system, a coordinated ocean observing and modeling enterprise aimed at understanding the workings of the west Florida coastal ocean and the ecosystems services that it provides.
- Leverage this important data set to secure additional funding aimed at maintaining the station into the future.

For detailed project description see Appendix F-3 (Full Proposal). The project location map of buoy site C21 is shown in Appendix G.

Project 3: Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity (funds requested: $479,493)

The ranking subcommittee ranked this project fourth highest with a mean score of 21.14 and recommended it for partial funding at $479,493 for the first three years of a proposed 5-year project. The applicant has agreed to proceed with the recommended

funding level for the first three years of the project that will allow the Nowcast/Forecast Model to become fully operational. A revised budget proposed for this project is shown on the last three pages of Appendix F-4.

General Project Description:

This project will implement and utilize a very high resolution and accurate numerical circulation model for the Tampa Bay estuary and vicinity [including the Intra-Coastal Waterway (ICWW), Boca Ciega Bay, Tampa Bay, Sarasota Bay and all of the major inlets and waterways connecting these with the Gulf of Mexico]. The model (developed by the applicant) exists and is vetted through publications in refereed professional journals. The next step is to set it up as an automated, daily nowcast/forecast publicly available on the internet. Applications include safe and efficient navigation, water quality, larval fish recruitment, harmful algal blooms and other ecological phenomena. What makes this model unique is its fine resolution (20m), enabling the inclusion of all relevant conveyances of mass. For instance, no other estuary model includes the ICWW and all of the relevant inlets that are necessary to properly address the flushing of water, the three dimensional distribution of water properties and the transport that are important for pollution and water quality studies. As an example, consider the 1993 fuel oil spill in lower Tampa Bay. No tools existed then to predict how that oil would move once it left the bay and how and when it would be transported into Blind Pass and Johns Pass. This model has that capability. Another example is a recent spill from a pipe break that sent raw sewage into Boca Ciega Bay. An automated nowcast/forecast model with daily updates would provide pertinent information to emergency response personnel specifically tailored to these types of emergencies.

Other models exist, for instance the NOAA TBOFS. However, the approach here is demonstrated to be more accurate and more complete, in part because of higher resolution and hence inclusion of the various inlets and waterways linking the adjacent Gulf of Mexico with Tampa Bay, Sarasota Bay and the ICWW. This model is also supported by the larger scale COMPS system that includes a larger scale West Florida Coastal Ocean Model, into which this Tampa Bay regional model will be nested. By virtue of this approach the Tampa Bay regional model will include more realistic forcing of Tampa Bay by the adjacent Gulf of Mexico, which greatly impacts Tampa Bay water quality.

Our applications go beyond the estuarine circulation driven by tides, winds and rivers, or water quality considerations. Estuary and coastal ocean ecology begins with the uniting of nutrients with light, fueling primary productivity and thence all subsequent trophic level interactions. The coastal ocean circulation determines the evolution of the water properties in which organisms live, including nutrients and pollutants. The deep ocean connects with the continental shelf, the continental shelf connects with the estuaries,

and it is through these connections that ecosystem services derive. If we are to manage our coastal ocean resources and predict the consequences of either human-induced or natural occurrences then we must know how the overarching system works. This requires a comprehensive, multidisciplinary set of observations, coordinated with science-based models for integration, hypotheses testing and prediction. Proposed herein is that modeling framework which properly links the estuaries with the adjacent ocean.

Finally, this project will bear directly upon the objectives of Project 1 (page 8): **"Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan."** Our high resolution models (currents and waves) will be germane to any future studies of inundation and damage by hurricane storm surge and waves, thereby providing effective regional planning tools.

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POC Title:	Distinguished University Professor
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Project Need:	A high resolution numerical circulation model of Tampa Bay and vicinity that accurately includes all of the inlets, channels and waterways that connect Tampa Bay, Sarasota Bay, Boca Ciega Bay and the ICWW with the adjacent Gulf of Mexico and with each other.
Project Purpose:	Accurately determine the circulation of water and water properties for Tampa Bay and vicinity by implementing a newly developed, professionally vetted, state-of-the-art numerical circulation model along with a coupled wave model.

Project Objectives:

- Implement the existing model (already run and published in hindcast mode for the period September to December 2001) and perform hindcast tests through the present time.
- Nest the Tampa Bay vicinity model into the COMPS West Florida Coastal Ocean Model (that already provides daily nowcast/forecasts).
- Implement the nested model as a nowcast/forecast model for Tampa Bay and vicinity.
- Add a nowcast/forecast wave model.
- Make all of these model products available to the general public and the agencies via the internet and engage in public outreach and education activities.
- Develop societally relevant, ecosystems services and sustainability applications.

- Use as an educational tool for the training of graduate students.
- Provide information necessary for engineering studies. Some possible examples could include channel modifications, protective structures, dredge spoil islands, inlet modifications and beach renourishments

For detailed project description see Appendix F-4 (Full Proposal). The geographic area impacted by the model is shown in Appendix G.

Project 4: Ft. De Soto Park Dune Walkovers (funds requested: $534,894)

The ranking subcommittee ranked this project fifth highest with a mean score of 20.80 and recommended it for partial funding at $617,042 to construct two walkovers that were considered the highest priority to construct by the applicant and possibly a third walkover depending upon the bid amounts received. County staff lowered the recommended funding level to $534,894 so as not to exceed the total Direct Component funding available. The applicant has agreed to the reduced funding level and has shortened the dune walkover lengths to reduce the cost as recommended by the ranking subcommittee. The requested funds may allow for a third walkover to be constructed depending on the bid prices. A revised budget and responses to the ranking subcommittee recommendations are shown on the last two pages of Appendix F-5.

General Project Description:

This three-year project proposes the design, permitting, and construction of a series of dune walkovers along a stretch of up to 1.5 miles of beach at Ft. De Soto Park, from the Gulf Pier parking lot northward to North Beach parking lots. The number and length of dune walkovers to be installed can be adapted to the available funding and cost of the project. In an unrealistic scenario of unlimited funding a total of at least 12 walkovers would be constructed. Due to the long distances a dune walkover must be constructed to carry pedestrian traffic at the project site, it is more likely that 5 may be constructed as funding becomes available. The current funding at $534,894 is expected to allow construction of at least 2 walkovers.

Project milestones and approximate duration for each:

- Prepare scope of services: 3 months
- Design: 6 months
- Permitting: 12 months
- Prepare bid package: 3 months
- Construction: 12 months
- Project wrap-up/as-built 1 month

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POC Phone: 727-582-2521

Project Need:

- Construction of dune walkovers at Ft. De Soto Park to protect fragile dune system while allowing pedestrian access to beach.

Project Purpose:

- Restore and conserve habitat
- Replenish and protect living coastal and marine resources
- Enhance community resilience

Project Objectives:

- Direct pedestrian traffic to dune walkovers
  - Prevent damaging pedestrian traffic on delicate dune system
- Decrease dune erosion
  - Reduce tidal overwash
  - Reduce floodwater access
  - Improve infrastructure sustainability
    - Protection via strong dune system
- Allow dunes to rebuild over time
  - Improved shorebird nesting areas
  - Improved sea turtle nesting areas
- Reduce pedestrian impact to wildlife in area

For detailed project description see Appendix F-5 (Full Proposal). The project location maps are shown in Appendix G.

5.2 How the applicant made the multiyear plan available for 45 days for public review and comment, in a manner calculated to obtain broad-based participation from individuals, businesses, Indian tribes, and non-profit organizations, such as through public meetings, presentations in languages other than English, and postings on the Internet. The applicant will need to submit documentation (e.g., a copy of public notices) to demonstrate that it made its multiyear plan available to the public for at least 45 days. In addition, describe how each activity in the plan was adopted after consideration of all meaningful input from the public.

Section 5.2 to be completed after 45-day public review period and prior to MYIP submittal to the Treasury.

Pinellas County solicited public input on the Draft Multiyear Implementation Plan from June 29 to August 20, 2015. A news release with a web link to the Plan was distributed to local media outlets on June 29, 2015 inviting the public to review and provide comments through August 20, 2015. Notices soliciting

comments were sent to each of the county's 24 city government offices and to the Tampa Bay Estuary Program's listserv e-mail addresses that encompasses numerous local and regional governments and environmental agencies as well as local chapters of non-profit organizations. The county also e-mailed notices directly to individuals from the following organizations:

- Audubon Florida Coastal Islands Sanctuary
- Audubon Society of Clearwater & St. Petersburg
- Clearwater Marine Aquarium
- Environmental Protection Commission of Hillsborough County
- FDEP Southwest District office
- Fish & Wildlife Research Institute (St. Petersburg)
- Florida Dept. of Transportation (Tampa office)
- Florida Native Plant Society
- Friends of Brooker Creek Preserve
- Friends of Ft. De Soto Park
- Friends of Island Parks (Honeymoon & Caladesi)
- Gulf Restoration Network
- Keep Pinellas Beautiful
- NOAA National Fisheries Service Southeast Regional Office
- Restore America's Estuaries
- Sierra Club Suncoast Group
- Tampa Bay Water
- U.S. Army Corps of Engineers,
- U.S. Environmental Protection Agency
- United States Geological Service (St. Petersburg)
- University of South Florida Coastal Research Laboratory

A copy of the news release issued June 29, 2015 and the e-mail sent to the above listed agencies can be viewed in Appendix I.

Due to overwhelming support for the proposed MYIP projects as summarized above in Section 3.6.2, no activities in the proposed projects, as proposed prior to receiving public comment, were revised. Sections 3.6.2 and 3.6.3 were added to the draft MYIP to summarize the public comment process and results and to document the final Board of County Commission approval to submit the draft MYIP to the U.S. Treasury.

5.3 How each activity included in the applicant's multiyear plan matrix is eligible for funding and meets all the requirements under the RESTORE Act.

Project 1: Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan ($300,000)

Eligible activities addressed:

1 – Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
2 - Mitigation of damage to fish, wildlife, and natural resources.
4 - Workforce development and job creation.
6 - Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.
7 - Coastal flood protection and related infrastructure.
8 - Promotion of Gulf Coast Region tourism, including recreational fishing.

Eligible Activities include:

- **Eligible Activity 1.** Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.

Response: This is anticipated to be a side benefit of enhancing community resilience. The restoration and protection of natural resources can provide important buffers to help protect coastal infrastructure.

- **Eligible Activity 2.** Mitigation of damage to fish, wildlife, and natural resources.

Response: See above. The mitigation of damage to fish, wildlife and natural resources would be a side benefit of adaptive or mitigative strategies that relied on enhancement of natural resources to help protect coastal infrastructure.

- **Eligible Activity 4.** Workforce development and job creation.

Response: A more resilient community leads to less financial risk for companies to invest in the area and do business here. This will support investment in workforce development and job creation. In addition, some of the mitigation activities themselves will provide job creation.

- **Eligible Activity 6.** Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.

Response: More resilient infrastructure will better protect ecological resources (e.g. stormwater management systems), lead to a more sustainable economy and directly create jobs (e.g. those projects to make infrastructure more resilient will require investment and jobs – some high paying although temporary).

- **Eligible Activity 7.** Coastal flood protection and related infrastructure.

Response: This is the primary eligible activity. The project will identify at-risk and critical infrastructure subject to sea level rise and inundation threats, as well as potential adaptive and mitigative strategies.

- **Eligible Activity 8.** Promotion of Gulf Coast Region tourism, including recreational fishing.

Response: A more resilient community, and in particular strategies for a more resilient transportation system, will lead to a more sustainable tourist economy.

Project 2: Coastal Ocean Monitoring and Prediction System (COMPS) ($233,934)

Eligible activities addressed:

1 – Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
2 - Mitigation of damage to fish, wildlife, and natural resources.
4 - Workforce development and job creation.
7 - Coastal flood protection and related infrastructure.
8 - Promotion of Gulf Coast Region tourism, including recreational fishing.

The proposed projects addresses eligible activities 1, 2, 4, 7 and 8 as listed in Section 3.

- **Eligible Activities 1 & 2.** (1) Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches and coastal wetlands; and (2) Mitigation of damage to fish, wildlife and natural resources

Response: The coastal ocean circulation provides the underpinning for ecosystem functionality. Ecology is not simply biology. It is multidisciplinary, combining all of the processes that promote organism success. This begins with the circulation physics, which connects the deep ocean to the continental shelf and the shelf with the estuaries. Nutrients that fuel primary productivity are transported by the circulation. The circulation and waves are also responsible for beach morphology, flushing of the coastal wetlands and estuaries and determining beach water quality. All of the RESTORE Act environmental goals are critically tied to the coastal ocean circulation.

- **Eligible Activity 4**. Workforce development and job creation

Response: COMPS employs trained technical and computer science staff; trains graduate students and post-doctoral associates and provides undergraduate intern opportunities. Thus it contributes directly to the present

workforce and provides STEM training for the future workforce. Indirectly it also adds significantly to the safety and enjoyment of recreational and tourism activities, thereby positively affecting workforce enhancements throughout Pinellas County.

- **Eligible Activity 7**. Coastal flood protection and related infrastructure.

Response: This is the primary eligible activity. The buoy site at Pass-a-Grille is in place but not functioning due to a lack of funding. Bringing the waves and meteorological sensors back on line will contribute to the continuation of storm surge and wave studies that have been central to COMPS research activities for the past decade. These works are published in peer reviewed journals (see list of relevant publications) and have been the subject of numerous briefings to emergency management and private citizen groups on the risks from hurricane storm surge and waves. This work is vital to identifying regions vulnerable to inundation during severe weather events and as such is critical information for emergency managers and city planners.

- **Eligible Activity 8**. Promotion of Gulf Coast Region tourism, including recreational fishing

Response: As a real-time station reporting oceanographic and meteorological variables, particularly wave height and wind velocity, the station will be a useful online information tool. Beach tourism, recreational and commercial fishing and sailing will benefit from beach wave conditions and sea state for safe marine outings. Securing the requested funding will also allow the COMPS program to pursue the development of a real-time app that will greatly increase the accessibility and profile of the COMPS coastal ocean observations.

Project 3: Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity ($479,493)

Eligible activities addressed:

1 – Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
2 - Mitigation of damage to fish, wildlife, and natural resources.
7 - Coastal flood protection and related infrastructure.
8 - Promotion of Gulf Coast Region tourism, including recreational fishing.

- **Eligible Activities 1 & 2**. (1) Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches and coastal wetlands; and (2) Mitigation of damage to fish, wildlife and natural resources

Response: Eligible Activity "1" as listed above is the primary eligible activity. As in addressing Question 7, goals A, B and C (see Appendix F-4) we reiterate that coastal circulation is the underpinning for ecosystem functionality. Ecology is multidisciplinary, it is biology and it is chemistry and it is most certainly the physics of circulation which connects the deep ocean to the continental shelf and the shelf with the estuaries. Circulation plays a foundational role in ecosystem dynamics, habitat accessibility, beach morphology and the flushing of coastal wetlands. Larvae, nutrients and pollutants are advected with currents making the ability to understand and predict circulation dynamics necessary to any complete discussion of these RESTORE Act activities.

- **Eligible Activity 7**: Coastal flood protection and related infrastructure

Response: The proposed model has been shown to be effective at determining the potential for damage and destruction of hurricane storm surge and waves in hindcast mode. An automated nowcast/forecast model with daily updates as proposed would provide pertinent information to emergency management personnel.

- **Eligible Activity 8**: Promotion of Gulf Coast Region tourism, including recreational fishing

Response: Recreational fishing for shallow water gamefish within Tampa Bay is extremely popular and constitutes not only a large percentage of charter and personal fishing outings but also numerous tournaments throughout the year. A high resolution, publically accessible circulation model is not only informative to the experienced fisherman but also encourages safe boating through knowledge of local currents and present conditions.

Project 4: Ft. De Soto Park Dune Walkovers ($534,894)

Eligible activities addressed:

1 – Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
2 - Mitigation of damage to fish, wildlife, and natural resources.
4 - Workforce development and job creation.
6 - Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.
8 - Promotion of Gulf Coast Region tourism, including recreational fishing.

- **Eligible Activity 1**: Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.

Response: This is the primary eligible activity. The installation of dune walkovers directly protects dune ecosystems and their diversity. This allows for the continuing entrapment of sand and development of dunes which continues to protect the natural resources in the project site. As a result, federally protected sea turtles and state protected shorebirds can continue to nest in their chosen habitats; thus positively impacting marine wildlife.

- **Eligible Activity 2**: Mitigation of damage to fish, wildlife, and natural resources.

Response: The installation of dune walkovers prevents the continuing damage by pedestrians to the dune habitat. By preventing further damage, this ecosystem is provided the opportunity to naturally recover and mitigate the damage caused by pedestrians. Allowing dunes to restore and further develop into a healthy well-stabilized system also provides a measure of mitigation reducing potential future storm damage.

- **Eligible Activity 4:** Workforce development and job creation.

Response: The construction of the dune walkovers will create up to 4 jobs in the short term. The length of time is dependent upon the number of walkovers able to be constructed for the requested funding (how competitively priced the construction bids end up). Job retention will be enhanced as the walkovers will require some measure of maintenance for public safety.

- **Eligible Activity 6**: Infrastructure projects benefitting the economy or ecological resources, including port infrastructure of Gulf Coast Region tourism, including recreational fishing.

Response: This project is an infrastructure project as walkovers must be constructed. A competitive bid process will be undertaken to acquire the best contractor at the best price for the work. This benefits the economy by placing work into the region, thus offering construction jobs that may not have previously existed. The infrastructure project provides ecological benefits because it protects the dune habitat, wildlife nesting areas and indirectly helps protect upland infrastructure.

- **Eligible Activity 8**: Promotion of Gulf Coast Region tourism, including recreational fishing.

Response: Promotion of Gulf Coast Region tourism may not initially sound like it is a benefit of this project, but it is. The installation of dune walkovers helps with disabled access to the beach and can be used in promoting beach access for this target audience. Ft. De Soto Park also provides beach wheelchairs for use and the walkovers will provide much needed access to the beach itself.

5.4 How the applicant will evaluate success of the activities included in the matrix.

Project 1: Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan ($300,000)

Success for each phase will be measured as listed below.

Phase 1 – Project Kickoff
- Retention of a technical services consultant and identification of lead project team and their associated roles.

Phase 2 – Data Collection and Database Development
- Selection of climate and sea level rise data/methodology to be used, assembly of an inventory of infrastructure assets and creation of a Geographic Information System (GIS) network(s) and database supporting resiliency and infrastructure planning.

Phase 3 – Data Analysis
- Completion of GIS-based scenario planning/vulnerability assessments/economic analyses on at-risk infrastructure assets.

Phase 4 – Strategy Development
- Development of final report, including summary of economic analysis, key infrastructure vulnerabilities and opportunities, as well as recommendations and a recommended action plan.

Project 2: Coastal Ocean Monitoring and Prediction System (COMPS) ($233,934)

Success will be a fully operational Coastal Ocean Monitoring and Prediction System (COMPS) station at the entrance to Pass-a-Grill channel, with a complete array of equipment and instrumentation as proposed. Success will occur after the completion of the milestones described below.

Year 1:
- Acquire all instruments and supplies.
- Fabricate mounting hardware for field deployment.
- Integrate and test system for field deployment readiness.
- Deploy the full system.

Year 2:
- Sustain the system.
- Provide fully operational real-time waves, currents, winds, air and sea temperature, barometric pressure, relative humidity and salinity data via the internet and incorporate into the overall COMPS data stream.
- Engage in public outreach.

Project 3: Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity ($479,493)

Success will be daily, automated nowcast/forecasts of Tampa Bay vicinity circulation (Phase 1) and waves (Phase 2) publically available via the internet. Success will be gauged with the completion of the milestones described below.

Phase 1 (Year 1):
- Implement the existing Tampa Bay vicinity model (already run and published in hindcast mode for September to December 2001) and perform hindcast tests through the present time.
- Nest the Tampa Bay vicinity model into the COMPS West Florida Coastal Ocean Model (that already provides daily nowcast/forecasts).
- Implement the resulting, tested Tampa Bay vicinity circulation model for daily, automated nowcast/forecasts.

Phase 2 (Years 2-3):
- Continue operation of the daily automated nowcast/forecast internet-based system and add a coupled wave model.
- Quantitatively gauge the nowcast/forecasts against all available observations and other model simulations.
- Make all of these model products available to the general public and the agencies via the internet and engage in public outreach and education activities.
- Develop societally relevant, ecosystems services applications.
- Use as an educational tool for the STEM training of graduate students.

Project 4: Ft. De Soto Park Dune Walkovers ($534,894)

Project success will be measured as listed below.

- Completion of two dune walkovers at Ft. De Soto Park.
- Public use of the new dune walkovers that is expected to draw use away from footpaths and help the recovery of nearby scarred areas. Although difficult to measure, dune walkover usage will also result in reduced disturbances to nesting shorebirds and sea turtles.

5.5 How the activities included in the multiyear plan matrix were prioritized and the criteria used to establish the priorities.

The public process used to select and rank (prioritize) projects including criteria to establish priorities is described in Section 3. The Board approved the project selection and ranking recommendations of county staff that were developed with assistance from a citizen-based Working Group.

5.6 The relationship, if any, between the activities the applicant included in the multiyear plan matrix and other activities funded under the RESTORE Act.

There are no known relationships between the projects submitted herein and other RESTORE Act funded activities.

APPENDIX A

Working Group Members and Charter

PINELLAS COUNTY RESTORE ACT MEETING PARTICIPANTS

WORKING GROUP MEMBERS (16)
Revised May 2015

CITIES

Mayor Bob Minning	City of Treasure Island
Mr. Carlos Frey	St. Petersburg
Mr. Elliot Shoberg	City of Clearwater

NON-PROFIT ENVIRONMENTAL ORGANIZATIONS

Jessica Koelsch	National Wildlife Federation *(David White replaced by Jessica Koelsch, March 2015)*
Mr. Peter Clark	Tampa Bay Watch
Ms. Elizabeth Fetherston	Ocean Conservancy
Ms. Cathy Harrelson	St. Petersburg Sustainability Council & Sierra Club
Mr. Mark Rachal	Audubon, Florida Coastal Island Sanctuaries

FISHING-SEAFOOD INDUSTRY

Mr. Mike Colby	Clearwater Marine Association
Mr. Dennis O'Hern	Fishing Rights Alliance
Mr. Frank Chivas	Baystar Restaurant Group
~~Mr. Tracy Harris~~	~~Fisherman~~ (withdrew 3/4/14 for personal reasons)

ACADEMIA

Dr. Mark Hafen	USF School of Public Affairs
Dr. Ernst Peebles	USF College of Marine Science
Dr. Mark Luther	USF College of Marine Science

REGIONAL PUBLIC UTILITY

Mr. Bob McConnell	Tampa Bay Water (Environmental Scientist)

ENVIRONMENTAL AGENCY

Dr. Randy Runnels	FDEP Tampa Bay Aquatic Preserves

OTHER PARTICIPANTS

Mr. Andy Squires	Pinellas County Public Works/Natural Resources
Ms. Kelli Levy	Pinellas County Public Works/Natural Resources
Ms. Liz Freeman	Pinellas County Planning
Mr. Mike Meidel	Pinellas County Economic Development
Ms. Libby Carnahan	UF/IFAS Extension Marine Agent
Ms. Lindsay Cross	**Tampa Bay Estuary Program (Meeting Facilitator)**

PINELLAS COUNTY RESTORE ACT WORKING GROUP CHARTER
TO DEVELOP A MULTIYEAR IMPLEMENTATION PLAN
(Last Revision 01/08/14)

PURPOSE: The Working Group serves as an advisory body by providing input and recommendations to County staff for the RESTORE Act "Direct Component" set of projects and programs to be incorporated into the Pinellas County (County) Multiyear Implementation Plan (Plan). The projects and programs developed will meet RESTORE Act and County goals and priorities focused on the improvement, protection, and resilience of County and Gulf of Mexico ecosystems and the County's economy.

RESOURCES AND APPROVALS: The projects implemented in the Plan will be funded through the "Direct Component" element of RESTORE Act funds to be distributed to Pinellas County according to rules and requirements established by the U.S. Department of Treasury (Treasury). The Plan developed by County staff, after consideration of Working Group input and recommendations, must receive Pinellas County Board of County Commissioner (BCC) approval prior to submittal to the Treasury.

IMPORTANCE: The RESTORE Act "Direct Component" funding source represents a unique once-in-a-lifetime opportunity to use a long-term source (≥10 years) of non-publicly derived funds to improve the County and Gulf coast environment and economy. This will allow projects without an established reoccurring funding source to be undertaken that otherwise might never occur. The thoughtful selection of the most appropriate projects and programs can significantly help sustain and improve ecosystems critical to Gulf health and help bolster and diversify the economy in the face of future environmental, climatic, and economic uncertainties. The careful and wise use of these funds may be pivotal to improving the resiliency of the region's environmentally sensitive habitats and quality of life for Pinellas County residents and visitors for generations to come.

PARTICIPANT ROLES:

Sponsor: Pinellas County Board of County Commission (BCC) – will approve: 1) the Working Group composition, 2) the project goals and priorities, 3) the project selection and ranking process, 4) the final project selections and ranks, and 5) the final Plan for submittal to the U.S. Treasury. The BCC will also carry out other tasks and requirements as specified in the Treasury rules.

Conveners: County staff (Staff) led by Andy Squires, Environmental Services Manager – will organize and administer the collaborative Plan development process to: 1) clarify the purpose of the collaborative effort, 2) develop the composition and list of Working Group members, 3) secure County Administration and BCC support for a) project goals and priorities, b) the project selection and ranking process, c) the overall process to develop the Plan, and 4) develop the final set of ranked projects and/or programs and draft the final Plan for presentation to the BCC for their consideration and approval prior to public notice of the Plan and submittal to the Treasury.

Facilitator: Lindsay Cross, Tampa Bay Estuary Program, Environmental Science & Policy Manager – will help facilitate the process; the role includes: 1) facilitating the collaborative efforts and full potential of the Working Group, 2) providing processes, tools, techniques and structure to get work done efficiently, 3) helping design Working Group sessions, with direction from County staff, with a specific focus and intent, 4) keeping the sessions on track, 5) helping resolve conflict, and 6) drawing participation from everyone.

Working Group Members: Invited participants by the BCC that represent environmental and economic interests in Pinellas County. Members include staff from cities, non-governmental organizations, academia, regional agencies, and fishing and seafood industry. Members are expected to attend, prepare for, and actively participate in meetings, and abide by the "Sunshine" Law (Chapter 286, F.S.).

To the extent possible, Working Group recommendations to Staff will be determined by the consensus of Working Group members. Working Group members may submit projects and/or programs to the County to be considered for selection and ranking along with other proposals submitted to the County.

Members will collaboratively work, at a minimum, to provide input and recommendations to Staff on: 1) project goals and priorities, 2) the project selection and ranking process, and 3) the final set of ranked projects and/or programs to be integrated into the Plan. With prior notice and acceptance by Staff, members may send informed alternates in their place to meetings they are unable to attend.

MEETING CONDUCT:

1. Meetings will allow for public comments
2. Meetings will be facilitated
3. County staff will keep a record of meeting attendees, key issues raised, and actions requested. Comments from individual members will generally not be attributed and a verbatim record of the meeting will not be prepared
4. All cell phones will be on vibrate, silenced, or turned off during meetings
5. Others…?

MEETING GROUND RULES:

1. Keep discussions focused
2. Come prepared for each meeting
3. Speak one at a time – do not interrupt others
4. Allow every member the opportunity to speak
5. Wait to be recognized before speaking
6. Listen to -- and show respect for -- all opinions expressed
7. Share all relevant information openly and respectfully
8. Remain flexible, open minded, and actively participate in meetings
9. Focus on reaching the best decisions for the overall environmental and economic health of the County and Gulf of Mexico
10. Others…?

PERIODIC REVIEW OF CHARTER: This Charter will be subject to review and revision when deemed appropriate by County staff and/or the consensus of Working Group members.

TERM OF WORKING GROUP MEMBERSHIP: The Working Group is expected to continue meeting periodically as requested by County staff until a set of selected and ranked projects and/or programs for the initial Plan are approved by the BCC. Upon BCC approval of the set of ranked projects for the initial Plan, periodic meetings may be suspended until a Plan revision is deemed necessary as determined by Pinellas County. Membership is voluntary and a member may resign from the Working Group through written notification to the County. The County may also remove a member from the Working Group for missing three or more consecutive meetings. A meeting attended by a member's alternate is not considered a missed meeting.

ATTACHMENT B

Direct Component Project Selection and Ranking Process

PINELLAS COUNTY RESTORE ACT PROJECT SELECTION & RANKING PROCESS

COUNTY RESTORE ACT PROJECT GOALS

The Pinellas County Board of County Commission has adopted the following goals for use of RESTORE Act Direct Component funds. Projects and programs to implement these goals, to the extent feasible, should (1) provide and/or contribute to countywide and/or regional environmental and/or economic benefits, and (2) utilize a collaborative approach emphasizing environmental stewardship and sustainable practices.

1. All projects must benefit the Gulf of Mexico ecosystem through one or more of the Gulf Coast Ecosystem Restoration Council's five goals:
    A. Restore and Conserve Habitat,
    B. Restore Water Quality,
    C. Replenish and Protect Living Coastal and Marine Resources,
    D. Enhance Community Resilience,
    E. Build and Revitalize the Gulf Economy.
2. Projects may also support, further, or implement goals as identified in the Future Land Use and Quality Communities; Natural Resource Conservation and Management; Coastal Management; Recreation, Open Space and Culture; and Economic Elements of the Pinellas County Comprehensive Plan
    http://www.pinellascounty.org/Plan/comp_plan/comp-plan.pdf

RESTORE ACT ELIGIBLE ACTIVITIES

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands
2. Mitigation of damage to fish, wildlife, and natural resources
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. Workforce development and job creation
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. Coastal flood protection and related infrastructure
8. Promotion of Gulf Coast Region tourism, including recreational fishing
9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region
10. Planning assistance

COUNTY RESTORE ACT PROJECT PRIORITIES **(not in order of priority)**

a. Protect and restore native habitats
b. Provide stormwater quality improvements
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages
d. Protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

PROJECT SELECTION & RANKING PROCESS

The following process is proposed to select and rank submitted projects. The process may need to be revised to comply with the final Treasury rules that have not yet been released.

Step 1. Determine which projects are eligible for RESTORE Act funding under the Direct Component.

Projects eligible include those that meet all four of the following criteria:

1. Within Pinellas County or adjacent surface and Gulf waters, or projects with an identified and strong benefit to the County.
2. Addressing one or more of the five Restoration Council Goals.
3. Addressing one or more RESTORE Act eligible activities.
4. Projects that are not fully funded.

Step 2. Assign scores for each project using criteria and suggested guidelines.

	CRITERIA	SCORE	SUGGESTED GUIDELINES
1	**Value of project in meeting Restoration Council goal(s)**	1 – 3	The degree or how well the project meets one or more of the Council's five goals. Consider cost to benefit as part of value level score. 1 pt: Low value anticipated 2 pts: Medium value anticipated 3 pts: High value anticipated
2	**Number of Restoration Council goals clearly addressed**	1 – 2	A project the addresses multiple Council goals will receive a higher score. 1 pt: no (Addresses 1 Restoration Council goal) 2 pts: yes (Addresses 2 or more Restoration Council goals)
3	**Value of project in meeting RESTORE Act eligible activity(ies)**	1 – 3	The degree to which or how well the project meets one or more of the RESTORE Act eligible activities. Consider cost to benefit as part of value level score. 1 pt: Low value anticipated 2 pts: Medium value anticipated 3 pts: High value anticipated
4	**Number of RESTORE Act eligible activities clearly addressed**	1 - 2	A project that addresses multiple RESTORE Act eligible activities will receive a higher score for this criterion. 1 pt: Addresses 1 eligible activity 2 pts: Addresses 2 or more eligible activities
5	**Value of project in meeting RESTORE Act Pinellas County priority(ies)**	0 – 3	The degree to which or how well the project meets one or more of the Pinellas County's priorities. Consider cost to benefit as part of value level score. 0 pt: Does not address any County priorities 1 pt: Low value anticipated 2 pts: Medium value anticipated 3 pts: High value anticipated
6	**Number of RESTORE Act County priorities clearly addressed**	0 – 3	A project that addresses multiple County priorities will receive a higher score for this criterion. 0 pt: Does not address any County priorities 1 pt: Addresses 1 County priority 2 pts: Addresses 2 or more County priorities 3 pts: Addresses 3 or more County priorities

7	**Provide countywide and/or regional benefits?**	1 – 3	The geographical scope of the project. 1 pts: Benefits 1 jurisdiction, or no portions of unincorporated County 2 pts: Benefits 2-4 jurisdictions 3 pts: Benefits ≥5 jurisdictions or all of unincorporated County; and/or highly supports regional efforts
8	**Utilizes a collaborative approach incorporating partnerships**	0 – 1	The degree to which the project involves multiple city, county, or regional partners. 0 pt: No partners or 1 partner included 1 pt: 2 or more partners included
9	**Will strongly support and further County Comprehensive Plan Element goal attainment as identified in the overarching project goals**	0 – 2	0 pt: No or low level of support of County Comp Plan goal(s) 1 pt: Moderate support of County Comp Plan goal(s) 2 pts: High/very strong support of County Comp Plan goal(s)
10	**Long-term project benefits**	1 – 3	1 pt: Short term benefits anticipated (<5 years) 2 pt: Medium term benefits anticipated (5-10 years) 3 pt: Long term benefits anticipated (>10 years)
11	**Matching Funding**	0 – 2	0 pt: no matching funds secure 1 pt: at least 25% matching funds secured 2 pts: at least 50% matching funds secured
	TOTAL POINTS PER PROJECT	6 – 27	

Step 3. Identify early action projects that can be completed within 5 years

Step 4. Identify a per project funding cap if needed.

The need to institute a project funding cap will depend upon the amount of funding available, the total funding amount requested, and Board of County Commissioner preference.

APPENDIX C

Project Proposal Submittal Questions

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

Based on the Transocean settlement and until the BP trial ends, it is estimated by March 31, 2015, $1,542,888 will be available in the Gulf Coast Restoration Trust fund for distribution to Pinellas County under the Direct Component allocation.

As a guideline, Pinellas County anticipates funding 3 to 7 projects not to exceed a total of $1,542,888 as part of the initial multiyear implementation plan (MYIP). It's anticipated that projects selected for MYIP inclusion that receive funding would not begin until after December 2015.

Please read through all the questions before beginning.

- Submit one form per project.
- Answer each of the 29 questions as completely as possible, but keep responses focused.
- Email completed forms to restore@pinellascounty.org.
- Submitting this completed form may be used instead of submitting project proposals using the online submittal form.
- The "Steps" and "Criteria" numbers refer to questions that address the steps and criteria for selection and ranking projects. The selection and ranking criteria can be viewed at www.pinellascounty.org/restore/pdf/project-selection.pdf
- Once the form is successfully submitted, you should receive a confirmation Email from Pinellas County.

Applicant Name: *(Include at least one Point of Contact (POC), phone number, email address, and organization name, if applicable)*:

1. **POC Name:**
2. **POC Organization:**
3. **POC Title:**
4. **POC Email:**
5. **POC Phone:**
6. **Proposed Activity Name:**

7. Restoration Council Goals Addressed:
(Step 1 and Step 2 - Criteria 1 and 2)
List which of the following goal(s) will be addressed and how each goal will be addressed.
A. Restore and Conserve Habitat
B. Restore Water Quality
C. Replenish and Protect Living Coastal and Marine Resources
D. Enhance Community Resilience
E. Build and Revitalize the Gulf Economy

8. RESTORE Act Eligible Activities Addressed:
(Step 1 and Step 2 - Criteria 3 and 4)
List which of the following activities will be addressed and how each activity will be addressed.

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands
2. Mitigation of damage to fish, wildlife, and natural resources
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. Workforce development and job creation
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. Coastal flood protection and related infrastructure
8. Promotion of Gulf Coast Region tourism, including recreational fishing
9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region
10. Planning assistance

9. Previous Claim:
Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.
Yes: __
No: __

10. RESTORE Act Pinellas County priorities addressed:
(Step 2 - Criteria 5 and 6)
List which of the following priorities will be addressed and how each priority will be addressed.
a. Protect and restore native habitats
b. Provide stormwater quality improvements
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages

d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan Link to Plan: http://www.postdisasterplan.org/pdrp.shtml
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

11. Project Location
(Step 1)
As applicable, describe the location, attach a map and indicate the address, city, zip code, longitude/latitude, and watershed:

12. Region or Geographic Area Impacted by Project
(Step 1 and Step 2 - Criterion 7)
Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

Discussion of Specific Activity
Describe the project by responding to each of the following topics.

13. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

14. Project Manager and Key Project Team Members - include credentials and experience doing similar work.

15. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

16. **Technical Feasibility** - Describe technologies and relevant past experience or proven success with similar projects.

17. **Public Acceptance** - Describe any known or potential public approval or opposition to the project.

18. **Project Activity Budget Justification:**
Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

- Personnel and fringe:
- Travel including the number of trips and estimated cost per trip:
- All equipment greater than $1,000:
- Supplies including a list of major types of supplies:
- Contractual costs:
- Administrative costs not to exceed 3% of the total award:
- Future costs related to maintaining the project, the funding source, and responsible entity:

19. **Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.**
(Step 2 - Criterion 8)
List any project partners and briefly describe their involvement and contribution to the project.

20. **Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed.**
(Step 2 - Criterion 9)
Link to Applicable Comprehensive Plan Element Goals:
www.pinellascounty.org/restore/pdf/comp-plan-goals.pdf

21. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

22. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

23. Best Available Science:
Only answer if proposed activity will serve to protect or restore natural resources, otherwise, indicate "Not Applicable." Briefly describe how the project will use best available science with respect to peer reviewed literature, objective(s), and methodologically sound literature sources that support the scope of work, when available.

24. Matching/Other funding
(Step 2 - Criterion 11)
Indicate:

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding.
- If matching funds are not secured, specify the amount of matching funds requested or expected.
- The date the amount of secured funds will be known.

Readiness for Implementation
(Step 3)
Complete the following:

25. Will the project be completed within 5 years from date funding is confirmed?
Yes: __
No: __

26. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

27. How long before the project can start after funds are available (months)?

28. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

29. Describe any issues or reasons that may delay project start or completion.

END OF QUESTIONS

APPENDIX D

RESTORE Ranking Subcommittee Guidelines for Ranking Projects

RESTORE Ranking Subcommittee Guidelines for Ranking Projects
March 16, 2015

1. The ranking subcommittee will operate in the "Sunshine." Subcommittee members cannot discuss the proposals with any of the other committee members. Since Andy Squires is not a ranking subcommittee member, you may contact Andy for clarification on project proposals or the ranking process.

2. The public may attend ranking subcommittee meetings. Once the meeting starts and ranking discussions begin, the public must only "observe" and will not be allowed to speak and/or be involved in the discussion or process.

3. The outcome of the ranking process serves as a tool to help the ranking subcommittee, the Working Group, County staff, and the Board of County Commission determine which projects should be funded. The final rank of each project will not necessarily determine whether or not a project will be included for funding in the Multiyear Implementation Plan. As an additional guideline, projects not achieving at least a mean score of 12.0 may not be recommended for funding. This is based on the following minimum scores by criterion.

   Criterion:Score: 1:2, 2:1, 3:2, 4:1, 5:1, 6:1, 7:1, 8:0, 9:1, 10:2, 11:0 Total Score = 12.0

4. The mean ranking score by project will be used to rank projects.

5. A ranking subcommittee member that has a conflict or potential perceived conflict with a project to be ranked must step out of the room while the project is being discussed and ranked.

6. The ranking of all submitted projects may take more than one ranking meeting. If a ranking subcommittee member misses a meeting, their preliminary ranking scores sent/emailed to the County (Andy Squires, asquires@pinellascounty.org) prior to the beginning of the missed meeting will be used for that person's final ranking scores for projects that were ranked that meeting.

7. At the end of ranking all projects, a consensus will be sought from the ranking subcommittee members as to which projects should be funded or partially funded. The projects recommended for full funding will not necessarily be ranked higher than those to be considered for partial funding. County staff anticipates working with some submitters to negotiate partial funding for submitted projects.

APPENDIX E

Final mean scores for each of the 17 project proposals submitted to Pinellas County between November 6, 2014 and February 6, 2015

ORIGINAL PROJECT NUMBER	PROJECT NAME	AVG SCORE	Requested Funding Amount
14	2016 TAMPA BAY ENV REST FUND	25.57	$100,000
7	PINELLAS CO SEA LEVEL RISE IMPACTS	22.00	$300,000
17	USF COMPS SYSTEM	21.86	$415,910
16	USF NOWCAST/FORECAST MODEL	21.14	$942,646
6	FT. DeSOTO DUNE WALKOVERS	20.80	$1,117,043
13	BLIND PASS ROAD IMPROVEMENTS	15.00	$311,734
3	JOHN'S PASS DOCK	13.63	$330,000
1	COOPER'S POINT	12.86	$450,000
2	NUTRIENT CONTROL STRATEGIES	12.00	$274,749
11	LASSING PARK BEACH RESTORATION	11.00	$300,000
10	BOOKER CREEK TRAIL PHASE IIA	11.00	$1,497,000
12	ST PETE PIER EDUCATION CENTER	10.88	$1,500,000
5	GRAVITY SEWER REHABILITATION	10.88	$600,000
4	BROOKER & MOCCASIN CREEK TMDL'S	10.88	$250,000
9	BAY VISTA PARK BEACH RESTORATION	10.75	$300,000
8	MAXIMO PARK BEACH RESTORATION	10.75	$300,000
15	PUBLIC BEACH ACCESS RESTORATION	8.88	$300,000
	Total Requested		$9,289,082

APPENDIX F

Project Proposals Submitted for Funding

APPENDIX F-1

2016 Tampa Bay
Environmental Restoration Fund
($100,000)

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

Based on the Transocean settlement and until the BP trial ends, it is estimated by March 31, 2015, $1,542,888 will be available in the Gulf Coast Restoration Trust fund for distribution to Pinellas County under the Direct Component allocation.

As a guideline, Pinellas County anticipates funding 3 to 7 projects not to exceed a total of $1,542,888 as part of the initial multiyear implementation plan (MYIP). It's anticipated that projects selected for MYIP inclusion that receive funding would not begin until after December 2015.

Please read through all the questions before beginning.

- Submitted projects must address one or more of the five Gulf Coast Ecosystem Restoration Council goals and one or more RESTORE Act-eligible activities.
- Projects submitted by FEBRUARY 6, 2015 will be eligible for inclusion in the initial Multiyear Implementation Plan (MYIP)
- The "Steps" and "Criteria" numbers in the application refer to questions that address the steps and criteria for selection and ranking projects. The selection and ranking criteria can be viewed at www.pinellascounty.org/restore/pdf/project-selection.pdf
- Answer each of the 29 questions as completely as possible, but keep responses focused.
- Submit one form per project.
- Once the form is successfully submitted, you will be contacted by Pinellas County.
- Send associated maps, charts, images, and budget information along with the title of your project in a Portable Document File (PDF) to restore@pinellascounty.org.
- Direct questions to restore@pinellascounty.org

Applicant Name: *(Include at least one Point of Contact (POC), phone number, email address, and organization name, if applicable)*:

1. **POC Name:** Holly Greening
2. **POC Organization:** Tampa Bay Estuary Program
3. **POC Title:** Executive Director
4. **POC Email:** hgreening@tbep.org
5. **POC Phone:** 727-893-2765
6. **Proposed Activity Name:** 2016 Tampa Bay Environmental Restoration Fund

7. **Restoration Council Goals Addressed:**
(Step 1 and Step 2 - Criteria 1 and 2)
List which of the following goal(s) will be addressed and how each goal will be addressed.
A. Restore and Conserve Habitat
B. Restore Water Quality
C. Replenish and Protect Living Coastal and Marine Resources
D. Enhance Community Resilience
E. Build and Revitalize the Gulf Economy

This project will address goals A, B, C, D and E, with particular emphasis on goals A, B and C. The Tampa Bay Environmental Restoration Fund (TBERF) is an annual competitive grants program with goals to restore Tampa Bay and watershed. Any one, or several, of the Restoration Council Goals could be addressed by projects selected for inclusion in the 2016 Pinellas County-funded TBERF projects. Pinellas County-funded TBERF projects would be selected for cost-effective projects that help to revitalize the Gulf economy through creation and support of natural resources and/or construction jobs. Projects will implement the coastal, estuarine and freshwater wetland habitat and water quality restoration priorities that are vital to coastal and marine wildlife. These priorities have been developed by the Tampa Bay Estuary Program and its partners including Pinellas County, and have been adopted by the TBEP partners through approval of the Tampa Bay Comprehensive Conservation and Management Plan (CCMP).

This proposal would support TBERF projects conducted within Pinellas County in 2016. All funds contributed by Pinellas County will be matched at least 1:1, doubling the funds awarded to projects within Pinellas County at a minimum. In addition, each TBERF proposal is required to have a dollar-for-dollar match, further leveraging the impact of funds contributed by Pinellas County.

TBERF objectives include:

> **Restoring and protecting vital wildlife habitats (Goals A and C)**, including tidal wetlands, forested and non-forested freshwater wetlands, in-stream fish habitat, tidal tributaries and upstream freshwaters, waterbird nesting islands, and oyster reefs and subtidal hard bottom habitats.
> **Improving stormwater management (Goal B),** implementing Low Impact Development, bioretention and rain water harvesting, and encouraging the reduction of runoff from residential landscapes.

Preference will be given to projects that are located within Pinellas County and include the following: 1) Measurable resource benefits linked to priority activities (i.e. restore 10 acres of salt marsh; reduce nitrogen loading by 2 tons/year; etc.); 2) Activities consistent with the priorities and goals of the County; 3) Education, training, and public outreach components to enhance the community benefits of the project; 4) Creation of new partnerships and innovative solutions to natural resource challenges in Pinellas County; and 5) Specific provisions for long-term maintenance, management, and protection, as appropriate.

A Pinellas County representative has been a member of the competitive projects Review Committee in 2013, 2014 and 2015 and would be encouraged to participate in 2016. In addition, as in past years Pinellas County departments would be eligible to receive grant funds from TBERF in 2016.

8. RESTORE Act Eligible Activities Addressed:
(Step 1 and Step 2 - Criteria 3 and 4)
List which of the following activities will be addressed and how each activity will be addressed.

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands
2. Mitigation of damage to fish, wildlife, and natural resources
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. Workforce development and job creation
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. Coastal flood protection and related infrastructure
8. Promotion of Gulf Coast Region tourism, including recreational fishing
9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region
10. Planning assistance

TBERF projects will address activities 1, 2 and 3. TBERF objectives and selection criteria directly support activities 1 and 2 above-- funded projects within Pinellas County would be consistent with restoration/protection of natural resources and mitigation of damage to fish, wildlife and natural resources. The Tampa Bay Estuary Program Comprehensive Conservation and Management Plan is a Federally-approved comprehensive conservation and management plan, directly addressing #3.

9. Previous Claim:
Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.
Yes: __
No: X_

10. RESTORE Act Pinellas County priorities addressed:
(Step 2 - Criteria 5 and 6)
List which of the following priorities will be addressed and how each priority will be addressed.

a. Protect and restore native habitats
b. Provide stormwater quality improvements
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages

d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan Link to Plan: http://www.postdisasterplan.org/pdrp.shtml
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

Selected TBERF projects in Pinellas County could support Pinellas County priorities a, b, c, d and e. In addition, a recent economic evaluation conducted by the Tampa Bay Regional Planning Council and TBEP has found that, by improving the health of Tampa Bay, the bay area's economy has also benefitted, so h. above would also be addressed.

As an example of the environmental benefits from TBERF projects which have been funded in TBERF's first two years (2013 and 2014), 12 contributors provided $1.5M, funding 18 projects. These projects collectively will provide 1,500 acres of coastal habitat restoration; 3,900 linear feet of oyster reefs; treat urban runoff from 500+ acres; protect colonial waterbird islands; and assess harmful algal blooms, carbon sequestration from restored habitats, and hard bottom habitat. TBERF 2015 projects will be awarded in May 2015.

This proposal is to provide funding for TBERF-awarded projects located within Pinellas County in May 2016.

11. Project Location
(Step 1)
As applicable, describe the location, attach a map and indicate the address, city, zip code, longitude/latitude, and watershed:

Proposals eligible for Pinellas County-funded TBERF projects could be restricted to those located within Pinellas County, or bay-wide projects which include Pinellas County. Pinellas County would make the final decision on which proposals would be eligible to receive Pinellas County TBERF funds.

12. Region or Geographic Area Impacted by Project
(Step 1 and Step 2 - Criterion 7)
Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

Projects funded by TBERF are located throughout the Tampa Bay watershed. Habitat restoration or water quality improvement projects conducted within the TBERF geographic area impact not

only those areas within the project boundary, but can support fish and wildlife populations throughout Tampa Bay and the Gulf which utilize restored and enhanced resources.

As an example, TBERF projects awarded to date benefit Pinellas County, Tampa Bay and the Gulf. The restoration objectives for TBERF are virtually identical to those of Pinellas County and the Gulf of Mexico. In particular, restoration of coastal habitats, oyster reefs and tidal tributaries improve the quality of local and Gulf fisheries nursery areas; reduction of pollutants in runoff improve water quality and support seagrass recovery critical to both resident and Gulfwide wildlife stocks; increased understanding of benefits of restoration in Pinellas County and Tampa Bay are relevant to other Gulf coastal areas; and improved management of waterbird nesting colonies in Tampa Bay provide protection for Pinellas County and Gulfwide waterbird populations.

Discussion of Specific Activity
Describe the project by responding to each of the following topics.

13. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

TBERF was initiated by the Tampa Bay Estuary Program and the National Fish and Wildlife Foundation in 2012 to continue the highly-successful (but discontinued) Pinellas County Environmental Fund. The goal of TBERF is to return added value to current and future Tampa Bay conservation initiatives and provides funding through a competitive application process for projects that will protect, restore or enhance the natural resources of Tampa Bay and its contributing watershed. In 2014, the national non-profit organization Restore America's Estuaries replaced NFWF as the non-profit partner to further the national reach of funding partners.

Funding for TBERF has been provided by the National Fish and Wildlife Foundation, Southwest Florida Water Management District, The Mosaic Company Foundation, Manatee County, Hillsborough County, Pinellas County, the Florida Department of Transportation, TECO Energy and the Tampa Port Authority to date. Each proposal is required to have a dollar-for-dollar match, further leveraging the impact of the grant funds. In 2013 and 2014, a total of almost $1.5M was awarded to 18 projects.

The Tampa Bay Environmental Restoration Fund leverages public funds with private sector contributions to provide new, increased resources for restoring and protecting the natural systems of Tampa Bay and the Gulf of Mexico. By contributing to the non-profit organization (RAE) partner in TBERF, private sector contributors are able to obtain tax benefits. Private contributions provide additional leverage to public dollars available. Competitive awards encourage the best projects from academic, non-profits, local governments and agencies specifically addressing adopted resource goals (i.e, increased habitat, reduced nutrient runoff, education to support attainment of goals). Required monitoring of measurable benefits assures results.

For TBERF 2016, a Request for Proposals will be widely distributed. Project proposals must include detailed timelines, budgets and (most importantly) defined measureable environmental benefits. Criteria for eligible projects are clearly defined in the RFP (see Attachment A; TBERF Call for Proposals). Highest priority will be given to projects that:

- Clearly describe activities that help meet the goals of one or more of the listed conservation priorities;
- Demonstrate its cost effectiveness relative to other conservation practices (i.e., cost per acre restored);
- Provide measurable resource benefits and meaningful conservation outcomes linked to the goals of the above priorities;
- Build on existing conservation efforts for these issues;
- Demonstrate its technical feasibility, is carefully planned, and involves qualified technical experts, agencies and/or organizations in their design and execution;
- Build new, or enhance existing, partnerships. Applicants are encouraged to leverage diverse organization strengths and resources to enhance project sustainability through partnerships and collaborations;
- Provide other ancillary benefits that could benefit others working on the recovery of the Bay and its watershed (e.g., serves as a model for others to replicate; shares methodologies developed with other practitioners; creates new partnerships; etc.);
- Address the long-term sustainability of the project by providing a monitoring and maintenance plan and describing how future funding will be secured; and
- Develop community stewardship through hands-on participation/volunteerism and/or innovative education and outreach associated with the project, if appropriate.

Applied research that addresses habitat restoration or species recovery needs of the above-listed priorities must demonstrate coordination with key organizations, academic institutions and agencies performing similar or complementary work and describe how the results of the research will be used to enhance the work of on-the-ground practitioners.

A Review Committee comprised of scientists and resource managers will evaluate and rank each proposal, using criteria as stated in the RFP. A critical element of a proposal is the definition of ***measurable environmental benefits (i.e., number of acres restored; lbs of pollutant removed, etc) for each phase of the project***. Findings from the Review Committee are provided by the TBEP Executive Director to the TBEP Policy Board for approval. Contracts are negotiated with the winning proposal team lead. Projects typically are started within 3-6 months of approval, for durations from 1 to 3 years depending upon the nature of the project.

Each project is required to submit quarterly progress reports to the TBEP project manager. Invoicing can occur at the end of a project phase, but invoices must include documentation that the approved measurable environmental benefit defined for that project phase has been accomplished before the invoice is approved and paid. The TBEP project manager will obtain approval from the Pinellas County project manager prior to paying an invoice. All project work is on a reimbursable basis.

The Timeline for TBERF 2016 is shown in response to #26 below.

RESULTS to date

In 2013, 10 agencies and organizations received $900,000 in grants for projects that restored more than 1,000 acres of coastal habitats and created 2,900 feet of oyster reefs; treated 500 acres of urban runoff; provided community education to support reduced residential runoff; and assessed fisheries habitat requirements.

In 2014, nearly $625,000 in grants was awarded to nine recipients that will restore 8,500 feet of oyster reefs, 26 acres of coastal wetland habitat and almost 200 acres of freshwater marsh habitat; provide community education; protect colonial nesting waterbirds on 13 bird islands; determine the extent and quality of hard bottom habitat within the bay; and assess the climate mitigation benefits of restoring coastal habitats in Tampa Bay. A summary of the projects awarded in 2013 and 2014 is shown in Attachment B and a map showing project locations can be found at https://www.estuaries.org/tampa-bay-environmental-restoration-fund.

14. Project Manager and Key Project Team Members - include credentials and experience doing similar work.

The 2016 TBERF program will be managed by the TBEP Executive Director, Holly Greening. Holly successfully initiated and has maintained the annual TBERF program since 2012, and will continue to be the key contact and team member for TBEP. Holly has been with TBEP since its inception in 1991, initially as the program's Senior Scientist, then selected as Director in 2008. Her primary duties will be to ensure that TBERF 2016 is fully funded by public and private sectors; that the solicitation and selection of high-quality projects is appropriately conducted; that approved measurable benefits are met; and that TBERF's accomplishments are known to Tampa Bay and wider Gulf and national communities. Holly's resume is included as Attachment C.

15. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

Project proposals are required to identify the measurable resource benefits to be achieved, and metrics used to measure progress towards attainment. The proposal must describe the monitoring approach that will be used. To ensure success, invoices are only approved following documentation that defined measurable resource benefits have been met. Pinellas County would have the opportunity to review proposals for projects located within the County, and approve the selection of projects with highly-ranked environmental benefits.

As noted above, restoring Tampa Bay and its watershed provides economic benefits as well as environmental benefits. A healthy and clean Tampa Bay provides an added economic benefit of $22M per year to Tampa Bay's economy. See the Tampa Bay Business Journal article from Friday, Jan 16 2015 for a summary of the assessment and the value of clean water to Tampa Bay's economy.

16. Technical Feasibility - Describe technologies and relevant past experience or proven success with similar projects.

Winning applications to TBERF must provide evidence that the technologies and techniques proposed will be successful. As noted above, to ensure success, invoices are only approved following documentation that defined measurable resource benefits have been met.

TBERF 2016 will be the fourth consecutive year of this Fund. TBEP staff have been involved with the successful implementation of TBERF 2013 and 2014, and will be initiating TBERF 2015 in February 2015. Effective contract and reporting templates have been developed and revised as new information is acquired, and the number and diversity of funding entities has increased.

17. Public Acceptance - Describe any known or potential public approval or opposition to the project.

There has been no public opposition to projects awarded in the first two years of TBERF. The multiple public and private sector funding contributors, as well as the wide range of types of winning applicants, helps to ensure broad public and private sector approval.

18. Project Activity Budget Justification:
Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

TOTAL REQUEST for Pinellas County-funded TBERF 2016 projects: $100,000

- Personnel and fringe:
  TBEP program and project management personnel and fringe costs will not exceed 7% ($7,000) of the requested amount over the three-year project period ($2,333 per year).

- Travel including the number of trips and estimated cost per trip:
  No travel costs are included in this proposal.

- All equipment greater than $1,000:
  No equipment costs are included in this proposal.

- Supplies including a list of major types of supplies:
  No supplies are included in this proposal.

- Contractual costs:
  $90,000 to competitively-awarded projects located in Pinellas County

- Administrative costs not to exceed 3% of the total award:

TBEP legal and contract administration will not exceed 3% ($3,000) over the three year project period (an average of $1000 per year).

- Future costs related to maintaining the project, the funding source, and responsible entity:

  Awarded project proposals must include a description of how the project will be maintained after completion. Maintenance is the responsibility of the applicant for TBERF-funded awards.

19. Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.

(Step 2 - Criterion 8)

List any project partners and briefly describe their involvement and contribution to the project.

TBERF is a collaboration of public and private contributors, partnering to fund projects submitted by multiple entities to support Tampa Bay community restoration goals identified through the Tampa Bay Estuary Program partners. Business funding partners include the Mosaic Company and Tampa Electric Company; public partners include three Counties, Southwest Florida Water Management District, the Florida Department of Transportation, and the Tampa Port Authority.

Criteria for competitive applications stress projects which build new, or enhance existing, partnerships. Applicants are encouraged to leverage diverse organization strengths and resources to enhance project sustainability through partnerships and collaborations.

For TBERF 2016, we anticipate continued partnerships with our current contributors, including SWFWMD (Cooperative Funding Initiative), Hillsborough County, Manatee County, The Mosaic Company Foundation, TECO Energy, FDOT, and Port Tampa Bay at a minimum. Pinellas County's contribution of **$100,000** would allow us to match SWFWMD's Cooperative Funding Initiative, with expected funds for projects totaling between $500,000 - $800,000. Expected funds for projects within Pinellas County would be $200,000+, depending upon the proposals received.

20. Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed.

(Step 2 - Criterion 9)

Link to Applicable Comprehensive Plan Element Goals:

www.pinellascounty.org/restore/pdf/comp-plan-goals.pdf

TBERF objectives and criteria directly support a number of Pinellas County's Comprehensive Plan Element Goals (see Attachment A, TBERF Call for Proposals). Primary among the Comp Plan Goals which eligible TBERF projects support are:

Natural systems and living resources Goal Two: Pinellas County will conserve, protect, restore and appropriately manage its natural systems and living resources ensure the highest environmental quality possible.

Environmental lands and resource-based parks Goal Three: Pinellas County's environmental lands and resource-based parks are the hallmark of this county's environmental commitment, and these lands are to be protected and managed in perpetuity for their contribution to the biodiversity and biological sustainability of the region, as a means of providing respite from urban life and because they instill future generations with a sense of appreciation for Florida's natural heritage.

Strengthened connections to the water Goal Four: Pinellas County will remain a leader in the protection and restoration of its surface waters and the dependent habitats and resources which are essential to this county's character, economy and quality of life.

Promoting environmental stewardship Goal Five: Pinellas County will be a recognized leader in environmental education and local environmental stewardship.

Floodplains and floodplain management Goal Six: Pinellas County will preserve, protect, restore and manage the natural resources of its floodplains to maintain or enhance water quality, plant and animal diversity, and aquatic productivity, to protect the flood storage value and purpose, and to protect the public and minimize property damage.

Environmental sustainability in every-day practice Goal Seven: Pinellas County will be a leader in environmentally sustainable government operations, a proponent of smart and sustainable growth management practices and will have a strong economy supported by sound environmental principles, programs and practices.

Economic Goal One: to facilitate a strong and robust local economy that provides growth opportunities for existing businesses, attracts new high-wage primary employers and promotes a diverse range of industries through innovative, sustainable methods that, in a responsible manner, enhance the county's vitality and the quality of life for residents and visitors.

21. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

As noted above, project proposals are required to identify the measurable resource benefits to be achieved, and metrics used to measure progress towards attainment. A critical element of a proposal is the definition of ***measurable environmental benefits (i.e., number of acres restored; lbs of pollutant removed, etc) for each phase of the project***. The proposal must describe the monitoring approach that will be used. To ensure success, invoices are only approved following documentation that defined measurable resource benefits have been met. Pinellas County would have the opportunity to review proposals for projects located within the County, and approve the selection of projects with highly-ranked environmental benefits.

In TBERF's first two years (2013 and 2014), 12 contributors provided $1.5M, funding 18 projects. These projects will provide 1,500 acres of coastal habitat restoration; 3,900 linear feet of oyster reefs; treat urban runoff from 500+ acres; protect colonial waterbird islands; and assess harmful algal blooms, carbon sequestration from restored habitats, and hard bottom habitat.

22. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

The applicants for TBERF funding are responsible for ensuring that operational, legal, regulatory, budgetary or ecological risks are minimized. Mitigation of risks is the responsibility of the applicant.

23. Best Available Science:
Only answer if proposed activity will serve to protect or restore natural resources, otherwise, indicate "Not Applicable." Briefly describe how the project will use best available science with respect to peer reviewed literature, objective(s), and methodologically sound literature sources that support the scope of work, when available.

Each TBERF application is required to describe methods and analyses proposed to accomplish the objectives stated in their proposal. Applicants are encouraged to use advanced technologies supported by peer-reviewed literature. The TBERF Review Committee is comprised of leading scientists and resource managers from throughout the Tampa Bay region and includes at least one national reviewer. Selection and ranking criteria focuses heavily on the scientific/technical merits of the proposed project. See Attachment A , the Call for Proposals for a description of the technical criteria used to evaluate proposals.

As an example, a project funding by TBERF 2014 to map hardbottom habitats in Tampa Bay incorporates sidescan sonar, sub-bottom profilers and underwater video which will be used to develop sophisticated benthic habitat maps throughout the bay, including Pinellas County's bay bottom habitat.

24. Matching/Other funding
(Step 2 - Criterion 11)
Indicate:

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding.

- If matching funds are not secured, specify the amount of matching funds requested or expected.

- The date the amount of secured funds will be known.

For TBERF 2016, we anticipate continued partnerships with our current contributors as follows:

SWFWMD (Cooperative Funding Initiative) CFI submitted, decision in Sept 2015	$350,000
Hillsborough County (Phosphate Severance funds) Funds requested, decision in Sept 2015	$100,000
Manatee County (Phosphate Severance funds) Funds requested, decision in Sept 2015	$ 75,000
The Mosaic Company Foundation (Partnership Grant) Will be requested in spring 2015, decision by summer 2015	$ 100,000
FL Department of Transportation (Stormwater Improvement Fund) Will be requested in Jan 2016, decision by summer 2016	$ 35,000
TECO Energy (Community Grants Program) Will be requested in late 2015, decision in early 2016	$ 25,000
Port Tampa Bay (Community Partnership Minigrants) Will be requested in late 2015, decision in early 2016	$ 2,500 (max allowed)
Pinellas County RESTORE grant This proposal	$100,000

Other private sector grants and foundations are being pursued by our NGO partner, Restore America's Estuaries. In addition, TBEP is updating our Interlocal Agreement, which includes provisions for reduced Member Dues with a contribution to TBERF, which may increase incentives for our local government partners to contribute to TBERF.

Readiness for Implementation
(Step 3)
Complete the following:

25. Will the project be completed within 5 years from date funding is confirmed?
Yes: _X_
No: __

26. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

February 2016	RFP announced
March 2016	Proposals due
April 2016	Review Committee evaluates proposals
May 2016	TBEP Policy Board approves TBERF 2016 projects and budgets
June-Aug 2016	Contracts executed with winning project team lead
Sept 2016	Projects initiated
Sept 2017-Sept 2019	Projects expected to be completed and measurable benefits documented.

27. How long before the project can start after funds are available (months)?

As noted above, TBERF 2016 request for proposals will be issued in Feb 2016 (one month after Pinellas County-funded TBERF funds are available). The awarded projects could be initiated upon contract approval starting in summer 2016.

28. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

Each TBERF applicant is responsible for design, permitting, construction, monitoring and maintenance of their proposed project. Any requirements or hurdles in permitting are the responsibility of the applicant to address.

29. Describe any issues or reasons that may delay project start or completion.

Project start dates for awarded TBERF projects are determined by the time needed to complete contract negotiation with the winning proposers. TBERF has a standard contract, but some awardees wish to edit that contract. Delays in contracting can cause delays in the start date of one to two months. No other reasons for project start or completion are anticipated for TBERF 2016 projects.

ATTACHMENTS:
Attachment A: TBERF Overview and Call for Proposals
Attachment B: Projects funded in 2013 and 2014
Attachment C: Resume of key project team member

END OF QUESTIONS

TAMPA BAY ENVIRONMENTAL RESTORATION FUND – 2015

REQUEST FOR PROPOSALS

OVERVIEW
The *Tampa Bay Environmental Restoration Fund – 2015* (TBERF-2015) is a strategic partnership between the Tampa Bay Estuary Program (TBEP) and Restore America's Estuaries (RAE). Funding for the TBERF-2015 has been provided by the Southwest Florida Water Management District, The Mosaic Company Foundation and Hillsborough County to date. The TBERF-2015 is designed to return added value to current and future Tampa Bay conservation initiatives and provides funding through a competitive application process for projects that will protect, restore or enhance the natural resources of Tampa Bay and its contributing watershed.

The TBERF-2015 Request for Proposal documents are available at www.tbeptech.org.

PROPOSAL DEADLINE
Proposals must be submitted electronically by **3:00 pm EST, March 20, 2015**. Late applications will not be accepted. Email completed proposals to ron@tbep.org.

GEOGRAPHIC FOCUS:
The geographic focus of TBERF-2015 is the Tampa Bay watershed (map available at tbeptech.org).

CONSERVATION OBJECTIVES
TBERF-2015 seeks applications for cost-effective projects that will implement the coastal, estuarine and freshwater wetland habitat and water quality restoration priorities that have been developed by the Tampa Bay Estuary Program and its partners, and outlined in the Tampa Bay Comprehensive Conservation and Management Plan (CCMP), Charting the Course.

Funding will be focused on achieving measurable conservation and resource benefits that advance the following priorities:

- Recover an additional 3,350 acres of seagrass over 2012 levels, while preserving Tampa Bay's existing grass beds and reducing propeller scarring of seagrasses.
- Prevent increases in nitrogen entering the bay and assist in maintaining nitrogen loading at 2003-2007 levels by implementing innovative stormwater management projects and programs.
- "Restore the historic balance" of coastal wetland habitats by restoring an additional 1,918 acres of salt marsh, including low-salinity tidal marsh, as approved in the TBEP 2010 Habitat Master Plan Update.
- Restore an additional 840 acres of salt barren (saltern) habitat in Tampa Bay.
- Restore an additional 1,615 acres of forested freshwater wetlands and 17,088 acres of non-forested freshwater wetlands, as approved by the TBEP Policy Board in 2013.
- Restore and protect connectivity and function of fisheries habitat in the bay's tidal streams and creeks.

CONSERVATION STRATEGIES

The following are conservation strategies and implementation actions that are priorities of this grant program. In addition to the on the ground work outlined below, funding for applied research that is aligned with the estuary's conservation goals and that helps prioritize restoration actions in the watershed, and improves the methods and outcomes of future on the ground implementation, will be considered.

Restoring and protecting vital wildlife habitats.

- Restore, enhance and create tidal wetlands (e.g., salt marshes, intertidal and subtidal habitats, salterns, etc.) and seagrass beds to maximize benefits for shorebirds and other wildlife habitat and enhance water quality.
- Restore forested and non-forested wetlands to improve benefits for wildlife habitat and water quality.
- Restore channelized and eroding streambanks to improve in-stream fish habitat and reduce sediment loads to the Estuary and its rivers and creeks.
- Restore connectivity between tidal tributaries and upstream freshwaters to improve fisheries movement and habitat.
- Protect and restore Tampa Bay's estuarine islands to provide critical colonial waterbird breeding habitat.
- Restore oyster reefs and subtidal hard bottom habitat to improve habitat for fish, birds and other wildlife and to enhance water quality.

Improving stormwater management.

- Implement low impact development (LID) practices and other innovative stormwater management practices to minimize the water quality impacts of new development, including practices on roads, streets, and highways.
- Retrofit existing development to retain stormwater on-site through stormwater management practices such as bioretention and rain water harvesting.
- Promote and implement innovative techniques that encourage landowners and local governments to reduce their use of fertilizer on lawns and public spaces.

CRITERIA FOR COMPETITIVE APPLICATIONS

Highest priority will be given to projects that:

- Clearly describe activities that help meet the goals of one or more of the above listed conservation priorities;
- Demonstrate its cost effectiveness relative to other conservation practices (i.e., cost per acre restored);
- Provide measurable resource benefits and meaningful conservation outcomes linked to the goals of the above priorities;
- Build on existing conservation efforts for these issues;
- Demonstrate its technical feasibility, is carefully planned, and involves qualified technical experts, agencies and/or organizations in their design and execution;
- Build new, or enhance existing, partnerships (list all partners involved). Applicants are encouraged to leverage diverse organization strengths and resources to enhance project sustainability through partnerships and collaborations;
- Provide other ancillary benefits that could benefit others working on the recovery of the Bay and its watershed (e.g., serves as a model for others to replicate; shares methodologies developed with other practitioners; creates new partnerships; etc.);
- Address the long-term sustainability of the project by providing a monitoring and maintenance plan and describing how future funding will be secured; and
- Develop community stewardship through hands-on participation/volunteerism and/or innovative education and outreach associated with the project, if appropriate.

Applied research that addresses habitat restoration or species recovery needs of the above-listed priorities must demonstrate coordination with key organizations, academic institutions and agencies performing similar or complementary work and describe how the results of the research will be used to enhance the work of on-the-ground practitioners. **Proposals that are entirely research-focused will not be entertained.**

Proposals including education, training, and/or public outreach as a main component must demonstrate how the project supports conservation goals related to the above-listed priorities, how the project will motivate people to take the desired action(s), and include an evaluation component that measures the success of the project in achieving specific and quantifiable conservation outcomes.

Preference will be given to projects that include the following: 1) Measurable resource benefits linked to priority activities (i.e. restore 10 acres of salt marsh; reduce nitrogen loading by 2 tons/year; etc.); 2) Activities consistent with the priorities and goals of the CCMP including applied research; 3) Education, training, and public outreach components to enhance the community benefits of the project; 4) Creation of new partnerships and innovative solutions to natural resource challenges in Tampa Bay; and 5) Specific provisions for long-term maintenance, management, and protection, as appropriate.

PROJECT DELIVERABLES

All applications should include specific quantitative performance metrics that will be tracked and measured to evaluate the success of the project in achieving stated conservation goals (degree of change from baseline or pre-project conditions as a result of project activities). If a proposed project has more than one Phase, measurable resource benefits for each project Phase must be clearly defined.

Examples of measurable resource benefits include, but are not limited to, the following:

- Number of acres of priority habitat (seagrass, oyster reefs, salt marsh, freshwater wetlands) restored
- Number of acres of priority habitat protected
- Number of linear feet of shoreline restored
- Pounds of nitrogen reduced, annually
- Number of citizens engaged in public education, training and outreach programs that support above-listed conservation priorities
- Number of landowners receiving directed technical assistance for habitat protection and restoration activities
- Number of volunteers involved in project implementation

Project Phase deliverables for early Phases of a project may include educational materials, construction of stormwater management systems, etc, which contribute to the attainment of final measurable resource benefits by the end of the project.

Project deliverables:

1. Quarterly progress reports
2. Phase reports, documenting measurable resource benefits. **Invoices must be accompanied by documented resource benefits identified for the Phase, and include matching funds documentation.** A Phase report may replace a quarterly progress report if both are due at the same time.
3. Draft final report, documenting final measurable resource benefits for the project, for review by the Project Manager.
4. Final report, addressing any review comments provided by the Project Manager.

PROJECT EVALUATION

All applications should include a statement describing how the project and its quantifiable results will be evaluated and documented, and a separate statement that describes the plan for long-term monitoring and adaptive management.

FUNDING AVAILABILITY

Approximately $500,000- $700,000 is available for the 2015 cycle.

ELIGIBLE APPLICANTS

Eligible applicants include local, state, and federal governments; non-profit organizations; and educational institutions. Private entities may be partners in a project if the private entity is procured through a competitive process, but applications must be submitted by an eligible entity as listed.

GRANT SIZE

Average grant range is **$30,000 to $150,000.**

PROJECT PERIOD

We strongly prefer that projects be completed within 18 months of formal award notification but in any case must be completed within two years.

RESTRICTIONS

Grant funds cannot be used for political advocacy, fundraising, lobbying, and litigation activities or to support projects resulting from legally mandated mitigation projects.

MATCH

A minimum 1:1 match of cash or in-kind/contributed goods and services is required; higher match ratios increase the competitiveness of the proposal. All potential sources and amounts of match should be listed in the proposal. Federal, non-federal and private funds are eligible for use as match.

To be eligible, matching contributions must be:

- Raised and dedicated specifically towards the project;
- Voluntary in nature (mitigation, restitution, or other permit or court-ordered settlements are ineligible);
- The cost of recent land acquisitions may also qualify as match for a project involving work at that site.
- Match contributed up to one year prior to the proposal submittal deadline may be included.

INDIRECT COSTS POLICY

Grant funding for indirect costs shall not exceed 10 percent on a project basis.

APPLICATION INSTRUCTIONS

Download and complete a TBERF – 2015 Project Proposal Application and submit to Ron Hosler at ron@tbep.org by 3:00 PM, EST, March 20, 2015.

All proposals should describe a plan for project implementation, including a timeline and measurable resource benefit resulting from each Project Phase, partnerships, and how the project will be sustained over the long term. Proposals should include maps and, if available, photographs of the site. Maps should clearly identify the project area.

If the funding request is for one element of a larger project, please put in context the element relative to the larger project by stating the goals, outcomes, and timelines for both the element and the larger project (and the extent to which the funding request will help achieve the overall project goals).

TIMELINE

The anticipated timeline for this grant round is as follows:

March 20, 2015: Full proposals are due via email to ron@tbep.org.

March – May 2015: Follow-up with applicants for additional information, as necessary

By May 30, 2015: Grant decisions announced

Any applicant awarded a grant will be required to enter into a contract with TBEP or RAE. It is at the sole discretion of TBEP and RAE to determine whether a grantee will enter into a contract with the TBEP or RAE. A key provision of all contracts will be to ensure that the grantee specify then meet agreed-upon measurable resource benefit(s) for each Phase of a project, and provided documentation of required match, prior to receiving payment for invoices for that Phase.

Be advised that all proposals that are received are Public Records under Florida law, and as such proposals may be reviewed and copied by members of the public.

QUESTIONS

Please direct any questions to Holly Greening, Executive Director, Tampa Bay Estuary Program, hgreening@tbep.org or 727-893-2765.

2013 Recipients: Tampa Bay Environmental Restoration Fund

Newman Branch Creek Fisheries Habitat Restoration Phase III ($60,000)
Ecosphere Restoration Institute will reconnect the creek to restore tidal flow to adjacent wetlands to provide critical fisheries habitat along 24 acres of the southeast shore of Tampa Bay.

Robles Park Water Quality Improvement Project ($175,000)
The Southwest Florida Water Management District will enhance stormwater treatment functions and freshwater wetland habitat in a manmade 5-acre pond at this urban park that discharges directly to the Hillsborough River.

McKay Bay Oyster Reef Creation and Enhancement ($80,000)
Tampa Bay Watch will utilize volunteers to install 2,900 feet of oyster reefs in shallow areas of McKay Bay to filter pollutants from the water and provide fish habitat and shorebird foraging areas.

Rock Ponds Ecosystem Restoration ($200,000)
The Southwest Florida Water Management District will continue the restoration of more than 1,000 acres of estuarine, freshwater and upland habitats along Hillsborough County's south shore, in what will be the largest coastal habitat restoration to date in Tampa Bay.

Which Tidal Tributaries Are The Best Snook Nurseries? ($100,000)
The Florida Fish and Wildlife Conservation Commission will attempt to answer this question by studying 20 tidal creeks in the bay watershed to identify common factors that contribute to productive habitat for juvenile snook, a popular sportfish.

Reducing Nitrogen Loads to Tampa Bay Using Bioretention Systems ($105,000)
The University of South Florida will construct four bio-retention systems in East Tampa and monitor their effectiveness at removing nitrogen from urban runoff.

Community-Based Stormwater Nutrient Management ($100,000)
The University of Florida will employ water quality sampling and social marketing techniques to inform and involve homeowners in the Lakewood Ranch community of Manatee County in implementing Best Management Practices to reduce nitrogen and improve water quality in their stormwater ponds.

East McKay Bay Habitat Restoration and Water Quality ($100,000)
The Southwest Florida Water Management District will remove invasive plants and construct three stormwater treatment ponds to treat urban and industrial runoff from 436 acres of surrounding lands.

Autonomous Water Quality and Harmful Algal Bloom Monitoring ($50,000)
The Florida Fish and Wildlife Conservation Commission will examine the relationship between Harmful Algal Blooms, water quality and bay restoration efforts through autonomous water quality sampling as well as phytoplankton sampling.

2014 Recipients: Tampa Bay Environmental Restoration Fund

Colonial Waterbird Management in the Tampa Bay Watershed ($36,000)
Audubon's Florida Coastal Islands Sanctuary staff will manage and track population trends and threats in nationally significant waterbird nesting colonies supporting 50,000 pairs of 31 bird species annually.

Safety Harbor Waterfront Park Habitat Restoration ($70,000)
The City of Safety Harbor will remove invasive plants from a planned passive-use public park and replant with native species to restore 6 acres of marsh/mangrove wetlands.

Mapping of Hard-Bottom Habitat in Tampa Bay ($150,000)
SWFWMD will inventory and assess the quality of hard bottom reefs, oyster beds, and tidal flats in Tampa Bay to determine historic extent and develop restoration/protection targets for these important habitats.

Coastal Blue Carbon Assessment ($100,000)
Restore America's Estuaries will assess the climate mitigation benefits associated with restoring salt marshes, mangroves and seagrass beds in the Tampa Bay ecosystem. These three habitat types are collectively called "coastal blue carbon habitats" for their ability to sequester carbon that contributes to climate change.

Rock Ponds Coastal Ecosystem Restoration ($60,000)
Tampa Bay Watch will plant marsh grasses utilizing community volunteers to enhance or restore 20 acres of tidal wetland habitat over a 2-year period as part of the comprehensive restoration of former shell mining pits on Tampa Bay's southeast shore.

Oyster Bar Restoration at Robinson Preserve ($53,000)
Manatee County will install 7,500-square-feet of oyster beds as part of the comprehensive restoration of a 651-acre county preserve.

Duette Preserve Hydrologic Restoration ($87,260)
Manatee County will restore forested and non-forested freshwater wetlands by removing manmade ditches to recreate natural hydrologic flows in the eastern Manatee River watershed.

***Bay Soundings* Environmental Journal ($25,000)**
The Tampa Bay Regional Planning Council will produce, print and distribute one year (four issues) of this popular environmental journal informing citizens about bay management trends, issues and accomplishments.

MacDill Air Force Base Living Shoreline ($41,000)
Tampa Bay Watch will place 137 tons of oyster reefs and plant 1,000 linear feet of salt marsh grass using community volunteers as part of a large restoration along the southeastern shoreline of MacDill AFB.

RESUME SUMMARY

Holly Greening
Tampa Bay Estuary Program
Executive Director
263 13th Ave South, Suite 350
St. Petersburg, FL 33701
hgreening@tbep.org; 727-893-2765

EDUCATION:
BS (General Biology) Florida State University; June 1975
MS (Biology) Florida State University; December 1980

POSITIONS HELD:

February 2008- present	Executive Director, Tampa Bay Estuary Program, St. Petersburg, FL
March 1991 – Jan 2008	Senior Scientist, Tampa Bay Estuary Program, St. Petersburg, FL
1989 - 1991	Project Biologist, Dames & Moore, Tampa, FL
1987 - 1989	Staff Scientist, International Science & Technology, Inc, Reston, VA
1985 - 1987	Assistant Scientist, Martin Marietta Environmental Systems, Columbia, MD
1981 - 1985	Research Coordinator and Assistant Manager, Okefenokee Swamp Research Group, Institute of Ecology, University of Georgia
1981 and 1983	Scientist, Sea Education Association, Woods Hole, Mass.

RESPONSIBILITIES AND APPOINTMENTS
Responsibilities and appointments include the following:

- Direct and oversee TBEP scientific and public outreach programs
- Personnel management, financial management, program management
- Maintain strong partnerships to protect and restore Tampa Bay
- Facilitate resource management planning and implementation efforts throughout the bay region and nationally
- Participate in national resource management initiatives, using Tampa Bay experience as an example of a successful resource management program
- Member, National Academy of Sciences National Research Council panels:
  - Causes and Management of Coastal Eutrophication(1998-2000)
  - National Needs for Coastal Mapping and Charting (2002-2003)
  - Evaluation of NOAA's sectoral applications research program to provide climate change information to resource managers (2006-2007)
  - Achieving Nutrient and Sediment Reduction Goals in the Chesapeake Bay (2011)
- Governing Board, Estuarine Research Federation, 2001-2005
- Co-Chair, Pinellas County Environmental Science Forum, 2006-2007
- Co-Chair, Federal-State Task Team advising SIMOR on the National Ocean Research Priorities Plan, 2005-2006
- Member, National Academy of Sciences Ocean Studies Board, 2005-2008
- Co-Chair, Coastal and Estuarine Research Federation 2011 International Conference
- Chair, Association of National Estuary Programs, 2009-2012
- Associate Editor, *Estuaries and Coasts*, 2007-2013
- Member, Florida Oceans and Coast Council, 2007-current

Selected Technical Publications

Greening, H., A. Janicki, E.T. Sherwood, R. Pribble and J.O.R. Johansson. 2014. Ecosystem responses to long-term nutrient management in an urban estuary: Tampa Bay, Florida, USA. Estuarine, Coastal and Shelf Science 151: A1-A16.

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Leber, K.L. and H.S. Greening. 1986. Community studies in seagrass meadows: a comparison of two sampling methods for macroinvertebrates and fishes. Fish. Bulletin 84: 443-450.

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APPENDIX F-2

Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan

($300,000)

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

Based on the Transocean settlement and until the BP trial ends, it is estimated by March 31, 2015, $1,542,888 will be available in the Gulf Coast Restoration Trust fund for distribution to Pinellas County under the Direct Component allocation.

As a guideline, Pinellas County anticipates funding 3 to 7 projects not to exceed a total of $1,542,888 as part of the initial multiyear implementation plan (MYIP). It's anticipated that projects selected for MYIP inclusion that receive funding would not begin until after December 2015.

Please read through all the questions before beginning.

- Submitted projects must address one or more of the five Gulf Coast Ecosystem Restoration Council goals and one or more RESTORE Act-eligible activities.
- Projects submitted by FEBRUARY 6, 2015 will be eligible for inclusion in the initial Multiyear Implementation Plan (MYIP)
- The "Steps" and "Criteria" numbers in the application refer to questions that address the steps and criteria for selection and ranking projects. The selection and ranking criteria can be viewed at www.pinellascounty.org/restore/pdf/project-selection.pdf
- Answer each of the 29 questions as completely as possible, but keep responses focused.
- Submit one form per project.
- Once the form is successfully submitted, you will be contacted by Pinellas County.
- Send associated maps, charts, images, and budget information along with the title of your project in a Portable Document File (PDF) to restore@pinellascounty.org.
- Direct questions to restore@pinellascounty.org

Applicant Name: *(Include at least one Point of Contact (POC), phone number, email address, and organization name, if applicable)*:

1. **POC Name: LIZ FREEMAN**

2. **POC Organization: PINELLAS COUNTY PLANNING DEPARTMENT**

3. **POC Title: PLANNING DIVISION MANAGER**

4. **POC Email: efreeman@pinellascounty.org**

5. **POC Phone: (727) 464-8200**

6. **Proposed Activity Name: PINELLAS COUNTY ASSESSMENT OF VULNERABILITY TO THE IMPACTS OF SEA LEVEL RISE AND INFRASTRUCTURE RESILIENCY PLAN**

7. **<u>Restoration Council Goals Addressed</u>:**
(Step 1 and Step 2 - Criteria 1 and 2)
List which of the following goal(s) will be addressed and how each goal will be addressed.

A. Restore and Conserve Habitat
B. Restore Water Quality
C. Replenish and Protect Living Coastal and Marine Resources
D. Enhance Community Resilience
E. Build and Revitalize the Gulf Economy

The project will address all of the Restoration Council Goals (i.e., Goals A through E), either directly or indirectly.

Those goals addressed <u>directly</u> include *Enhance Community Resilience* and *Build and Revitalize the Gulf Economy*. The project will enhance community resilience by identifying coastal infrastructure assets that are vulnerable to the impacts of climate change/rising sea levels and by formulating adaptation/mitigation strategies to better protect those assets. Importantly, a more resilient community leads to a more sustainable and robust local economy. A less resilient community adds economic risk that will make it more difficult to attract and retain target industries and the high-wage employers that are essential to a healthy economy.

Those goals addressed more <u>indirectly</u> include *Restore and Conserve Habitat, Restore Water Quality,* and *Replenish and Protect Living Coastal and Marine Resources*. It is anticipated that the adaptation/mitigation strategies derived from the project will consider utilization of the natural environment as a buffer to protect vulnerable infrastructure. That utilization will likely include restoration and conservation of habitat which leads to the restoration of water quality and the replenishment and protection of living coastal and marine resources, as all three of these environmental-related goals are intertwined. In addition, the enhanced resilience of coastal infrastructure will lead to more efficient stormwater systems that will help restore water quality and positively impact the other related environmental goals.

8. **<u>RESTORE Act Eligible Activities Addressed</u>:**
(Step 1 and Step 2 - Criteria 3 and 4)
List which of the following activities will be addressed and how each activity will be addressed.

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.
Response: *This is anticipated to be a side benefit of enhancing community resilience. The restoration and protection of natural resources can provide important buffers to help protect coastal infrastructure.*

2. Mitigation of damage to fish, wildlife, and natural resources.
   Response: *See above. The mitigation of damage to fish, wildlife and natural resources would be a side benefit of adaptive or mitigative strategies that relied on enhancement of natural resources to help protect coastal infrastructure.*

3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring.
   Response: *NA*

4. Workforce development and job creation.
   Response: *A more resilient community leads to less financial risk for companies to invest in the area and do business here. This will support investment in workforce development and job creation. In addition, some of the mitigation activities themselves will provide job creation.*

5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill.
   Response: *NA*

6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.
   Response: *More resilient infrastructure will better protect ecological resources (e.g. stormwater management systems), lead to a more sustainable economy and directly create jobs (e.g. those projects to make infrastructure more resilient will require investment and jobs – some high paying although temporary).*

7. Coastal flood protection and related infrastructure.
   Response: *the primary purpose of the project is to identify at-risk and critical infrastructure subject to sea level rise and inundation threats, as well as potential adaptive and mitigative strategies.*

8. Promotion of Gulf Coast Region tourism, including recreational fishing.
   Response: *A more resilient community, and in particular strategies for a more resilient transportation system, will lead to a more sustainable tourist economy.*

9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region.
   Response: NA

10. Planning assistance.
    Response: N/A

9. **Previous Claim:**
   Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.
   Yes:
   No: X

10. **RESTORE Act Pinellas County priorities addressed:**
    (Step 2 - Criteria 5 and 6)
    List which of the following priorities will be addressed and how each priority will be addressed.

a. Protect and restore native habitats
   Response: *This is anticipated to be a side benefit of enhancing community resilience. The restoration and protection of natural resources can provide important buffers to help protect coastal infrastructure.*

b. Provide stormwater quality improvements
   Response: *The identification of stormwater improvements or retrofits may result from this project.*

c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages
   Response: *NA*

d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
   Response: *The planned economic analysis of the project will facilitate long-term/sustainability and cost-benefit-driven decision-making and prioritization by local governments, including the opportunity to identify key projects that may be eligible for infrastructure sales tax funding. The project will broadly assess the economic impact of certain infrastructure losses and scenarios in order to better plan and prioritize resiliency, mitigation and adaptation investments. The project will also provide the means to better facilitate the allocation of finite capital over time to the key infrastructure needed to sustain (both economically and environmentally) the Pinellas community, using a systems method of planning and analysis. The project will support better understanding of the connection between infrastructure resiliency and economic development, helping to facilitate policy development and the prioritization of certain public investments, including the identification of key resiliency projects that could be funded by a Penny for Pinellas extension.*

e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement

Response: This project is intended to identify at–risk assets as well as selected adaptation/mitigation strategies that should make those asset-types more resilient to a changing climate. Essential elements of the project include ongoing participation and collaboration in the regional climate science and planning initiatives underway, as well as strategic public engagement to inform citizens, business community, etc. of the project purpose and solicit targeted input along the way. A key goal of the project is to generate collaborative and ongoing momentum for countywide resiliency planning, including arriving at a common understanding and agreement on critical infrastructure vulnerabilities.

f. **Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels**

Response: *A key goal of the project is to better facilitate decision-making and the allocation of finite capital to the key infrastructure needed to support a more climate-resilient Pinellas community, using a systems method of planning and analysis that can be applied to annual capital improvement planning and programming.*

g. **Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan Link to Plan: http://www.postdisasterplan.org/pdrp.shtml**

Response: The project will implement components of the County's post-disaster redevelopment plan (PDRP) - The Environmental Action Plan and the Infrastructure Action Plan. Broadly, the PDRP both acknowledges and recognizes the need to plan for coastal resiliency and sea level rise. In particular, the Infrastructure Restoration Action Plan includes the following Strategy: "incorporate the potential for, and adaption to, sea level rise in infrastructure build back policies," and Action C9.1.1 states: "identify the potential for sea level rise under different scenarios" and Action C9.1.2 states "Determine the cost-benefit to adaptive strategies." The Environmental Action Plan (Action D2.1.4.) states: "Work with federal and state partners to identify potential sea level rise scenarios for west Florida. " This project will build on the partnership and collaboration already underway (which is further described throughout this application). In the 2015 Pinellas County Local Mitigation Strategy (LMS), sea level rise is recognized as an emerging hazard warranting attention in the LMS, but the decision was made to wait until local studies were accomplished with locally-specific data before including migitation and adaptation projects in the document. This project will help facilitate this next step.

h. **Diversify and improve the economy including tourism**

Response: *A more resilient community, and in particular strategies for a more resilient transportation system, will lead to a more sustainable tourist economy.*

i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts
Response: *NA*

11. Project Location
(Step 1)
As applicable, describe the location, attach a map and indicate the address, city, zip code, longitude/latitude, and watershed:

The project location is the Pinellas County peninsula, comprised of 25 local governments, located on the western-most coast of Central Florida, with the Gulf of Mexico on its western edge and Tampa Bay on its eastern and southern edges. Please refer to the attached map of Pinellas County, as well as a watershed map of the overall County (there are 55 watersheds within the Pinellas County boundary). General latitude and longitude is: 27°36'41.31" N and 28°10'23.73" N Latitude; 82°35'15.56" W and 82°51'06.52" W Longitude

Region or Geographic Area Impacted by Project
(Step 1 and Step 2 - Criterion 7)
Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

The geographic area for the project encompasses all of the 25 local government jurisdictions within the boundaries of Pinellas County. These include:

- Belleair
- Belleair Beach
- Belleair Bluffs
- Belleair Shore
- Clearwater
- Dunedin
- Gulfport
- Indian Rocks Beach
- Indian Shores
- Kenneth City
- Largo
- Madeira Beach
- North Redington Beach
- Oldsmar
- Pinellas Park

- Redington Beach
- Redington Shores
- Safety Harbor
- Seminole
- South Pasadena
- St. Pete Beach
- St. Petersburg
- Tarpon Springs
- Treasure Island
- Unincorporated Pinellas County

As a small peninsular county surrounded by water and made up of 25 local governments, planning separately community by community when faced with a collective challenge is counter-productive logistically and fiscally, particularly when the benefits of this project are intended to serve the citizens and business owners of the entire Pinellas Community.

The impacts of sea level rise will not recognize jurisdictional boundaries. The existing network of roads and utility infrastructure already transcends individual local government limits; flooding and inundation events do not respect county or municipal limits. Responding collaboratively to the collective challenge of sea level rise only makes sense.

Eventually, other communities within the region could also benefit from the project outcomes, as the results and methodologies used should be transferable to neighboring communities who wish to undertake similar resiliency analyses (Hillsborough, Manatee and Pasco counties encompass the area served by the Tampa Bay Regional Planning Council).

Discussion of Specific Activity

Describe the project by responding to each of the following topics.

12. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

This project is timely for the following reasons: current average global temperatures, based on current science, are warmer by about +0.8 degrees Celsius compared to 100 years ago. The 2014 United States National Climate Assessment (NCA) and the Intergovernmental Panel on Climate Change (IPCC) report of 2013-2014 forecasts accelerating global warming with increases of +2 to +5 degrees Celsius by 2100. As a result of warming global temperatures, global sea levels are rising. This rise is

anticipated to accelerate in the future due to two factors: 1) warmer global temperatures will result a higher rate of ice melt for mountain snow caps, glaciers and land ice in Greenland and Antarctica and 2) warmer global temperatures will result in the thermal expansion of the world's oceans.

Local data measured at the St. Petersburg tide gauge station (Station ID 8726520) shows that sea levels in Tampa Bay have already increased approximately 6.6 inches since 1947, when water levels were first recorded at this tide gauge. This rate of change (approximately 2.54 mm/year or 10 inches per 100 years) has accelerated in recent decades. Recent reports indicate that not only will global mean sea level (MSL) continue to rise during the 21st century, but that rate of increase is likely to accelerate due to additional ocean warming and the loss of land-based glaciers and ice sheets.

Pinellas County's ties to the water are extensive. Because of its small geographic size and unique peninsular location separating the Gulf of Mexico from Tampa Bay, no areas within its boundaries are more than just a few miles from the coastline. Unfortunately, Pinellas County has numerous coastal infrastructure assets that serve the public and these facilities may be vulnerable to rising sea levels. This project is important as it will identify these assets as well as adaptation/mitigation strategies that will make the County more resilient, physically and economically, to a changing climate.

Essential elements of the project include building upon previous resiliency planning work performed in the region, eventually facilitating the systematic incorporation of climate risk and resiliency information into local and countywide infrastructure planning and investment processes. Specifically, this project will involve, among several tasks, the creation of a Geographic Information System (GIS) that utilizes an agreed-upon sea level rise projection methodology for various time scales and scenarios, the latest topographic data (DEM/LiDAR) and the location of existing and planned transportation, utilities and public safety infrastructure in Pinellas County [i.e., for the unincorporated county, municipal data and relevant infrastructure data from other stakeholders (e.g., FDOT)]. This GIS-based decision support tool will be used to generate scenarios related to timelines and change, and facilitate assessment of realistic adaptation and mitigation strategies. Additionally, the planned economic analysis will facilitate long-term/sustainability and cost-benefit-driven decision-making and prioritization by local governments, including the opportunity to identify key projects that may be eligible for infrastructure sales tax funding. More specifically, **Key goals of the project include:**

- To generate collaborative and ongoing momentum for countywide resiliency planning, including arriving at a common understanding and agreement on critical infrastructure vulnerabilities.
- To build on the post-disaster redevelopment planning work done to date and begin to link sea level and climate planning to the Local Mitigation Strategy.

- To broadly assess the economic impact of certain infrastructure losses and scenarios in order to better plan and prioritize resiliency, mitigation and adaptation investments.
- To create a robust countywide GIS network(s) and database supporting resiliency and infrastructure planning.
- To better facilitate the allocation of finite capital over time to the key infrastructure needed to sustain (both economically and environmentally) the Pinellas community, using a systems method of planning and analysis.
- To facilitate the identification of adaptation strategies for incorporation into the MPO's 2040 Long Range Transportation Plan.
- To support better understanding of the connection between infrastructure resiliency and economic development, helping to facilitate policy development and the prioritization of certain public investments, including the identification of key resiliency projects that could be funded by a Penny for Pinellas extension.

The Project is intended to be phased as follows:

PHASE 1 - PROJECT KICKOFF: est. 2 month duration

The objective of this Phase is to initiate the project and on-board the consultant, as well as confirm the project goals and objectives. Key tasks include:

***Task 1.1**: Release Request for Proposals; retain technical consultant services; convene lead project team and identify key collaborators/subject matter experts*
***Task 1.2**: Confirm project goals and objectives with project partners and identify/establish planning teams(s)*

PHASE 2 – DATA COLLECTION AND ANALYSIS (countywide): est. 8 month duration

The objective of this phase of the project is to identify and synthesize existing sea level rise data, studies, and findings relevant to this project and as necessary, to generate supplementary data to facilitate the assessment of vulnerabilities. The Consultant will work with the lead team to perform the following tasks:

***Task 2.1**: Determine climate and sea level data/methodology to be used*

***Task 2.2**: Identify other relevant data (topographic, environmental, etc.); identify data gaps*

***Task 2.3:** Collect/assess/verify asset inventory (at a minimum, transportation, utilities and stormwater); includes relevant infrastructure data from county, municipal as well as non-municipal and county providers.*

***Task 2.4:** Initiate GIS database design and development*

The Consultant will work with the lead team, project partners and stakeholders to obtain the best available, regionally-scaled transportation, utilities, stormwater, climate data, Flood Insurance Rate Maps (FIRMs), and topographic data (LiDAR/DEMs) from local, regional, state, and national agencies, etc. This task will leverage previous work performed by and/or relevant to Pinellas County, including the FDOT's Sketch Planning Tool, Local Mitigation Strategy (LMS), watershed plans, etc. Data collection, analysis and outreach are primary elements of this task. The TBRPC and Pinellas County will lead GIS database development. Existing and planned Infrastructure networks/layers will be collected and integrated into the GIS geodatabase. The focus of the infrastructure data collection will be facilities of countywide significance, but all readily-available data will be integrated if relevant. Existing data on sea level rise and inland flooding will be collected. The best available LiDAR/Digital Elevation Model(s) will be used/integrated into the GIS geodatabase to facilitate the asset exposure analysis. Data and information gaps will be assessed. Other environmental data which may impact infrastructure vulnerability assessment or identification of mitigation and adaptation strategies will be identified for inclusion in the analysis. Additional climate data is likely to include scenarios of sea level rise, developed based on specific analysis years and impact thresholds required for infrastructure vulnerability analysis. Available plans and studies that are relevant to the analysis will also be identified at this time (e.g., Long Range Transportation Plan, Local Mitigation Strategy, Watershed Plans, etc.)

PHASE 3 - DATA ANALYSIS: est. 12 month duration

The objective of this Phase is to verify critical infrastructure, and identify at-risk critical infrastructure for further analysis. Once the infrastructure subsets are identified, detailed analysis will be undertaken to better assess specific vulnerabilities, to refine data, verify assumptions and findings, and begin to test scenarios and strategies. For the critical infrastructure assets identified for detailed analysis, the potential fiscal impact of specific facility threats and inundation will be initiated using, among other methods, the REMI model. Key tasks include:

***Task 3.1**: Identify critical infrastructure*

***Task 3.2:** GIS-based scenario planning/vulnerability assessments on identified critical assets*

Task 3.3: *Consider relationships/opportunities presented via interplay between the natural and built environment*
Task 3.4: *Initiate economic analysis [e.g., TBRPC's Regional Economic Model (REMI) tool and analysis]*

PHASE 4 – STRATEGY DEVELOPMENT: est. 10 month duration

The objective of this task is to assess Phase 3 results and begin to apply mitigation and adaptation strategies to the critical assets. The consultant will identify and develop effective, feasible, and cost-sensitive adaptation strategies for impacted assets identified in Task 4.2. Primary emphasis will be placed on orienting strategies to coincide with the regular asset renewal cycle (mainstreaming). Adaptation alternatives will be developed through guided stakeholder outreach, supported by a customized decision-making matrix and expert guidance from consultant planners, scientists, and engineers. For a selection of preferred alternatives (e.g., for the 10-20 assets identified in Task 4.2), order of magnitude costs will be developed to facilitate consideration by the lead team. Key tasks include:

Task 4.1: Identification and testing of mitigation and adaptation strategies, alternatives and scenarios
Task 4.2: Decision and long range planning tools for assessing cost-benefit of adaptation and/or mitigation proposals for critical infrastructure; includes estimates of economic impact and economic damage where feasible for integration into the decision-making/prioritization approach, as appropriate.
Task 4.3: Final Report, including summary economic analysis, key infrastructure vulnerabilities and opportunities, as well as policy recommendations, priority recommendations and a recommended action plan. The final report will, at a minimum:

- Document the screening process for prioritizing critical infrastructure including a GIS geodatabase and tabular inventory of selected asset types
- Document the potential climate vulnerabilities and risks due to sea level rise (and related effects such as storm surge, flooding, etc.)
- Identify candidate adaptation projects, including rationales and justifications (economic and otherwise) for inclusion in local government capital planning and programming
- Recommendations for further development of the GIS decision-support tool
- Recommendations for the future advancement of regional climate resiliency activities in the transportation, utilities and stormwater sectors
- An executive summary and web content, summarizing the science, results and recommendations.

Resiliency assessments are a key tool for informing adaptation planning and enabling infrastructure managers to make such sound judgments and investment decisions. A sea level rise resiliency assessment provides two essential contributions to adaptation planning. Specifically, it helps in; 1) identifying which infrastructure is most likely to be most impacted by projected changes in sea levels; and 2) understanding how to adapt existing and future infrastructure to new environmental conditions. Determining which infrastructure sectors are most vulnerable enables managers to better set priorities for investment decisions, while understanding why they are vulnerable provides a basis for developing appropriate adaptation and mitigation strategies.

13. Project Manager and Key Project Team Members - include credentials and experience doing similar work.

Project Partners: Pinellas County Government, Tampa Bay Regional Planning Council, Pinellas County Metropolitan Planning Council

Key Staff/Lead Project Team includes: (*each of the team members below have been assembled for their experience and a multi-year history of involvement in local government planning, project management, scientific studies, environmental science, water and natural systems management, infrastructure planning and design, as well as several years' experience monitoring climate findings and science, and participating in, among other related activities, the climate and sea level collaborations described elsewhere in this application*)

- Elizabeth Freeman, Long Range Planning Manager - Pinellas County Planning Department
- Kelli Levy, Natural Resources Division Manager, Pinellas County Public Works
- Nan Bennett, Engineering Support, Pinellas County Utilities
- Maya Burke, Senior Planner (Environmental), TBRPC
- Brady Smith, Principal Planner (Emergency Management), TBRPC
- Rodney Chatman, Planning Section Manager, Pinellas County MPO

A consultant will complete the project with direction and assistance from the project team.

14. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

The project will provide key information towards formulating strategies and future actions required to make the County more resilient and sustainable in the face of a changing climate and rising sea levels. A physically more resilient County leads to a more economically resilient County, particularly as economic interests may become reluctant to invest in areas that are perceived to be risky and vulnerable. Specifically, the project

findings and results will enable more sustainable capital and financial decisions by local governments in Pinellas County, with capital spending decisions considering specific infrastructure risk and vulnerability over incremental periods of time, using cost-benefit and "full-cost accounting" regarding the cost of actions today versus the cost tomorrow. Additionally, building on the economic impact work done by the Hillsborough County MPO, this project will enable looking at transportation infrastructure on a multi-county scale, and enable a better regional assessment of transportation impacts and potential consequences to the commuting public and regional economy. On the environmental side, benefits are likely to derive from consideration of the natural system (and its protection or enhancement) as an integral part of the buffer and defense system for the built environment.

15. Technical Feasibility - Describe technologies and relevant past experience or proven success with similar projects.

Pinellas County has monitored the sea level work and science in South Florida for several years, including the collaboration towards the Southeast Florida Regional Climate Compact and the preliminary technical assessments of vulnerability done in association with development of the Compact, as well as planning and technical work underway in South Florida (e.g., the Broward County MPO is assessing the vulnerability of transportation infrastructure; Broward County government is starting to look at protection and mitigation strategies, as well as design standards, Miami-Dade has adopted a resolution requiring consideration of sea level rise in all infrastructure planning decisions, etc.). The County has convened an internal multi-disciplinary climate team and has been building up background in climate planning and science. Over the past year, the County has engaged the assistance of UF/Florida SeaGrant to assess the level of knowledge and interest among the Pinellas municipalities in planning collaboratively for climate and sea level change locally.

The Tampa Bay Regional Planning Council has taken the initiative to form the One Bay Resilient Communities Working Group, along with participating in a technical team of area scientists, (the Tampa Bay Climate Advisory Panel) facilitated by UF/Florida Sea Grant staff, focused on evaluating current sea level science and facilitating agreement on sea level rise projections for the region, and involving examination of the most recent Army Corp of Engineering (ACOE) and National Oceanographic and Atmospheric Administration (NOAA) modeling and scenarios. The Hillsborough County Metropolitan Planning Organization recently initiated an assessment of transportation infrastructure and sea level vulnerability using the FDOT Sketch Planning Tool, developed by UF/GeoPlan Center, for assessment of their transportation system vulnerability. This provides an excellent model as a starting place for Pinellas County's assessment.

The Pinellas County project intends to build on the scientific work done to date (including the work in Hillsborough County), using professional technical consultant

assistance, in order to conduct a comprehensive and collaborative assessment of infrastructure vulnerability, economic impact, and evaluation of mitigative and adaptive strategies in Pinellas County.

Additionally, the TBRPC operates a sophisticated economic modeling and analysis operation through its regional information center, using Regional Economic Models, Inc. (or REMI) - they are equipped to conduct a variety of scenarios and economic analyses specific to individual counties and the region as a whole, and in fact provided technical support to the Hillsborough initiative. Their work will be coupled with the work of the Tampa Bay Climate Adaptation Science Advisory Panel and be translatable at the county, regional and State level. County and TBRPC staff are also involved in the sea level planning work underway by the Tampa Bay Estuary Program. Each of the partners to this project have identified success in managing large and comprehensive technical projects, and managing large consultant contracts. All three partners routinely manage large planning and technical consultant contracts.

16. **Public Acceptance** - Describe any known or potential public approval or opposition to the project.

In early 2014, the Pinellas County Board of County Commissioners identified planning for sea level rise and climate change as a priority. At that time, they acknowledged that an assessment of vulnerability is an important first step in understanding what steps are required to better plan for a resilient environment, economy and community. Since that time, County staff engaged the assistance of UF/Florida Sea Grant to conduct an informal conversation with each of the other local governments in Pinellas County, assessing their interest, needs and awareness of the sea level rise challenge, and gauging the desire to start planning together. While the project is not complete, we are advised that there is interest among other governments in working together on the sea level rise challenge. For this reason, municipal representatives will be critical partners on the project team.

Economic development officials have emphasized that the message not be one of doom and gloom, as the viability of the local economy is essential to the sustainability of a quality Pinellas community. New investment and business growth must not be scared away by planning scenarios and maps. The project goal and message will need to be clear that planning for a more resilient community supports quality investment opportunities in the future.

17. Project Activity Budget Justification:
Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

Identified Task	Estimated Cost
Personnel and fringe:	$0
Travel including the number of trips and estimated cost per trip:	$0
All equipment greater than $1,000:	$0
Supplies including a list of major types of supplies:	$0
Contractual costs:	$300,000
Administrative costs not to exceed 3% of the total award:	$0
Future costs related to maintaining the project, the funding source, and responsible entity:	$0

18. Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.
(Step 2 - Criterion 8) *List any project partners and briefly describe their involvement and contribution to the project.*

The Tampa Bay Regional Planning Council (TBRPC) will be a key partner to the project. They have been instrumental in convening governments in the region to begin to assess and address the impacts of a changing climate, and in fact TBRPC recently initiated a two year project to facilitate knowledge-sharing and help develop decision support tools that will improve the regional capacity to withstand the effects of sea level rise and coastal hazards. Through this forum, they are also promoting the recommendations of the scientific panel currently studying the sea level rise models and local data pertinent to the Tampa Bay Region, and will be working to promote regional climate resilience policy. Additionally, they house considerable disaster management, economic and GIS technical expertise in-house which will be committed to the project, and will be part of the lead project team.

The Pinellas County Metropolitan Planning Organization (MPO) is a countywide body responsible for long range planning for the County's transportation network. They administer the Countywide Long Range Transportation Plan and its cost feasible component. They have been monitoring the work done around the State regarding transportation infrastructure resiliency and are ready to undertake a local initiative. They will commit staff and resources to the project, and will be part of the lead project team.

19. Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed. (Step 2 - Criterion 9)

The proposed project is supported by and furthers the following Principles, Goals, Objectives and Policies of the Pinellas County Comprehensive Plan:

Planning to Stay Element

The Ethic of Sustainability is Fundamental to Every County Policy, Decision and Plan

Principal 1: Sustainability is fundamental to every County policy, plan and decision, to ensure that our actions today do not compromise the quality of our future.

Work Together at the Local, Regional and Global Level for a Sustainable Future

Principle 1: Pinellas County will work cooperatively with other governments, agencies, and community stakeholders to promote the social, environmental and economic conditions necessary to achieve a sustainable community.

Prepare for Disasters and Plan for Change

Principle 1: Planning for development must respect the restrictions imposed by the County's susceptibility to natural disasters, and should anticipate potential alterations to the urban and natural environment induced by long-term changes in the climate.

Natural Resource Conservation and Management Element

Goal Seven: Pinellas County will be a leader in environmentally sustainable government operations, a proponent of smart and sustainable growth management practices and will have a strong economy supported by sound environmental principles, programs and practices.

Objective 7.2: Pinellas County will plan responsibly for climate change and will educate citizens and stakeholders so that they are partners in determining the County's future.

Policy 7.2.3: In association with the update to the Land Development Code, determine whether there is a need to further amend the Comprehensive Plan and land development regulations to protect public and private coastal infrastructure and investment from the inland advancement of coastal waters, and to coordinate land use planning decisions with the expectations of sea level rise.

Coastal Management Element

Goal One: Pinellas County will protect human life, private property and public investment from the effects of hurricanes and other natural disasters.

Goal Four: Land use designations and decisions in the coastal planning area shall be consistent with the Future Land Use and Quality Communities Element of this Comprehensive Plan and compatible with protection of the County's natural and historic resources, reflecting the need for long-term sustainability, continued economic vitality and consideration for the vulnerability of the County's coastal location.

Objective 4.6: In an effort to ensure the long-term viability and sustainability of its coastal resources and land use, Pinellas County will remain apprised of, and plan where appropriate for rising sea levels.

Policy 4.6.1: Pinellas County will evaluate the data and findings regarding sea level rise on at least a five-year basis.

Policy 4.6.2: Based on the evaluations directed by Policy 4.6.1, Pinellas County will continue to refine and incorporate long-term planning strategies, and amend land development regulations as necessary, to responsibly plan for the effects of rising sea levels.

Policy 4.6.4: Pinellas County will encourage, and participate in, coordinated intergovernmental and interagency efforts to develop responsible strategies for addressing the potential negative effects of rising sea levels.

Policy 4.6.5: Pinellas County will share information with local municipalities regarding the implications of sea level rise and development decisions along the coast and other vulnerable areas.

Economic Element

Goal One: To facilitate a strong and robust local economy that provides growth opportunities for existing businesses, attracts new high-wage primary employers and promotes a diverse range of industries through innovative, sustainable methods that, in a responsible manner, enhance the County's vitality and the quality of life for residents and visitors.

20. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

As indicated in question 14, the project is intended to generate strategies and potential mitigative actions and adaptive measures designed to make the County more resilient and sustainable in the face of a changing climate and rising sea levels into the foreseeable future. Specifically, project findings and results will enable more sustainable capital and financial decisions by local governments in Pinellas County, facilitating capital spending decisions that incorporate infrastructure risk and vulnerability over incremental periods of time, using cost-benefit and "full-cost accounting" regarding the cost of actions today versus the cost of action or inaction tomorrow. The results and decision-tools can be used annually in budgeting as well as in long range planning. On the environmental side, long term benefits are likely to derive from consideration of the natural system (and its protection or enhancement) as an integral part of the buffer and defense system for the built environment. Economic benefits relating to sustained private investments and dependent jobs are difficult to measure in the short term, but the economic and social benefit of local government capital investments towards resiliency should be more readily quantifiable by comparing the cost of the improvement to the cost of specific infrastructure losses. Additionally, through the REMI analysis, the social/economic costs associated with, for example, an inability to get to work due to road inundation or loss, or other public facility failures or impacts, compared to the cost of mitigation, facility relocation and/or adaptation, are more quantifiable. Where relevant, any natural system enhancements recommended in order to provide ancillary infrastructure protection are also likely quantifiable as to their contributory habitat value as well as economic value.

21. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

There are no specific material risks anticipated at this point; however, the results of the vulnerability assessment, and the identification of potential mitigative/adaptive strategies will likely inspire much discussion by elected officials and the community regarding priorities, strategies and the consequences of action versus no action.

Key to managing technical results and implications is the ongoing dialogue that must take place at the TBRPC-level, the MPO-level and the local government level. Also, the engagement of the Pinellas County community, including the business community, is critical to achieving a meaningful project outcome. Therefore, the public involvement component of the project is a critical priority; it will be designed to periodically engage stakeholders for input and to test and validate findings and refine project direction. To date however, the work done by Thomas Ruppert with UF/Florida SeaGrant for Pinellas County indicates a desire among most local governments to move forward with planning for sea level rise. In early 2014, the Pinellas County Board of County Commissioners prioritized planning for sea level rise, but recommended that it be done collaboratively. The TBRPC, made up of local elected officials, has embraced the need to plan for a resilient community by establishing its collaborative One Bay initiative. The Pinellas MPO has monitored the progress by the

Hillsborough MPO and is ready to embark on a similar assessment. For all these reasons, broad material risk is not anticipated

22. Best Available Science:
Only answer if proposed activity will serve to protect or restore natural resources, otherwise, indicate "Not Applicable." Briefly describe how the project will use best available science with respect to peer reviewed literature, objective(s), and methodologically sound literature sources that support the scope of work, when available.

Not Applicable*

**Note that although this project is not intended to focus on the protection or restoration of natural resources, the contribution of the natural system to the resiliency of the community could be considered as a mitigative and adaptive strategy and may be addressed in the identification of policy and actions.*

23. Matching/Other funding
(Step 2 - Criterion 11)
Indicate:

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding. NA

- If matching funds are not secured, specify the amount of matching funds requested or expected. NA

- The date the amount of secured funds will be known. NA

Readiness for Implementation
(Step 3)
Complete the following:

24. Will the project be completed within 5 years from date funding is confirmed?
Yes: X
No: __

25. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

PHASE 1 – PROJECT KICKOFF MILESTONE: estimated 2 -3 month duration from project award

PHASE 2 – DATA COLLECTION AND ANALYSIS MILESTONE: (countywide): estimated 8-10 month duration

PHASE 3 - DATA ANALYSIS MILESTONE: estimated 12 month duration

PHASE 4 – STRATEGY DEVELOPMENT MILESTONE: 10 -12 month duration

TOTAL TIMELINE: ≤ 3 YEARS

26. How long before the project can start after funds are available (months)?

Upon notice of award, a Request for Proposal is expected to be released within two months, with the expectation that a technical consultant will be onboard within six months to commence the project with the project team.

27. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

No project design work or permitting is required.

28. Describe any issues or reasons that may delay project start or completion.
None.

END OF QUESTIONS

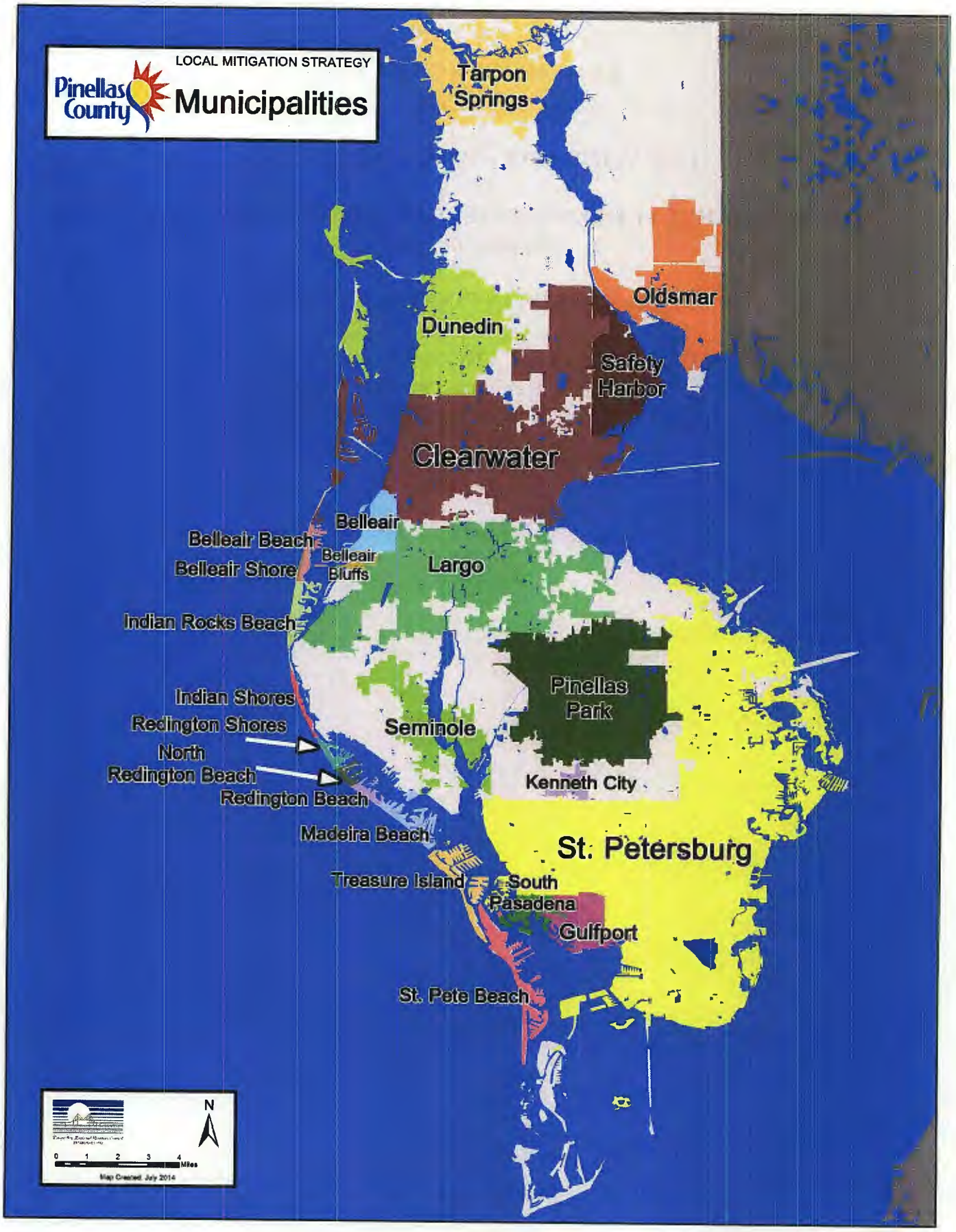
LIST OF ATTACHMENTS

LOCATION MAP – PINELLAS COUNTY

MAP OF MUNICIPALITIES IN PINELLAS COUNTY (*unincorporated area depicted in gray*)

WATERSHEDS IN PINELLAS COUNTY

LETTERS OF SUPPORT FROM PROJECT PARTNERS:
Tampa Bay Regional Planning Council
Pinellas County Metropolitan Planning Organization


LOCAL MITIGATION STRATEGY
Pinellas County
Municipalities
Tarpon Springs
Oldsmar
Dunedin
Safety Harbor
Clearwater
Belleair
Belleair Beach
Belleair Shore
Belleair Bluffs
Largo
Indian Rocks Beach
Pinellas Park
Indian Shores
Redington Shores
Seminole
North Redington Beach
Redington Beach
Kenneth City
Madeira Beach
St. Petersburg
Treasure Island
South Pasadena
Gulfport
St. Pete Beach
N
0 1 2 3 4 Miles
Map Created: July 2014

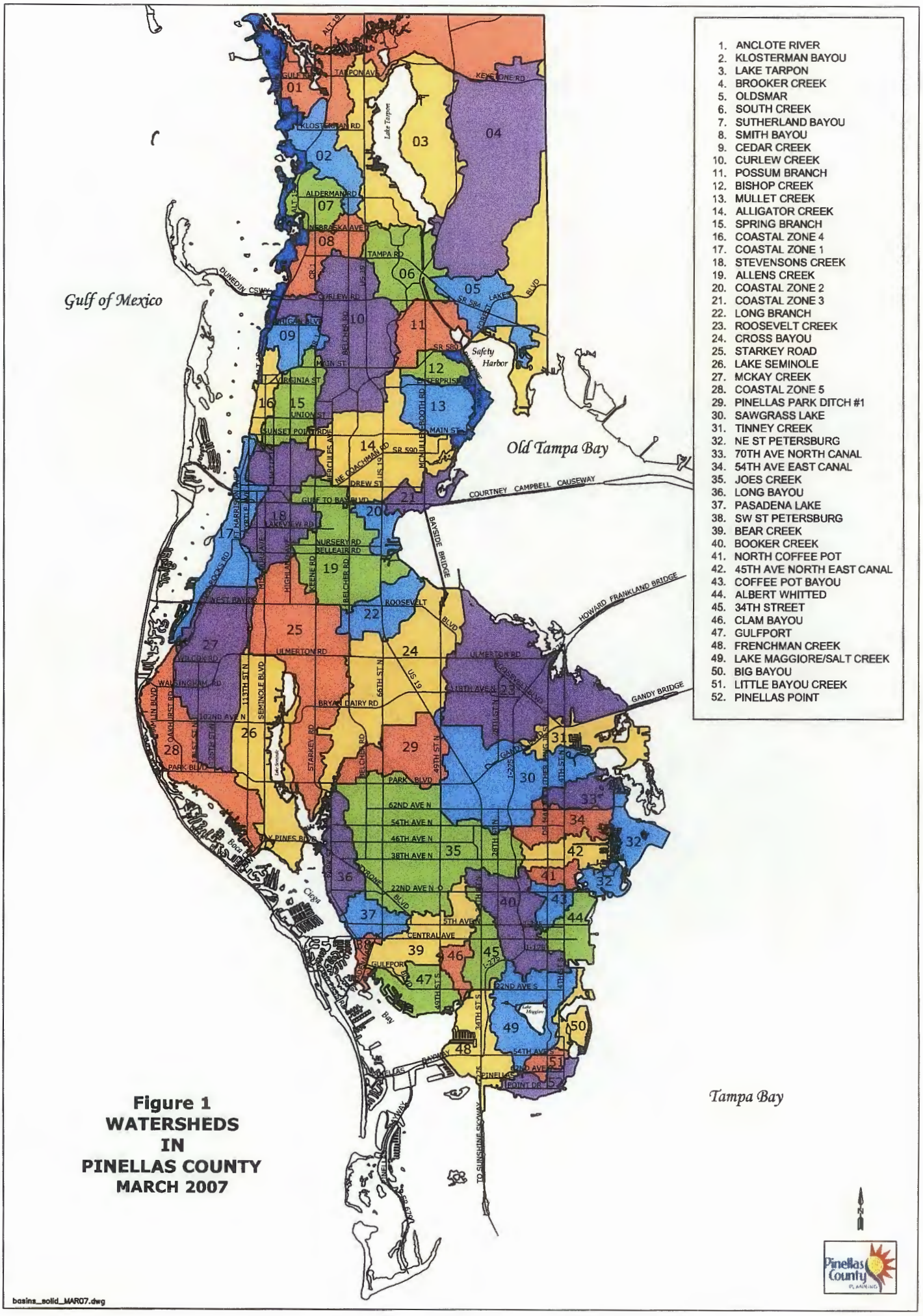


Figure 1
WATERSHEDS
IN
PINELLAS COUNTY
MARCH 2007


LOCAL MITIGATION STRATEGY
Pinellas County
Location Map
Pinellas County
N
0 25 50 75 100
Miles
Map Created: July 2014

Tampa Bay Regional Planning Council
ESTABLISHED 1962

February 2, 2015

Elizabeth Freeman
Planning Manager
Pinellas County Planning Department
310 Court Street
Clearwater, FL 33756

RE: Support for Pinellas County Infrastructure Sea Level Vulnerability Assessment and Resiliency Plan

Dear Ms. Freeman:

Tampa Bay Regional Planning Council supports the development of an Infrastructure Sea Level Vulnerability Assessment and Resiliency Plan for Pinellas County. TBRPC would be delighted to engage as a member of the project team to conduct an assessment and develop a resiliency plan.

As outlined in the project description, TBRPC has been engaged in assessing the region's resiliency and beginning to identify ways the region and local governments can address the impacts of a changing climate – particularly regarding sea level rise. TBRPC recently began a two year project under the leadership of NOAA to facilitate community dialogue on rising sea levels and planning our community's long term response.

The Council has several *best in class* resources that we can utilize to enhance the project such as our Geographic Information System (GIS), Econometric Model (REMI PI+), and Audience Response System. TBRPC staff has vast experience using these tools in decision support scenarios as well as public participation settings. We are pleased to partner with Pinellas County government and the Pinellas County Metropolitan Planning Organization on this important project.

Sincerely,

Wm. Avera Wynne, AICP
Planning Director

4000 Gateway Centre Boulevard, Suite 100 • Pinellas Park, FL 33782
Phone: (727) 570-5151 • Fax: (727) 570-5118 • www.tbrpc.org

MPO Pinellas County Metropolitan Planning Organization
310 Court Street. 2nd Floor. Clearwater. Florida 33756 • (727)464-8200: Fax (727)464-8201

February 5, 2015

Elizabeth Freeman, Division Manager
Pinellas County Planning Department
310 Court Street
Clearwater, Florida 33756

RE: Letter of Support for Pinellas County's Infrastructure Sea Level Vulnerability Assessment and Resiliency Plan

Dear Ms. Freeman:

The Pinellas County Metropolitan Planning Organization (MPO) strongly supports your application for funding through the Restore Act-Direct Component fund for the above referenced plan. This application is to develop a GIS-based decision support tool, vulnerability assessment and resiliency plan to assess the economic impact of infrastructure losses at various sea level rise scenarios and time scales. We believe there is great value in this initiative due to its potential to provide key data that can assist all Pinellas County local governments in their long range infrastructure planning.

The MPO's 2040 Long Range Transportation Plan (LRTP) acknowledges the importance of planning and adapting to the potential impacts of rising sea levels and climate change on the transportation system as called for in Objective 6.2. The identification of vulnerable infrastructure and development of appropriate mitigation strategies will preserve the mobility of our residents and visitors as well as the movement of goods and access to the County's largest employment centers. The resiliency of the existing and future infrastructure systems will enhance economic development opportunities, transportation mode options, user safety, and quality of life.

Thank you for your effort in preparing this application, which, when funded, will further our ongoing goal to provide a safer, more efficient multi-modal transportation system.

Sincerely,

Sarah Ward

Sarah Ward, Interim Executive Director
Pinellas County Metropolitan Planning Organization

SW:af

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APPENDIX F-3

Coastal Ocean
Monitoring and Prediction System (COMPS)
($233,934)

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

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1. **POC Name:** Dr. Robert Weisberg

2. **POC Organization:** University of South Florida, College of Marine Science

3. **POC Title:** Distinguished University Professor

4. **POC Email:** weisberg@usf.edu

5. **POC Phone:** 727-553-1568

6. **Proposed Activity Name:** Coastal Ocean Monitoring and Prediction System (COMPS): Publically accessible, real time wind, waves and currents from Pass-a-Grille Channel, Pinellas County.

7. **Restoration Council Goals Addressed:**
   (Step 1 and Step 2 - Criteria 1 and 2)
   List which of the following goal(s) will be addressed and how each goal will be addressed.

   A. **Restore and Conserve Habitat**
   B. **Restore Water Quality**
   C. **Replenish and Protect Living Coastal and Marine Resources**
   D. **Enhance Community Resilience**
   E. **Build and Revitalize the Gulf Economy**

   This project addresses all 5 Restoration Council Goals in the context of the comprehensive coastal ocean observing and modeling program within which it resides. A description of this system is provided in responses to questions 7, 8 and 10. As part of a broader effort, the benefit to cost ratio is very high when considering the varied applications of the system in which the proposed project is a part of.

   The College of Marine Science (CMS), University of South Florida (USF) initiated a Coastal Ocean Monitoring and Prediction System (COMPS) in 1998 to observe and predict coastal ocean phenomena of societal importance. COMPS observations are of surface meteorology, ocean currents, waves, temperature and salinity using moored buoys, HF-radar and robotic gliders, all supporting predictive models. COMPS utilizes a systems science approach to describing and understanding coastal ocean phenomena through the coordination of observations with models. Models are necessary as the coastal ocean is both vast and three dimensional and observations alone are impractical to fully describe it. Similarly, models without observations for data assimilation, initialization, boundary conditions and veracity testing are of little use. Thus, to describe the coastal ocean one must employ science based physical models which are coordinated with real, sustained observations. This is the essence of COMPS.

The presently proposed project will solidify funding for one observing station that is part of the COMPS system. This station (hereafter referred to as the C21 station) is located 1 mile offshore of Pass-a-Grille beach and will measure winds, waves, currents, temperature, relatively humidity, barometric pressure, sea surface temperature and salinity and will report these data to the general public in near real-time via the internet.

A., B. & C. Restore and Conserve Habitat; Restore Water Quality; Replenish and Protect Living Coastal and Marine resources

Habitat, water quality and living coastal marine resources all fall under the umbrella of coastal ocean ecology as ecology integrates all of the processes that are responsible for organism success. This success (or lack of it) begins with the coastal ocean circulation, which unites nutrients with light, fueling primary productivity and thence all higher trophic level interactions. It is the coastal ocean circulation that determines the evolution of the water properties within an organism's habitat, including nutrients and pollutants. Thus, the utility of COMPS in understanding and predicting coastal ocean circulation directly applies to any efforts regarding restoration and conservation of habitat, water quality or living marine resources. Specific examples are provided in our recent publications on gag grouper recruitment, harmful algae bloom prediction and explanations of fish lesions post Deepwater Horizon spill.

D. Community Resilience

COMPS observations and models can be utilized as effective community resilience tools. The waves measurements proposed at C21 in conjunction with COMPS wave and surge models make possible further scenario studies on the severity and location of storm surge and waves for a multitude of extreme weather events, thus providing a valuable tool for emergency management planning. Additionally, COMPS was shown to be effective for tracking surface and subsurface oil during the Deepwater Horizon spill, and this utility would apply to any future hazardous material spill. Finally, along with providing near real-time observations for recreational and commercial mariners at the entrance to one of the major Pinellas County inlets, the observations collected at C21 will help to ensure the quality and accuracy of COMPS circulation models which make possible applications such as our harmful algal bloom tracking tool in partnership with FWC and the availability of real time data and models to the US Coast Guard for SAROPS.

E. Build and Revitalize the Gulf Economy

Similar to the economy of the gulf, the state of funding for COMPS suffered greatly in the wake of the Deepwater Horizon spill. Ironically, the prospect of penalty monies hindered the availability of other funds for observing systems such as COMPS and to this point RESTORE funds have not supported such systems. We maintain that investment in a scientifically defensible observing and prediction system such as COMPS will have longstanding positive economic benefits to Pinellas County (and elsewhere along Florida's west coast) as it provides valuable information to both recreational and commercial boaters, beach goers and county planners. In other words, tourism, resiliency and ecosystems services are all directly impacted.

8. **RESTORE Act Eligible Activities Addressed:**
(Step 1 and Step 2 - Criteria 3 and 4)
List which of the following activities will be addressed and how each activity will be addressed.

1. **Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands**
2. **Mitigation of damage to fish, wildlife, and natural resources**
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. **Workforce development and job creation**
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. **Coastal flood protection and related infrastructure**
8. **Promotion of Gulf Coast Region tourism, including recreational fishing**
9. **Promotion of the consumption of seafood harvesting from the Gulf Coast Region**
10. **Planning assistance**

As mentioned in Question 7 above, not only does the proposed waves, water quality and meteorological observing site address RESTORE Act Activities directly, but the COMPS system of which it is part greatly expands upon these RESTORE ACT applications.

1. & 2. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches and coastal wetlands; Mitigation of damage to fish, wildlife and natural resources

As in addressing Question 7, goals A, B and C we reiterate that the coastal ocean circulation provides the underpinning for ecosystem functionality. Ecology is not simply biology. It is multidisciplinary, combining all of the processes that promote organism success. This begins with the circulation physics,which connects the deep ocean to the continental shelf and the shelf with the estuaries. Nutrients that fuel primary productivity are transported by the circulation. The circulation and waves are also responsile for beach morphology, flushing of the coastal wetlands and estuaries and determining beach water quality. All of the RESTORE ACT environmental goals are critically tied to the coastal ocean circulation.

4. Workforce development and job creation

COMPS employs trained technical and computer science staff; trains graduate students and post-doctoral associates and provides undergraduate intern opportunities. Thus it contributes directly to the present workforce and provides STEM training for the future workforce. Indirectly it also adds significantly to the safety and enjoyment of recreational and tourism activities, thereby positively affecting workforce enhancements throughout Pinellas County.

7. & 10. Coastal flood protection and related infrastructure; Planning assistance

The C21 site at Pass-a-Grille is in place but not functioning due to a lack of funding. Bringing the waves and meteorological sensors back on line will contribute to the continuation of storm surge and wave studies that have been central to COMPS research activities for the past decade. This work is published in numerous peer reviewed journals (see list of relevant publications) and has been the

subject of numerous briefings to emergency management and private citizen groups on the risks from hurricane storm surge and waves. This work is vital to identifying regions vulnerable to inundation during severe weather events and as such is critical information for emergency managers and city planners.

8. Promotion of Gulf Coast Region tourism, including recreational fishing

As a real-time station reporting oceanographic and meteorological parameters, particularly wave height and wind velocity, the C21 site will be a useful online tool for beach tourism and recreational and commercial fishing in determining beach wave conditions and sea state for safe marine outings. Securing the requested funding will also allow the COMPS program to pursue the development of a real-time app that will greatly increase the accessibility and profile of the coastal observations.

9. Previous Claim:

Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.
Yes: ___ No: X

10. RESTORE Act Pinellas County priorities addressed:

(Step 2 - Criteria 5 and 6)
List which of the following priorities will be addressed and how each priority will be addressed.

a. Protect and restore native habitats
b. Provide stormwater quality improvements
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages
d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan Link to Plan: http://www.postdisasterplan.org/pdrp.shtml
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

a. Protect and restore native habitats;

As outlined in Questions 7 and 8 above, circulation plays a foundational role in coastal ocean ecology and habitat. Circulation provides the highway upon which nutrients and pollutants are transported throughout the coastal ocean, and any discussion of habitat health must be predicated on some understanding of the circulation of the region. Direct evidence for this statement lies in our explanations and recent predictions of harmful algae blooms, explanations of gag grouper recruitment success or lack of same and explanations of fish lesions post Deepwater Horizon spill. The coastal ocean is hardly static; it is the movement of water that largely determines ecosystems functionality and habitat viability. The COMPS observational and modeling system adds significantly to our understanding of habitat and how it may be sustained or restored..

c. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability

COMPS observations and models assist in the protection against future environmental damage by illustrating the pathways through which potential hazardous material spills or natural occurrences may transit within the coastal ocean, inlets and estuaries. To protect we must first define our vulnerability and this begins with an understanding of the circulation and the ability to portray how materials and organisms may be transported throughout the coastal ocean.

e. & f. Provide climate change/sea-level rise planning, adaptation and/or related community engagement; Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels

Issues regarding sea-level rise planning and flood and storm protection planning are related in that issues regarding damage to infrastructure due to sea-level rise will likely be episodic in nature due to storm events. It will not be the steadily increasing sea-level that will pose the greatest risk to infrastructure, but rather the combined effects of severe weather induced waves and surge superimposed on top of a rising sea level. Therefore, studies made possible through the addition of wave measurements at C21 will provide additional information and knowledge necessary for productive community engagement. Long-term observations from COMPS also provides important information on what may actually be changing in Pinellas county coastal waters using real data.

g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan

As with e. and f. above, establishing a permanent waves station at Pass-a-Grille beach will increase knowledge regarding the impacts of waves and surge from severe weather events on Pinellas County property and infrastructure. It makes possible the continuation and advancement of local expertise in areas critical to the implementation of the PDRP, namely further quantifying both major hazards such as hurricanes and floods and related vulnerability analyses.

i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfront

Gag recruitment had always been a mystery until we explained the mechanism using COMPS observations and models. We now know why some years may be successful recruitment years and others may not be. Such knowledge as it works its way into agency use may offer improved methods for sustainable fisheries and associated services.

11. Project Location

The C21 Waves site is located on the USCG navigation tower located approximately one nautical mile west of the entrance to the Pass-a-Grille North Channel. Coordinates for the site are 27° 40.6'N, 82°46.0'W. The tower structure as modified by COMPS and installed in 2009 is shown in the image below.

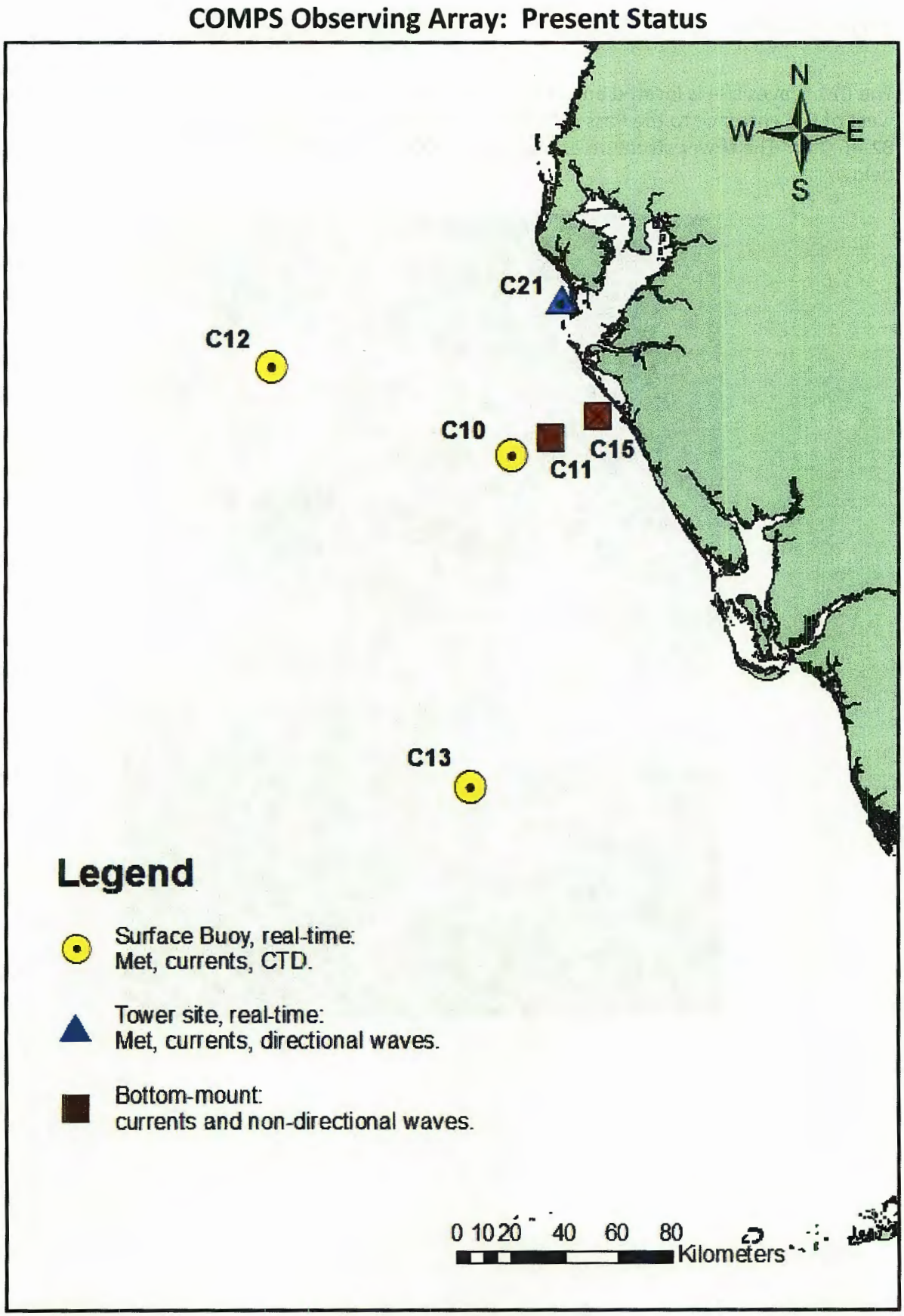

Figure 1: COMPS observing array. Pass-a-Grille site (C21) shown as blue triangle.

12. Region or Geographic Area Impacted by Project
(Step 1 and Step 2 - Criterion 7)
Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

The addition of waves measurements at the Pass-a-Grille channel marker will affect Pinellas County and neighboring counties as well. The availability of meteorological and sea state data (winds, waves) will be useful to recreational beach goers and boaters throughout Pasco, Pinellas, Sarasota and Manatee counties. Furthermore, the addition of environmental data at this location augments COMPS modeling efforts which covers the entire west Florida shelf.

Discussion of Specific Activity

Describe the project by responding to each of the following topics.

13. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

This project will solidify one COMPS observational site at the entrance to Pass-a-Grille Channel (St. Pete Beach) in Pinellas County, FL. Real time observations of winds, waves, currents, barometric pressure, relative humidity, air temperature and sea surface temperature will be provided to the general public via the internet, thereby facilitating safe navigation for recreational and commercial boaters and environmental data for tourists, beachgoers, researchers and agencies. Real time salinity measurements will also be added. Measurements of salinity, an important variable that tends to correlate with beach water quality, are generally lacking in near shore waters.

The proposed project duration is five years. Year one entails purchasing two new waves sensors, meteorological sensors and upgrading the telemetry system. During the first year the complete system will be tested at the USF COMPS facility in preparation for deployment before the end of the first year. It is anticipated that by the end of year two the system will be in standard operational mode with years three through five entailing regular maintenance and annual recovery and re-deployment of all sensors. Two months of salary is included annually for a systems administrator and a data analyst.

The proposed project provides key observational measurements that are lacking in the nearshore region of west Florida coastal waters. Very few reliable real-time waves measurements exist on the west Florida shelf, particularly near the coast. The same is true for salinity, while long time series for salinity exist from offshore buoys few measurements are made near the coast where salinity acts as an indicator of beach water quality. The inclusion of additional sensors into the real-time telemetry data stream is made possible by the flexibility of the data logger and telemetry system, which allows for the anticipated inclusion of additional water quality sensors in the future. Lastly, the addition of meteorological sensors, particularly wind will improve COMPS modeling efforts while also providing useful data to beach goers and boaters.

14. Project Manager and Key Project Team Members - include credentials and experience doing similar work.

Project Manager: Dr. Robert Weisberg, USF Distinguished University Professor

Dr. Weisberg has over 40 years of oceanographic research experience with nearly 25 years of research specifically on the west Florida shelf. With over 90 papers in refereed journals through the COMPS program alone he is an expert on the circulation dynamics of the west Florida coastal ocean.

Key Team members: Jason Law, USF Research Associate and Mooring Technician
Randy Russell, COT Electrical Engineer

15. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

Environmental Benefits:

Ocean water properties are determined by physical, biological and chemical connections that occur across space, time and trophic levels. Coastal ocean environmental stewardship is predicated on understanding this complex system functionality and applying that understanding toward prediction in a quantitative, scientifically defensible manner. Only in this way can forecasts be made regarding the consequences of either human or natural occurrences. Understanding the coastal ocean ecosystem begins with understanding the coastal ocean circulation because it sets the background state for all else. Five recent examples of this are: 1) our emergent ability to forecast the occurrence (2014) or lack of occurrence (2010 and 2013) of WFS HABs, 2) our explanation of gag grouper recruitment success, 3) our explanation of WFS fish lesions and liver chemistry anomalies subsequent to the Deepwater Horizon oil spill, 4) the use of our model trajectory forecasts by NOAA during the Deepwater Horizon event itself and 5) our numerous briefings to emergency management and private citizen groups on hurricane storm surge and wave risks. With observations and understanding comes predictive capabilities that enable circulation and the evolution of water properties to be modeled and forecast. But models must be continually veracity tested, requiring continued observations. With sustained observations, coordinated with models, we steadily increase our ability to predict coastal ocean processes and their environmental consequence. The environmental benefit is thus improved, scientifically defensible environmental stewardship of value to county, state and federal agencies and the general public.

Economic and Social Benefits:

As a peninsula nearly surrounded by water there is little of the Florida economy that is not influenced by the ocean. Even inland agriculture is influenced by land-sea breeze and the ensuing rainfall. Tourism, in particular, is related in large measure to the attraction of the sea and Florida's bountiful living marine resources. The understanding of such ecosystem services begins with the data collection proposed and the use of data in conjunction with predictive models. For instance, matters of real property and personal safety under extreme conditions require the ability to track storm systems, forecast storm surge and waves and provide information for use by emergency managers, activities enhanced by ocean observations. Direct near real time observations of winds, waves and currents, along with the associated model forecasts are also of immediate application for recreational and commercial boaters and fishers to inform safe and successful outings. Employment of skilled technical and scientific staff for operations and related science provides another benefit. Further employment will derive through improved tourist attraction as a consequence of better environmental stewardship. These data and model simulations will also serve the present and next generation of students through outreach and education.

16. Technical Feasibility - Describe technologies and relevant past experience or proven success with similar projects.

The monitoring station at Pass-a-Grille is in place but without a functioning waves sensor. A modified tower platform was constructed and installed in 2009 to house the meteorological sensors and surface telemetry. The inventory, infrastructure and expertise necessary to properly assemble, deploy and maintain the proposed atmosphere and ocean observations at Pass-a-Grille Channel are already in place at USF.

COMPS has been a functioning asset to science and to the coastal community at large for nearly two decades, albeit in a presently diminished capacity. Measurements on the WFS by the University of South Florida, College of Marine Science, Ocean Circulation Group (under the direction of Dr. Robert Weisberg) began in 1993. Real time observations of both atmosphere (wind, atm. pressure, relative humidity, air and sea surface temperatures and short and long wave radiation) and ocean (currents and temperature/salinity) began in 1998. Modeling evolved in conjunction with the moored array beginning in 1998. We subsequently added HF-radar for surface currents and gliders/profilers for water column temperature/salinity bio-optics, oxygen and (in some instances) bio-acoustics. The site is also capable of adding nutrient and other sensors as robust versions become available. COMPS data and nowcast/forecast models are all publically available on the internet.

Recognizing that our technology was vintage 1998 we invested funds through our Center for Ocean Technology to redesign and build new telemetry and data loggers. The transition period

began over the past year and the results are satisfying. Outages that we may now be experiencing from time to time entail antenna failures or power lapses due to sea bird droppings on solar panels. In other words, our proposed observing system is robust and reliable, and we are ready to perform.

17. **Public Acceptance** - Describe any known or potential public approval or opposition to the project.

We know from the calls and emails received when a COMPS buoy goes down that our real time data are regularly used by the general boating public. While unheralded, the buoys graphically shown by local weather reporters are COMPS buoys, and the data provided to the agencies via the GTS are used in local weather forecasts. COMPS provides real time data to beachgoers, sailors and fishers making their outings safer and more enjoyable. Pass-a-Grille is a particularly important location for Pinellas County, given its point of access to the greater Gulf of Mexico for so many boaters. The coastal ocean is where society meets the sea, and we are committed to contributing our scientific expertise to the benefit of society.

18. Project Activity Budget Justification:
Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

- Personnel and fringe: $166,210
- Travel including the number of trips and estimated cost per trip: N/A
- All equipment greater than $1,000: $85,200
- Supplies including a list of major types of supplies: See attached.
- Contractual costs: N/A
- Administrative costs not to exceed 3% of the total award:

Pass-a-Grill (C21) 5-Year Budget

New Purchases, Repairs to Existing:						
Waves Sensors (2 ea.)	72,000	-	-		-	
CTD Calibration and repair	3,000	-	-	-		
Telemetry Upgrade to include Met	16,500	-	-	-	-	
Met Sensors (2 sets WND, RH, BP)	13,200	-	-	-		
Antennas, Batteries, Solar panels	4,400	-	-	-	-	
Diving supplies and certifications	5,500	-	-			
Machine Shop time	3,300		-		-	
Misc Brackets and Hardware	1,100	-	-	-		
Subtotal	***119,000***	***0***	***0***	***0***	***0***	***119,000***
Annual Expense:						
80 meter armored data cable	2,475	2,475	-	2,475	2,475	
Misc Hardware	-	1,100	1,100	1,100	1,100	
Misc Mooring Supplies	-	3,300	3,300	3,300	3,300	
Machine Shop time	-	2,200	2,200	2,200	2,200	
Calibrations	-	6,500	1,000	6,500	1,000	
Diving Supplies	-	1,100	1,100	1,100	1,100	
Deployment Ship-time	10,000	10,500	10,500	11,000	11,000	
Service Trips	4,400	4,400	4,400	4,400	4,400	
Subtotal	***16,875***	***30,575***	***22,600***	***31,075***	***25,575***	***126,700***
Salary:						
Systems Administrator	2 months	2 months	2 months	2 months	2 months	
Data Analyst/Oceanographer	2 months	2 months	2 months	2 months	2 months	
Subtotal	***33,242***	***33,242***	***33,242***	***33,242***	***33,242***	***166,210***
TOTALS	***169,117***	***64,817***	***56,842***	***65,317***	***59,817***	***415,910***

19. Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.

(Step 2 - Criterion 8)

List any project partners and briefly describe their involvement and contribution to the project.

This project proposes to incorporate several partnerships. First, local dive and charter boat captains have agreed to assist with servicing of the site as well as maintaining regular cleaning of the solar panels, which greatly extends the system's battery life. Additionally the opportunity to assist with instrument set-up and deployment as well as processing and analyzing of waves will be incorporated into an extant NOAA EPP Internship program that the COMPS group participated in during 2014. Lastly, the site will also be incorporated into a SECOORA regional association educational partnership through Florida Gulf Coast University whereby undergraduate students are provided the opportunity to assist with planning and carrying out regular field work.

20. Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed.

(Step 2 - Criterion 9)

Link to Applicable Comprehensive Plan Element Goals:
www.pinellascounty.org/restore/pdf/comp-plan-goals.pdf

- **Future Land Use and Quality Communities Element: Goal Three**
  Pinellas County shall promote a balanced relationship between the natural environment and development
  This goal is furthered by the COMPS program overall. As described in detail previously, the COMPS program is by definition the monitoring of the natural environment that is the coastal ocean. By increasing our knowledge of the coastal ocean and maintaining continuous monitoring efforts of circulation and water quality we assure that we remain ever vigilant and prepared in the event of any future man-made or naturally occurring harmful substance events.

- **Natural Resources Conservation and Management Element: Goal Four**
  Strengthened connections to the water – Pinellas County will remain a leader in the restoration of its surface waters and the dependent habitats and resources which are essential to this county's character, economy and quality of life
  Again, as previously detailed the COMPS program goal is to observe, describe and predict the coastal ocean circulation and how it contributes to coastal ocean ecology. The importance of circulation as a driving factor in coastal ocean ecology is unfortunately not a priority for other sources of RESTORE funding. Pinellas County has the opportunity to be a true leader in recognizing and supporting the value inherent to the COMPS program in observing and forecasting coastal ocean circulation and its myriad effects on ecology and the environment.

- **Coastal Management Element: Goal One**
  Natural Disaster Planning -- Pinellas County will protect human life, private property and public investment from the effects of hurricanes and other natural disasters
  As mentioned in previous sections, the addition of waves measurements at Pass-a-Grille allows COMPS researchers to advance published research on severe weather events such as hurricanes.

- **Recreation, Open Space and Culture: Goal Three**
  Strengthening Connections to the Water – To strengthen public connections to Pinellas County waters and waterways through the maintenance, promotion and environmentally sensitive expansion of recreational spaces
  The coastal ocean in our neighboring Gulf of Mexico is the ultimate recreational space, and is the major attraction for leisure activities for residents and tourists alike. Supporting COMPS observing station C21 at Pass-a-Grille strengthens the connection to this ultimate recreational space by putting the current conditions at the beach and on the water at the fingertips of those who seek to utilize our most precious asset... the Gulf of Mexico.

21. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

In the short term the C21 site will provide the public with useful and desirable observational data and predictive models that will allow for informed decisions regarding activities on or near the coastal waters. The primary long term benefits of the C21 project begin with a better understanding of coastal ocean circulation in general. This leads to a better understanding of effects of waves and surge during severe weather events and how this can be applied to events on infrastructure and private property. Advancing knowledge of the circulation of the coastal ocean on the west Florida shelf advances our understanding and thus our predictive capabilities regarding the health of the coastal ocean ecosystem as well. It allows us to assess our ecosystem vulnerabilities and therefore to better protect it when possible and when not possible to anticipate the effects of harmful substance events. Of lasting benefit is the advancement of knowledge as it pertains to coastal ocean science and the ability to share and apply that knowledge to other geographic regions through scientific publications and collaborations.

22. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

No material risks exist other than the ever present risk of deploying scientific instrumentation in the harsh ocean environment. However, we have decades of experience in this arena, this site has been functional in the past and we are only in need of sufficient funds to bring it back to an expanded operational status.

23. Best Available Science:

Models and observations are only as good as the underlying science. This project builds upon a long history of scientific applications to the west Florida coastal ocean and Tampa Bay. The instrumentation and sensors are state of the art and the COMPS personnel have decades of experience in deploying such gear. Since the creation of COMPS nearly 90 peer reviewed articles have been published utilizing COMPS data and models. Recent peered reviewed publications using the COMPS system explained why there was no red tide bloom along Florida's west coast in 2010, how gag grouper juveniles get from offshore spawning to near shore settlement sites and why fish lesions were prominent on the west Florida continental shelf after the Deepwater Horizon spill. In summary, COMPS observations and models are all based on state of the art equipment and models and COMPS work regularly appears in refereed professional journals. By applying best available

science we regally contribute to the understanding and prediction of societally relevant coastal ocean phenomena as well as providing useful real time information to the general public.

24. Matching/Other funding (Step 2 - Criterion 11) *Indicate:*

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding.
- If matching funds are not secured, specify the amount of matching funds requested or expected.
- The date the amount of secured funds will be known.
- Future costs related to maintaining the project, the funding source, and responsible entity.

Matching funds have been requested through the NOAA IOOS South East Coastal Ocean Observing Regional Association (SECOORA) in the amount of $50k. In addition the technician support is provided for through the USF College of Marine Science.

Readiness for Implementation
(Step 3)
Complete the following:

25. Will the project be completed within 5 years from date funding is confirmed?
Yes: X No: _

It is anticipated that US IOOS funding will ramp up to provide sustaining funds beyond the 5-year interval proposed here.

26. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

Upon receipt of funds orders will be placed immediately for all required instruments and supplies pertaining to year one. It is anticipated that within 3 months all supplies will be in house and after 9 months the system will be integrated, tested and ready for deployment in the field. A functional system returning real-time waves, currents, wind, temperature, barometric pressure, relative humidity, salinity and sea surface temperature will be realized before the end of year one. Subsequent years will involve regular maintenance with the instrumentation recovered and re-deployed on an annual basis.

27. How long before the project can start after funds are available (months)?

The project can start immediately.

28. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

C21 is an active COMPS station in regards to USCG Aids To Navigation requirements, therefore no additional permits are required.

29. Describe any issues or reasons that may delay project start or completion.

None.

END OF QUESTIONS

Additional Information

Tables and Figures:

1. Table 1. 5 Year Budget.
    - https://drive.google.com/a/mail.usf.edu/file/d/0B5PGt0arj3QZUXBMdE5uSG5jb0E/view?usp=sharing
2. Figure 1. COMPS moorings, monthly glider tracks and model domains. Shows existing assets and phased implementation of new moorings and glider deployments.
    - https://drive.google.com/a/mail.usf.edu/file/d/0B5PGt0arj3QZdW5fQnFtZ2NVYIk/view?usp=sharing

Online Data and Product Sources, and tracking tools:

1. C21 (Pass-a-Grill) Station Page:
    - http://comps.marine.usf.edu/index?view=station&id=C21
2. COMPS program homepage. All real-time sites shown on interactive map for simple, clickable access to current ocean-atmosphere observations.
    - http://comps.marine.usf.edu/
3. Ocean Circulation Group homepage. Interactive website displaying OCG monitoring and modeling efforts.
    - http://ocgweb.marine.usf.edu/
4. SECOORA regional association homepage. COMPS data is displayed in real-time.
    - http://secoora.org/

Relevant Publications:

1. Weisberg, R. H. (2011). Coast Ocean Pollution, Water Quality, and Ecology. MTS Journ., 45(2), pp. 35-42.
    - https://docs.google.com/a/mail.usf.edu/file/d/0B5PGt0arj3QZVzlMOExld1JjVXM/edit
2. Weisberg, R. H., Boicourt, W., Jochens, A. E., Virmani, J. I. A Vision for Coastal Ocean IOOS for the next Decade.
    - https://docs.google.com/file/d/0BwW7dLnWT2C0UW8tc2hxMEhHQXM/edit
3. Weisberg, R. H. , Zheng, L., Liu, Y., Lembke, C., Lenes, J. M., Walsh, J. J. (2014). Why no red tide was observed on the West Florida Continental Shelf in 2010. J. Harmful Algae, 38 (2014), pp. 119-126.
    - http://www.sciencedirect.com/science/article/pii/S1568988314000572
4. Weisberg, R. H., Zheng, L., Peebles, P. (2014). Gag grouper larvae pathways on the West Florida Shelf. Cont. Shelf Res., 88 (2014), pp. 11-23.
    - http://www.sciencedirect.com/science/article/pii/S0278434314002027
5. Weisberg, R. H., Zheng, L., Liu, Y., Murawski, S., Hu, C., Paul, J. (2014). Did Deepwater Horizon hydrocarbons transit to the west Florida continental shelf? Deep Sea Res. Part II: Top. Studies in Oceangr., In Press.
    - http://www.sciencedirect.com/science/article/pii/S0967064514000356
6. Huang, Y., Weisberg, R. H., Zheng, L. (2010). Coupling of surge and waves for an Ivan-like hurricane impacting the Tampa Bay, Florida region. J. Geophys. Res., 115, C12009, doi:10.1029/2009JC006090.
    - https://docs.google.com/a/mail.usf.edu/file/d/0B5PGt0arj3QZVXFzcXpUNk1lbG8/edit)
7. Zhu, J., R.H. Weisberg, R.H., L. Zheng, and S. Han (2015). On the flushing of Tampa Bay. *Estuaries and Coasts*, 38, 118-131, doi: 10.1007/s12237-014-9793-6.

8. Zhu, J., R.H. Weisberg, R.H., L. Zheng, and S. Han (2015). Influences of channel deepening and widening on the tidal and non-tidal circulation of Tampa Bay. *Estuaries and Coasts*, 38, 132-150, doi: 10.1007/s12237-014-9815-4.

UNIVERSITY OF
SOUTH FLORIDA

April 17, 2015

Mr. Andy Squires, MS, CPM
Section Manager, Coastal & Freshwater Resources
Pinellas County Natural Resources Division
22211 US Highway 19 North, Bldg. 10
Clearwater, FL 33765
Ph: 727-464-4633
Email: asquires@pinellascounty.org

Re: "*Coastal Ocean Monitoring and Prediction System (COMPS): Publically accessible, real time wind, waves and currents from Pass-a-Grill Channel, Pinellas County.*"; USF PI Dr. Robert Weisberg; Total Request $233,934

Dear Mr. Squires:

The University of South Florida is pleased to participate in this proposal with your institution on the above named project. In the event that the project is funded, we agree to carry out the contract and grant administration policies and responsibilities as are assigned or delegated in the award.

Please contact the above named Dr. Robert Weisberg with any questions regarding the scientific aspects of this proposal at 727-553-1568. All administrative questions should be referred to Ms. Heather Morr, Sponsored Research Administrator, at 813-974-3526 or via email at hmorr@usf.edu.

The University of South Florida enthusiastically looks forward to our collaboration with your company on this proposal.

Sincerely,

Rebecca Puig

Rebecca Puig
Assistant Vice President
Office of Research & Innovation

Coastal Ocean Monitoring and Prediction System (COMPS): Publically accessible, real time wind, waves and currents from Pass-a-Grille Channel, Pinellas County.

R. H. Weisberg and Y. Liu
College of Marine Science
University of South Florida
St. Petersburg, FL 33701

Submitted to:

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT

Andy Squires, MS, CPM
Section Manager, Coastal & Freshwater Resources
Pinellas County Natural Resources Division
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asquires@pinellascounty.org

4/13/15

Statement of Work

This RESTORE Act project will add an ocean-atmosphere observing station to the USF Coastal Ocean Monitoring and Prediction System (COMPS) for the west Florida coastal ocean. This particular station will be located ~1 mile offshore of Pass-a-Grille beach at the entrance to Pass-a-Grill channel. It will measure winds, waves, currents, temperature, relatively humidity, barometric pressure, sea surface temperature and salinity and it will report these data to the general public in near real-time via the internet. Given that Pass-a-Grill inlet is one of the major connections between the Pinellas County Intracoastal Waterway and the Gulf of Mexico, these data will be of great value to the boating, fishing and beach-going public and to the agencies charged with safe navigation, and natural resource management.

Budget Justification

Funds are requested for two years beginning as soon as RESTORE Act funds are made available to Pinellas County. R.H. Weisberg, a tenured Distinguished University Professor in the College of Marine Science, University of South Florida will provide project guidance with Y. Liu, an Associate in Research providing daily oversight, assisted by our lead sea-going technician, J. Law. J. Donovan will provide data and computational resource management. Man-months per year are given in parentheses. Fringe is calculated at 16.44% on salaries plus 1269/mo on 12 month faculty and staff.

Equipment is for outfitting the Pass-a-Grille station with wave and current measuring capabilities, the necessary undersea cabling and the telemetry and data logging upgrades to be consistent with our other COMPS stations.

Other direct costs are for materials and supplies to maintain this at sea station, diving supplies for underwater servicing, calibration expenses and the costs of ship-time.

Consistent with the U.S. Treasury Department regulations imposed on the Pinellas County RESTORE Act funds, indirect costs are charged at 3% of total direct costs

Budget

	FY15	FY16
Salaries		
R.H. Weisberg (0.25, 0.25)	4,124	4,248
Y. Liu (2,2)	12,305	12,674
J. Donovan (2,2)	17,797	18,331
Total salaries	34,226	35,253
Fringe	10,703	10,872
Salaries+Fringe	44,929	46,125
Equipment		
Wave/Current Sensors (2)	74,250	
Telemetry Systems	21,000	
Total Equipment	95,250	
Other Direct costs		
Materials and Supplies	5,132	2,624
Diving Supplies	2,500	800
Calibration	2,000	4,000
Cables	2,380	2,380
Shiptime	12,000	7,000
Total Other	24,012	16,804
Total Direct Costs	164,191	62,929
Indirect Costs (@3%)	4,926	1,888
Total Costs	169,117	64,817

Total costs (2 years): 233,934

APPENDIX F-4

Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity ($479,493)

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

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1. **POC Name:** Dr. Robert Weisberg

2. **POC Organization:** University of South Florida, College of Marine Science

3. **POC Title:** Distinguished University Professor

4. **POC Email:** weisberg@usf.edu

5. **POC Phone:** 727-553-1568

6. **Proposed Activity Name:** A very high resolution estuary circulation nowcast/forecast model for Tampa Bay and vicinity.

7. **Restoration Council Goals Addressed:**
(Step 1 and Step 2 - Criteria 1 and 2)
List which of the following goal(s) will be addressed and how each goal will be addressed.

   A. **Restore and Conserve Habitat**
   B. **Restore Water Quality**
   C. **Replenish and Protect Living Coastal and Marine Resources**
   D. **Enhance Community Resilience**
   E. **Build and Revitalize the Gulf Economy**

This project primarily addresses Council goals B. and D., and as part of a larger coordinated observing and modeling system it addresses all five goals. The proposed Tampa Bay and vicinity circulation model will be part of the Coastal Ocean Monitoring and Prediction System (COMPS) initiated by the College of Marine Science at USF in 1998 to observe and predict coastal ocean phenomena of societal importance. COMPS is a collection of observations of surface meteorology, ocean currents, waves, temperature and salinity using moored buoys, HF-radar and robotic gliders, all supporting predictive models.

The primary COMPS West Florida coastal Ocean Model (WFCOM) presently runs as an automated, daily nowcast/forecast model providing information on the coastal ocean circulation from west of the Mississippi River to south of the Florida Keys, including all of the major estuaries. Unique to the present proposal is a very high resolution version (to be nested in WFCOM) that will include Tampa Bay, Sarasota Bay, the Intracoastal Waterway and all of the inlets connecting these water bodies with the adjacent Gulf of Mexico.

A., B. & C. Restore and Conserve Habitat; Restore Water Quality; Replenish and Protect Living Coastal and Marine resources

Habitat, water quality and living coastal marine resources all fall under the umbrella of coastal ocean ecology as ecology integrates all of the processes that are responsible for

organism success. This success (or lack of it) begins with the coastal ocean circulation which unites nutrients with light, fueling primary productivity and thence all higher trophic level interactions. It is this coastal ocean circulation that determines the evolution of the water properties within an organism's habitat, including nutrients and pollutants. Thus, the utility of COMPS in understanding and predicting coastal ocean circulation directly applies to any efforts regarding restoration and conservation of habitat, water quality or living marine resources. Moreover, Tampa Bay water properties are largely determined by Tampa Bay interactions with the adjacent Gulf of Mexico; hence modeling these water bodies as a system is necessary for ecological understanding and prediction.

D. Community Resilience

COMPS modeling capabilities can be utilized as effective community resilience tools. This was demonstrated very successfully during the Deepwater Horizon spill as COMPS was shown to be effective for tracking surface and subsurface oil during the spill, and this utility would apply to any future hazardous material spill. Given the uniquely fine resolution of the proposal model it could even predict where the raw sewage would have gone from the recent pipe break near Boca Ciega Bay. Additionally, such model has been shown to be effective at determining the potential for damage and destruction of hurricane storm surge and waves. An automated nowcast/forecast model with daily updates as proposed would provide pertinent information to emergency management personnel.

E. Build and Revitalize the Gulf Economy

Similar to the economy of the gulf, the state of funding for COMPS suffered greatly in the wake of the Deepwater Horizon spill. Ironically, the prospect of penalty monies ended the availability of other funds for observing systems such as COMPS and to this point RESTORE funds have not supported such systems. We maintain that investment in a scientifically defensible monitoring and prediction system such as COMPS will have longstanding positive economic benefits to the local region as it provides valuable information to both recreational and commercial mariners, beach goers, tourists and county planners.

8. RESTORE Act Eligible Activities Addressed:

(Step 1 and Step 2 - Criteria 3 and 4)

List which of the following activities will be addressed and how each activity will be addressed.

1. **Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands**
2. **Mitigation of damage to fish, wildlife, and natural resources**
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. Workforce development and job creation
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. **Coastal flood protection and related infrastructure**
8. **Promotion of Gulf Coast Region tourism, including recreational fishing**

9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region
10. **Planning assistance**

1. & 2. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches and coastal wetlands; Mitigation of damage to fish, wildlife and natural resources

As in addressing Question 7, goals A, B and C we reiterate that coastal circulation is the underpinning for ecosystem functionality. Ecology is multidisciplinary, it is biology and it is chemistry and it is most certainly the physics of circulation which connects the deep ocean to the continental shelf and the shelf with the estuaries. Circulation plays a foundational role in ecosystem dynamics, habitat accessibility, beach morphology and the flushing of coastal wetlands. Larvae, nutrients and pollutants are advected with currents making the ability to understand and predict circulation dynamics necessary to any complete discussion of these RESTORE Act activities.

7. Coastal flood protection and related infrastructure

The proposed model has been shown to be effective at determining the potential for damage and destruction of hurricane storm surge and waves in hindcast mode. An automated nowcast/forecast model with daily updates as proposed would provide pertinent information to emergency management personnel.

8. Promotion of Gulf Coast Region tourism, including recreational fishing

Recreational fishing for shallow water gamefish within Tampa Bay is extremely popular and constitutes not only a large percentage of charter and personal fishing outings but also numerous tournaments throughout the year. A high resolution, publically accessible circulation model is not only informative to the experienced fisherman but also encourages safe boating through knowledge of local currents and present conditions.

10. Planning assistance

The proposed high resolution model will be of great assistance to planners. The previously sited sewage leak in Boca Ciega Bay is one example. As another example consider the 1993 fuel oil spill in lower Tampa Bay. No tools existed then to predict how that oil would move once it left the bay and how and when it would be transported into Blind Pass and Johns Pass. Our model has that capability to inform city planners and emergency management

9. Previous Claim:

Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.
Yes: ___ No: X

10. RESTORE Act Pinellas County priorities addressed:

(Step 2 - Criteria 5 and 6)

List which of the following priorities will be addressed and how each priority will be addressed.

a. **Protect and restore native habitats**

b. Provide stormwater quality improvements
c. **Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages**
d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. **Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan Link to Plan: http://www.postdisasterplan.org/pdrp.shtml**
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

a. Protect and restore native habitats;

As outlined in Questions 7 and 8 above, circulation plays a foundational role in coastal ocean ecology and habitat and this is certainly true in the dynamic Tampa Bay estuary. As Florida's largest open water estuary Tampa Bay is home to over 200 species of fish, as well as many types of marine invertebrates, mammals, birds and sea grasses. Any discussion of habitat health or restoration must be predicated on an understanding of the circulation in the bay, and the proposed high resolution model enables the resolution of circulation on spatial scales not possible until now.

c. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability

With a population of nearly 3 million in the metro and micropolitan areas and a busy port with over 80 miles of dredged shipping channels, the repeat of past damage to water quality and habitat is a near constant concern. The accuracy of the proposed high resolution model and the ability to serve it to the public allows for informed discussion and planning regarding potential hazardous material spills or natural occurrences that may occur. This applies to planned infrastructure improvements and their associated effects, and example of which is outlined in the referenced journal article detailing the influences of channel deepening and widening on the tidal and non-tidal circulation in Tampa Bay. Without this high resolution model such a study would not be possible.

g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan

Accurate, high resolution knowledge of the circulation patterns under a variety of extreme weather scenarios impacting the Tampa Bay region allows for more informed implementation of the PDRP. With damage will come debris and possible loss of life and understanding where the water will go is vital to planning for the consequences of such a disaster.

11. Project Location

Project location. Showing Tampa Bay, Sarasota bay and associated inlets and ICWW.

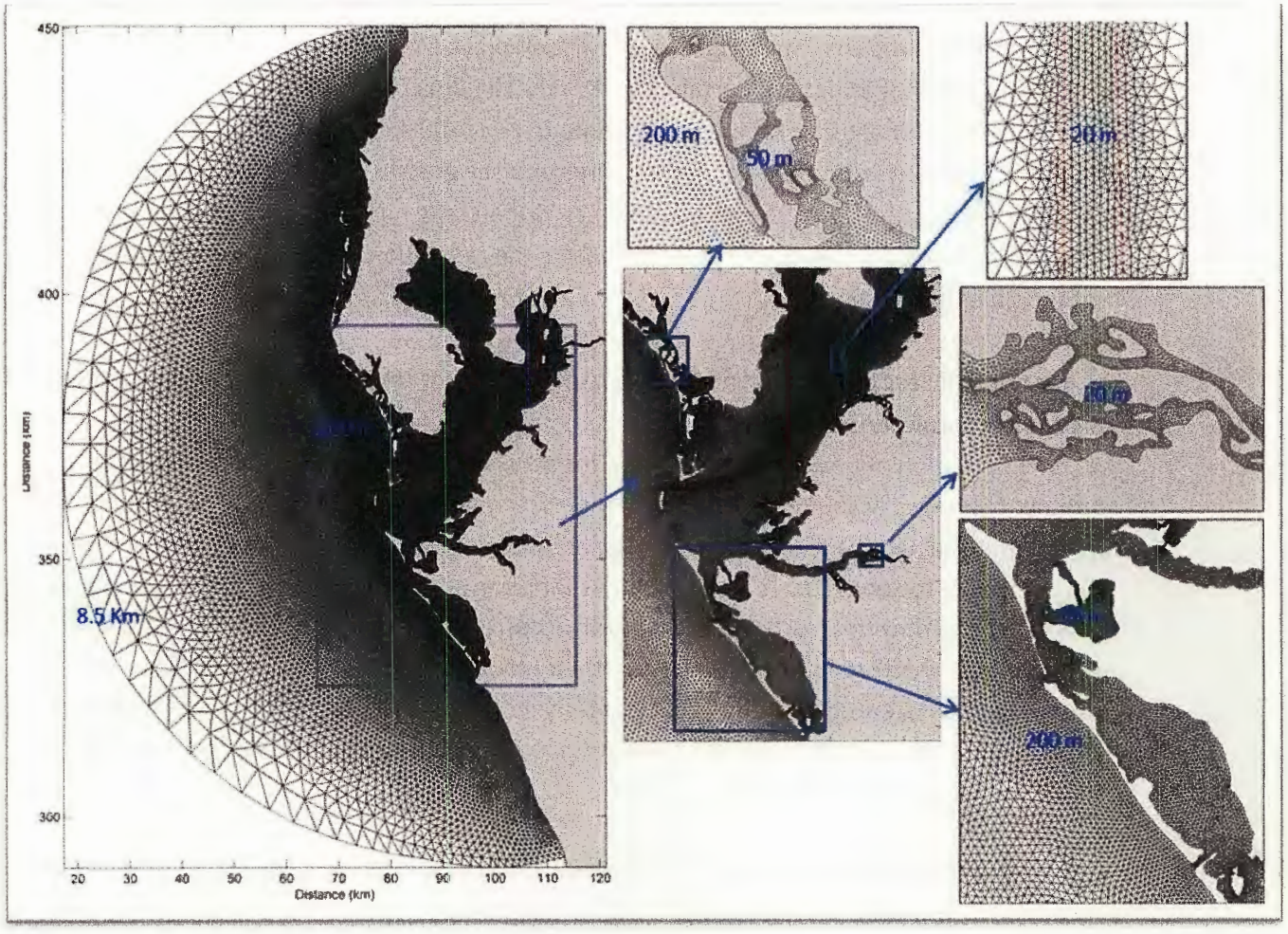
12. Region or Geographic Area Impacted by Project

(Step 1 and Step 2 - Criterion 7)

Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

The implementation of the high resolution Tampa Bay model will affect Tampa Bay, Boca Ciega Bay, Sarasota Bay and the surrounding areas. Once demonstrated the model can be expanded to other estuaries along the coast (e.g. Charlotte Harbor).

Discussion of Specific Activity



Describe the project by responding to each of the following topics.

13. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

We propose a very high resolution and accurate numerical circulation model for the Tampa Bay estuary and vicinity [including the Intra-Coastal Waterway (ICWW), Boca Ciega Bay, Tampa Bay,

Sarasota Bay and all of the major inlets and waterways]. The model exists and is vetted through publications in refereed professional journals. The next step is to set it up as an automated, daily nowcast/forecast publically available on the internet. Applications include safe and efficient navigation, water quality, larval fish recruitment, harmful algal blooms and other ecological phenomena. What makes this model unique is its fine resolution (20m), enabling the inclusion of all relevant conveyances of mass. For instance, no other estuary model includes the ICWW and all of the relevant inlets, which are necessary to properly address the flushing of water bodies and the three dimensional distribution of water properties and their transport that are so important to pollutant and water quality studies. As an example, consider the 1993 fuel oil spill in lower Tampa Bay. No tools existed then to predict how that oil would move once it left the bay and how and when it would be transported into Blind Pass and Johns Pass. Our model has that capability. Another example is a recent sewage spill from a pipe break that sent raw sewage into Boca Ciega Bay. An automated nowcast/forecast model with daily updates would provide pertinent information to emergency personnel.

Other models exist, for instance the NOAA TBOFS. However, our approach is more accurate and more complete, in part because of higher resolution and hence inclusion of the various inlets and in part because it more accurately links the adjacent Gulf of Mexico with Tampa Bay, Sarasota Bay and the ICWW. The proposed model is also supported by the larger scale COMPS system of coastal ocean observations and larger scale models to which ours may be nested.

Our applications go beyond the estuarine circulation driven by tides, winds and rivers, or water quality considerations. Estuary and coastal ocean ecology does not just happen. It begins with the uniting of nutrients with light, fueling primary productivity and thence all subsequent trophic level interactions. The underpinning is the coastal ocean circulation that determines the evolution of the water properties in which organisms live, including nutrients and pollutants. The deep ocean connects with the continental shelf, the continental shelf connects with the estuaries, and it is through these connections, across space, time and trophic levels, that ecosystem services derive. If we are to manage our coastal ocean resources and predict the consequences of either human-induced or natural occurrences then we must know how the system works. This requires a comprehensive, multidisciplinary set of observations, coordinated with science-based models for integration, hypotheses testing and prediction. Proposed herein is that modeling framework which properly links the estuaries with the adjacent ocean.

14. Project Manager and Key Project Team Members - include credentials and experience doing similar work.

Project Manager: Dr. Robert Weisberg, USF Distinguished University Professor

Dr. Weisberg has over 40 years of oceanographic research experience with nearly 25 years of research specifically on the west Florida shelf. With over 90 papers in refereed journals through the COMPS program alone he is an expert on the circulation dynamics of the west Florida coastal ocean.

Key Team member: Lianyuan Zheng, PhD Physical Oceanography
Dr. Zheng has over 10 years of oceanographic research experience with a focus in circulation and water quality modeling.

Key Team member: Yonggang Liu, PhD Physical Oceanography
Dr. Liu has over 10 years of oceanographic research experience with a focus in circulation modeling and data assimilation studies.

15. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

Environmental Benefits:

Water properties are determined by physical, biological and chemical connections that occur across space, time and trophic levels. Coastal ocean environmental stewardship is predicated on understanding this complex system functionality and applying that understanding toward prediction in a quantitative, scientifically defensible manner. Only in this way can forecasts be made regarding the consequences of either human or natural occurrences. Understanding the coastal ocean ecosystem begins with understanding the coastal ocean circulation because the circulation sets the background state for all else. Five recent examples of this are: 1) our emergent ability to forecast the occurrence (2014) or lack of occurrence (2010 and 2013) of WFS HABs, 2) our explanation of gag grouper recruitment success, 3) our explanation of WFS fish lesions and liver chemistry anomalies subsequent to the Deepwater Horizon oil spill, 4) the use of our model trajectory forecasts by NOAA during the Deepwater Horizon event itself and 5) our numerous briefings to emergency management and private citizen groups on hurricane storm surge and wave risks. The environmental benefit is thus improved, scientifically defensible environmental stewardship of value to county, state and federal agencies and the general public.

Economic and Social Benefits:

As a peninsula nearly surrounded by water there is little of the Florida economy that is not influenced by the ocean. Inland agriculture is even influenced by land-sea breeze and the ensuing rainfall. Tourism, in particular, is related in large measure to the attraction of the sea and Florida's bountiful living marine resources. The understanding of ecosystem functionality begins with observations used in conjunction with predictive models. Matters of real property and personal safety under extreme conditions require the ability to track storm systems, forecast storm surge and waves and provide information for use by emergency managers. Direct near real time observations of winds, waves and currents, along with the associated model forecasts that these observations facilitate are important for recreational and commercial boaters and fishers to inform safe and successful outings. Understanding Gulf and estuary ecosystem functionality is also critical for assessing and measuring environmental and

social impacts caused by either human-induced or natural variations. Direct employment will include technical and scientific staff related to operations and related science. Indirect employment will derive through improved tourist attraction by facilitating improved environmental stewardship. These COMPS data and models plus the high resolution Tampa bay and vicinity model proposed here will also serve the present and next generation of students through outreach, education and training.

16. **Technical Feasibility** - Describe technologies and relevant past experience or proven success with similar projects.

The proposed high resolution Tampa Bay model presently exists, two papers are already published in professional refereed literature and a third is in review (model development was the PhD dissertation of Jun Zhu, a former USF-CMS graduate student under the supervision of the PI, Professor Robert H. Weisberg). It is the implementation as a nowcast/forecast model that remains to be done, and we are experienced in doing this. Thus, everything proposed is technically feasible using existing, proven capabilities. Development time is not required.

17. **Public Acceptance** - Describe any known or potential public approval or opposition to the project.

A common theme of public input from Gulf Restoration Council hearings in 2013 was the call for a system that provides observations from the deep waters of the Gulf of Mexico to the coastal region to assist in resource management, protect lives and property and sustain a healthy environment. One need only observe a map of the entire Gulf to realize that COMPS fills a critical gap for Florida's west coast, which constitutes a significant portion of the continental shelf waters of the Gulf of Mexico. Additionally, COMPS has demonstrated public acceptance by the use of COMPS real time data and model products. USF scientists, in collaboration with county, state and federal officials, will actively seek to engage more public stakeholders in the use of the proposed information. The coastal ocean is where society meets the sea, and we are committed to contributing our scientific expertise to the benefit of society.

18. Project Activity Budget Justification:

Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

The estimated cost is based on a 5-year project duration, and the budget is broken into three phases. Phase 1 occurs in year 1 and it consists of implementing our existing Tampa Bay estuary model as an automated, daily nowcast/forecast. The phase 1 cost is $121,921. Phase 2 occurs over years 2 and 3. It adds a water quality sub-model, and it also reinstitutes a coupled wave model that we had to abandon this past year for lack of support. The phase 2 cost is $413,432. Phase 3 is the sustaining part in which we will seek additional partners and applications.

Tampa Bay Modeling Budget

Notes: Fringe @ 0.1644 + 1264/mo. on faculty
@ 0.0165 + 4495/yr. on post-docs
@ 0.005 + 2161/yr. on graduate students
Indirect @ 0.15 on total direct costs

Budget (USF)	FY15	FY16	FY17	FY18	FY19
Salary					
a. R. Weisberg	15,900	16,400	16,900		
b. L. Zheng	8,100	16,200	16,700	17,200	17,800
c. J. Donovan	34,600	35,600	36,700	37,800	38,900
d. Post-Doctoral Assoc.		45,000	46,300	47,700	49,100
d. G.S.			23,000	24,000	25,000
Total Salaries	58,600	113,200	139,600	126,700	130,800
Fringe	17,218	25,298	27,940	24,189	23,233
Salary+Fringe	75,818	138,498	167,540	150,889	154,033
Equipment	12,000	6,000	6,000		
Travel					
a. Domestic	3,500	3,500	3,500	3,500	3,500
b. Foreign					
Total travel	3,500	3,500	3,500	3,500	3,500
Materials and Supplies					
a. PCs	3,000	3,000	3,000	3,000	
b. Laptop	1,200		1,200	1,200	
c. Data storage	4,500		4,500	4,500	
Total supplies	8,700	3,000	8,700	8,700	
Other					
a. Publication	6,000	6,000	6,000	6,000	6,000
b. Tuition			10,771	10,771	10,771
Total Other	6,000	6,000	16,771	16,771	16,771
Direct Costs	106,018	156,998	202,511	179,860	174,304
Indirect Costs	15,903	23,550	30,377	26,979	26,146
Total Costs	121,921	180,548	232,888	206,839	200,450

Total costs, 5-years: 942,646

- Personnel and fringe: $686,778
- Travel including the number of trips and estimated cost per trip: $17,500 ($3,500)
- All equipment greater than $1,000: $85,200
- Supplies including a list of major types of supplies: $53,100
- Contractual costs: N/A
- Administrative costs not to exceed 3% of the total award:

19. Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.
(Step 2 - Criterion 8)
List any project partners and briefly describe their involvement and contribution to the project.

We would pursue a partnership with NOAA to transition our model into their TBOFS. We would also seek agency partnerships on matters such as fish larvae recruitment, harmful algae blooms, search and rescue, engineering assessments of permitting applications, all while providing relevant information to the general public for use in recreational outings such as paddle boarding, kayaking, sailing, fishing etc.

20. Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed.
(Step 2 - Criterion 9)
Link to Applicable Comprehensive Plan Element Goals:
www.pinellascounty.org/restore/pdf/comp-plan-goals.pdf

- **Future Land Use and Quality Communities Element: Goal Three**
  Pinellas County shall promote a balanced relationship between the natural environment and development
  This goal is furthered by all COMPS modeling efforts. As described in detail previously, the COMPS program is by definition the monitoring of the natural environment that is the coastal ocean. By increasing our knowledge of Tampa Bay circulation we assure that we remain ever vigilant and prepared in the event of any future man-made or naturally occurring harmful substance events.

- **Natural Resources Conservation and Management Element: Goal Four**
  Strengthened connections to the water – Pinellas County will remain a leader in the restoration of its surface waters and the dependent habitats and resources which are essential to this county's character, economy and quality of life
  Again, as previously detailed the COMPS program goal is to observe, describe and predict the coastal ocean circulation and how it contributes to coastal ocean ecology. The importance of

circulation as a driving factor in estuarine ecology is unfortunately not a priority for other sources of RESTORE funding. Pinellas County has the opportunity to be a true leader in recognizing and supporting the value inherent to the COMPS program in observing and forecasting coastal ocean circulation and its myriad effects on ecology and the environment.

- **Recreation, Open Space and Culture: Goal Three**
  Strengthening Connections to the Water – To strengthen public connections to Pinellas County waters and waterways through the maintenance, promotion and environmentally sensitive expansion of recreational spaces
  Tampa Bay waters are utilized by the public for a multitude of recreational activities including paddle boarding, kayaking, boating, fishing, swimming etc, and is a major attraction for leisure activities for residents and tourists alike. The proposed high resolution model served to the public informs safe and successful recreational outings in our beloved bay.

21. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

In the short term the proposed high resolution model will provide the public with more useful circulation data than previously possible that will allow for informed decisions regarding activities on or near the coastal waters. This same principle applies to commercial endeavors such as shipping. The primary long term benefits of the model project begin with a better understanding of Tampa Bay circulation in general. Advancing knowledge of the estuarine circulation of Tampa Bay advances our understanding and thus our predictive capabilities regarding the health of the Tampa Bay ecosystem as well. It allows us to assess our ecosystem vulnerabilities and therefore to better protect it when possible and when not possible to anticipate the effects of harmful substance events. Of lasting benefit is the advancement of knowledge as it pertains to coastal ocean science and the ability to share and apply that knowledge to other geographic regions through scientific publications and collaborations.

22. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

No material risks exist.

23. Best Available Science:

Models are only as good as the underlying science. This project builds upon a long history of scientific applications to the west Florida coastal ocean and Tampa Bay. The WFCOM in which the high resolution Tampa Bay and vicinity model will be nested is a state of the art coastal ocean model. Recent peered reviewed publications using this model explained why there was no red tide bloom along Florida's west coast in 2010, how gag grouper juveniles get from offshore spawning to near shore settlement sites and why fish lesions were prominent on the

west Florida continental shelf after the Deepwater Horizon spill. Specific to Tampa Bay are two recent publications using the proposed model explaining how Tampa Bay and specific sub-regions flush and also examining what might occur if the shipping channels were to be deepened and widened to accommodate larger vessels. Prior to that, our research group published the first paper on a three-dimensional, density dependent circulation model for Tampa Bay to appear in a truly refereed professional journal. All of these examples are provided in the reference list. In summary, COMPS observations and models are all based on state of the art equipment and models and COMPS work regularly appears in refereed professional journals. By applying best available science we regally contribute to the understanding and prediction of societally relevant coastal ocean phenomena as well as providing useful real time information to the general public.

24. Matching/Other funding
(Step 2 - Criterion 11) *Indicate:*

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding.

- If matching funds are not secured, specify the amount of matching funds requested or expected.

- The date the amount of secured funds will be known.

- Future costs related to maintaining the project, the funding source, and responsible entity.

Matching funds will be requested through the NOAA IOOS South East Coastal Ocean Observing Regional Association (SECOORA) in 2016 as new funds become available. Some salary support is provided for through the USF College of Marine Science.

Readiness for Implementation
(Step 3)
Complete the following:

25. Will the project be completed within 5 years from date funding is confirmed?
Yes: X No:

It is anticipated that once demonstrated the model will be able to be sustained through other funds beyond the 5-year interval proposed here, and possibly even before.

26. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

The high resolution Tampa Bay model as proposed already exists in a hindcast mode. Implementation as a nowcast/forecast model is what remains to be completed. The first milestone would be nesting the existing high resolution model into the existing WFCOM and

testing the various real time data streams necessary to run daily nowcast/forecasts. Acquisition of a dedicated computer server is also required. We estimate that this initial milestone will be completed during the first year. Testing of both hindcast simulations and nowcasts/foreasts will continue throughout the project duration. A year two milestone will be to quantify the veracity of these nowcast/forecasts and to gauge them against all available observations and other model simulations such as those produced by NOAA TBOFS, a much lower resolution model for which we know from prior experience does not have the same capabilities of what we are proposing. Throughout this time we will also be exploring scientific questions regarding fisheries recruitment as already begun with earlier versions. We anticipate that such explorations will lead to research grants that can help in the long run to sustain our project beyond the five year duration proposed and possibly even earlier to alleviate some operational costs included in the 5-year budget. Improving information dissemination to the general public will be an ongoing objective as will be collaborating with all agencies who may have need or use for the information being generated.

27. How long before the project can start after funds are available (months)?

The project can start immediately.

28. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

Not applicable.

29. Describe any issues or reasons that may delay project start or completion.

None.

END OF QUESTIONS

Additional Information

Tables and Figures:

1. Table 1. 5 Year Budget.
    - https://drive.google.com/file/d/0B5PGt0arj3QZUWp2QmI0VVJMS00/view?usp=sharing

Online Data and Product Sources, and tracking tools:

1. Collaboration for Prediction of Red Tides (CPR). Tracking tool in partnership with FWC to help federal, state and local end users monitor and manage red tide blooms on the west Florida shelf.
    - http://ocgweb.marine.usf.edu/hab_tracking/HAB_trajectories.html
2. COMPS program homepage. All real-time sites shown on interactive map for simple, clickable access to current ocean-atmosphere observations.

- http://comps.marine.usf.edu/

3. Ocean Circulation Group homepage. Interactive website displaying OCG monitoring and modeling efforts.
   - http://ocgweb.marine.usf.edu/
4. SECOORA regional association homepage. COMPS data is displayed in real-time.
   - http://secoora.org/
5. GCOOS regional association homepage. COMPS data is displayed in real-time.
   - http://data.gcoos.org/

Relevant Publications: Recent

1. Weisberg, R. H. (2011). Coastal Ocean Pollution, Water Quality, and Ecology. MTS Journ., 45(2), pp. 35-42.
   a. https://drive.google.com/file/d/0B5PGt0arj3QZdDloX0RfVW1UQzg/view?usp=sharing
2. Weisberg, R. H., Zheng, L., Liu, Y., Lembke, C., Lenes, J. M., Walsh, J. J. (2014). Why no red tide was observed on the West Florida Continental Shelf in 2010. J. Harmful Algae, 38 (2014), pp. 119-126.
   - http://www.sciencedirect.com/science/article/pii/S1568988314000572
3. Weisberg, R. H., Zheng, L., Peebles, P. (2014). Gag grouper larvae pathways on the West Florida Shelf. Cont. Shelf Res., 88 (2014), pp. 11-23, doi.10.1016/j.csr.2014.06.003.
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UNIVERSITY OF
SOUTH FLORIDA

April 17, 2015

Mr. Andy Squires, MS, CPM
Section Manager, Coastal & Freshwater Resources
Pinellas County Natural Resources Division
22211 US Highway 19 North, Bldg. 10
Clearwater, FL 33765
Ph: 727-464-4633
Email: asquires@pinellascounty.org

Re: *"A very high resolution estuary circulation nowcast/forecast model for Tampa Bay and vicinity"*; USF PI Dr. Robert Weisberg; Total Request $479,493

Dear Mr. Squires:

The University of South Florida is pleased to participate in this proposal with your institution on the above named project. In the event that the project is funded, we agree to carry out the contract and grant administration policies and responsibilities as are assigned or delegated in the award.

Please contact the above named Dr. Robert Weisberg with any questions regarding the scientific aspects of this proposal at 727-553-1568. All administrative questions should be referred to Ms. Heather Morr, Sponsored Research Administrator, at 813-974-3526 or via email at hmorr@usf.edu.

The University of South Florida enthusiastically looks forward to our collaboration with your company on this proposal.

Sincerely,

Rebecca Puig

Rebecca Puig
Assistant Vice President
Office of Research & Innovation

A very high resolution estuary circulation nowcast/forecast model for Tampa Bay and vicinity

R. H. Weisberg and L. Zheng
College of Marine Science
University of South Florida
St. Petersburg, FL 33701

Submitted to:

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT

Andy Squires, MS, CPM
Section Manager, Coastal & Freshwater Resources
Pinellas County Natural Resources Division
22211 US Highway 19 North, Bldg. 10
Clearwater, FL 33765
Phone (727) 464-4633
Cell (727) 515-1120
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4/13/15

Statement of Work

A very high resolution and accurate numerical circulation model will be implemented for the Tampa Bay estuary and vicinity [including the Intra-Coastal Waterway (ICWW), Boca Ciega Bay, Tampa Bay, Sarasota Bay and all of the major inlets and waterways]. The model exists and is vetted through publications in refereed professional journals. The next step is to set it up as an automated, daily nowcast/forecast to be publically available on the internet. Applications include safe and efficient navigation, water quality, larval fish recruitment, harmful algal blooms and other ecological phenomena. Unique to this model is its fine resolution (20m), enabling the inclusion of all relevant conveyances of mass. For instance, no other estuary model includes the ICWW and all of the relevant inlets, which are necessary to properly address the flushing of water bodies and the three dimensional distribution of water properties and their transport that are so important to pollutant and water quality studies.

The proposed model will be part of the larger COMPS system of coastal ocean observations and larger scale models to which ours will be nested. Our applications go beyond the estuarine circulation driven by tides, winds and rivers, or water quality considerations. Estuary and coastal ocean ecology begins with the uniting of nutrients with light, fueling primary productivity and thence all subsequent trophic level interactions. The underpinning is the coastal ocean circulation that determines the evolution of the water properties in which organisms live, including nutrients and pollutants. The deep ocean connects with the continental shelf, the continental shelf connects with the estuaries, and it is through these connections, across space, time and trophic levels, that ecosystem services derive. COMPS is a comprehensive, multidisciplinary science-based program aimed at understanding how the coastal ocean system works. The outcome will be an improved ability to predict the consequences of either human-induced or natural occurrences and to become better stewards of the coastal ocean environment and its resources.

Budget Justification

Funds are requested for three years beginning as soon as RESTORE Act funds are made available to Pinellas County. R.H. Weisberg, a tenured Distinguished University Professor in the College of Marine Science, University of South Florida will provide project guidance with L. Zheng, an Associate in Research, providing daily oversight. J. Donovan will provide data and computational resource management. A post-doctoral associate will be added in year 2, along with a graduate student for which funding is provided in year three. Man-months per year are given in parentheses. Fringe is calculated at 16.44% on salaries, plus 1,269/mo. (medical ins.) on 12 month faculty and staff. Fringe on post-doctoral associates is @ 1.65%, plus 7,170/yr. (medical ins.), and fringe on graduate students is @ 0.2%, plus 2,161 (medical ins.).

Equipment is for computer workstations and data servers.

Travel is for the presentation of scientific results at professional meetings and for public outreach.

Materials and supplies are for office PCs, Laptop computers and data storage media.

Other direct costs are for publication of scientific results and gradient student tuition.

Consistent with the U.S. Treasury Department regulations imposed on the Pinellas County RESTORE Act funds, indirect costs are charged at 3% of total direct costs

Budget (USF)	FY15	FY16	FY17
Salary			
a. R. Weisberg (1,1,1)	16,497	16,992	17,502
b. L. Zheng (1,2,2)	8,173	16,836	17,341
c. J. Donovan (4,4,4)	35,594	36,662	37,762
d. Post-Doctoral Assoc.		45,000	46,350
d. G.S.			23,000
Total Salaries	60,264	115,490	141,955
Fringe	14,983	24,577	27,154
Salary+Fringe	75,247	140,067	169,109
Equipment	12,000	6,000	6,000
Travel			
a. Domestic	4,500	4,500	4,500
b. Foreign			
Total travel	4,500	4,500	4,500
Materials and Supplies			
a. PCs	3,000	3,000	3,000
b. Laptop	1,200		1,200
c. Data storage	4,500		4,500
Total supplies	8,700	3,000	8,700
Other			
a. Publication	5,571	3,431	3,431
b. Tuition			10,771
Total Other	5,571	3,431	14,202
Direct Costs	106,018	156,998	202,511
Indirect Costs	3,181	4,710	6,075
Total Costs	109,199	161,708	208,586

Total costs, 3-years: 479,493

APPENDIX F-5

Ft. De Soto Park Dune Walkover

($534,894)

PINELLAS COUNTY RESTORE ACT DIRECT COMPONENT PROJECT PROPOSAL SUBMITTAL FORM

Based on the Transocean settlement and until the BP trial ends, it is estimated by March 31, 2015, $1,542,888 will be available in the Gulf Coast Restoration Trust fund for distribution to Pinellas County under the Direct Component allocation.

As a guideline, Pinellas County anticipates funding 3 to 7 projects not to exceed a total of $1,542,888 as part of the initial multiyear implementation plan (MYIP). It's anticipated that projects selected for MYIP inclusion that receive funding would not begin until after December 2015.

Please read through all the questions before beginning.

- Submitted projects must address one or more of the five Gulf Coast Ecosystem Restoration Council goals and one or more RESTORE Act-eligible activities.
- Projects submitted by FEBRUARY 6, 2015 will be eligible for inclusion in the initial Multiyear Implementation Plan (MYIP)
- The "Steps" and "Criteria" numbers in the application refer to questions that address the steps and criteria for selection and ranking projects. The selection and ranking criteria can be viewed at www.pinellascounty.org/restore/pdf/project-selection.pdf
- Answer each of the 29 questions as completely as possible, but keep responses focused.
- Submit one form per project.
- Once the form is successfully submitted, you will be contacted by Pinellas County.
- Send associated maps, charts, images, and budget information along with the title of your project in a Portable Document File (PDF) to restore@pinellascounty.org.
- Direct questions to restore@pinellascounty.org

Applicant Name: *(Include at least one Point of Contact (POC), phone number, email address, and organization name, if applicable)*:

1. **POC Name: Debbie Chayet**
2. **POC Organization: Pinellas County Office of Management & Budget**
3. **POC Title: Sr. Grants Specialist**
4. **POC Email: dchayet@pinellascounty.org**
5. **POC Phone: 727-582-2521**
6. **Proposed Activity Name: Ft. De Soto Park Dune Walkovers**

7. Restoration Council Goals Addressed:
(Step 1 and Step 2 - Criteria 1 and 2)
List which of the following goal(s) will be addressed and how each goal will be addressed.
A. Restore and Conserve Habitat
B. Restore Water Quality
C. Replenish and Protect Living Coastal and Marine Resources
D. Enhance Community Resilience
E. Build and Revitalize the Gulf Economy

This project will address several of the five listed Restoration Council Goals. It will (A) conserve habitat, (C) Protect Living Coastal and Marine Resources and (D) provide a small measure of enhanced resilience to infrastructure. The project involves the development of dune walkover structures over existing coastal dune systems in Ft. De Soto Park. Vegetated dune systems provide the best defense against storms and tidal influx. Aerial photos clearly delineate scarring where long time pedestrian use has destroyed vegetative cover through the dune system and created over 35 existing open sand paths. These paths provide access for floodwaters, tidal overwash and wave overrun during storms and/or extreme high tides. Exposed sand along these paths shifts readily with wind, further eroding the open pathways and further creating opportunity for tidal overwash.

The development of five selectively located dune walkovers will conserve the dune habitat by preventing damaging pedestrian traffic on the delicate dune system, decreasing erosion and allowing the dunes to naturally restore and rebuild over time. The walkways will direct the flow of pedestrian traffic away from footpaths and toward these acceptable dune crossings. The presence of the dune system protects the upland infrastructure of the park by capturing the brunt of storm impact; thus protection of the dune system protects the park and provides a measure of resiliency for uplands. "Protecting dunes helps prevent loss of life and property during storms and safeguards the sand supply that slows shoreline erosion. Protecting dunes also preserves and enhances the beauty of the coast and coastal ecosystems." Rigid structures are less efficient than the naturally resilient dunes as defense for the beach against storm surge. Per "Coastal Dunes" a publication from Texas.

Having the dune walkovers may also bring educational awareness to the public of the value of dune systems. Understanding the importance of dunes in this coastal ecosystem may assist with public conservation of "sand dunes".

The five dune walkovers, totaling roughly 1,290 linear feet, will also prevent pedestrians from traversing other areas in the existing beach and dunes which serves to protect other dune flora and fauna. Dune systems are quite biologically diverse; especially along beach wrack lines. The assorted vegetation and marine wildlife present in wrack lines assist with the beginnings of dune development as sand gets trapped and builds over time; allowing grasses to move in and stabilize a beginning dune. Decaying wrack provides nutrients for newly growing dune vegetation (University of Florida). Soft sand in early dunes is also an ideal location for federally endangered and threatened nesting sea turtles to lay eggs. The sea turtles will lay eggs above the high tide line so nests are not washed out by high tides. This is

usually located at the edge of developing dunes or on open sandy beaches. Ft. De Soto Park averaged 59 sea turtles nests over the last 5 years has recorded as many as 104 (in 2014). Loggerhead sea turtles (federally threatened) are the most common nesting sea turtle at Ft. De Soto Park although one green sea turtle (federally endangered) has nested at Ft. De Soto in the past. The location of the proposed dune walkovers is a highly used nesting area and crawl area for sea turtles. The installation of dune walkovers will keep pedestrians away from sea turtle nests and minimize impacts to the dunes edges where turtles may choose to nest. Walkovers will also assist in keeping pedestrians away from the many shorebirds that nest in this ecosystem, particularly those that nest in open sandy spots near vegetative cover. This includes Willets and Wilson's and snowy plovers (state threatened) that all nest at the edge of dunes. On open beach sand close to the dunes, the American oystercatcher (species of special concern), black skimmer (species of special concern) and least tern (state threatened) also nest. Currently this 1,100+ acre park, with its 7 miles of beaches has only two dune walkovers. Lack of funding availability is why.

8. RESTORE Act Eligible Activities Addressed:
(Step 1 and Step 2 - Criteria 3 and 4)
List which of the following activities will be addressed and how each activity will be addressed.

1. Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands
2. Mitigation of damage to fish, wildlife, and natural resources
3. Implementation of Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring
4. Workforce development and job creation
5. Improvements to or on State parks in coastal areas affected by Deepwater Horizon oil spill
6. Infrastructure projects benefitting the economy or ecological resources, including port infrastructure
7. Coastal flood protection and related infrastructure
8. Promotion of Gulf Coast Region tourism, including recreational fishing
9. Promotion of the consumption of seafood harvesting from the Gulf Coast Region
10. Planning assistance

This project addresses several of the Restore Act Eligible Activities including all or portions of items 1,2,4,6 and 8.

Item 1: The installation of dune walkovers directly protects dune ecosystems and their diversity. This allows for the continuing entrapment of sand and development of dunes which continues to protect the natural resources in the project site. As a result, federally protected sea turtles and state protected shorebirds can continue to nest in their chosen habitats; thus positively impacting marine wildlife.

Item 2: The installation of dune walkovers prevents the previous/continuing damage by pedestrians to the dune habitat. By preventing further damage, this ecosystem is provided the

opportunity to naturally recover and mitigate the damage caused by pedestrians. Allowing dunes to restore and further develop also provides a measure of mitigation before a storm or natural disaster as the dune system would be healthy enough to reduce risk from a storm's impact.

Item 4: The construction of the dune walkovers will create up to 4 jobs in the short term. The length of time is dependent upon the number of walkovers able to be constructed for the requested funding (how competitively priced the construction bids end up). Job retention will be enhanced as the walkovers will require some measure of maintenance for public safety.

Item 6: This project is an infrastructure project as walkovers must be constructed. A competitive bid process will be undertaken to acquire the best contractor at the best price for the work. This benefits the economy by placing work into the region, thus offering construction jobs that may not have previously existed. The infrastructure project provides ecological benefits because it protects the dune habitat, wildlife nesting areas and indirectly helps protect upland infrastructure.

Item 8: Promotion of Gulf Coast Region tourism may not initially sound like it is a benefit of this project, but it is. The installation of dune walkovers helps with disabled access to the beach and can be used in promoting beach access for this target audience. Ft. De Soto Park also provides beach wheelchairs for use and the walkovers will provide much needed access to the beach itself. Additionally, marketing of Ft. De Soto beaches with beautiful dunes cascading around dune walkovers is a typical type of marketing scene. Easy beach access spreads readily by word of mouth and social media amongst beachgoers. Searching online for Ft. De Soto Park results in hundreds of photos dune walkovers will rapidly be added to social media photos that unofficially promote the park and tourism. Beaches are the primary tourism draw to Pinellas County and Ft. De Soto Park was named as the best beach in the nation in 2005. Providing easy access to the beaches of this park can only serve to further tourism especially since the Tourist Development Council indicates that 95% of visitors to Pinellas County consider the beach the number one reason for choosing this area to spend their vacation.

9. Previous Claim:

Is the proposed activity included in any claim for compensation paid out by the Oil Spill Liability Trust Fund after July 6, 2012? If yes, this activity is not eligible for Direct Component grant.

Yes: __
No: _X_

10. RESTORE Act Pinellas County priorities addressed:

(Step 2 - Criteria 5 and 6)

List which of the following priorities will be addressed and how each priority will be addressed.

a. Protect and restore native habitats

b. Provide stormwater quality improvements
c. Create policies, programs, and/or mechanisms to remediate environmental and/or economic damages
d. Create policies, programs, and/or mechanisms to protect against future environmental and/or economic vulnerability
e. Provide climate change/sea-level rise planning, adaptation and/or related community engagement
f. Provide flood and storm protection to infrastructure and other publically owned assets that consider resilience and changing sea levels
g. Implement or further actions in the Pinellas County Post Disaster Redevelopment Plan
Link to Plan: http://www.postdisasterplan.org/pdrp.shtml
h. Diversify and improve the economy including tourism
i. Promote sustainable recreational fishing and consumption of seafood dependent on Gulf ecosystem, and/or protect or promote working waterfronts

Installing dune walkovers will allow the currently damaged dunes to recover and accrete sand and grow vegetation. As the dunes build in size they serve to protect the upland from the impact of storms. Healthy dune systems protect the coast by mitigating before a disaster to reduce risk from future storms (items a, c & d). This is one means to implement actions of the Pinellas County Post Disaster Redevelopment Plan (PCPDR) and the Pinellas County Comprehensive Plan. According to the PCPDR, "tropical storms/hurricane events as well as flooding events pose the greatest risk to Pinellas County in terms of probability, extent of damage, vulnerability and impact and potential loss" (page 3-38) (item g). The maintenance of healthy dune systems, which is enhanced by dune walkovers, is the first line of protection against storms and flooding. The dunes in the project area will be of particular importance in the protection of the batteries at Fort De Soto which are in the National Historic Register. This project further implements the PCPDRP as it complies with standard land management practices to protect the dune system in the park. Per page 5-63 "in many instances open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands, or other flood prone areas in their natural state in perpetuity". This project helps to protect the dune system from human damage and retain the dunes in natural state. "The County's natural lands are often the first line of defense in a storm and are foundational to the County's character and quality of life, a cornerstone of the local economy and critical contributors to regional biodiversity and the function of the larger ecosystem." This statement on page 8-114 explains succinctly why dune walkovers fulfill Pinellas County Restore Act criteria.

As a beach that has been ranked the best beach in America and repeatedly is noted by TripAmerica as an outstanding beach location, providing disabled access and environmentally friendly access to the beach will further promote tourism (item h). This location is nationally and internationally known and the installation of dune walkovers will enhance the site that brings tourists to the park. Tourists spend money which furthers drives the economy in Pinellas County.

11. Project Location

(Step 1)

As applicable, describe the location, attach a map and indicate the address, city, zip code, longitude/latitude, and watershed:

Project location is along the northwest side of Ft. De Soto Park, which is situated at the southernmost point of Pinellas County; buffeted by Tampa Bay to the east and south and by the Gulf of Mexico to the west. Please see attached maps. Since the park is over 1,100 acres, the coordinates provided are at the proposed project site and not at the park entrance or administration facility.

Park address is:

Ft. De Soto Park
3500 Pinellas Bayway S.
Tierra Verde, FL 33715

Watershed: Tampa Bay

Coordinates:
Lon: -82 44'11.82" W
Lat: 27 36'52.66" N

12. Region or Geographic Area Impacted by Project
(Step 1 and Step 2 - Criterion 7)
Provide a description of the project area or region in which environmental or economic benefits will be realized. Be as specific as possible by listing cities or geographical boundaries and why.

The project area is situated along the beachfront of Ft. De Soto Park from the Gulf Pier to North Beach, approximately 1.5 miles in length. This is located on the west side of the park. Currently the site contains footpaths that scar the dune system and create erosion of sand dunes. Substantial environmental benefits will be realized with this project (dune restoration, reduction/elimination of erosion, protection of upland, protection of nesting sea turtles and shorebirds etc.). This shoreline is a nesting location for sea turtles, primarily federally threatened loggerheads. Protecting the natural habitat from erosion and trampling by pedestrians provides a measure of protection to these nests. If the sand dunes are destroyed by public use, the sea turtle nesting areas and shorebird nesting areas are no longer viable and considerable environmental diversity is lost. This site is also internationally known as a major migration route for birds. Ft. De Soto Park is a gateway location on the Great Florida Birding Trail and attracts many thousands of birding enthusiasts weekly during bird migration time. The sighting of an unusual bird hits bird listserves and/or social media and birders visit the park in busloads to observe the bird life. Along the way they use fuel, eat at local restaurants, stop for snacks & drinks and provide a boost to the local (Pinellas County) and regional economies (several surrounding counties such as Manatee, Hillsborough, Sarasota, Pasco etc).

The park mailing address is Tierra Verde; however, the park is usually associated with a St. Petersburg location. With up to 3.2 million annual visitors that come from local, regional, national and international locations, the park generates considerable economic impact on the region. Visitors spend money to camp in the park, and then sightsee, take boat rides, rent cars, eat out, visit regional museums and art galleries, fish, attend sporting events and a wide assortment of other activities. Money is also spent at local concessions to buy fishing gear, bait and assorted sundries for fishing in the park. Ft. De Soto Park's beaches and sand dunes are also renowned for their presence in films and advertising clips.

Coastal recreation is valued at $43,200 for every 1,000 visitors to a state park per the Florida Oceans and Coastal Council, Florida's Ocean and Coastal Economies Report. Frequently confused for a state park, if this number is extrapolated to the average visitation figures of 2.7 million annual visitors to Ft. De Soto Park, this represents an economic impact of $116,640,000 annually.

Discussion of Specific Activity
Describe the project by responding to each of the following topics.

13. Project Description – Discuss the essential elements of the project. Include what is proposed, clearly list major project tasks or program milestones, the project duration, and why it should be done.

This project proposes the design, permitting and construction of a series of dune walkovers along a stretch of up to 1.5 miles of beach at Ft. De Soto Park, from the Gulf Pier parking lot northward to North Beach parking lots. The number of dune walkovers to be installed can be adapted to the available funding and cost of the project. In an unrealistic scenario of unlimited funding a total of at least 12 walkovers would be constructed. Due to the long distances a dune walkover must be constructed to carry pedestrian traffic at the project site, it is more likely that 5 may be constructed.

Essential elements of project: These are also the milestones of the project:

1. Design
2. Permitting
3. Construction
4. Construction inspection

Project tasks:

1. Prepare consultant scope of services for design & permitting
2. Contract review process
3. Let request for proposal to public for consultant services
4. Perform design
5. Acquire permits
6. Prepare bid package, specifications for construction
7. Contract review process
8. Let request for proposal to public for construction services
9. Commence construction

10. Consecutively perform construction inspections
11. Complete construction: perform final inspection-generate punch list & complete items
12. Acquire as-built
13. Open dune walkovers to public

Duration of Project:
This is dependent upon the time it takes to acquire permits. That process can vary greatly depending upon the permitting agency's request for additional information, backlog of work and assorted other factors.

Turtle and bird nesting season will also impact this project. No work will be performed during turtle nesting season as the dune walkover construction approaches the beach area. That limits the project progress during the time frame of May to October. This timeline can also be extended as some turtles may build nests earlier than May.

Therefore, the duration of project timeline is an estimate that may be impacted by these variables.

Prepare scope of services/review etc:	3 months
Design:	6 months
Permitting:	12 months
Prepare bid package	3 months
Construction	12 month
Project wrap up/as-built	1 month
Total project time:	3 years +/-

Why the project should be done has already been thoroughly addressed in questions previously. Summary: environmental sustainability, disabled access to beach, reduced erosion, stabilization of dunes, protection of sea turtle and bird nesting areas, economic impact to region, protection of natural resources, job creation and others.

14. **Project Manager and Key Project Team Members - include credentials and experience doing similar work.**

Project manager:
Debbie Chayet, Senior Grants Specialist, will facilitate the project. Ms. Chayet, in her role as Sr. Grants Specialist, has coordinated over $30 million dollars of grant projects for Pinellas County. These include major infrastructure projects such as the restoration of the Ft. De Soto Fort, Pinellas Trail repairs, development of Eagle Lake Park & Joe's Creek Greenway Park, reconstruction of Belleair Boat Ramp Park, multiple large scale habitat restoration projects at Wall Springs Park, McKay Creek Greenway, Chesnut Park and many other sites. The only existing two dune walkovers (built in 2005) at Ft. De Soto Park were funded and constructed under Debbie Chayet's grant management. Ms. Chayet is skilled in project management and

grant compliance and is able to ensure the appropriate progress on construction projects is made and funding allocations follow "granting agency" requirements.

Key Project Team Members:

1. A vital team member will be the person from the Pinellas County Public Works Department that will be assigned to this project; most likely Professional Engineer Greg Cutrone. Mr. Cutrone and his staff (Engineers & Engineer Interns) will perform engineering project management services. This includes the development of the scope of services for design/permitting functions and also bid specifications for construction. Mr. Cutrone supervises the engineering staff that works on Parks & Conservation Resources Department construction projects. Mr. Cutrone and Ms. Chayet have worked together on multiple projects and have a working relationship based on mutual respect.
2. Purchasing Department: a staff person from the Pinellas County Purchasing Departing will assist the development of boilerplate for the bid packages to be let out for public bid. They will advertise the availability of the work, open the bids, and select the consultant & contractor according to appropriate legal requirements. This is normal work activity for Purchasing Department staff.
3. Consultant-This firm, currently to be determined, will develop design specifications for this project, using a county template and modifying to meet specific needs of Ft. De Soto Park. The consultant will also acquire the permits for the project and will work closely with the County engineer.

15. Environmental and/or Economic Benefits - Describe environmental and/or economic benefits of the project.

According to "Economics of Beach Tourism in Florida (2006)" the total contribution of the Southwest Beach Region (inclusive of Pinellas County) to the economics of Florida is $13 billion. This equates to 177,000 jobs. Roughly 83% of the tourists to the Southwest region visit beaches. Ft. De Soto Park North Beach was designated the Best Beach in America in 2005 and the following year attendance at the park topped 3.2 million; a new attendance record for the park. Economic benefits are not limited to just the beach attendance. The ripple effect of beach visitors impacts local and regional businesses that provide fuel, restaurant services, lodging, recreational facilities, rentals, bait & sundries, etc for resident and out of town visitors. This beach has also been used for the film industry where advertisements have been filmed and shots for movies. This is a major economic benefit.

Environmental benefits are numerous:

- Restore & conserve habitat
  - Prevents damage to sand dunes via funneling pedestrian traffic to walkover
  - Allows continuing development of dunes
- Protect living coastal resources
  - The protection of the dunes allows for the protection of nesting sea turtles and shore birds as well as state protected sea oats
- Enhance community resilience

    - Mechanism to protect against future environmental vulnerability
    - Installation of dune walkovers allows the continuing growth of sand dunes
        - Dunes protect the coastal shoreline by taking brunt of storm and protecting upland resources
- Mitigation of damage to natural resources
    - Installation of dune walkovers diminishes dune erosion and allows dune damage to cease. Dunes reverse damage by accreting sand and building
- Infrastructure project benefiting ecological resources
    - Walkovers funnel pedestrians off the sand dunes, thus preventing ecological damage
- Promotion of Gulf Coast Region tourism
    - Walkovers provide disable access to beach
    - Healthy beach with diversity of coastal wildlife and birds promotes visitation by birders, residents and out of town visitors
    - Park keeps and improves upon positive national reputation
- Further actions in the Pinellas County Post Disaster Redevelopment Plan
    - Installation of walkovers furthers actions of this plan as well as comprehensive plan, state recommendations etc.

16. **Technical Feasibility** - Describe technologies and relevant past experience or proven success with similar projects.

    This project does not involve any advanced technology. The construction of dune walkovers is straightforward. With sufficient funding, walkovers may be constructed of composite material; a combination of recycled woods and plastics. This product has a longer life expectancy; however, it requires more stringers during construction than traditional wood decking. The surface can be slippery when wet and would need anti-slip material placed on it. Most likely the design would specify wood decking and composite handrails which would minimize splinters in hands. Wood requires frequent treatment with sealant and can be more maintenance demanding. In that regard, composite would have significantly less ongoing maintenance for the park staff.

    Parks & Conservation Resources Department (PCR) staff has experience with all wood boardwalks, all composite boardwalks and a combination of wood and composite. The product to be used at this site will be thoroughly discussed prior to design. Experience indicates there is no perfect product that is completely maintenance free. PCR maintains miles of boardwalk throughout its parks, including dune walkovers at Sand Key Park, beach access parks, Weedon Island Preserve and inland parks. Their ultimate selection will be based on these years of experience, available funding and the best return on investment.

17. **Public Acceptance** - Describe any known or potential public approval or opposition to the project.

No public opposition to this project is known. The Friends of Ft. De Soto Park supports the installation of dune walkovers. The Friends group is a 501 (c) (3) volunteer organization whose mission is to support the park and assist with sweat equity and financial needs.

18. Project Activity Budget Justification:
Provide the total project cost and costs by identified tasks for the following items. Provide specific justification for all that apply.

- Personnel and fringe: **$117,042.36**

  This cost is derived from the hourly pay of the Public Works Professional Engineer and Engineering Specialist I who will be working on this project. Cost covers labor for the development of scope of services for consultant, review of contracts, development of construction contract specifications, meetings, including pre-construction meeting etc. Cost also includes labor associated with construction building inspection by Project Coordinator from Public Works.
  Please see attached budget detail.

- Travel including the number of trips and estimated cost per trip: $0

- All equipment greater than $1,000: $0

- Supplies including a list of major types of supplies: $0

- Contractual costs: **$1,000,000 (option for Phase 1 at $500,000, Phases 2 & 3 at $250,000 each.) for installation of five dune walkovers totaling 1,290 linear feet.**
  Please see attached budget detail.
- Administrative costs not to exceed 3% of the total award: $0

- Future costs related to maintaining the project, the funding source, and responsible entity:

  Future costs involve dune walkover safety inspections and dune walkover maintenance. Safety inspections will be performed by a park staff person at least every two weeks and involve observing and walking the structures and checking for broken decking, stringers, washouts around pilings, nails working out of decking, slippery surfaces and similar items. Maintenance involves the repair of any items. This might include replacing individual boards on the decking, sections of handrail, removal of sand on the deck, replacement of side rails etc.

  All costs related to maintaining the project will be absorbed by Ft. De Soto Park in the Parks & Conservation Resources Department budget.

  TOTAL PROJECT COST: $1,117,042.36
  See attached budget detail.

Additional dune walkovers further north along the beach could easily be added to this project to increase the overall project allocation.

19. Describe how the project will utilize a collaborative approach that incorporates partnerships, if applicable.

(Step 2 - Criterion 8)

List any project partners and briefly describe their involvement and contribution to the project.

Both the Friends of Ft. De Soto and Tampa Bay Watch have been long standing partners in funding acquisition of sea oats and providing sweat equity with sea oat planting in continual enhancement of dune development on the beach. These partnerships are expected to continue. Although none are anticipated, any nearby dune impacts from dune walkover construction will be restored with planted sea oats. While dunes are expected to naturally mitigate and accrete sand near the dune walkovers, this process will be assisted with planted sea oats if needed.

The St. Petersburg Audubon Society is also a long-standing partner of the park and supports this project. This group monitors the shorebirds and dune nesting birds. They have been instrumental in establishing protected sections of the beach where birds may try to nest uninterrupted by human use of the park. The installation of dune walkovers should reduce nesting bird/people interaction; an Audubon success. Please see attached letter of support.

20. Describe how the project will support, further, or help implement one or more Pinellas County Comprehensive Plan Element goal(s) as identified in the overarching project goals, if applicable. Clearly list each Comprehensive Plan Element goal addressed.

(Step 2 - Criterion 9)

Link to Applicable Comprehensive Plan Element Goals:
www.pinellascounty.org/restore/pdf/comp-plan-goals.pdf

ELEMENT: Future Land Use and Quality Communities:

GOAL ONE: THE PATTERN OF LAND USE IN PINELLAS COUNTY SHALL PROVIDE A VARIETY OF URBAN ENVIRONMENTS TO MEET THE NEEDS OF A DIVERSE POPULATION AND THE LOCAL ECONOMY, CONSERVE AND LIMIT DEMANDS ON NATURAL AND ECONOMIC RESOURCES TO ENSURE SUSTAINABLE BUILT AND NATURAL ENVIRONMENTS, BE IN THE OVERALL PUBLIC INTEREST, AND EFFECTIVELY SERVE THE COMMUNITY AND ENVIRONMENTAL NEEDS OF THE POPULATION.

Because this project assists in conserving, preserving and restoring coastal dune habitat as well as providing public access to the beach, it supports the portion of the goal that references conserving and limiting demands on natural resources. It also supports the part that references effectively serving the community and environmental needs of the population while ensuring sustainable natural environments.

ELEMENT: Natural Resource Conservation & Management, Natural Systems & Living Resources:

GOAL TWO: PINELLAS COUNTY WILL CONSERVE, PROTECT, RESTORE AND APPROPRIATELY MANAGE ITS NATURAL SYSTEMS AND LIVING RESOURCES ENSURE THE HIGHEST ENVIRONMENTAL QUALITY POSSIBLE.

This project fully implements Goal Two. The project helps conserve and protect existing sand dunes. It helps restore dunes via prevention of further damage and allowing accretion of sand. The installation of dune walkovers is a very appropriate and state and federally supported coastal management practice on coastal ecosystems. The installation of dune walkovers also protects state and/or federally listed (protected) flora and fauna (living resources), thus ensuring the highest environmental practices are implemented to secure a quality environment.

ELEMENT: Natural Resource Conservation & Management, Environmental Lands & Resource-Based Parks:

GOAL THREE: PINELLAS COUNTY'S ENVIRONMENTAL LANDS AND RESOURCE-BASED PARKS ARE THE HALLMARK OF THIS COUNTY'S ENVIRONMENTAL COMMITMENT, AND THESE LANDS ARE TO BE PROTECTED AND MANAGED IN PERPETUITY FOR THEIR CONTRIBUTION TO THE BIODIVERSITY AND BIOLOGICAL SUSTAINABILITY OF THE REGION, AS A MEANS OF PROVIDING RESPITE FROM URBAN LIFE AND BECAUSE THEY INSTILL FUTURE GENERATIONS WITH A SENSE OF APPRECIATION FOR FLORIDA'S NATURAL HERITAGE.

The first sentence of this goal states how resource-based parks are the hallmark of Pinellas County's environmental commitment. Ft. De Soto Park has long been the crown jewel of the County parks. Sized at over 1,100 acres and providing over 7 miles of beaches for public access, this county park is often mistaken for a state park. Attendance figures average around 2.7 million visitors annually and topped 3.2 million visitors in 2005 when the park was named the best beach in the nation. This honor was again bestowed upon Ft. De Soto when TripAdvisor ranked it the best beach in 2009. This goal further references protection of the park in perpetuity due to the biodiversity and the importance of the biological sustainability. Ft. De Soto Park is not only a major birding hotspot; it is a Gateway site on the Great Florida Birding Trail. Over 325 species of birds have been documented here. This includes many federally and state protected species; many of which nest in the park and on the beach. Ft. De Soto Park is also an annual nesting site for federally protected sea turtles, with a whopping 100+ loggerhead nests recorded on the beaches of this park last year.

One of the reasons the park is so popular is public access to its beautiful white sandy beaches. The beaches on the west side of the park are so heavily used that pathways have been gouged out in the dunes by people trying to access the beach. People come to the beach as a "respite from urban life". Installation of dune walkovers will help provide proper stewardship of this property and keep it available in natural condition for future generations.

ELEMENT: Natural Resource Conservation & Management, Promoting Environmental Stewardship:
GOAL FIVE: PINELLAS COUNTY WILL BE A RECOGNIZED LEADER IN ENVIRONMENTAL EDUCATION AND LOCAL ENVIRONMENTAL STEWARDSHIP.

The desire to implement this project which provides the list of benefits below, a great many of which are ecological benefits, speaks to Pinellas County's position as a leader in environmental stewardship. Pinellas County (now called) Parks & Conservation Resources Department won the first ever awarded national County Leadership in Conservation Award given jointly by the Trust for Public Lands and the National Association of Counties. This recognition dramatically speaks to the environmental stewardship of Pinellas County.

ELEMENT: Coastal Management, Beaches & Dunes:
GOAL TWO: PINELLAS COUNTY SHALL CONSERVE, MAINTAIN AND RESTORE COASTAL BEACH AND DUNE SYSTEMS TO BALANCE THE BENEFITS TO STORM PROTECTION, RECREATION, AND THE ECONOMY WITH THEIR FUNCTION AS A NATURAL RESOURCE.

This project implements the entirety of Goal Two of the Coastal Management Element, as identified in the benefits list.

ELEMENT: Recreation, Open Space & Culture, The Provision of Recreation & Open Space:
GOAL ONE: TO ADMINISTER OUTSTANDING COUNTYWIDE RECREATIONAL, OPEN SPACE AND ENVIRONMENTAL SYSTEMS THAT PROVIDE, THROUGH ACQUISITION, DEVELOPMENT AND MAINTENANCE, SUFFICIENT RESOURCE-BASED REGIONAL PARKS AND ENVIRONMENTAL LANDS THAT ARE ENVIRONMENTALLY SUSTAINABLE, FOSTER ENVIRONMENTAL STEWARDSHIP, AND ENHANCE THE COUNTY'S ECONOMIC VITALITY AND THE QUALITY OF LIFE FOR RESIDENTS AND VISITORS.

Providing sustainable beach access within a County park supports this goal.

ELEMENT: Recreation, Open Space & Culture, Sustainability of the County's Recreation & Open Space System:
GOAL SIX: TO PRACTICE AND PROMOTE A SUSTAINABILITY ETHIC, ENSURING THAT ECOLOGICAL LIMITS AND ENVIRONMENTAL IMPACTS ARE CONSIDERED IN ALL DECISIONS AND DESIGNS AFFECTING CULTURAL, RECREATION AND OPEN SPACE PLANNING, AND THAT ALL DECISIONS AND PROJECTS CONTRIBUTE INCREMENTALLY TO ACHIEVING AND SUSTAINING SOCIAL EQUITY, ECONOMIC PROSPERITY AND A QUALITY COMMUNITY FOR CURRENT AND FUTURE RESIDENTS.

As this goal states, this project does ensure that ecological limit and environmental impacts are strongly considered in decisions and design related to the project. That is the very reason for the project.

21. Describe the benefits the project will provide, for how long, and why:
(Step 2 - Criterion 10)
Benefits may be economic, social, and/or environmental. Explain how the benefits will or could be identified, assessed, and/or measured. Describe and quantify environmental and/or economic benefits as applicable [e.g., area restored (acres, linear feet), improved ecosystem services, jobs created/preserved, pollutants and/or nutrients removed (e.g., kg, pounds, tons)].

This project will provide multiple benefits, as referenced in several questions above. In recap, the following are benefits of this project:

1. Restore & conserve habitat
    a. Prevents damage to sand dunes via funneling pedestrian traffic to walkover
    b. Allows continuing development of dunes
    c. Environmentally sensitive mechanism for reducing erosion and sediment transport upland
    d. Reduced fragmentation of dune system
2. Protect living coastal resources
    a. The protection of the dunes allows for growth and spread of state protected sea oats
    b. Maintains suitable beach habitat for nesting sea turtles, invertebrate species, and shorebirds
3. Enhance community resilience
    a. Mechanism to protect against future environmental vulnerability
    b. Installation of dune walkovers allows the continuing growth of sand dunes
        i. Dunes protect the coastal shoreline by taking brunt of storm and protecting upland resources
        ii. Reduces expected storm erosion damage to park upland infrastructure
        iii. Short-term offset to climate change beach migration
4. Mitigation of damage to natural resources
    a. Installation of dune walkovers diminishes dune erosion and allows dune damage to cease. Dunes reverse damage by accreting sand and building
5. Infrastructure project benefiting ecological resources
    a. Walkovers funnel pedestrians off the sand dunes, thus preventing ecological damage
6. Promotion of Gulf Coast Region tourism
    a. Walkovers provide disable access to beach
    b. Healthy beach with diversity of coastal wildlife and birds promotes visitation by birders, residents and out of town visitors
    c. Park keeps and improves upon positive national reputation
7. Further actions in the Pinellas County Post Disaster Redevelopment Plan
    a. Installation of walkovers furthers actions of this plan as well as comprehensive plan, state recommendations etc.
8. Conserve existing dunes and provide opportunity for sand accretion to build up beach area

a. Use for recreational opportunities
b. Increased tourism
    i. Increased economic benefit

Up to 1.5 miles of beach will benefit from this project. The ecosystem services benefit are hard to measure as the preservation of a single sea turtle nest could equate to un-measureable long term benefits.

22. Possible material risks to implement and maintain the proposed activity:
List possible material risks, e.g., operational, legal, regulatory, budgetary or ecological. Include brief description of mitigation strategy to address each identified risk.

This project is straightforward and bears little risk. The project will require a permit to proceed due to its location seaward of the Coastal Construction Control Line. The Florida Department of Environmental Protection manages the Coastal Construction Control Line (CCCL) Program under the authority of Chapter 161 Florida Statutes, the "Beach and Shore Preservation Act." This is not considered a regulatory risk, however, as dune walkovers are considered beneficial to protection of coastal dunes. The project will also bear no ecological risk as walkovers will also provide protection to nesting shorebirds and sea turtles. Construction will be stopped during sea turtle nesting season. Shorebirds nesting nearby will be cordoned off so nests are not disturbed.

23. Best Available Science:
Only answer if proposed activity will serve to protect or restore natural resources, otherwise, indicate "Not Applicable." Briefly describe how the project will use best available science with respect to peer reviewed literature, objective(s), and methodologically sound literature sources that support the scope of work, when available.

From the most basic perspective, not much scientific literature exists that supports the installation of dune walkovers as a mechanism to protect or restore beaches. Much literature addresses the benefits that have been identified as outcomes of this project due to conservation of sand dunes and beaches. A great deal of scientific literature exists that negates the use of shoreline hardening, such as seawalls, for this purpose.

Years of experience support this proposed project. The literature that does specifically support the use of dune walkovers includes:

1. "FEMA P-55, Coastal Construction Manual: (Chapter on) Dune Walkover Guidance" : *The Florida Department of Environmental Protection encourages the design of beach access, including beach and dune walkovers, to protect the dune topography and dune vegetation from pedestrian traffic and allow for the natural recovery of damaged or eroded dunes*". Page 3; Produced by FEMA, with statement from Florida Department of Environmental Protection Bureau of Beaches & Coastal Systems document.

2. "Building Back the Sand Dunes": "***Three Things You Can Do To Protect Sand Dunes;*** *1. Use Dune Walkovers and Designated Beach Access Points to Cross the Dunes."* Page 3; Produced by Florida Department of Environmental Protection, Bureau of Beaches & Coastal Systems & United States Fish & Wildlife Service.
3. "Shoreline Enhancement and Restoration": "*Dune Restoration-Here's How You Can Help; Use Dune Walkovers-A few extra steps may be all it takes to protect the plants that hold the dune in place. Serious erosion problems are caused by pedestrian traffic and by dragging....objects across the dunes*". Last page. Produced by Palm Beach Department of Environmental Resource Management.
4. "City of South Padre Island Erosion Response Plan": "*Dune walkovers remove the pedestrian traffic from the dunes that lead to erosion and blowouts along the frontal dunes. The most harmful activity that takes place on the dunes is the continuous pedestrian traffic that leads to low elevations. Storm surge makes its way up the paths and erodes the path with each wave which can eventually undermine the massive dunes that provide protection"*. Page 46. Produced for Texas General Land Office by Ravella Consulting, LEAP Engineering, Three Rivers Studio, and Coastal Resource Manager.

24. Matching/Other funding
(Step 2 - Criterion 11)
Indicate:

- The amount and percent of the total project cost secured and the source of each matching fund secured. Restore Act funds can be matched with other federal sources of funding.

- If matching funds are not secured, specify the amount of matching funds requested or expected.

- The date the amount of secured funds will be known.

No cash match is secured at this time. Pinellas County will provide a considerable amount of in-kind match to the project. In-kind match will be provided in the form of Restore Act fund management, project management etc by Sr. Grants Specialist in Office of Management and Budget. In-kind match will be provided in the form of contract review administration by Contracts Administrator in Public Works. In-kind match will be provided in the form of Public Works permitting staffer to coordinate permit receipt and filing. In-kind match will be provided in the form of daily site monitoring by Parks & Conservation Resource staff. In-kind match will be performed in the form of periodic site visits by Public Works engineers not listed as Key Team Members. In-kind match will be performed in the form of periodic visits by Coastal Management staff. Permanent maintenance will be performed by park staff; the ultimate in-kind match.
Through the estimated 3 +/- year timeline of this project, in-kind match may exceed $45,000.

Readiness for Implementation

(Step 3)
Complete the following:

25. Will the project be completed within 5 years from date funding is confirmed?

Yes: _X_
No: __

26. Identify each project milestones and proposed duration (no. of months) to complete each step and the total number of months or years to complete the project.

Prepare scope of services/review etc:	3 months
Design:	6 months
Permitting:	12 months
Prepare bid package	3 months
Construction	12 months
Project wrap up/as-built	1 month
Total project time:	3 years +/-

27. How long before the project can start after funds are available (months)?

The project can commence immediately after funds are available. County staff can commence with development of scope of services to acquire a consultant and proceed forward from that point.

28. Describe project design work, permit requirements and hurdles (federal, state, or local), and/or permitting that is in progress *(attach applicable permits or design work).*

Pinellas County Public Works Engineering maintains a standard design template for boardwalk for use in County parks. This design will be modified as needed to best fit the conditions at Ft. De Soto Park. The use of composite recycled material to minimize long term maintenance is desired at this site and the current boardwalk design uses wood decking. This will require some design modification to add stringers and potentially change hardware. The majority of the design, however, is completed do design should proceed rapidly. See attached boardwalk design template from existing 2005 dune walkovers.

Permitting anything seaward of the Coastal Construction Control Line (CCCL) (which includes most of the land in this project) can be a potentially time-consuming process. The dune walkovers will need permits. A Florida Department of Environmental Protection permit related to the CCCL is needed. That permit will be pursued upon notification of funding availability.

This project may also require an Army Corps of Engineers (ACOE) permit. An Exemption for the ACOE permit will be requested. The two dune walkovers constructed in 2005 were permitted by the Florida Department of Environmental Protection (permit # 52-0248325-001). Page three of this FDEP permit indicates that the ACOE did not require a permit for the construction of those two dune walkovers. With that precedent, it is hoped that an ACOE permit would not be needed to construct the proposed new dune walkovers.

29. Describe any issues or reasons that may delay project start or completion.

Unanticipated natural disasters such as hurricanes, tropical storms. This impacts the park to a degree that a construction project might get delayed until clean-up has been achieved.

Timing of actual construction of dune walkovers will have to be coordinated to avoid any disruption or disturbance of nesting shorebirds. Construction closest to the beach will have to be performed outside the standard sea turtle nesting season of May to October.

END OF QUESTIONS

BUDGET
Note: A revised budget based on available funding is on second to last page of this pdf document.

Project length anticipated to be 3 +/- years.

Personnel & Fringe: **Total: $117,042.36**

1. Professional Engineer

Year 1: ($44.75/hour pay + $20.88/hr fringe) x 120 hours =	$ 7,875.60
Year 2: ($44.75/hour pay + $20.88/hr fringe) x 56 hours =	$ 3,675.28
Year 3: ($44.75/hour pay + $20.88/hr fringe) x 56 hours =	$ 3,675.28

2. Engineering Specialist 1

Year 1: ($31.36/hour pay + $14.63/hr fringe) x 280 hours =	$12,877.20
Year 2: ($31.36/hour pay + $14.63/hr fringe) x 200 hours =	$ 9,198.00
Year 3: ($31.36/hour pay + $14.63/hr fringe) x 80 hours =	$ 2,872.00

3. Project Coordinator (Construction Building Inspector)

Year 1: ($35.90/hour pay + $16.75/hr fringe) x 120 hours =	$ 6,318.00
Year 2: ($35.90/hour pay + $16.75/hr fringe) x 1,040 hours =	$54,756.00
Year 3: ($35.90/hour pay + $16.75/hr fringe) x 300 hours =	$15,795.00

Contractual Cost: **Total: $1,000,000**

Composite recycled material for boardwalk/dune walkover construction estimated price per **linear foot: $775**

Desired outcome: Installation of **five dune walkovers** at approximately **1,290 linear feet** of dune walkovers. This provides walkovers specifically over the dunes along the beach area as identified in the attached map.

Should insufficient funds be available to construct all five dune walkovers in a single construction project, **phases have been identified**, with associated costs. **Installing walkovers in phases will take considerably longer and will be more expensive as the contractor will charge a mobilization fee and contingency fee for each phase of construction; thus actual**

on the ground linear feet of dune walkovers will be reduced and increased funding will be received by contractor.

OPTIONS:

1. **Install all five dune walkovers as a single project.**
    a. **This is the recommended option.**

    Cost for total project: $1,117,042.36

    Personnel: $117,042.36

    Construction: $1,000,000

2. **Install dune walkovers identified as priority 1, in red, on map.**

    Cost for this option: $617,042.36

    Personnel: $117,042.36

    Construction: $500,000

3. **Install dune walkovers identified as priority 2 or 3.**

    Cost for this option: $367,042.36

    Personnel: $117,042.36

    Construction: $250,000

    This option provides far less return on investment as the same amount of work must be performed for this option as the others; i.e.: personnel cost remain the same. The contractor cost of mobilization remains the same and contingency cost is high, thus a substantially reduced quantity of dune walkover is constructed for this amount of funding. Additionally, these lower priority sites are less likely to protect the most at-risk dune sites.

Map Produced September 23, 2003

Ft. DeSoto Park

3500 Pinellas Bayway S.
Tierra Verde, FL 33715
Park Office: 727.582.2267
Camp Office: 727.582.2267

Park Hours: 7:00a.m. to dusk

Information Park Map/3-D Views Amenities

Pinellas County
GEOGRAPHIC INFORMATION SYSTEMS
A Pinellas County Government Service

Ft. De Soto Park
3500 Pinellas Bayway S.
Tierra Verde, FL 33715

Project location is from the north side of the fort parking lot northward to north beach.

Project falls within the Tampa Bay Watershed.

Location coordinates per the northwest corner of the fort parking lot:
Lon: -82° 44'11.82" W
Lat: 27° 36'52.66" N

Ft. De Soto Park Dune Walkovers

Priority Spots for Dune Walkovers

Priority 1-Red
Priority 2-Blue
Priority 3-Green

Priority 1 Cost: $500,000
Priority 2 Cost: $250,000
Priority 3 Cost: $250,000

Entire Project: $1,000,000
Construction

February 1, 2015

ST. PETERSBURG
AUDUBON SOCIETY

The St. Petersburg Audubon Society is a 501 (c) (3) volunteer-based organization whose mission is to protect and restore natural ecosystems important to birds and other wildlife through responsible activism and education.

In alignment with this mission, the St. Petersburg Audubon Society strongly supports the Pinellas County Restore Act application for funding of dune walkovers along the west side of the park. This stretch of beach, running from the Gulf Pier north to North Beach, is in dire need of dune walkovers. The public over time has carved out paths into the sand dunes in their efforts to access the beach, which has damaged the dunes and has caused long term dune erosion, increased high tide flooding upland, contributed to pedestrian damage to beach nesting wildlife and generally negatively impacted the environment.

Fort Desoto Park staff, in conjunction with local volunteer based organizations, has facilitated several dune plantings over the years. It is sad to see the vegetation planted by volunteers being trampled by beachgoers. The installation of dune walkovers would improve upon those conditions and would also provide disabled access to the beach.

We appreciate the effort of Pinellas County in conserving birds and wildlife and enthusiastically support installation of dune walkovers at Fort Desoto Park.

Sincerely,

Dave Kandz
Conservation Chair
St. Petersburg Audubon Society

PO Box 12407 • St. Petersburg, FL 33743-2407 • www.stpeteaudubon.org

The mission of St. Petersburg Audubon is to protect and restore natural ecosystems important to birds and other wildlife through responsible activism and education.

PINELLAS COUNTY ENGINEERING DEPARTMENT
STATE OF FLORIDA

PLANS OF PROPOSED
DUNE WALKOVERS
AT
FT. DESOTO PARK

M:\MASTER\PC_LOGOS\NEW_BCC_SEAL\pc_seal_black.jpg

OUR PUBLIC WORKS MISSION IS TO SERVE THE CITIZENS AND VISITORS OF PINELLAS COUNTY BY PROVIDING, IMPLEMENTING, OPERATING AND MAINTAINING COASTAL, SURFACE WATER AND TRANSPORTATION PROGRAMS IN A PROFESSIONAL MANNER WHICH SUPPORTS ECONOMIC AND COMMUNITY GROWTH.

RELATED STANDARDS AND SPECIFICATIONS

DOCUMENT	DESCRIPTION
D-1	FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 2000 AND ALL SUPPLEMENTAL SPECIFICATIONS THERETO.
D-2	STATE OF FLORIDA "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS", MAY, 2001.
D-3	FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", LATEST EDITION.
D-4	FLORIDA DEPARTMENT OF TRANSPORTATION "ROADWAY AND TRAFFIC DESIGN STANDARDS", JANUARY, 2002.
D-5	PINELLAS COUNTY ENGINEERING DEPARTMENT "SPECIFICATIONS FOR ROAD AND DRAINAGE CONSTRUCTION" (FOR CONTRACT CORRESPONDING TO THESE PLANS).
D-6	PINELLAS COUNTY, DEPARTMENT OF PUBLIC WORKS "STANDARD ENGINEERING DETAILS", LATEST EDITION AVAILABLE ONLINE (WWW.PINELLASCOUNTY.ORG/PUBLICWORKS).

BUILDING STANDARDS AND SPECIFICATIONS

2001	FLORIDA BUILDING CODE, PLUMBING, MECHANICAL CODE AND FUEL GAS
2001	FLORIDA FIRE PROTECTION
1997	NFPA70 – NATIONAL ELECTRIC CODE

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

UTILITY WARNING NOTE

ABOVE GROUND AND/OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT – PROCEED WITH CAUTION – CALL "SUNSHINE STATE ONE CALL OF FLORIDA" AND THE UTILITY OWNER(S) 2 WORKING DAYS IN ADVANCE OF BEGINNING WORK (1-800-432-4770).

THE FOLLOWING COVERS ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY ONLY

ALL WORK SHALL CONFORM TO:

A. FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2000), (A.K.A.: STANDARD SPECS).

B. FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON STATE HIGHWAY SYSTEM (JAN. 2000), WITH INTERIM STANDARDS SUPPLEMENT (A.K.A.: STANDARD INDEX), COMPLIANCE WITH ALL APPLICABLE INDICES IS REQUIRED.

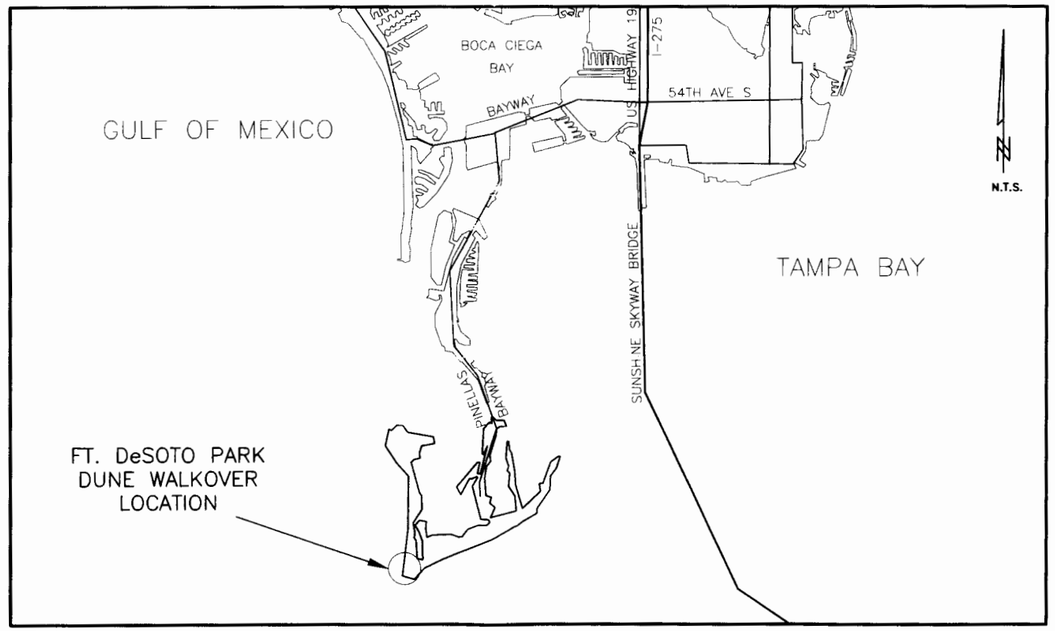
C. FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY PLANS PREPARATION MANUAL VOLUME I, CHAPTER 2 & 25

D. FLORIDA DEPARTMENT OF TRANSPORTATION FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION (MAR. 1995).

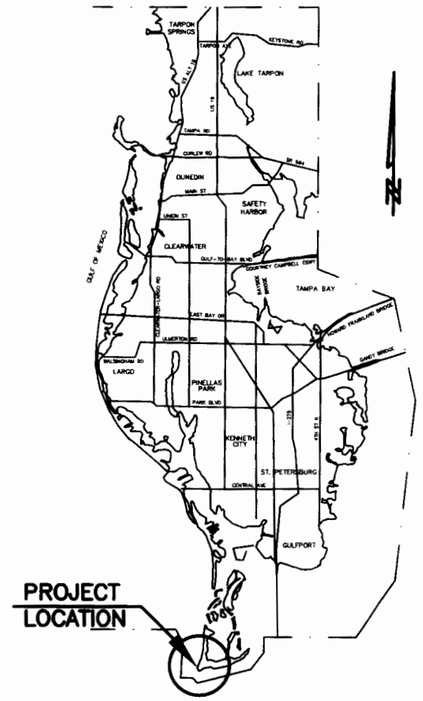
E. NO LANE CLOSURES ARE PERMITTED BETWEEN THE HOURS OF 5:00 AM AND 9:00 PM, UNLESS PRIOR APPROVAL IS RECEIVED FROM THE FDOT INSPECTOR.

SUMMARY OF REVISIONS	
DATE	DESCRIPTION

P.I.D. NO. 1082



SECTIONS 18 TOWNSHIP 33 SOUTH RANGE 16 EAST



INDEX OF PLANS

PINELLAS COUNTY, FLORIDA
Department of Public Works

HASSAN R. SHAFEE, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5316
PHONE (727) 464-3251

PROJECT PRODUCTION TEAM
(CORE MEMBERS)

PROJECT MANAGER:	John M. Linton, E.I. Nedima A. Ablakovic
DEPT. OF ENV. MGMT:	Steve Robinson
CONSTRUCTION:	Laurence Ritchie
SURVEY:	Susan Scholpp
HIGHWAY:	N/A
UTILITY COORDINATOR:	Jim Cannon
RIGHT – OF – WAY:	Sonny Noar
TRAFFIC:	N/A
PARK DEPT.:	Joe Lupardus Robert Browning

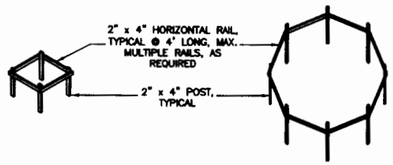
SUBMITTED BY AND RECOMMENDED FOR APPROVAL BY:
ANTONIO HORRNIK, P.E., STRUCTURES DIVISION ENGINEER — DATE

RECOMMENDED FOR APPROVAL BY:
PAUL A. COZZIE, PARK AND RECREATION DIRECTOR — DATE

RECOMMENDED FOR APPROVAL BY:
JORGE M. QUINTAS, P.E. DIRECTOR OF ENGINEERING — DATE

APPROVED BY:
JAN R. HERBST, P.E., DIRECTOR OF PUBLIC WORKS — DATE

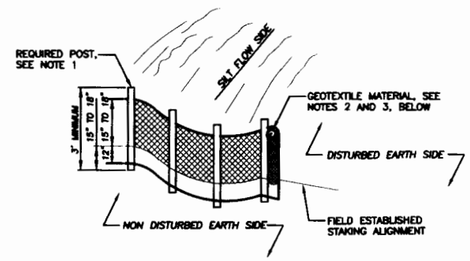
PALM TREES DECIDUOUS TREES CONIFEROUS TREES



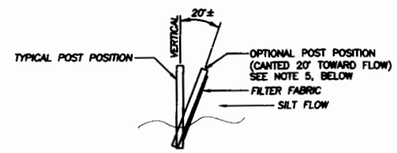
PALMS AND SMALL TREES LARGE TREES AND BUSHES

NOTES:
1. NO TRUCKS OR HEAVY EQUIPMENT ALLOWED WITHIN BARRIERS, ONLY HAND LABOR ALLOWED.
2. NO CONSTRUCTION MATERIALS, SOILS DEPOSITS, OR SOLVENTS SHALL BE ALLOWED WITHIN BARRIERS.
3. BARRIERS ARE TO IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES WITH-IN TREE AREA.
4. BARRIERS ARE TO STAY IN PLACE UNTIL ALL PAVING, CONSTRUCTION, AND HEAVY EQUIPMENT IS REMOVED FROM THE AREA.

TREE PROTECTION BARRIERS DETAIL
NTS



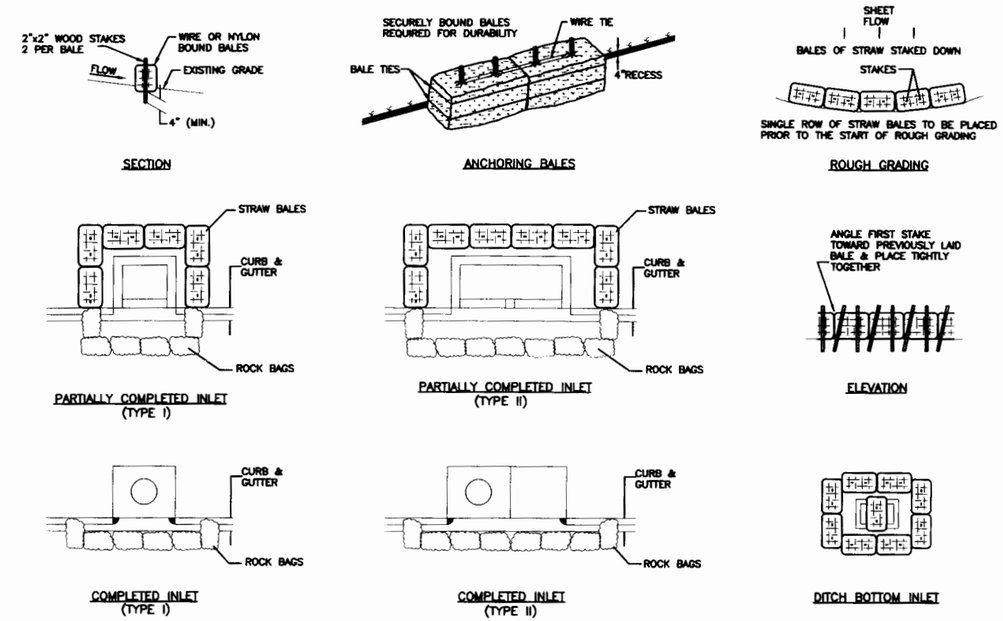
ELEVATION VIEW



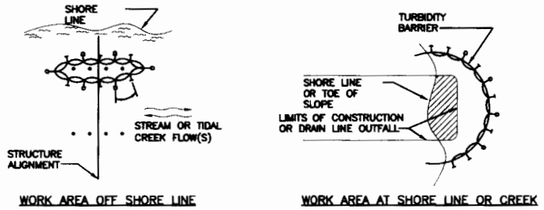
SECTION VIEW

NOTES:
1. POST; 2" x 2" WOOD, P.T. OR 2-1/2" ϕ STEEL AT 6'-0" CENTERS MAXIMUM.
2. GEOTEXTILE; GRAB TENSILE AT 90 LBS, TRAPEZOIDAL TEAR AT 35 LBS., MULLEN BURST AT 180 PSI.
3. GEOTEXTILE MATERIAL SHALL BE BURIED IN THE GROUND A MINIMUM OF 12" AND BACK FILLED.
4. ALSO SEE FDOT INDEX 199, "GEOTEXTILE CRITERIA", EROSION CLASS.
5. OPTIONAL POST POSITION REQUIRED WHEN SLOPE IS GREATER THAN 1:2.

STAKED SILT BARRIER DETAIL
NTS



BALED HAY OR STRAW BARRIERS
NTS



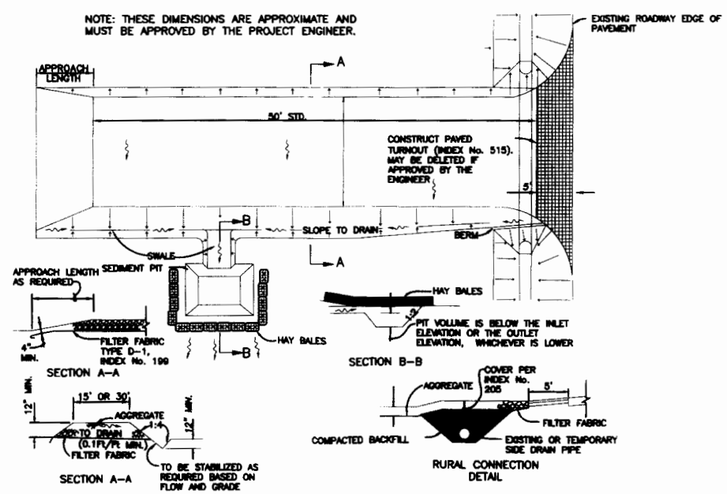
WORK AREA OFF SHORE LINE WORK AREA AT SHORE LINE OR CREEK

LEGEND

- DREDGE OR FILL AREA
- MOORING BUOY W/ ANCHOR BARRIER MOVEMENT DUE
- TO CURRENT ACTION
- PILE LOCATIONS
- WAVE ACTION

NOTES:
1. CURTAIN TO REACH THE BOTTOM UP TO DEPTHS OF 10', 2 PANELS ARE TO BE USED FOR DEPTHS GREATER THAN 10' UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY ARE CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. COMPONENTS OF TYPES I AND TYPES II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND/OR TYPE II SHALL BE AS APPROVED BY THE ENGINEER.
3. TURBIDITY BARRIERS SHALL BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
4. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
5. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VERY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
6. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION ACTIVITIES.
7. FOR ADDITIONAL INFORMATION, SEE SECTION 104 OF THE STANDARD FDOT SPECIFICATIONS.

FLOATING TURBIDITY BARRIER DETAIL
NTS



SOIL TRACKING PREVENTION DEVICE
TYPE A
NTS

SOIL TRACKING PREVENTION DEVICE NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the Engineer for points of egress from unstabilized areas of the project to public roads where off site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed through a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The contractor may propose an alternative technique to minimize off site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregated shall be described in section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are not suitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15'x50'=100 $ft.^3$ 30'x50'=200 $ft.^3$
   as an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, hay bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.2% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the side drain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent offset tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward through the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD: including but not limited to excavation, grading, temporary pipe (including M.E.S. when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Hay bales shall be paid for under the contract unit price for Hay or Straw Baled, EA. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, L.F.
10. The nominal size of a standard STPD is 15'X50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-B	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	08/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVERS AT FT. DeSOTO PARK

EROSION & SEDIMENT CONTROL DETAILS

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3261

HASSAN R. SHAFEE, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET: B02 of B14

STRUCTURAL DESIGN CRITERIA:

D01. DESIGN CODES:
- a. FLORIDA BUILDING CODE 2001.
- b. AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 9th EDITION.
- c. AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7–2002
- d. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, N.D.S. 2001

D02. DESIGN LOADS:

A. WIND LOAD:

1. WIND SPEED	130 MPH (ASSUMED COASTAL LOCATION)
2. CATEGORY	I
3. EXPOSURE	B
4. IMPORTANCE FACTOR	1.0

B. LIVE LOAD:
1. DECK = 50 psf

C. DEAD LOAD:
1. DECK = 20 psf

D. HANDRAIL:
1. 200# CONCENTRATED LOAD AT ANY POINT IN ANY DIRECTION. OR
2. 50 plf LOAD IN ANY DIRECTION.

D03. TIMBER PILE DESIGN: (ALL LOAD VALUES (lbs.) PER PILE)
- a. AXIAL: 4000 lbs
- b. LATERAL: 1500 lbs (750 lbs GROUND LEVEL BOARDWALK)
- c. UPLIFT: 500 lbs
- d. MINIMUM EMBEDMENT: 8'–0".
- e. TOP OF PILES AT TURNS SHALL BE FLUSH WITH TOP OF STRINGERS.
- f. TOP OF PILES AT OTHER LOCATIONS SHALL BE FLUSH WITH TOP OF BEAMS, UNLESS OTHER WISE NOTED.

GENERAL NOTES:

G01. CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS PRIOR TO FABRICATION AND START OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO ARCHITECT OR ENGINEER PRIOR TO PROCEEDING WITH WORK.

G02. IT IS THE CONTRACTOR'S RESPONSIBILITY AT ALL TIMES TO MAINTAIN STRUCTURAL STABILITY FOR THE STRUCTURE DURING THE CONSTRUCTION PHASE OF THE PROJECT.

G03. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGES DURING CONSTRUCTION.

G04. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN SIZE OR STRENGTH WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

G05. COORDINATE STRUCTURAL AND OTHER DRAWINGS THAT ARE PART OF THE CONTRACT DOCUMENTS FOR ANCHORED, EMBEDDED OR SUPPORTED ITEMS WHICH MAY AFFECT THE STRUCTURAL DRAWINGS.

G06. ALL DETAILS AND SECTIONS ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUCTED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT EXCEPT WHERE A SEPARATE DETAIL IS SHOWN.

G07. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO PROVIDE NECESSARY DETAILS TO DESIGN A COMPLETE STRUCTURE. WHEN SPECIFIC INFORMATION IS MISSING OR IS IN CONFLICT, THE CONTRACTOR SHALL USE A SIMILAR DETAIL AND/OR THE MORE COSTLY ITEM OF CONFLICT. THE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER/REPRESENTATIVE.

G08. THE OWNER'S ENGINEER/REPRESENTATIVE SHALL NOT BE RESPONSIBLE FOR LAYOUT, DIMENSIONAL ERRORS OR DISCREPANCIES RESULTING FROM THE REPRODUCTION AND USE OF DRAWINGS FOR ERECTION AND SHOP DRAWINGS. USE OF CONTRACT DRAWINGS REPRODUCED IN WHOLE OR ANY PART IN SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR NOR SUBCONTRACTORS FROM THEIR RESPONSIBILITY TO ACCURATELY LAYOUT, COORDINATE, DETAIL, FABRICATE AND INSTALL A COMPLETE STRUCTURE.

G09. REVIEW ALL SHOP DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND FOR COMPLETENESS AND ANSWER ALL CONTRACT RELATED QUESTIONS. SIGN AND SEAL ALL SHEETS PRIOR TO SUBMITTING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. NONCOMPLIANCE WITH THIS REQUEST WILL RESULT IN REJECTION OF SUBMITTAL.

G10. AFTER ALL WORK IS COMPLETED, LOOSE WOOD AND FILL MUST BE REMOVED FROM BELOW AND WITHIN THE CONSTRUCTION ZONE OF THE BOARDWALK. THIS INCLUDES ALL GRADE STAKES, TUB TRAP BOXES, FORMS, SHORING OR OTHER CELLULOSE MATERIAL.

G11. NO WOOD, VEGETATION, STUMPS, CARDBOARD, TRASH, ETC., SHALL BE BURIED WITHIN THE CONSTRUCTION SITE.

WOOD:

W01. DECKING AND RAILING SHALL BE NO. 1 DENSE GRADE PRESSURE TREATED SOUTHERN PINE. ALL OTHER MEMBERS SHALL BE NO. 2 GRADE PRESSURE TREATED, SOUTHERN PINE.

W02. DECKING AND RAILING SHALL BE AIR DRIED TO LESS THAN 19% MOISTURE CONTENT, GRADED IN ACCORDANCE WITH THE SPIB GRADE RULES, SECTION 4, AND MAY HAVE ANY OR ALL OF THE CHARACTERISTICS OF THIS GRADE.

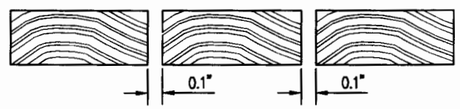
W03. ALL DECKING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED IN THE PLANS.

W04. EACH PIECE OF DECKING SHALL BE FACE SCREWED WITH THREE NO. 10x3" DECK SCREWS AT EACH SUPPORT.

W05. ALL BOLT HOLES THROUGH TIMBERS TO BE AN EXTRA 1/16" IN DIAMETER RELATIVE TO THE BOLT DIAMETER.

W06. DECKING AND RAILING WITH WANE OF 3/8" OR MORE MAY BE GROUNDS FOR REJECTION, REMOVAL AND REPLACEMENT.

W07. INSTALL DECKING FACING DOWN AS SHOWN BELOW AND WITH MAXIMUM 0.1 INCH SPACING FOR EXPANSION.



W08. BEAMS, STRINGERS, DIAGONAL CROSS BRACING, AND RAILS SHALL BE CONTINUOUS OVER SINGLE SPANS UNLESS OTHERWISE NOTED IN THE PLANS.

W09. POSTS SHALL BE SOUTHERN PINE WITH A MINIMUM ALLOWABLE COMPRESSIVE STRESS OF 1200 PSI PARALLEL TO GRAIN AND SHALL BE PRESSURE TREATED IN ACCORDANCE WITH REQUIREMENTS OF AWPA C3 WITH A MINIMUM OF 0.6 ACQ RETENTION AND 0.25 WATER REPALLENT.

W10. POSTS/PILES SHALL RUN FULL HEIGHT. NO SPLICING OF POSTS SHALL BE PERMITTED.

W11. ALL CUTS IN POSTS/PILES ARE A MAXIMUM DEPTH. ANY CUT DEEPER THAN THE CUT DEPTH NOTED ON THE DRAWING IS GROUNDS FOR REJECTION, REMOVAL AND REPLACEMENT OF THE POSTS FOR ITS FULL HEIGHT.

W12. ALL FIELD CUTS IN POSTS/PILES SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA STANDARD M4 PRIOR TO STRINGER SUPPORT BEAM INSTALLATION.

W13. FIELD PRESERVATIVE CHEMICALS SHALL BE APPLIED TO ALL FIELD CUTS AND DRILLED HOLES TO MAINTAIN TIMBER PRESSURE TREATMENT INTEGRITY.

W14. ALL PILES/POST SHALL CONFORM TO ASTM D 25–99.

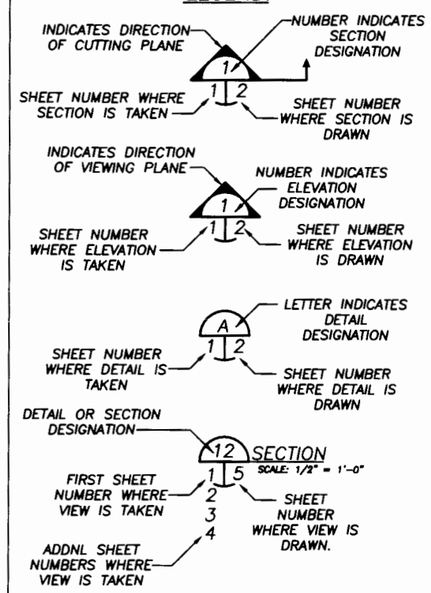
W15. PILES SHALL BE MINIMUM 8" DIAMETER AT THE TIP END AND HAVE A STANDARD LINEAR TAPER OF ROUGHLY 0.2 in/ft FROM THE TIP TO THE BUTT.

W16. TIMBER PILES TO BE INSTALLED PER FDOT SECTION 455–6 OF THE STANDARD SPECIFICATIONS TO A 2.0 TON CAPACITY (UNFACTORED). PILES SHALL BE INSTALLED TO THE MINIMUM EMBEDMENT INDICATED ON THIS SHEET (NOTE D03), IT MAY BE NECESSARY TO PREDRILL PILE HOLES TO OBTAIN THE REQUIRED EMBEDMENT WITHOUT DAMAGING THE PILE DURING DRIVING. AUGERS USED FOR PREDRILLING SHALL BE NO LARGER THAN THE MINIMUM PILE DIAMETER.

W17. TIMBER PILES SHALL BE SET BY DRIVING, OR JETTING, OR EXCAVATING A 12" DIA. HOLE. IF SET BY DRIVING, THE POST TIP SHALL BE DRIVEN TO THE EMBEDMENT "D" DEPTH. IF SET BY EXCAVATION, PILES SHALL BE SET CENTERED IN THE HOLE AND TO THE EMBEDMENT "D" DEPTH. THE HOLE SHALL BE BACKFILLED AND COMPACTED WITH FDOT SELECT MATERIAL AS APPROVED BY THE ENGINEER.

W18. ALL TURNS SHOWN IN THE PLANS ARE STANDARD 30', 45', 90', AND TEES. FIELD CONDITION MAY REQUIRE MODIFICATIONS; ANY MAJOR MODIFICATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING THE WORK.

LEGEND:



WOOD PRESSURE TREATMENT TABLE		
COMPONENT	CCA RETENTION (PCF)	
PILES	2.5	
COMPONENT	ACQ RETENTION (PCF)	w/ WATER REPALLENT
STRINGER, STRINGER SUPPORT BEAMS, BRACES	0.6	0.25
DECK BOARDS, RAILS AND RAIL POSTS	0.6	0.25

CONTRACTOR'S NOTE:

CONTRACTOR SHALL SECURE CONSTRUCTION SITE ALL AROUND WITH TEMPORARY FENCING AND POST NO TRESPASSING SIGNS, AND PROVIDE TRAFFIC BARRICADES TO BLOCK TRAFFIC LEADING TO STAGING / STORAGE AREA. TEMPORARY FENCING, POST NO TRESPASSING SIGNS, AND TRAFFIC BARRICADES SHALL BE PAID FOR UNDER MOBILIZATION.

REVISIONS	BY	DATE

SURVEY BOOK No.	2422–8	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	08/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVERS AT FT. DeSOTO PARK

GENERAL NOTES

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756–5136
PHONE (727) 464–3251

HASSAN R. SHAFEE, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET B03 of B14

FASTENER NOTES:

- **N-1** SPLICE 2x10 STRINGERS WITH THREE F2 COMMON NAILS (TYP.)
- **N-2** SIMPSON HURRICANE TIE H4 EACH STRINGER
- **N-3** CONNECT 6x6 RAIL POSTS TO DOUBLE 2x10 STRINGERS WITH TWO B3 BOLTS ON 3 ¼" CENTERS (TYP.)
- **N-4** CONNECT 6x6 RAIL POST TO STRINGER SUPPORT BEAMS WITH TWO B3 BOLTS (TYP.).
- **N-5** CONNECT 2x10 STRINGER SUPPORT BEAMS TO TIMBER PILE WITH TWO B2 BOLTS (TYP.)
- **N-6** CONNECT WITH ONE B3 BOLT (TYP).
- **N-7** CONNECT 2x10 STRINGERS WITH THREE F2 COMMON NAILS (16d). (TYP.)

FASTENERS TABLE

CODE	FASTENER	STEEL GRADE	SIZE	DESCRIPTION	CORROSIVE PROTECTION
P1	STEEL PLATE – 30°	A36	¼" x 6" x 1'–0" LG. 30°	STRINGER AND RAIL CONNECTOR	HOT DIPPED GALVANIZED
P2	STEEL PLATE – 45°	A36	¼" x 6" x 1'–0" LG. 45°	STRINGER AND RAIL CONNECTOR	HOT DIPPED GALVANIZED
P3	STEEL PLATE – 90°	A36	¼" x 6" x 1'–0" LG. 90°	STRINGER AND RAIL CONNECTOR	HOT DIPPED GALVANIZED
P4	STEEL ANGLE – 90°	316 L, 304 SS	⅛" x 2" x 2" X 2" LG.	BENCH ANCHOR.	STAINLESS STEEL
P5	STEEL PLATE – 51°	A36	¼" x 6" x 1'–0" LG. 90°	STRINGER AND RAIL CONNECTOR	HOT DIPPED GALVANIZED
P6	STEEL PLATE – 20°	A36	¼" x 6" x 1'–0" LG. 90°	STRINGER AND RAIL CONNECTOR	HOT DIPPED GALVANIZED
B1	BOLT, HEX HEAD, GALV–O–GEE WASHERS & NUT	A307	1"ø	BRACE CONNECTION.	HOT DIPPED GALVANIZED
B2	BOLT, HEX HEAD, GALV–O–GEE WASHERS & NUT	A307	¾"ø	PILES TO 2x10 STRINGER SUPPORT BEAMS. STRINGER CONNECTION METAL PLATES FOR 30° & 45° FRAMING.	HOT DIPPED GALVANIZED
B3	BOLT, HEX HEAD, GALV–O–GEE WASHERS & NUT	A307	½"ø	6x6 RAIL POSTS TO 2x10 STRINGER SUPPORT BEAMS. 6x6 RAIL POSTS TO 2x10 STRINGERS. 2x10 STRINGER SPLICE.	HOT DIPPED GALVANIZED
B4	CARRIAGE BOLT, WASHERS & NUT	A307	½"ø	RAILS TO 6x6 RAIL POSTS.	HOT DIPPED GALVANIZED
L1	LAG SCREW, HEX HEAD WITH WASHER	A36	⅜"ø	BACK OF BENCH AND APPROACH.	HOT DIPPED GALVANIZED
S1	DECK SCREW	CONFORM TO ANSI/ASME STANDARD B 18.6.1–1981	No. 10 x 3"	2x6 DECKING.	CERAMIC
S2	DECK SCREW	CONFORM TO ANSI/ASME STANDARD B 18.6.1–1981	No. 8 x 1½"	BENCH ANCHORS.	CERAMIC
S3	RAIL SCREW	CONFORM TO ANSI/ASME STANDARD B 18.6.1–1981	No. 8 x 2½"	2x2 PICKET TO 2x8 RAIL.	CERAMIC
H4	HURRICANE ANCHOR (SIMPSON OR EQUIV.)	304 SS	H4 – UPLIFT CAPACITY 360 lbs	STRINGER TO STRINGER SUPPORT BEAMS.	STAINLESS STEEL
F1	COMMON NAIL	316 L, 304 SS	8d	H4	STAINLESS STEEL
F2	COMMON NAIL	A307	16d	STRINGER TO STRINGER CONNECTION.	HOT DIPPED GALVANIZED
F3	COMMON NAIL	A307	12d	STRINGER TO STRINGER CONNECTION.	HOT DIPPED GALVANIZED

FASTENERS:

F.01 HOT DIPPED GALVANIZED ITEMS SHALL BE GALVANIZED AS FOLLOWS:
- a. STRUCTURAL SHAPES AND PLATES – ASTM A123
- b. ALL NUTS, BOLTS AND WASHERS – ASTM A153
- c. CLASS C OR D DEPENDING ON SIZE, FIELD TOUCH UP ALL STEEL IMMEDIATELY WHERE GALVANIZING HAS BEEN DAMAGED DURING OR PRIOR TO CONSTRUCTION WITH COLD GALVANIZING COATING.

F.02 ALL THROUGH BOLTS WHICH ARE EXPOSED TO HUMAN CONTACT SHALL BE CUT OFF AND GROUND SMOOTH, FLUSH WITH THE NUT.

F.03 ALL THROUGH BOLTS SHALL EXTEND FULL LENGTH TO THE FACE OF THE NUT. FOR BOLTS NOT EXPOSED TO HUMAN CONTACT, EXTEND BOLT 1 ½ TIMES THE BOLT DIAMETER PAST THE NUT.

F.04 ALL STEEL SHALL BE ASTM–A36 AND HOT DIPPED GALVANIZED.

F.05 STAINLESS STEEL SHALL CONFORM TO AISI MARINE GRADE 316L STAINLESS STEEL.

F.06 IF STAINLESS STEEL PLATES AND ANGLES ARE SUBSTITUTED, THE FASTENERS SHALL ALSO BE STAINLESS STEEL.

F.07 "O–GEE" WASHERS SHALL BE USED FOR ALL TIMBER SIDE CONNECTOR SIZES EQUAL TO OR GREATER THAN ½"ø.

F.08 STAINLESS STEEL HURRICANE ANCHOR H4 SHALL BE ATTACHED WITH F1–STAINLESS STEEL NAILS (8d). WHENEVER POSSIBLE ALL ANCHORS SHALL BE PLACED IN THE LEAST VISIBLE MANNER TO THE PUBLIC.

F.09 9/32ø PILOT HOLE SHALL BE DRILLED PRIOR TO LAG SCREW INSTALLATION.

F.10 ALL THROUGH NAILS SHALL BE BENT ON PROTRUDING SIDE.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-8	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVERS AT FT. DeSOTO PARK

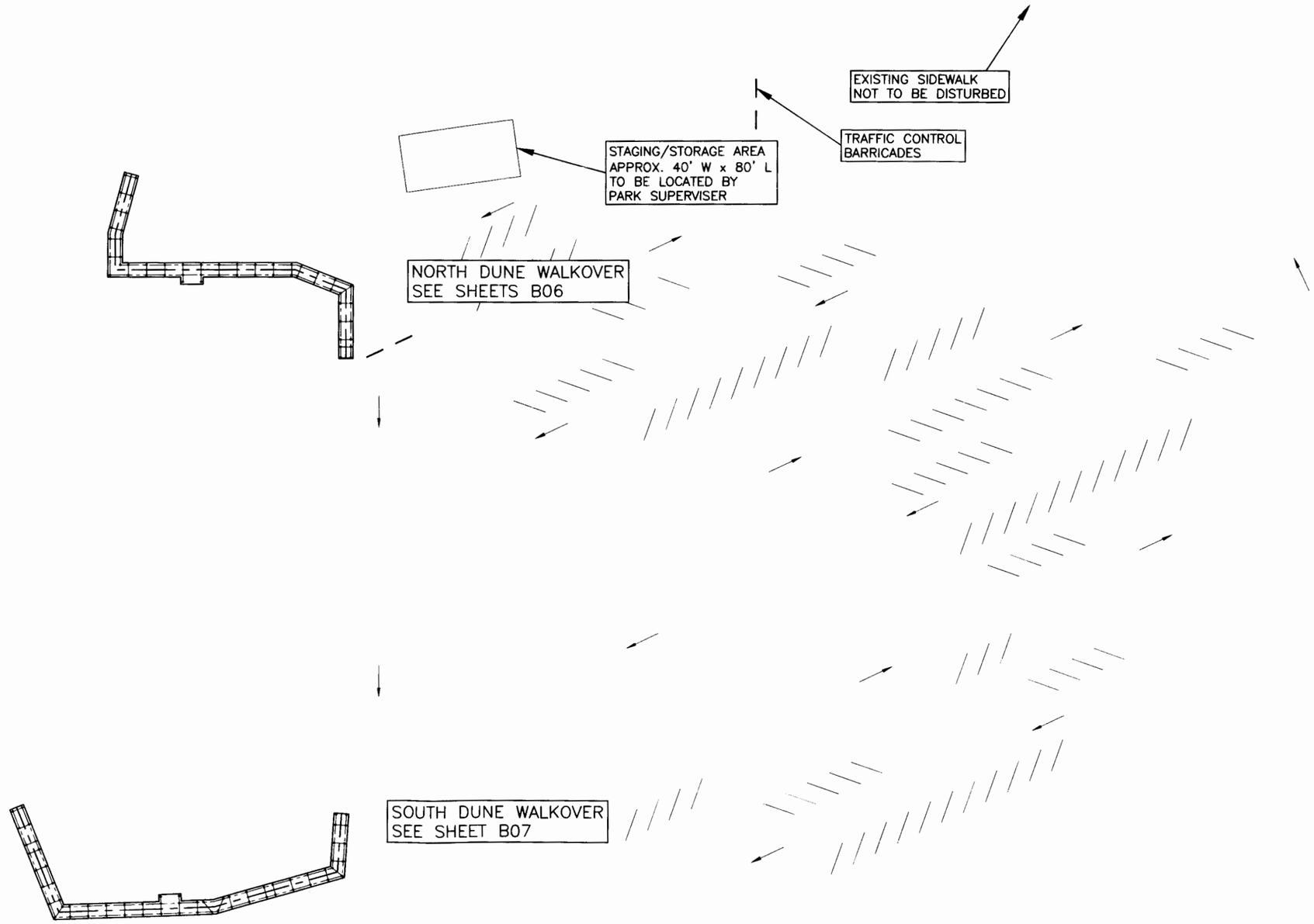
FASTENER TABLE

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3261

HASSAN R. SHAFEE, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET: B04 of B14



REVISIONS	BY	DATE

SURVEY BOOK No.	2422-8	
SURVEY DIVISION	BY	DATE
SURVEYED	S.C.V.S.	6/29/04
TECHNICIAN	AET	05/04
CHECKED	JF	05/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

NORTH & SOUTH BOARDWALK LOCATIONS

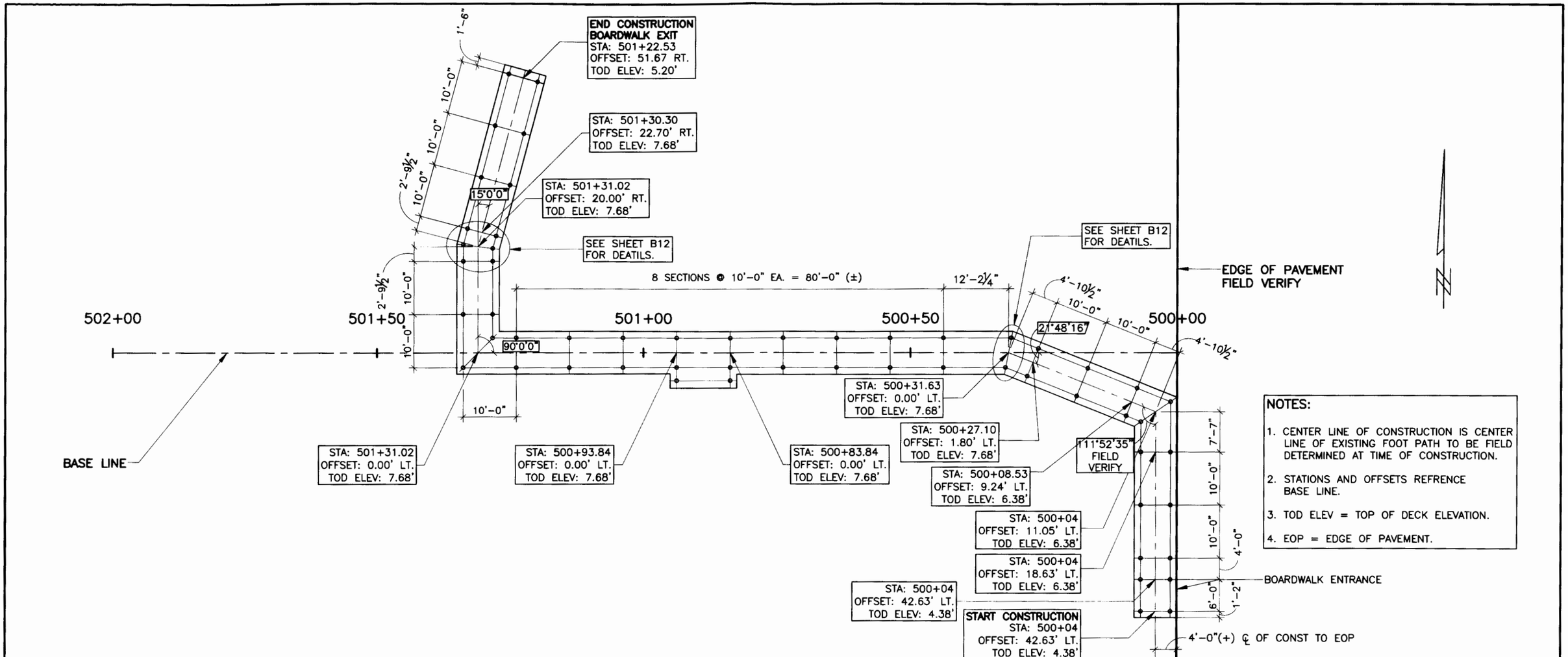
PINELLAS COUNTY, FLORIDA
Department of Public Works

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

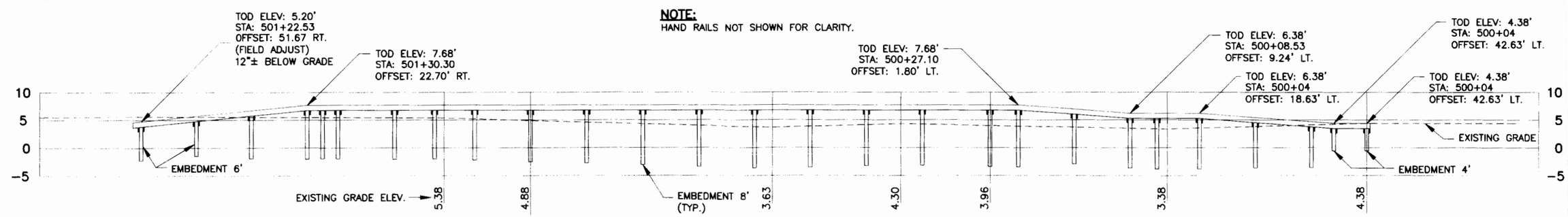
DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET B05 of B14



NOTES:

1. CENTER LINE OF CONSTRUCTION IS CENTER LINE OF EXISTING FOOT PATH TO BE FIELD DETERMINED AT TIME OF CONSTRUCTION.
2. STATIONS AND OFFSETS REFRENCE BASE LINE.
3. TOD ELEV = TOP OF DECK ELEVATION.
4. EOP = EDGE OF PAVEMENT.



PROPOSED PROFILE SECTION THRU CENTER LINE OF CONSTRUCTION

REVISIONS	BY	DATE

SURVEY BOOK No.		2422-8
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
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CHECKED	HRS	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

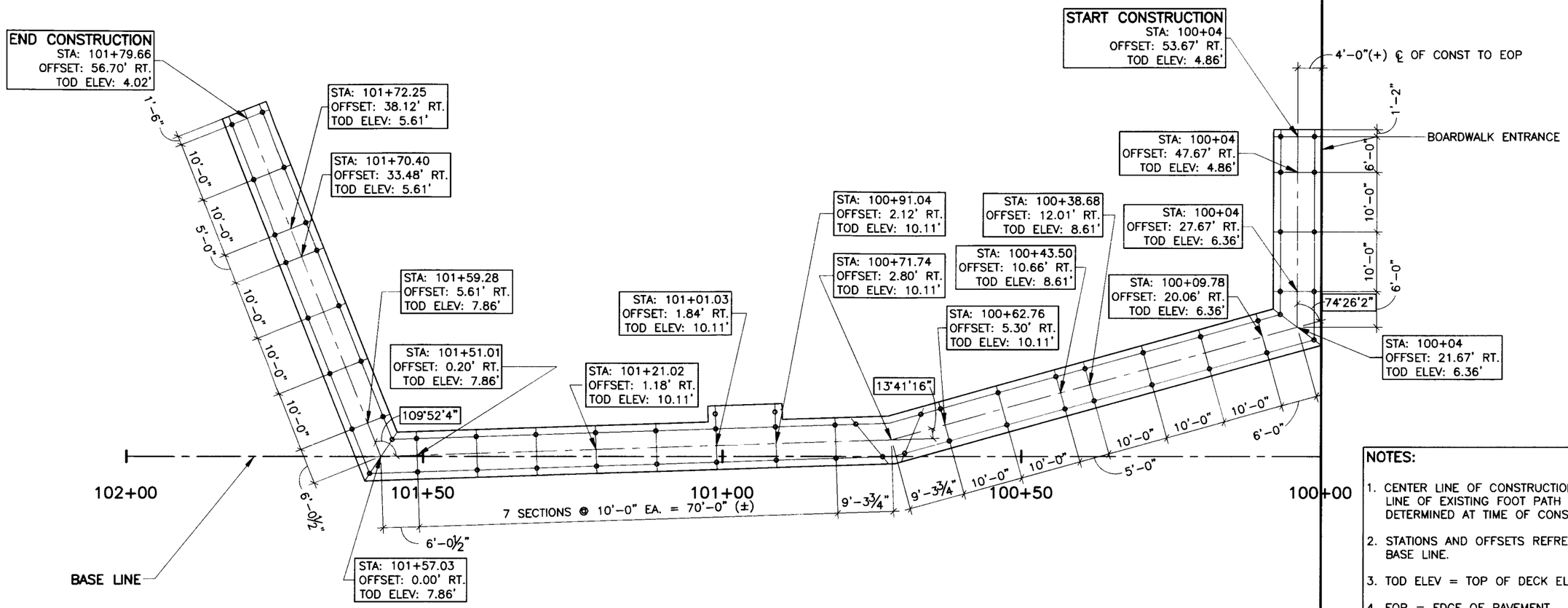
NORTH BOARDWALK LAYOUT & PROFILE

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: APRIL 11, 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET: B06 of B14



NOTES:

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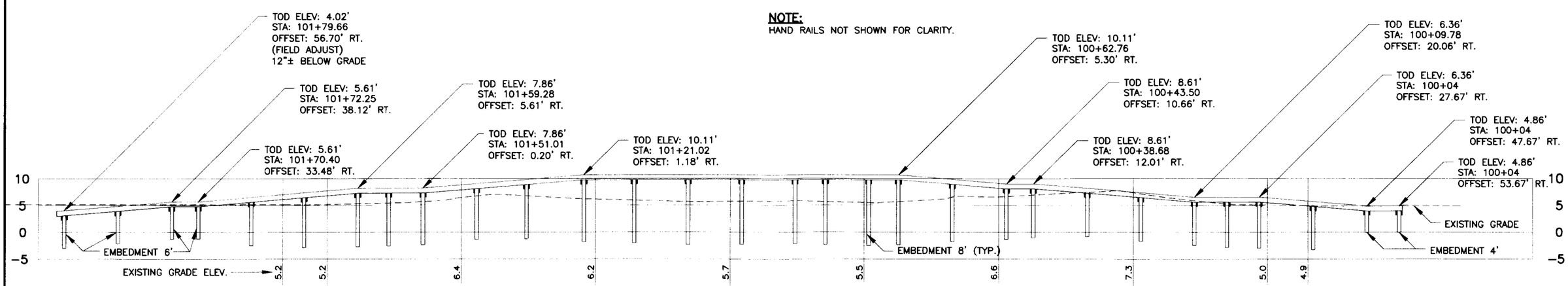
2. STATIONS AND OFFSETS REFRENCE BASE LINE.
3. TOD ELEV = TOP OF DECK ELEVATION.
4. EOP = EDGE OF PAVEMENT.

NOTE:
HAND RAILS NOT SHOWN FOR CLARITY.



PROPOSED PROFILE SECTION THRU CENTER LINE OF CONSTRUCTION

REVISIONS	BY	DATE

SURVEY BOOK No.: 2422-B		
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

SOUTH BOARDWALK LAYOUT & PROFILE

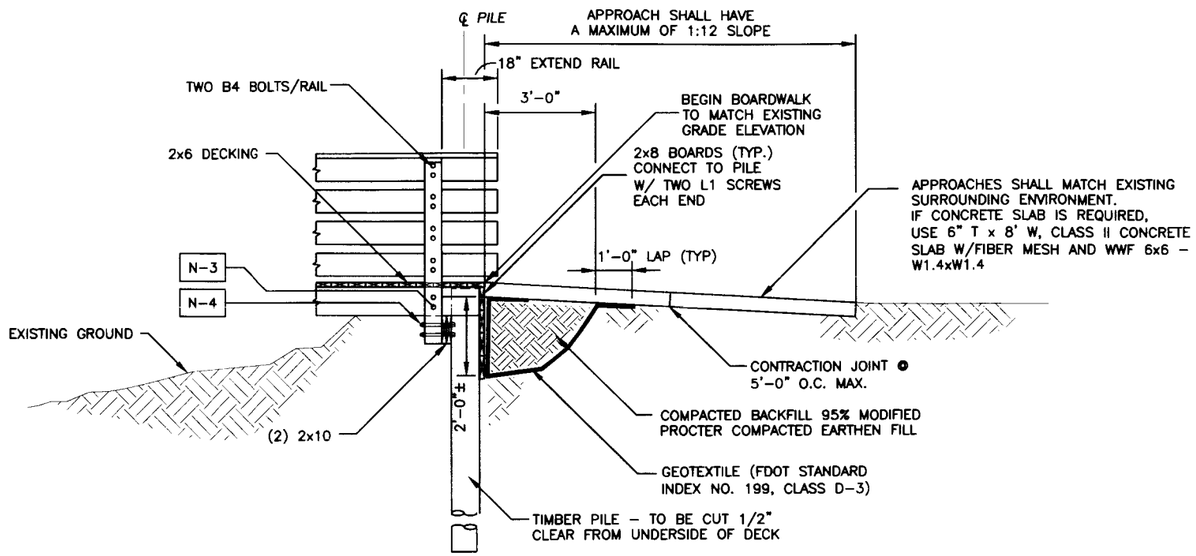
PINELLAS COUNTY, FLORIDA
Department of Public Works

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

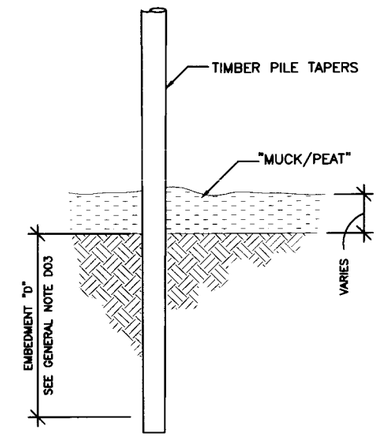
HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

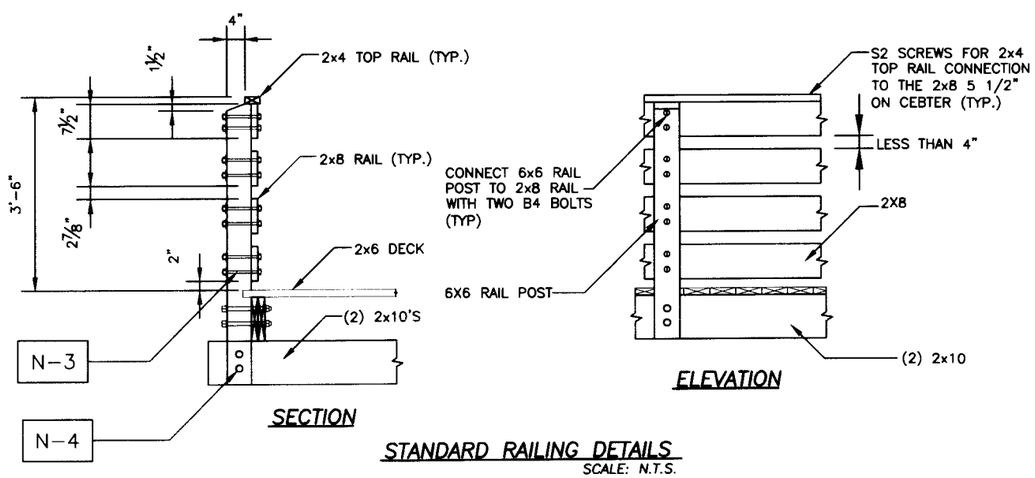
DATE: APRIL 11, 2005
PROJECT I.D. 1082
SURVEY FILE NO.: 1369
SHEET: B07 of B14



1 BOARDWALK APPROACH SECTION
B08 B08
SCALE: N.T.S.



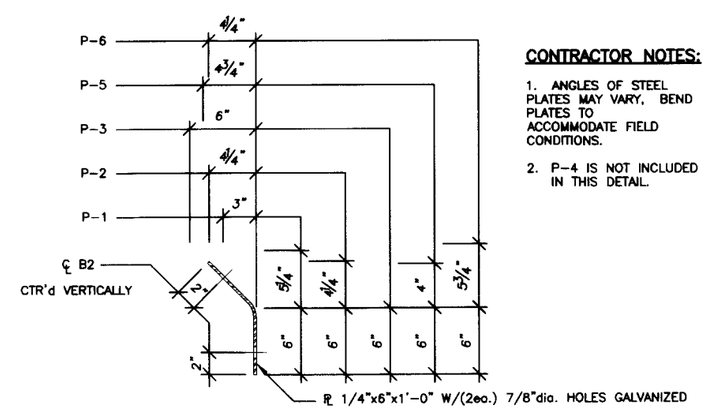
PILE EMBEDMENT DETAIL
SCALE: N.T.S.



SECTION

ELEVATION

STANDARD RAILING DETAILS
SCALE: N.T.S.



CONTRACTOR NOTES:

1. ANGLES OF STEEL PLATES MAY VARY, BEND PLATES TO ACCOMMODATE FIELD CONDITIONS.
2. P-4 IS NOT INCLUDED IN THIS DETAIL.

P-1, P-2, P-3, P-5 & P-6 PLATE DETAIL
SCALE: N.T.S.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-8	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
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DESIGN DIVISION		
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BEGIN/END RAILING, PILE EMBEDMENT & PLATE DETAILS

PINELLAS COUNTY, FLORIDA
Department of Public Works

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3951

HASSAN R. SHAFEE, P.E.
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO.: 1369
SHEET: B08 of B14

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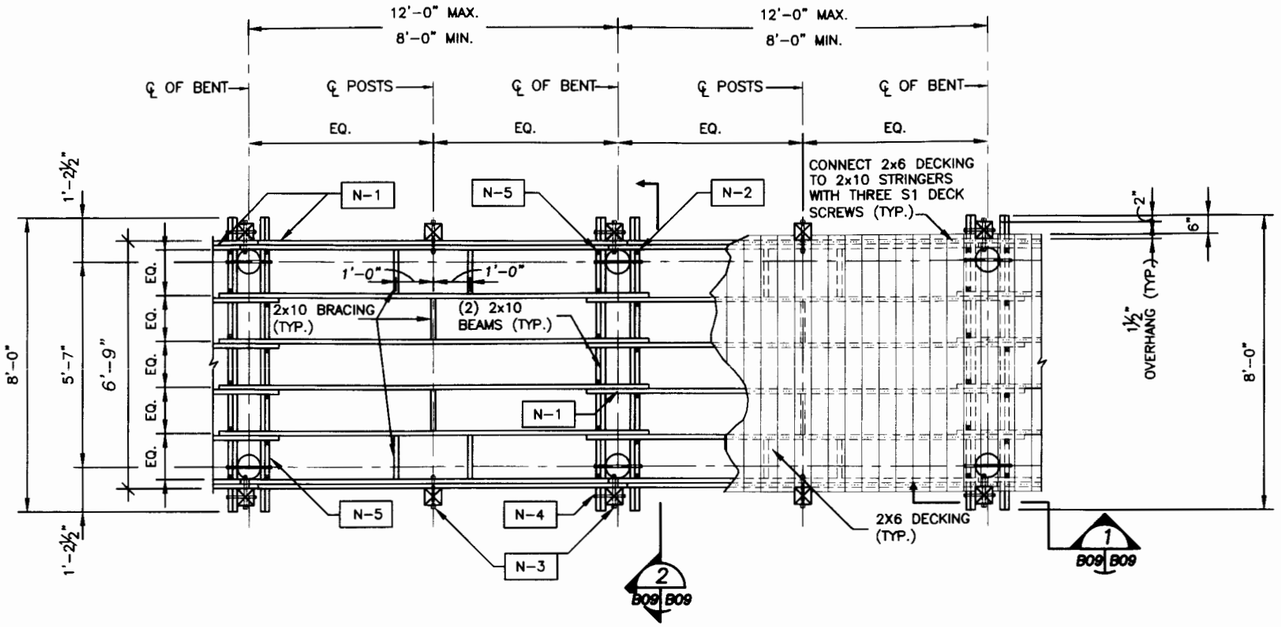
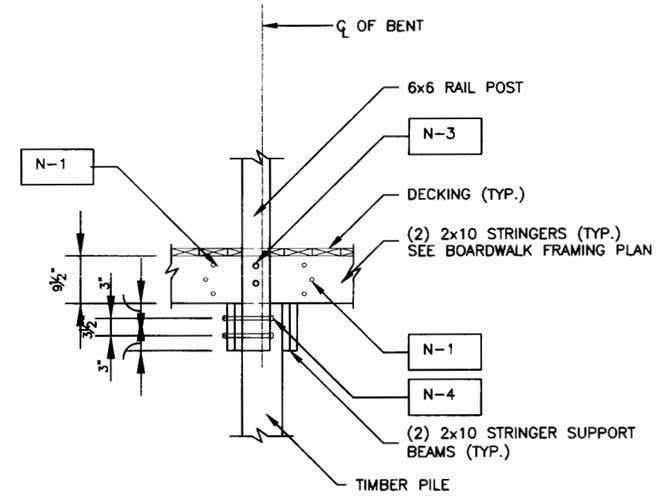
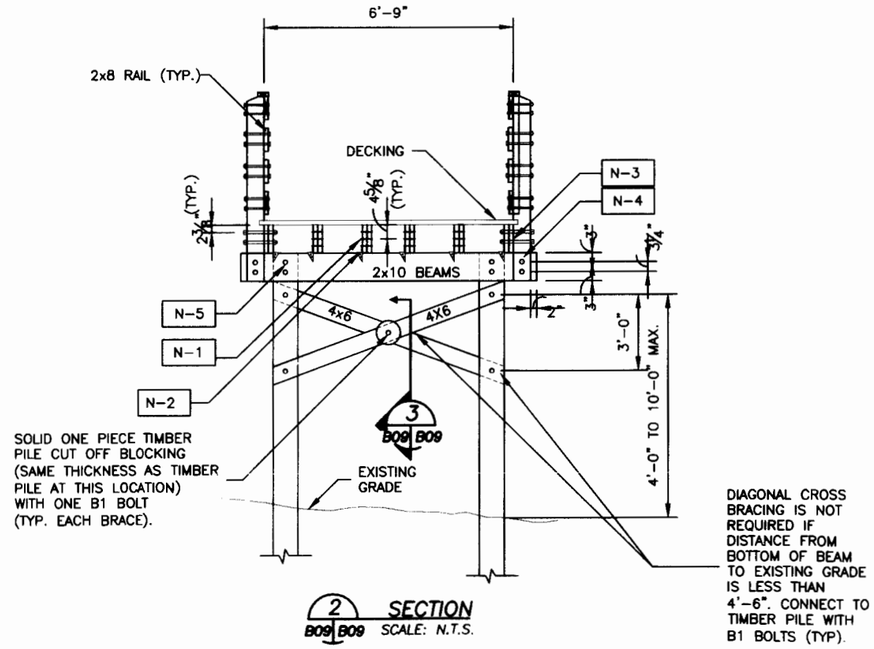


A BOARDWALK FRAMING PLAN
B09 B09 SCALE: N.T.S.

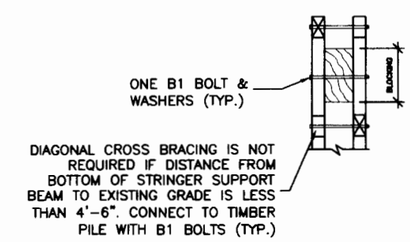
NOTE:
HAND RAILS NOT SHOWN FOR CLARITY



1 SECTION
B09 B09 SCALE: N.T.S.



2 SECTION
B09 B09 SCALE: N.T.S.



3 SECTION
B09 B09 SCALE: N.T.S.

REVISIONS	BY	DATE

SURVEY BOOK No.	2422-8	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
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DESIGN DIVISION		
DESIGNED	HRS	08/04
DRAWN	NAA	12/04
CHECKED	HRS	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

TYPICAL FRAMING PLAN AND DETAILS

PINELLAS COUNTY, FLORIDA
Department of Public Works

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET B09 of B14

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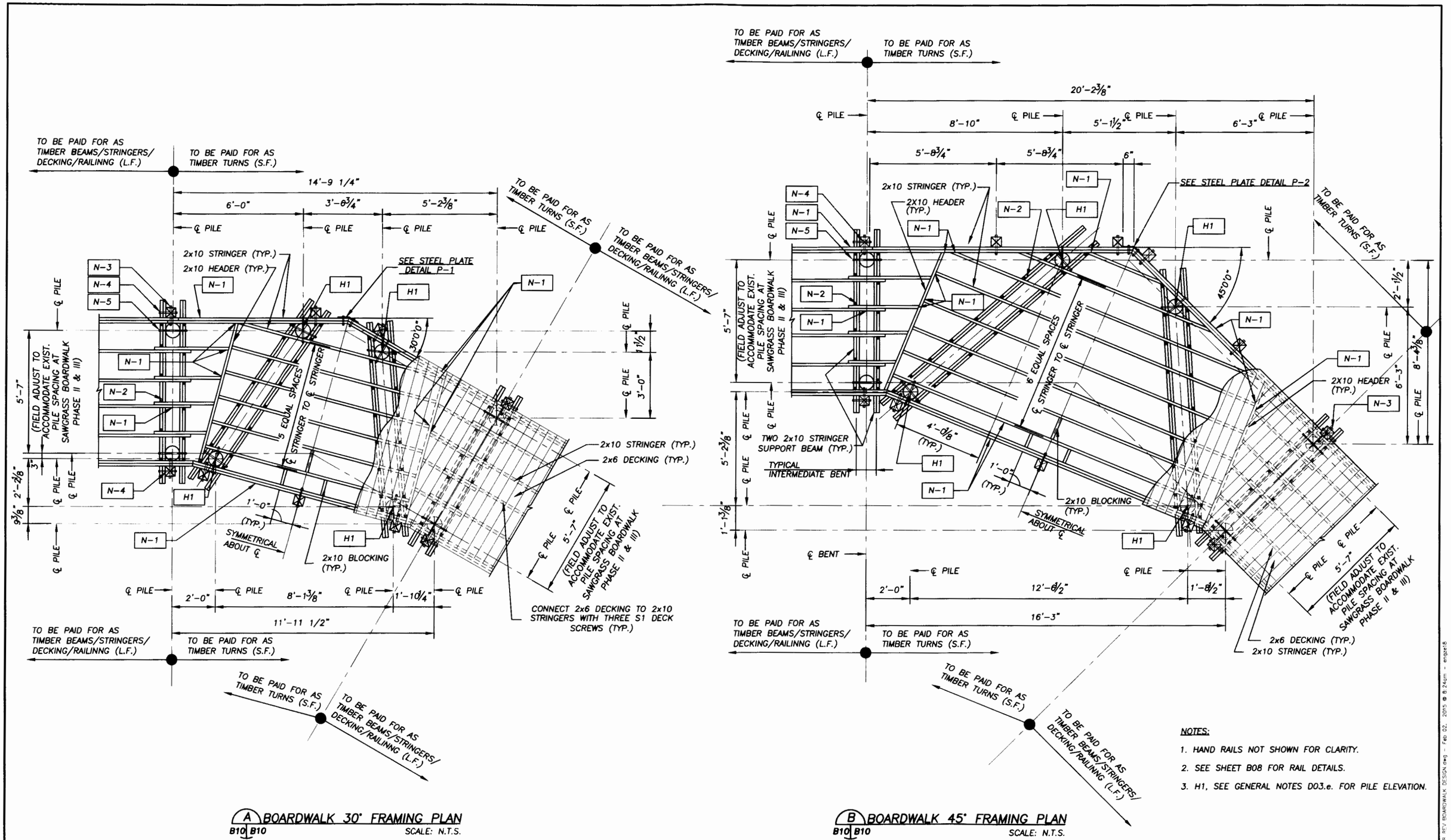

NOTES:

1. HAND RAILS NOT SHOWN FOR CLARITY.
2. SEE SHEET B08 FOR RAIL DETAILS.
3. H1, SEE GENERAL NOTES D03.e. FOR PILE ELEVATION.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-8	
SURVEY DIVISION	BY	DATE
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DESIGN DIVISION		
DESIGNED	HRS	08/04
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DUNE WALKOVER AT FT. DeSOTO PARK

TYPICAL 30 & 45 DEGREE FRAMING PLANS

PINELLAS COUNTY, FLORIDA
Department of Public Works

ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

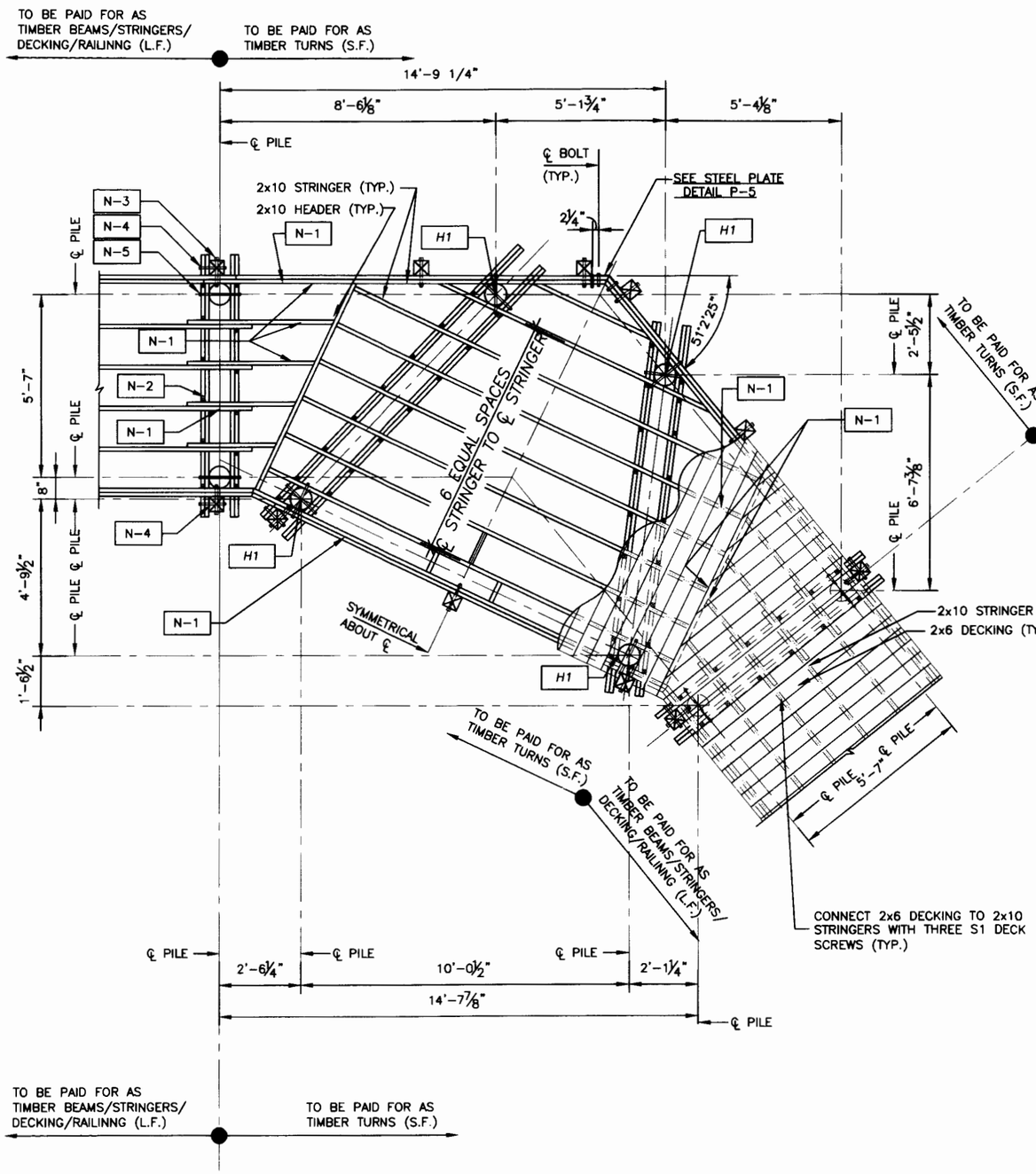
DATE

DATE: FEBRUARY 2005

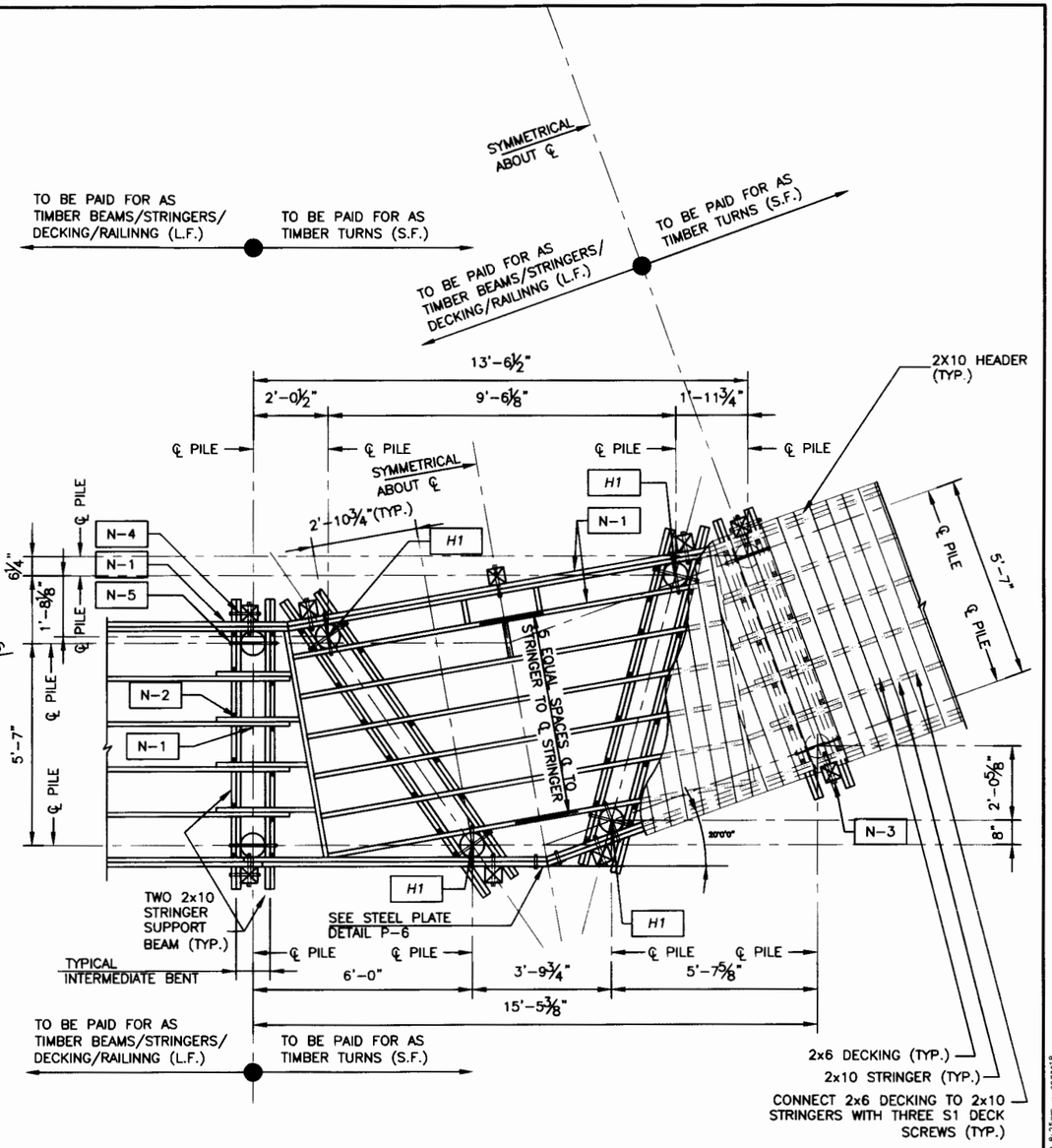
PROJECT I.D. 1082

SURVEY FILE NO.: 1369

SHEET: B10 of B14



A BOARDWALK 51° FRAMING PLAN
B11 B11
SCALE: N.T.S.



B BOARDWALK 20° FRAMING PLAN
B11 B11
SCALE: N.T.S.

NOTES:

1. HAND RAILS NOT SHOWN FOR CLARITY.
2. SEE SHEET B08 FOR RAIL DETAILS.
3. H1, SEE GENERAL NOTES D03.e. FOR PILE ELEVATION.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-8	
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TECHNICIAN	AET	05/04
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DESIGN DIVISION		
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DRAWN	NAA	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

TYPICAL 51 & 20 DEGREE FRAMING PLANS

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591
DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO: 1369
SHEET B11 of B14

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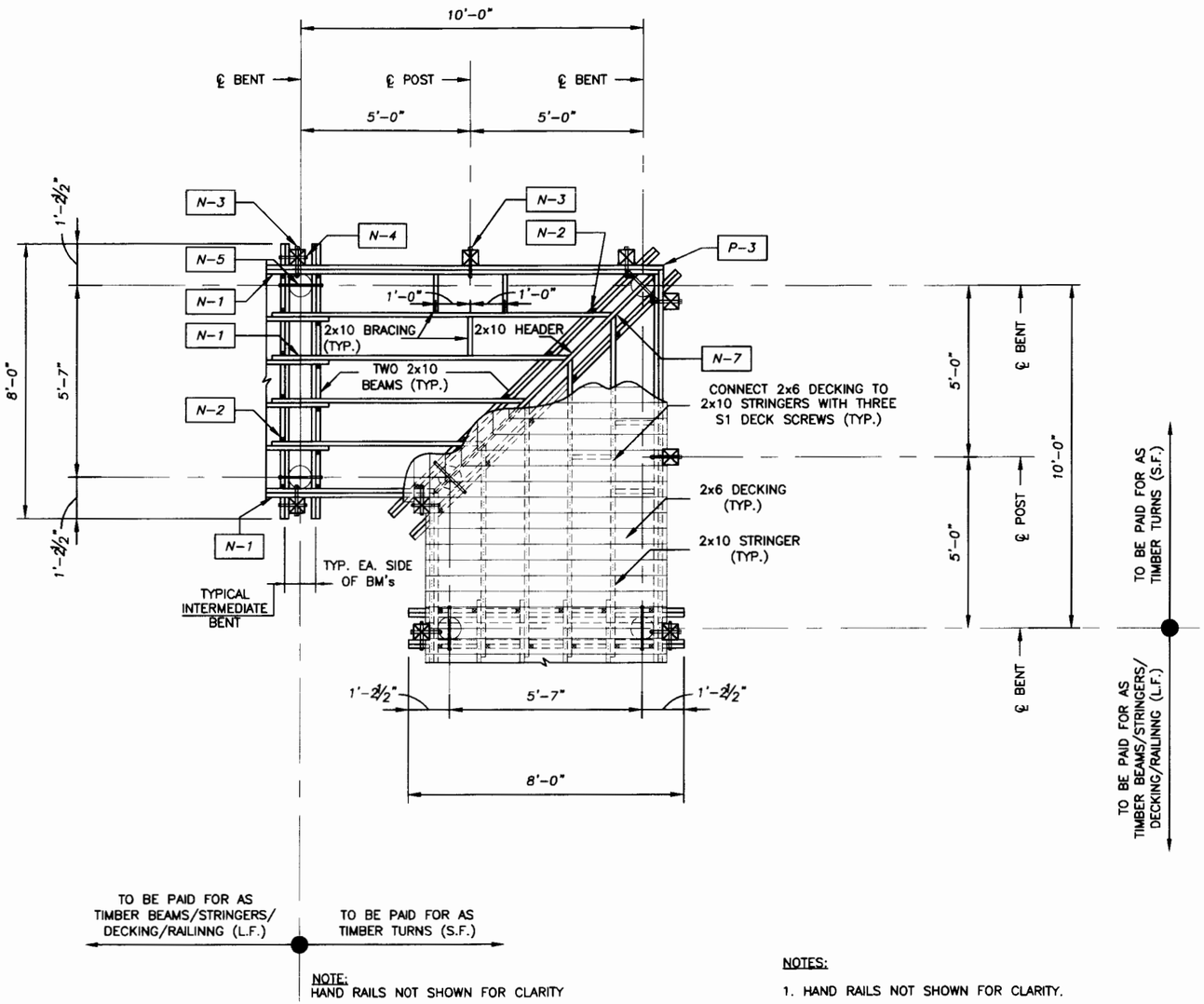
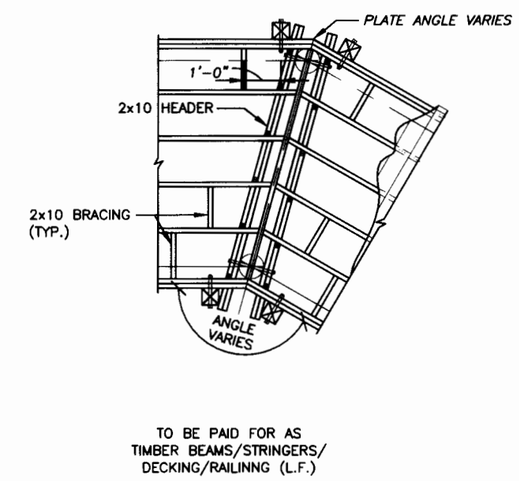


NOTE:
HAND RAILS NOT SHOWN FOR CLARITY



NOTES:

1. HAND RAILS NOT SHOWN FOR CLARITY.
2. SEE SHEET B08 FOR RAIL DETAILS.
3. H1, SEE GENERAL NOTES D03.e. FOR PILE ELEVATION.

A BOARDWALK 90° CORNER FRAMING PLAN
B12 B12
SCALE: N.T.S.

B BOARDWALK NON-TYPICAL CORNER FRAMING PLAN
B12 B12
SCALE: N.T.S.

REVISIONS	BY	DATE

SURVEY BOOK No.:	2422-8	
SURVEY DIVISION	BY	DATE
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DESIGN DIVISION		
DESIGNED	HRS	08/04
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CHECKED	HRS	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

TYPICAL 90 DEGREE NON-TYPICAL CORNER FRAMING PLAN

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET: B12 of B14

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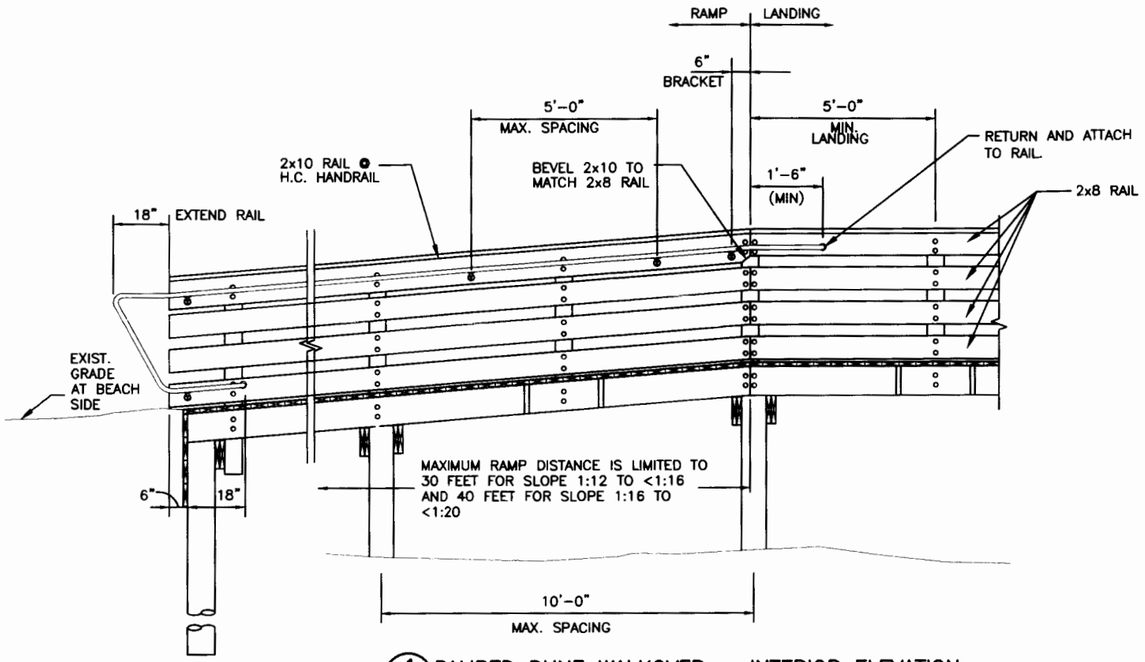
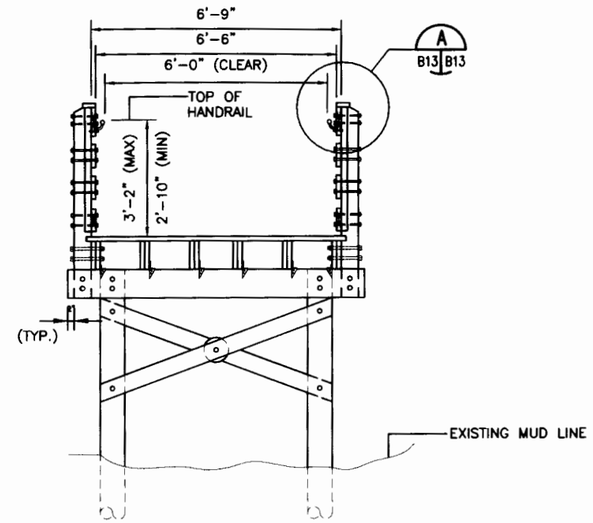


1 RAMPED DUNE WALKOVER – INTERIOR ELEVATION
B13 B13
SCALE: N.T.S.

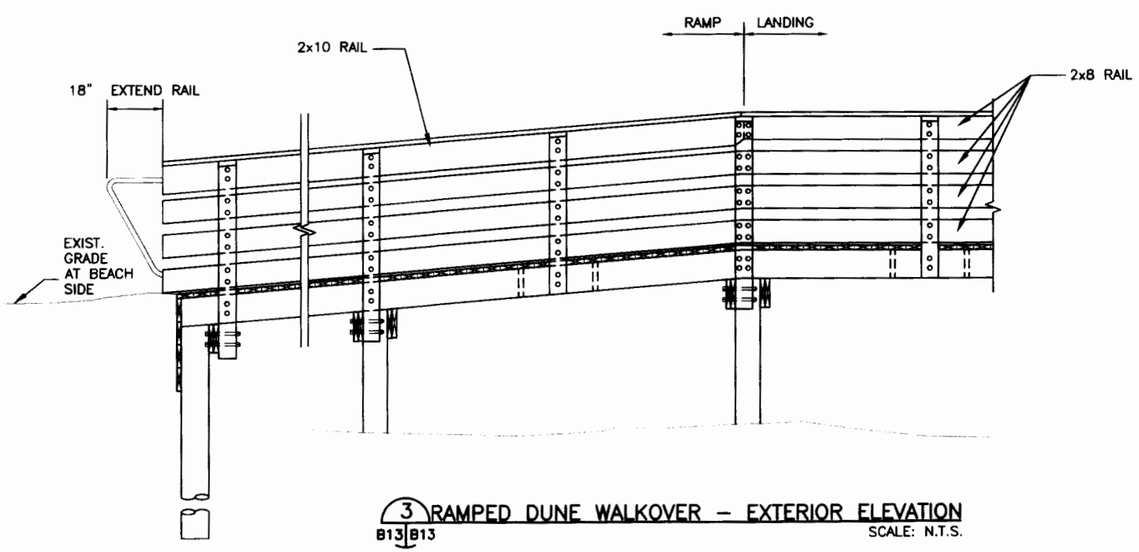


FOR ADDITIONAL INFORMATION NOT
SHOWN SEE SECTION "1" SHEET B09

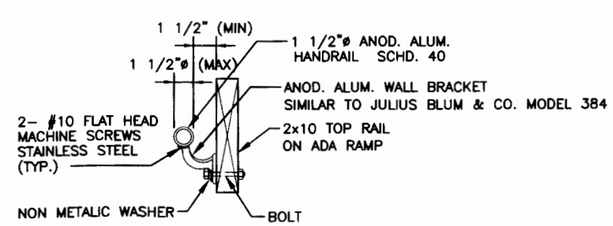
2 ADA RAMP SECTION
B13 B13
SCALE: N.T.S.

GENERAL NOTES:

1. RAMP SHALL BE IN COMPLIANCE WITH ADA ACCESSIBILITY GUIDELINES.
2. THE MAXIMUM SLOPE OF A RAMP SHALL BE 1:12.
3. BOARDWALK RAMP OVER 5% TO 8.33% SLOPE SHALL HAVE ALUMINUM HANDRAIL.
4. HANDRAIL TO EXTEND 18" MINIMUM HORIZONTAL BEYOND TOP AND BOTTOM OF RAMP RETURN ENDS AND ATTACH TO 2x TOP RAIL.
5. SPACE HANDRAIL BRACKETS EQUALLY ALONG LENGTH MAXIMUM SPACING NOT TO EXCEED 5'-0".



3 RAMPED DUNE WALKOVER – EXTERIOR ELEVATION
B13 B13
SCALE: N.T.S.



A DETAIL – ADA HANDRAIL AND BRACKET
B13 B13
SCALE: N.T.S.

REVISIONS	BY	DATE

SURVEY BOOK No.	2422-8	
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CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
[illegible]	[illegible]	12/04

DUNE WALKOVERS AT FT. DeSOTO PARK

RAMP SECTION & DETAILS

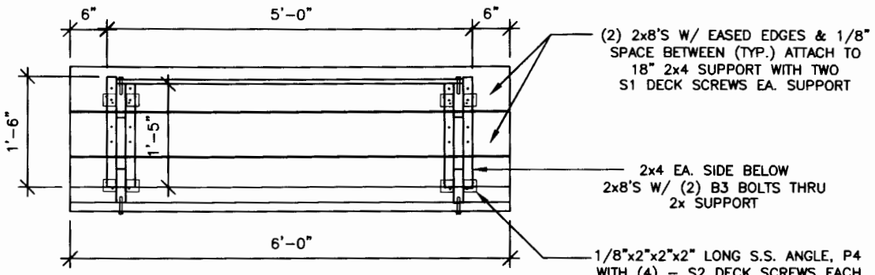
PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591

DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO.: 1369
SHEET B13 of B14

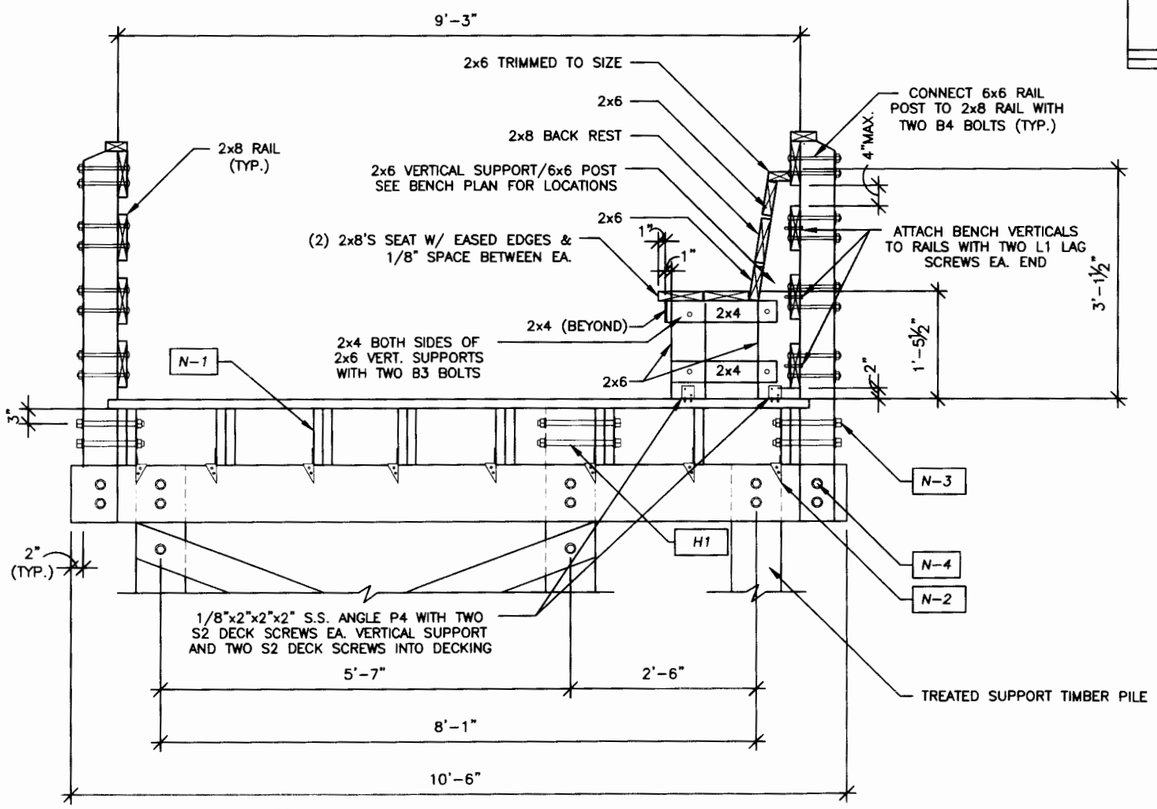
S:\Staff\Temp0\DUNEWALKOVER REV BOARDWALK DESIGN.dwg – Feb 02, 2015 @ 8:26am – engre18



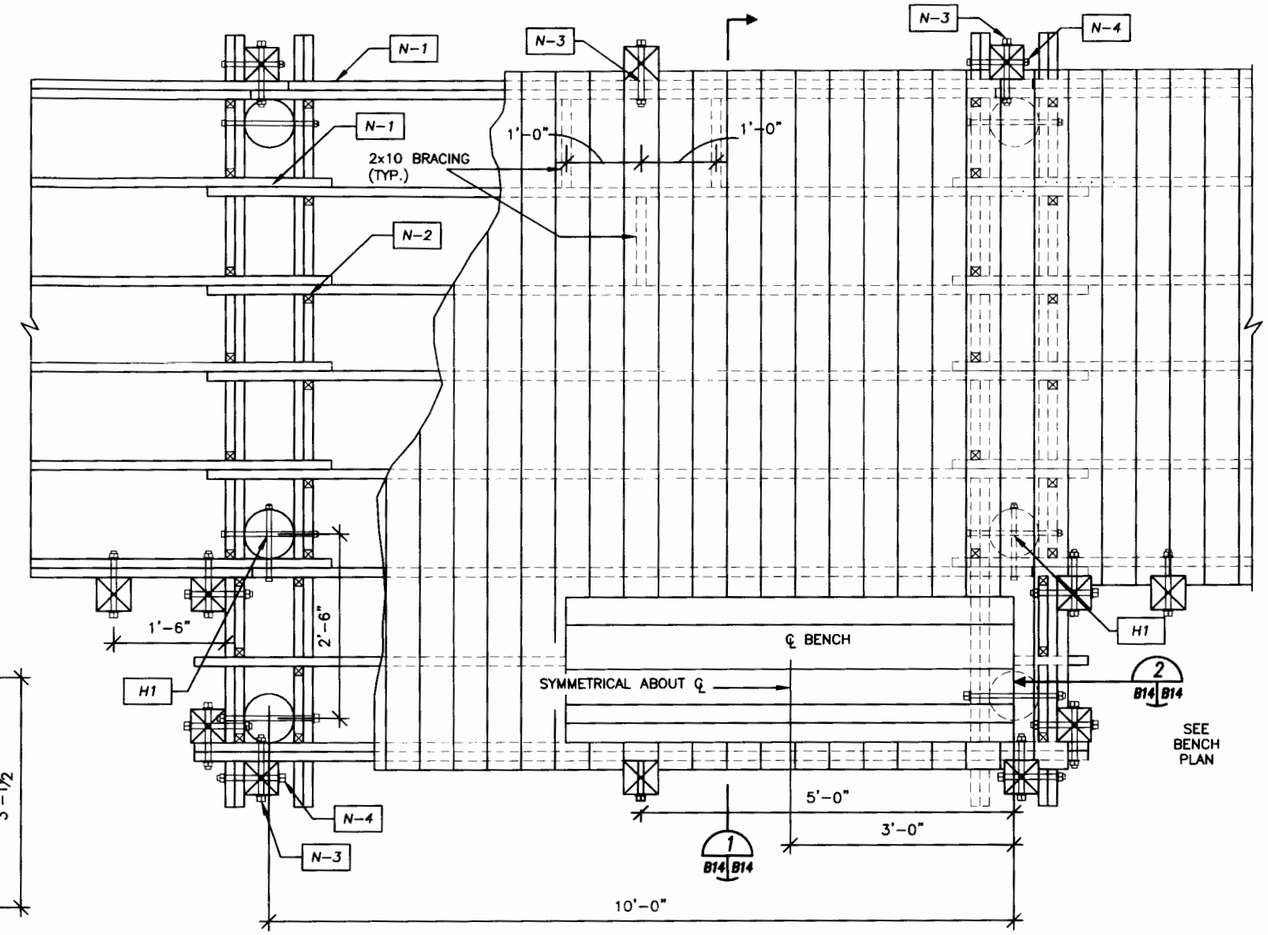
2 BENCH PLAN
B14 B14 SCALE: N.T.S.

NOTE:

ALL BENCH BACK REST AND SEATING AREA 2x6'S AND 2x8'S SHALL HAVE EASED EDGES AND APPROX. ⅛" SPACING FOR EXPANSION



1 BOARDWALK W/BENCH SECTION
B14 B14 SCALE: N.T.S.



A BOARDWALK W/BENCH PLAN
B14 B14 SCALE: N.T.S.
SEE SHEET B09 FOR CONNECTIONS

NOTES:

1. HAND RAILS NOT SHOWN FOR CLARITY.
2. SEE SHEET B08 FOR RAIL DETAILS.
3. H1, SEE GENERAL NOTES D03.e. FOR PILE ELEVATION.

REVISIONS	BY	DATE

SURVEY BOOK No.	2422-8	
SURVEY DIVISION	BY	DATE
SURVEYED	CB	04/04
TECHNICIAN	AET	05/04
CHECKED	SCVS	06/04
DESIGN DIVISION		
DESIGNED	HRS	8/04
DRAWN	NAA	12/04

DUNE WALKOVER AT FT. DeSOTO PARK

REST AREA LAYOUT AND SECTIONS

PINELLAS COUNTY, FLORIDA
Department of Public Works
ENGINEERING DEPARTMENT
440 COURT STREET
CLEARWATER, FLORIDA 33756-5136
PHONE (727) 464-3251

HASSAN R. SHAFEE
FLORIDA PROFESSIONAL ENGINEER NO. 57591
DATE

DATE: FEBRUARY 2005
PROJECT I.D. 1082
SURVEY FILE NO. 1369
SHEET: B14 of B14

REVISED BUDGET FOR DUNE WALKOVERS FT. DE SOTO PARK

County Staff Recommendation: Reduce the funding recommendation to be within the available funding level. This results in $534,894 available for the project.

Personnel & Fringe: **Total: $117,042.36**

1. Professional Engineer

   Year 1: ($44.75/hour pay + $20.88/hr fringe) x 120 hours = $ 7,875.60

   Year 2: ($44.75/hour pay + $20.88/hr fringe) x 56 hours = $ 3,675.28

   Year 3: ($44.75/hour pay + $20.88/hr fringe) x 56 hours = $ 3,675.28

2. Engineering Specialist 1

   Year 1: ($31.36/hour pay + $14.63/hr fringe) x 280 hours = $12,877.20

   Year 2: ($31.36/hour pay + $14.63/hr fringe) x 200 hours = $ 9,198.00

   Year 3: ($31.36/hour pay + $14.63/hr fringe) x 80 hours = $ 2,872.00

3. Project Coordinator (Construction Building Inspector)

   Year 1: ($35.90/hour pay + $16.75/hr fringe) x 120 hours = $ 6,318.00

   Year 2: ($35.90/hour pay + $16.75/hr fringe) x 1,040 hours = $54,756.00

   Year 3: ($35.90/hour pay + $16.75/hr fringe) x 300 hours = $15,795.00

Composite recycled material for boardwalk/dune walkover construction estimated price per **linear foot: $775**

Install dune walkovers identified as priority 1, in red, on map. This consists of two dune walkovers.

Original budget: Cost for this option: $617,042.36

Personnel: $117,042.36 + Construction: $500,000

Revised budget: Cost for this option: $534,894

Personnel: $117,042.36 + Construction: $417,851.64

Construction of approximately 539 linear feet of dune walkover at estimated price. Additional linear feet or a third, short dune walkover will be constructed should bid price per linear foot be less than estimate.

APPENDIX G

RESTORE Act Direct Component Multiyear Plan Matrix

RESTORE ACT Direct Component Multiyear Plan Matrix — Department of the Treasury

OMB Approval No. 1505-0250

Applicant Name: Pinellas County Government

1. CUMULATIVE DIRECT COMPONENT ALLOCATION AVAILABLE FOR DISTRIBUTION TO APPLICANT:	$1,548,321	2. TOTAL ALLOCATIONS PLUS KNOWN FUNDS NOT YET DEPOSITED IN TRUST FUND FOR DIRECT COMPONENT:	$1,548,321

3. Primary Direct Component Eligible Activity Further Described in Application (Static Field)	4. Activity Title (Static Field)	5. Location - Municipality(ies) (Static Field, locations also shown on attached map)	6. Total Funding Resources For Activity Budget (refer to Instructions)				7. Proposed Start Date mm/yyyy	8. Actual Start Date mm/yyyy (Static Field)	9. Proposed End Date mm/yyyy	10. Actual End Date mm/yyyy (Static Field)	11. Proposed High Level Milestones Further Described in Application
			6a. Direct Component Contribution	6b. Other RESTORE Act Contribution	6c. Other Third Party Contribution	6d. Total Project Budget					
g) Coastal flood protection and related infrastructure.	Project 1. Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan	Pinellas County, Florida, See attached Project 1 Location Map.	$300,000			$300,000	01/2016		01/2019		Phase 1 - Project Kickoff, Phase 2 - Data Collection and Database Development, Phase 3 - Data Analysis, Phase 4 - Strategy Development
a) Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.	Project 2. Coastal Ocean Monitoring and Prediction System (COMPS)	Pinellas County, Florida, See attached Project 2 Location Map.	$233,934			$233,934	01/2016		01/2018		1. Acquire instruments & supplies, 2. Fabricate mounting hardware, 3. Integrate & test system, 4. Deploy full system, 5. Attain full operation of system in field 6. Engage in public outreach
a) Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.	Project 3. Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity	Pinellas County, Florida, See attached Project 3 Location Map.	$479,493			$479,493	01/2016		01/2019		1. Implement the model and perform hindcast tests, 2. Nest the model into the COMPS WFCOM model, 3. Implement the model for daily nowcast/forcasts, 4. Add a coupled wave model, 5. Quantitatively gauge model against observations and other models, 6. Make model products available to general public, agencies and engage in outreach, 7. Develop ecosystems services applications, 8. Train a graduate student throughout the process
a) Restoration/protection of natural resources, ecosystems, fisheries, marine wildlife habitats, beaches, and coastal wetlands.	Project 4. Ft. De Soto Park Dune Walkovers	Pinellas County, Florida, See attached Project 4 Location Map.	$534,894			$534,894	01/2016		01/2018		1. Prepare scope of services, 2. Design, 3. Permit, 4. Prepare bid package, 5. Construction, 6. Project wrap-up/as built drawings
	12. TOTAL FUNDING FOR BUDGET (refer to Instructions)		$1,548,321	$0	$0	$1,548,321					

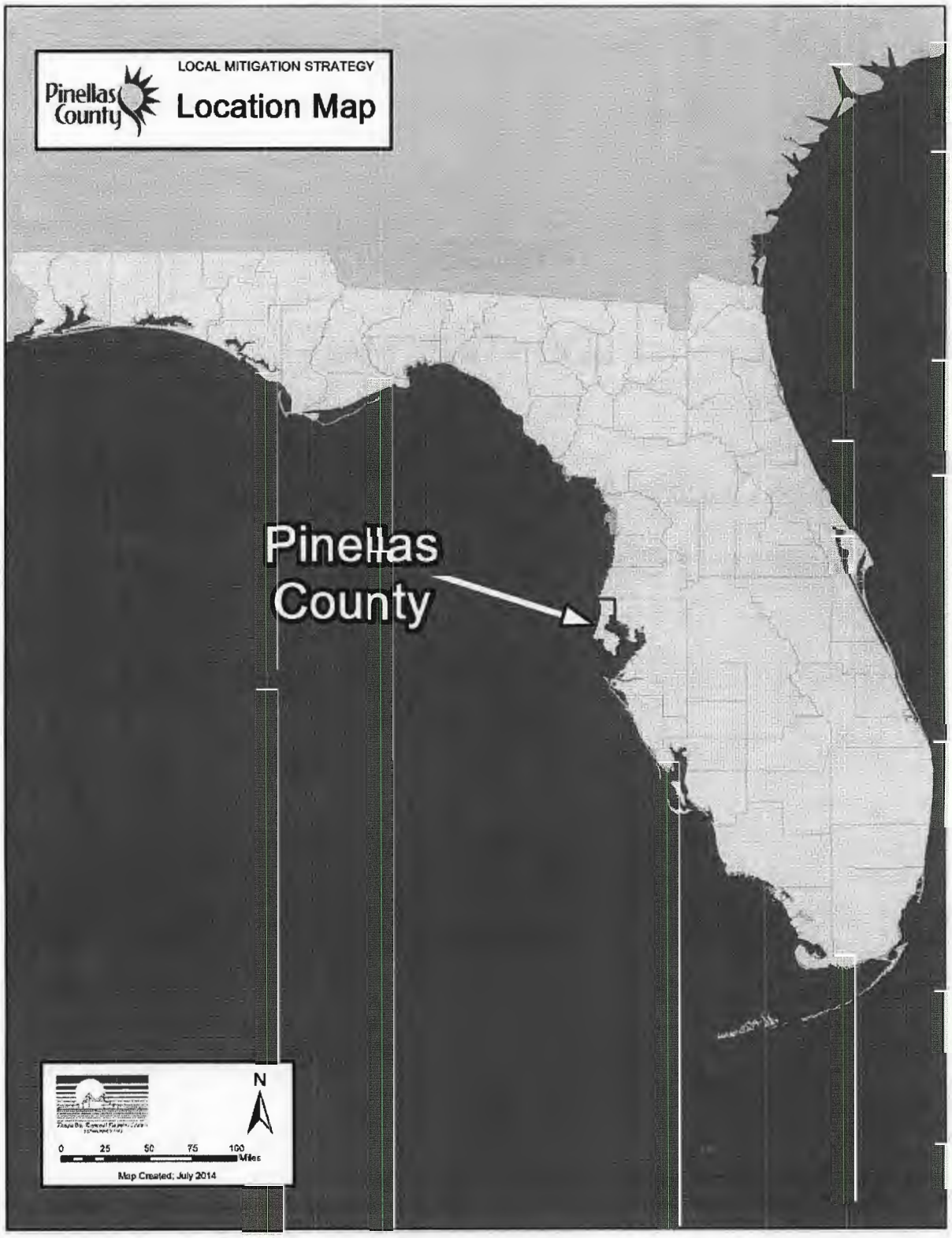
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1505-0250. Comments concerning the time required to complete this information collection, including the time to review instructions, search existing data resources, gathering and maintaining the data needed, and completing and reviewing the collection of information, should be directed to the Department of the Treasury, RESTORE Act Program, 1500 Pennsylvania Ave., NW, Washington, DC 20220.

PROJECT 1

LOCATION MAP

Pinellas County Assessment of Vulnerability to the Impacts of Sea Level Rise and Infrastructure Resiliency Plan

($300,000)


LOCAL MITIGATION STRATEGY
Pinellas County
Location Map
Pinellas County
N
0 25 50 75 100
Miles
Map Created: July 2014

PROJECT 1


LOCAL MITIGATION STRATEGY
Pinellas County
Municipalities
Tarpon Springs
Oldsmar
Dunedin
Safety Harbor
Clearwater
Belleair
Belleair Beach
Belleair Shore
Belleair Bluffs
Largo
Indian Rocks Beach
Pinellas Park
Indian Shores
Redington Shores
Seminole
North Redington Beach
Redington Beach
Kenneth City
Madeira Beach
St. Petersburg
Treasure Island
South Pasadena
Gulfport
St. Pete Beach
N

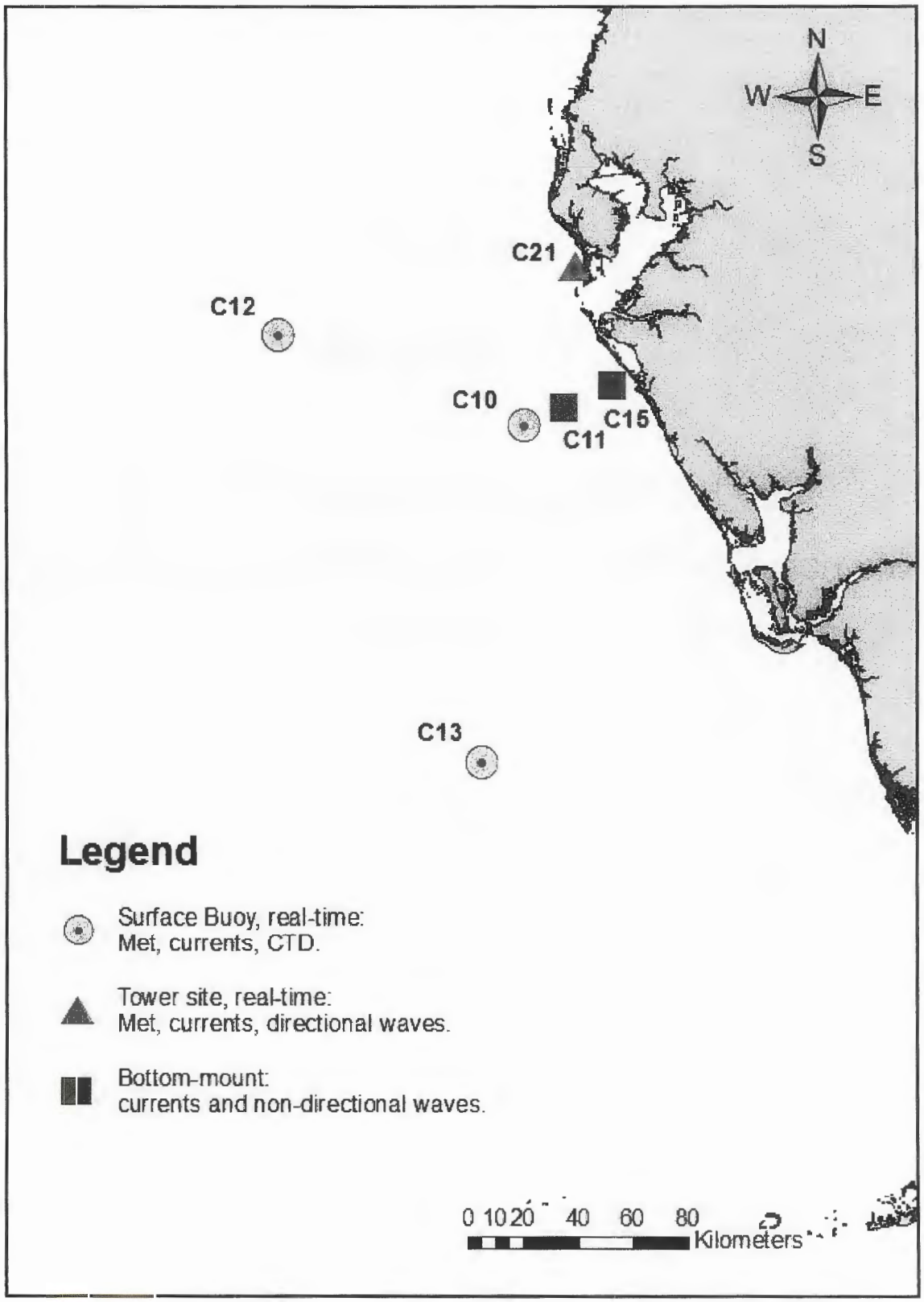
PROJECT 1

PROJECT 2

LOCATION MAP

SITE C21

Coastal Ocean
Monitoring and Prediction System (COMPS)
($233,934)


N
W
E
S
C21
C12
C10
C11
C15
C13
Legend
Surface Buoy, real-time:
Met, currents, CTD.
Tower site, real-time:
Met, currents, directional waves.
Bottom-mount:
currents and non-directional waves.
0 10 20 40 60 80
Kilometers

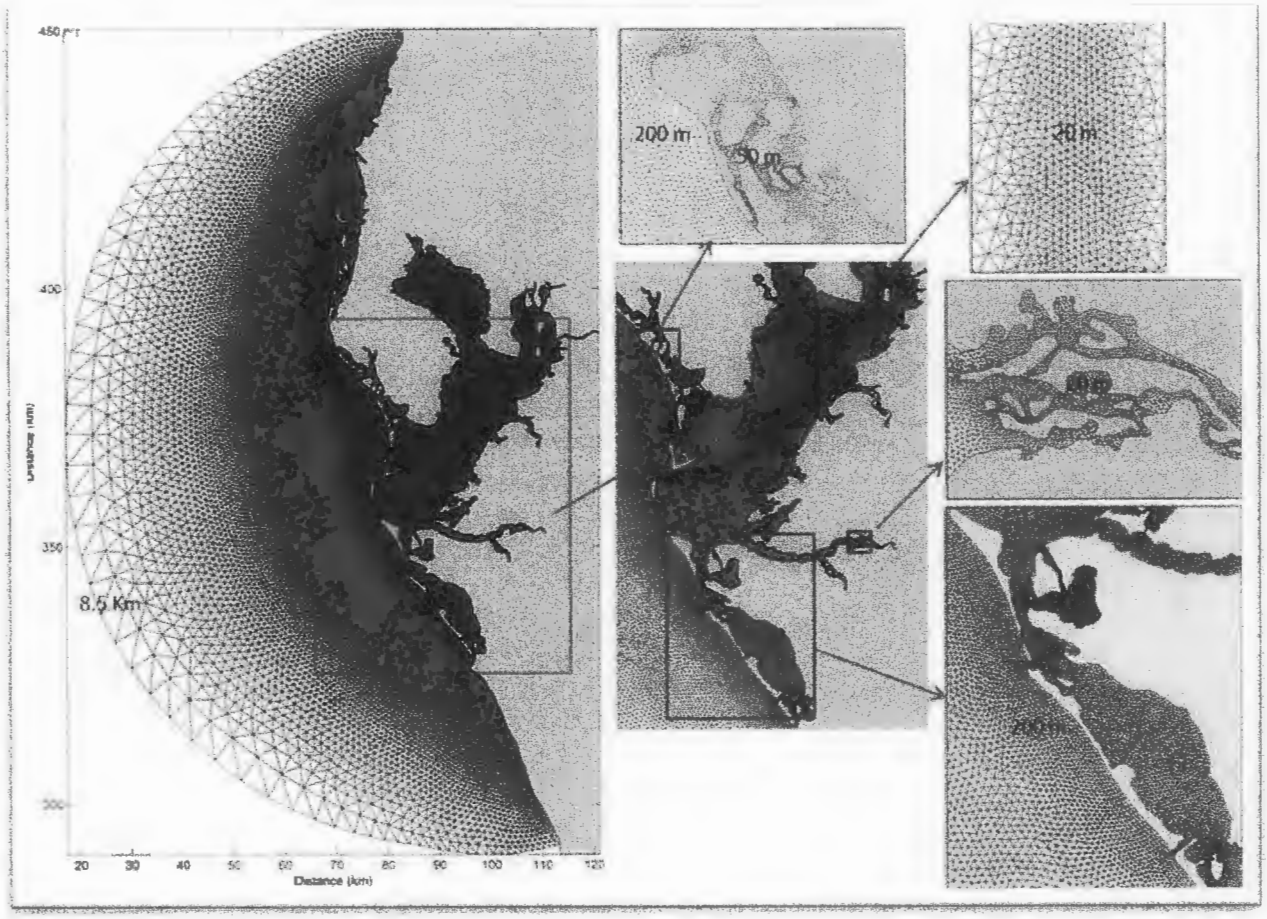
PROJECT 2

PROJECT 3

LOCATION MAP

Very High Resolution Estuary Circulation Nowcast/Forecast Model for Tampa Bay and Vicinity ($479,493)

Tampa Bay Region/Geographic Area Impacted by Project



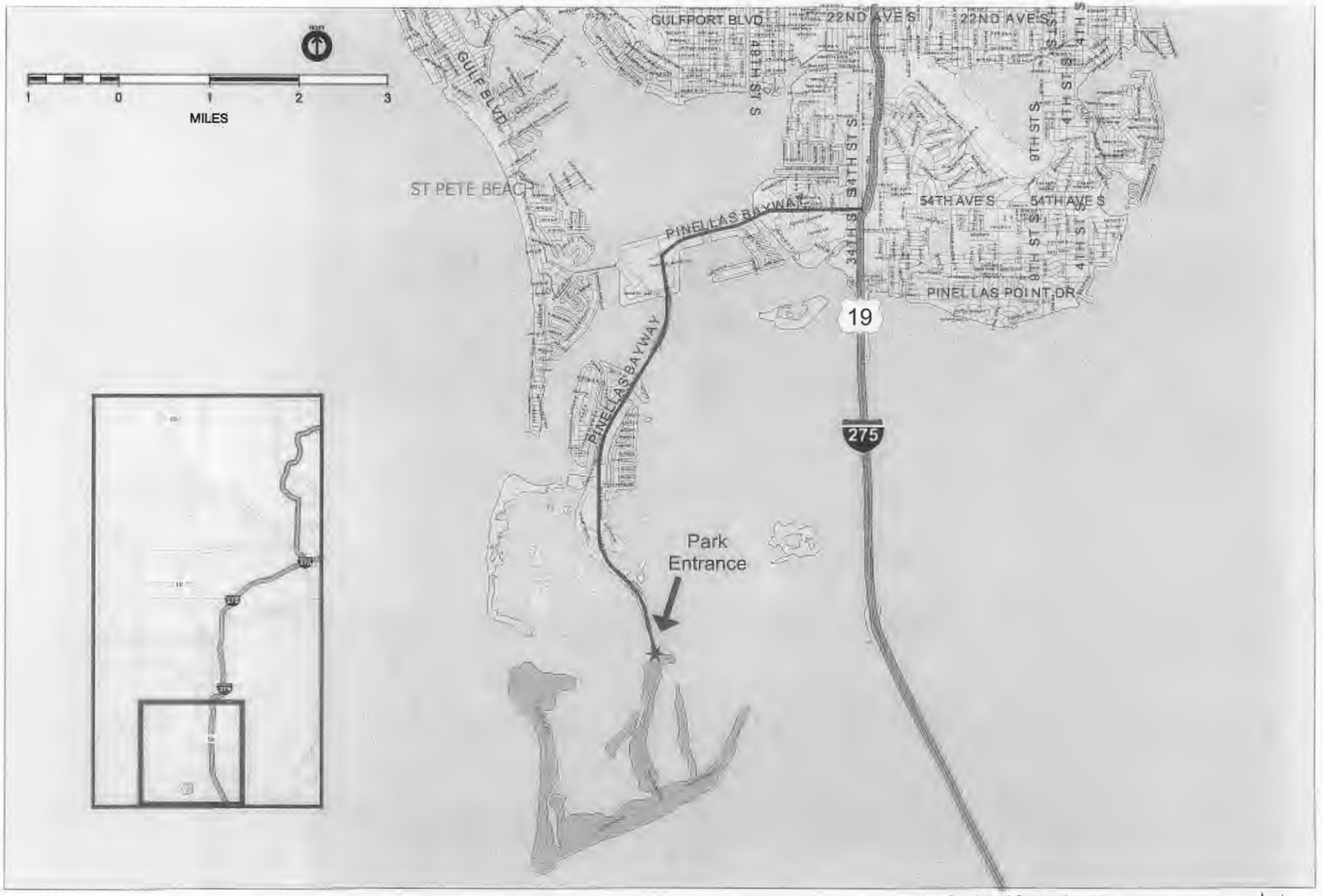
PROJECT 3

PROJECT 4

LOCATION MAP

Ft. De Soto Park Dune Walkover

($534,894)



Map Produced September 23, 2003

Ft. DeSoto Park

3500 Pinellas Bayway S.
Tierra Verde, FL 33715
Park Office: 727.582.2267
Camp Office: 727.582.2267

Park Hours: 7:00a.m. to dusk

Information Park Map/3-D Views Amenities

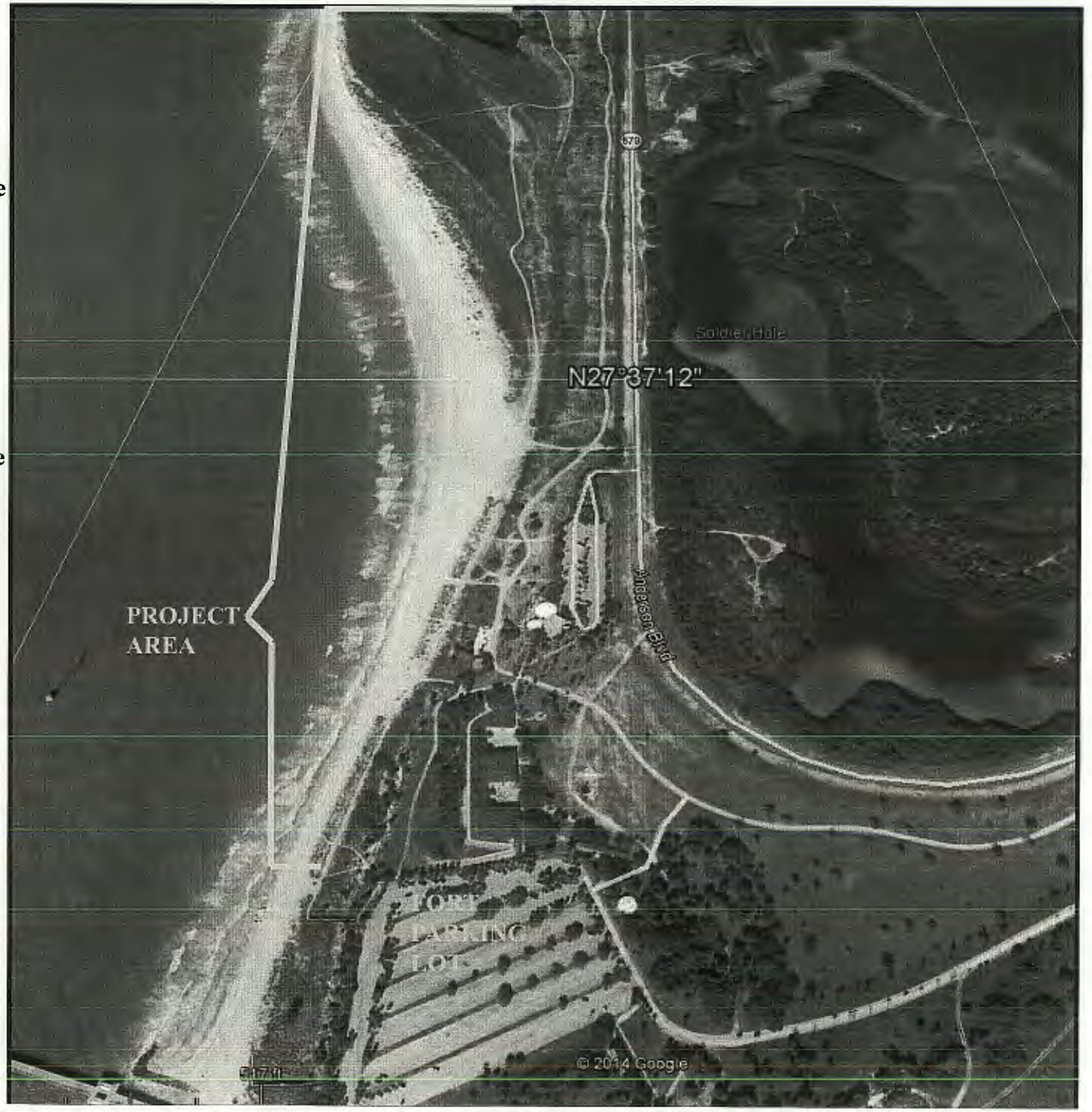
Pinellas County
GEOGRAPHIC INFORMATION SYSTEMS
A Pinellas County Government Service

Ft. De Soto Park
3500 Pinellas Bayway S.
Tierra Verde, FL 33715

Project location is from the north side of the fort parking lot northward to north beach.

Project falls within the Tampa Bay Watershed.

Location coordinates per the northwest corner of the fort parking lot:
Lon: -82° 44'11.82" W
Lat: 27° 36'52.66" N



Ft. De Soto Park Dune Walkovers

Priority Spots for Dune Walkovers

Priority 1-Red
Priority 2-Blue
Priority 3-Green

Priority 1: $500,000
Priority 2: $250,000
Priority 3: $250,000

Proposed Project to build two red walkovers and one addtional walkover depending upon bid prices.

Funds requested: $534,894

Construction

APPENDIX H

RESTORE Act Direct Component Multiyear Plan Narrative

RESTORE ACT Direct Component Multiyear Plan Narrative

OMB Approval No. 1505-0250

Eligible Applicant Name:	PINELLAS COUNTY GOVERNMENT

Name and Contact Information of the Person to be contacted (POC) on matters concerning this Multiyear Implementation Plan

POC Name:	ANDREW P. SQUIRES
POC Title:	ENVIRONMENTAL SERVICES MANAGER
POC Email:	asquires@pinellascounty.org
POC Phone:	+1 (727) 464-4633

B. PROVIDE A BRIEF NARRATIVE THAT DEMONSTRATES:

1. The need, purpose, and objectives for each activity, including a detailed description of each activity.

See Section 5.1 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

2. How the applicant made the multiyear plan available for 45 days for public review and comment, in a manner calculated to obtain broad-based participation from individuals, businesses, Indian tribes, and non-profit organizations, such as through public meetings, presentations in languages other than English, and postings on the Internet. The applicant will need to submit documentation (e.g., a copy of public notices) to demonstrate that it made its multiyear plan available to the public for at least 45 days. In addition, describe how each activity in the plan was adopted after consideration of all meaningful input from the public.

See Section 5.2 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

3. How each activity included in the applicant's multiyear plan matrix is eligible for funding and meets all requirements under the RESTORE Act.

See Section 5.3 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

4. How the applicant will evaluate success of the activities included in the matrix.

See Section 5.4 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

5. How the activities included in the multiyear plan matrix were prioritized and the criteria used to establish the priorities.

See Section 5.5 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

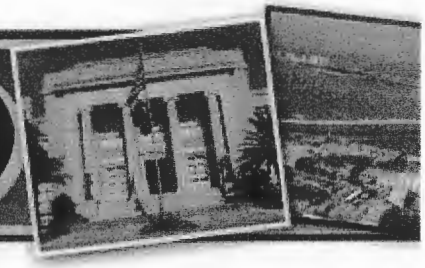
6. The relationship, if any, between the activities the applicant included in the multiyear plan matrix and other activities funded under the RESTORE Act.

See Section 5.6 in the document entitled: Pinellas County RESTORE Act Multiyear Implementation Plan.

APPENDIX I

News Release and E-mail Soliciting Public Review and Comment

Pinellas County
NEWS RELEASE
PINELLAS COUNTY COMMUNICATIONS DEPARTMENT
333 Chestnut Street, Clearwater, Florida 33756
(727) 464-4600 | fax (727) 464-4432 | www.pinellascounty.org



Immediate Release
June 29, 2015
Media Contact
Mary Burrell
Public Information Manager
(727) 453-3065

Public invited to review, comment on RESTORE Act plan

Review period runs through Thursday, Aug. 20

The public is invited to review and provide comment on Pinellas County's Multi-Year Implementation Plan for projects that would use RESTORE Act funds. The review and comment period is open through Thursday, Aug. 20.

The plan includes four proposed projects selected by a citizen-based working group that would be paid for through the Gulf Coast Restoration Trust Fund. Pinellas County has received about $1.5 million to use for environmental projects through the Direct Component of the fund, which comes from Clean Water Act penalties related to the Deepwater Horizon Oil Spill in 2010.

The proposed projects – and their projected costs – are:

- Coastal ocean monitoring and prediction system (University of South Florida's College of Marine Science) - $233,934
- Assessment of vulnerability to the impacts of sea-level rise and infrastructure resiliency plan (Pinellas County Planning Department) - $300,000
- A very high resolution estuary circulation nowcast/forecast model for Tampa Bay and vicinity (USF College of Marine Science) - $479,493
- Fort De Soto Park dune walkovers (Pinellas County Office of Management and Budget) -$534,894

At the end of the review and comment period, the plan will be revised if needed and submitted to the U.S. Department of the Treasury for approval before each project receives funds.

Citizens can view the Multi-Year Implementation Plan, which has details about the proposed projects and information about how they were selected, at www.pinellascounty.org/restore. Comments can be sent via email to restore@pinellascounty.org or via U.S. Mail to:

RESTORE Act Program Director
Pinellas County Natural Resources Division
22111 U.S. Highway 19 N., Bldg. 10
Clearwater, FL 33765

EMAIL SOLICITING PUBLIC INPUT ON PINELLAS COUNTY'S DRAFT MYIP

From: Squires, Andrew P
Sent: Wednesday, July 01, 2015 12:28 PM
To: 'AUDUBON FLORIDA COASTAL ISLANDS SANCTUARY'; 'AUDUBON SOCIETY - CLEARWATER'; 'AUDUBON SOCIETY – ST PETERSBURG'; 'CLEARWATER MARINE AQUARIUM'; 'CLEARWATER MARINE AQUARIUM'; 'ENVIRONMENTAL PROTECTION COMMISSION OF HILLSBOROUGH COUNTY'; 'FDEP SOUTHWEST DISTRICT'; 'FISH AND WILDLIFE RESEARCH INSTITUTE (ST PETERSBURG)'; 'FISH AND WILDLIFE RESEARCH INSTITUTE (ST PETERSBURG)'; 'Florida Dept. of Transportation (Tampa Office)'; 'FLORIDA NATIVE PLANT SOCIETY'; 'FRIENDS OF BROOKER CREEK PRESERVE'; 'FRIENDS OF FORT DESOTO PARK'; 'FRIENDS OF THE ISLAND PARKS (HONEYMOON & CALADESI)'; 'Gulf Restoration Network'; 'KEEP PINELLAS BEAUTIFUL'; 'NOAA NATIONAL FISHERIES SERVICE SOUTHEAST REGIONAL OFFICE'; 'NOAA NATIONAL FISHERIES SERVICE SOUTHEAST REGIONAL OFFICE'; 'NOAA NATIONAL FISHERIES SERVICE SOUTHEAST REGIONAL OFFICE'; 'RESTORE AMERICA'S ESTUARIES'; 'SIERRA CLUB'; 'SIERRA CLUB SUNCOAST GROUP'; 'SIERRA CLUB SUNCOAST GROUP'; 'TAMPA BAY WATER'; 'U.S. ARMY CORPS OF ENGINEERS'; 'U.S. ENVIRONMENTAL PROTECTION AGENCY'; 'UNITED STATES GEOLOGICAL SURVEY (ST. PETE)'; 'UNITED STATES GEOLOGICAL SURVEY (ST. PETE)'; 'UNIVERSITY OF SOUTH FLORIDA COASTAL RESEARCH LABORATORY'
Subject: Pinellas RESTORE Plan Review Period Through August 20

Please see the attached News Release and share with your organization and others as you see appropriate.

Direct link Pinellas County's Draft Multiyear Implementation Plan:
http://www.pinellascounty.org/restore/default.htm

Your review and comments are welcome!

Andy Squires
Pinellas County Natural Resources

DEPARTMENT OF PUBLIC WORKS
BCC AGENDA ITEMS

REVIEW/INFORMATION SHEET

CATS No. 47991

BCC Submittal Subject: Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act Draft Multiyear Implementation Plan to the U.S. Treasury.

Proposed BCC Agenda Date: September 24, 2015

Approval Request Date: August 27, 2015

Division Submitting Agenda Item: Public Works, Natural Resources

Reviewed by: Name	Signature	Review Date
Originator(s): Public Works		
Andy Squires	AS approved via email	8/30/15
Kelli Levy	Kelli Hammer	8/31/2015
Brendan Mackesey County Attorney		8/31/2015
Pick Talley Assistant County Administrator	Pick Talley	9/1/15

S:\Divisions\Engineering\CONTRACT\Contract Management\Projects, DEM\RESTORE Act Planning\RESTORE Act MYIP to US Treasury 9-24-15\1-Agenda Review Sheet.docx

Della
→ Andy
→ MSH

Gaydos Hydro Services, LLC
PO Box 55802
St. Petersburg, FL 33702-5802
727-667-6786

Dana J. Gaydos
Principal
Gaydos Hydro Services
727-667-6786
dana@gaydoshydroservices.com

June 23, 2015

Re: Restore Act Committee Request for 45 Day Public Review

Thank you for the time to come and speak to you today. My name is Dana Gaydos and reside in St Petersburg FL. I am here to request that all of you vote positively for the Restore Act committee's request to have a 45 day period for public comment of the draft MYIP. I am the owner of a small environmental consulting firm based in St Pete, and as a resident as well as a scientist, I am very interested in how Pinellas County is going to utilize the Restore Act funds that are solely for Pinellas County. As you are familiar, project priorities for Restore Act funding focus on restoration, mitigation and protection activities of natural resources and local economy vulnerable to damage by environmental causes as well as the improvement of tourism.

I have read the draft MYIP. In review of the projects, my opinions are as follows. Project 1, the Infrastructure Resiliency Plan, is a project that should be funded. Compiling and updating GIS files and maps, county wide, which focus on essential utilities, transportation routes and systems, and public safety infrastructure is a direct benefit to the residents of, as well as tourists to, Pinellas County. This data and information can be used by all the municipalities within the county for future disaster planning and facilitate disaster planning. GIS files are easily transferrable or downloaded and can be used by municipalities, consultants, and the general public with ease and can save thousands if not millions of tax payers money by correctly identifying infrastructure that assists with disaster preparedness. Hurricane Katrina was not long enough ago to forget the tragedy suffered, and this project is focused on long-term solutions that are in consideration of the future for Pinellas County and its residents.

Project 2, the Pass-A-Grille COMP buoy, does not fulfill the requirements of the Restore Act. It does not encompass a direct environmental benefit component. The project is to replace oceanic and meteorological monitoring equipment on an existing buoy that previously had equipment and was previously funded by USF, which the funding was discontinued in 2009. According to NOAA's website, there are more than 20 buoys in and around the Tampa area. A little less than half of these are COMPS buoys and the rest are NOAA, NOS or other buoys. Because of my hobbies, I am familiar with the COMPS system and have found the COMPS buoy system to be unreliable for present weather and marine conditions. This project consumes 15% of the entire Pot 1 funds for purchase and installation of expensive equipment with only a 1 year guarantee of being fully functioning in Year 2. As a scientist that routinely works with equipment, I know that monitoring equipment breaks down regularly and is expensive to repair. With the existing buoy system, there is already adequate data collection, and there is no secured funding after Year 2. Why spend several hundreds of thousands of dollars that is essentially tax free money for Pinellas County on the replacement of another buoy in a system that is adequate? Overall the COMPS buoy system is a large scale research project, and this project would be much better funded by other pots of money such as the Center of Excellence, which is an academic based fund for research and monitoring.

Project 3 improves an existing wave model for Tampa Bay and the surrounding areas. Models are difficult to use, especially if one is not familiar with it, and are usually only used by the developer of the model. Determining data sets, location of data sets, and data input is a

GHS, LLC

complicated endeavor, making the use of this model by the general public unlikely. This project consumes 31% of the Pot 1 funds. This will be the second project awarded to the same individual or small group of individuals involved with the project. Project 3 ties directly to Project 2. Both projects provide minimal positive impact to the residents of and tourists to Pinellas County and do not provide restoration or direct environmental benefit component, which is the main focus of the Restore Act. When combined, both projects consume 46% of the entire Pot 1 funds for our county. That would be giving half of the BP monies to USF, which already successfully obtains large amounts of funding for research projects such as this from various sources. Additionally, there is an existing NOAA buoy specifically utilized for wave model generation that is presently funded by the phosphate tax monies. Let's let more academic or government type funding sources refine this wave model and utilize the BP monies to directly benefit Pinellas County, its residents and its tourists.

Project 4, which is the Dune Walkover project, is a great example of direct, tangible restoration of natural resources, mitigation to ecological damage, and enhancement of local and tourism use of one of the top rated beaches in the nation. This project includes the design, permitting, and construction of boardwalks across environmentally sensitive sand dunes that provide habitat to birds and other wildlife. Both you and I and everyone else in this room can use them. This is a good project, is reasonably priced and is well outlined in the draft MYIP.

Opening the draft MYIP for public review and comment will encourage the community to have ownership in these project. The BP oil spill of 2010 not only impacted the environment, but it impacted the community surrounding the Gulf of Mexico. The Restore Act funds are to provide for environmental restoration, mitigation and protection, and by using these funds to do these type activities, it allows for residents and tourists to continue to enjoy our local environment, which is ultimately the artery for tourism in our community or simply the reason why we live here. Thank you.

August 19, 2015

RESTORE Act Program Director
Pinellas County Natural Resources Division
22111 U.S. Highway 19 N., Bldg. 10
Clearwater, FL 33765

Re: Comments on Pinellas County's Draft Multi-Year Implementation Plan (MYIP)

Dear Mr. Squires,

Thank you for the opportunity to submit comments on Pinellas County's Draft Multi-Year Implementation Plan (MYIP).

Our collective organizations (Audubon Florida, Florida Wildlife Federation, National Wildlife Federation, Ocean Conservancy, and The Nature Conservancy) represent nearly 100,000 members and supporters along Florida's Gulf Coast, several of whom are Pinellas County residents. Working together as a coalition as well as within our individual organizations and chapters, we have been advocating for Gulf restoration that is comprehensive, and targets watersheds for protection of coastal and marine resources. Our collaboration began with the crafting and passage of the RESTORE Act and is now focused on ensuring the best allocation of restoration funds.

In anticipation of the diverse perspectives on how to spend restoration funds, our groups collaborated to develop a framework, including comprehensive restoration principles and outcomes, designed to inform project selection and Multi-Year Implementation Plans (MYIP). We encourage Pinellas County to consider these themes throughout the planning and implementation of both current and future restoration activities.

A successful MYIP should have four key project outcomes: environmental impact, fisheries management, wildlife resource enhancement and community resiliency.

The cornerstone of a strong MYIP should be careful consideration of **environmental impact**; we are pleased to see that the Pinellas County MYIP has focused on this element. A MYIP should include projects that protect water quality and wildlife habitat, and provide the public with environmentally sustainable outdoor recreation opportunities. The Plan should promote restoration, health and sustainability of coastal habitats, fisheries, marine resources and vulnerable species. Projects included in the MYIP should work together to maximize environmental benefits. Most importantly, the plan should not include projects

that would result in further damage to the Gulf ecosystems. MYIPs should include regional projects that advance priorities toward achieving identified restoration goals that enhance watersheds and estuaries along the Gulf Coast. We applaud Pinellas County for its participation and leadership in working with the Tampa Bay Estuary Program, and encourage the County to reference the Estuary Program and its priorities in any refinements to your MYIP.

The MYIP should also consider the sustainability and health of its commercial and recreational fisheries, building in projects that protect and restore habitats and estuaries, and remove threats to fisheries such as marine debris and invasive species.

In addition, the MYIP should prioritize **wildlife resource enhancement** as a means to ensure healthier communities and a thriving nature-based economy. We applaud Pinellas County for including the dune walkover project in their MYIP to enhance wildlife habitat.

Another key project outcome is enhanced **community resiliency.** Investments in projects that will enhance resiliency may reduce the impact of hurricanes and other disasters. Restoring and protecting marshes, wetlands, reefs and other coastal habitats also mitigate storm surge, erosion and coastal flooding, further reducing the costs of insurance and disaster relief. The sea-level rise and resiliency project may contribute to this community resiliency goal.

In order to efficiently and effectively achieve these outcomes, we encourage Pinellas County to consider several guiding principles for project selection: science-based metrics and evaluation, phased approach to implementation, clear outcomes, local input/participation, leverage opportunities, and mutual project compatibility.

Employing the guiding principle of **science-based evaluation** is instrumental to proper project selection and plan development. Every project should be evaluated across a broad metrics of science-based criteria. In addition, project implementation should be monitored and subject to an ongoing review process to ensure short and long-term goals are being met, allocated funds are being spent responsibly and projects are performing and managed adaptively.

Furthermore, project descriptions should state clear, measurable and achievable ecological and community **outcomes**. Making these outcomes understood by the public and stakeholder groups, and providing opportunities for meaningful input into project selection and evaluation increases public confidence in the success of these projects and will elicit more public support.

Counties should consider ways to **leverage** resources across RESTORE funding allocations and as a match for other local, state and federal funding sources, and we were pleased to see Pinellas County identify some matching funds for its selected projects. Pinellas County should also seek to achieve **mutual project compatibility** to ensure that discrete projects

are not inadvertently working at odds with one another. Accordingly, it would be beneficial for a panel of resource and economic managers to provide oversight and ensure project designs avoid unintended impacts to key resources that are also restoration targets.

The ultimate success of the RESTORE Act rests on selecting and implementing integrated ecological restoration projects, consistent with a state-wide plan, and rigorous application of criteria to ensure that only the best and most appropriate projects are funded. We feel these themes have been well considered in projects proposed in the published MYIP and encourage Pinellas County to continue to keep these themes in mind in planning and implementing future restoration activities.

While we applaud Pinellas County for being leaders in the state and among the first to select projects and prepare a Draft MYIP. We respectfully urge Pinellas County to consider our comments and incorporate them as appropriate into both the current Draft MYIP, as well as in future MYIPs (which may be prepared as additional RESTORE Act funds become available). Moreover, we encourage Pinellas County to move forward with implementing the proposed projects.

Thank you very much for considering our comments.

Sincerely,

Audubon Florida
Florida Wildlife Federation
National Wildlife Federation
Ocean Conservancy
The Nature Conservancy
Defenders of Wildlife

Catalina Yachts
MORGAN DIVISION

RESTORE Act Program Director
Pinellas County Natural Resources Division
22111 U.S. Highway 19 N., Bldg. 10
Clearwater, FL 33765

Dear Program Director,

I read the RESTORE Act project selections with interest and found all of them to be worthwhile. The two by the University of South Florida are particularly appealing because one of these offers observations that will be of use to recreational and commercial boaters, and the other will provide a unique set of model simulations that can be used to address the movement of water and waves throughout the Tampa Bay region. As a marine industry principal, I know that these observations and models will be of great value to Pinellas Co.

Thank you for the thorough process engaged in coming to these recommendations.

Sincerely

Edward Douglas V.P.

CATALINA / MORGAN / CAPRI / NACRA

7200 Bryan Dairy Rd. • Largo, FL 33777 • 727-544-6681 • Fax 727-546-7303

Gonya, Paula

From: Jessica Koelsch [KoelschJ@nwf.org]
Sent: Thursday, August 20, 2015 5:39 PM
To: Squires, Andrew P
Subject: MYIP Comments
Attachments: Comments on MYIP Hernando Revised.docx

In addition to the "member comments" from NWF, and the "Coalition Comments" that I just sent, for the other counties I had been preparing rather detailed comments specific to that County's process and projects (see what I sent to Hernando as an example). I planned to do that same for Pinellas but unfortunately things have been crazy busy and I couldn't get to everything. Given that I think you did a solid job, and there was not a lot to critique, I let it slip through the cracks. Please don't take it as a bad sign --- Pinellas is still my favorite county!! ☺

Jessica Koelsch
Florida Policy Specialist
Gulf of Mexico Restoration
National Wildlife Federation
www.nwf.org
727.424.9957 c
850.332.0266 o

NATIONAL WILDLIFE FEDERATION

SOUTH CENTRAL REGIONAL CENTER
44 East Avenue, Suite 200
Austin, Texas 78701
Local Office: 5295 Powrie Dr, Pensacola, FL 32504

850.332.0266
727.424.0057
www.nwf.org

March 27, 2015

Brian Malmberg, Assistant County Administrator/Director of Public Works
Hernando County Department of Public Works
1525 East Jefferson Street
Brooksville, FL 34601

Re: National Wildlife Federation's Comments on Hernando County's Draft Multi-Year Implementation Plan (MYIP)

Dear Mr. Malmberg,

Thank you for the opportunity to submit comments on Hernando County's draft Multi-Year Implementation Plan (MYIP).

National Wildlife Federation (NWF) is the nation's largest conservation organization. We have four million members and supporters nationally, hundreds of whom reside in Hernando County. Working closely with our state partner Florida Wildlife Federation, we have been on the ground, lobbying for comprehensive Gulf restoration in the wake of the BP oil spill. Our work has been focused on long-lasting action, such as coastal and watershed protection. The work that began with the passage of the RESTORE Act is now directed towards supporting ecological restoration. We have been closely following as Florida's 23 Gulf Coast Counties consider projects to fund with their Direct Component funds available through the RESTORE Act, as they develop Multi-Year Implementation Plans (MYIP).

Working with a coalition of organizations in Florida, NWF and its partners crafted a restoration framework with project outcomes and guiding principles, which is outlined in a separate comment letter. We encourage Hernando County to keep these themes in mind while planning and implementing restoration activities.

In addition to these themes and principles, NWF has also carefully reviewed Hernando County's MYIP, and wishes to present comments and recommendations on two the two main components of the MYIP: **Process** and **Projects**.

Process:
In 2014, the U.S. Treasury Department issued their "Direct Component Guidance and Application to Receive Federal Financial Assistance". This Guidance provides critical context for ensuring effective process and describes the following:

> As a prerequisite under the RESTORE Act for requesting and receiving Direct Component funding for eligible activities, each applicant must submit a multiyear plan to cover a period of time during which projects could be undertaken with funds available from the Trust Fund...An applicant must use the form shown at Section 4.0 for its multiyear plans... The multiyear plan must include the Multiyear Implementation Matrix, a map showing the locations where the work will be performed, and the narrative description. An applicant must provide detail on planned activities in the multiyear plan, including the information required in the multiyear plan matrix and narrative in Section 4.0. The multiyear plan must be available for 45 days for public review and comment, in a manner calculated to obtain broad---based participation from individuals, businesses, Indian tribes, and non---profit organizations. If the applicant has developed a more detailed multiyear plan document in addition to the forms in Section 4.0, the document should be included as an attachment to the multiyear plan submission to Treasury.

We feel that while Hernando County may have met the minimum requirements outlined in the Treasury Guidance, and did have some of the elements available for public review and comment, the full suite of documents (including the Matrix and the Narrative) were only available by request, which is an area of concern. We respectfully offer input related to public process.

Website:
Although Hernando County established a website with information on the process (including Project Consideration Form, Ranking Criteria, Scoring Criteria Guide), we could not readily find information announcing public meetings, a list of projects submitted for consideration (or details on those proposed projects), names of the members of the "internal committee" created by the County, the final rankings of the submitted projects, or several other topics as described below.

The Hernando County RESTORE website (http://co.hernando.fl.us/restoreact/) states: "Public participation is an important part of the RESTORE ACT project development process" yet information to facilitate public participation is not readily available. As one example, the "Public Meeting" section of the RESTORE website is blank; no meetings are listed: http://co.hernando.fl.us/restoreact/index.php/public-meetings.

We were pleased to see the Scoring Criteria and Ranking Criteria were posted on-line, and also to see that project scoring will follow an objective evaluation process. It is important to the transparency and integrity of the process to clearly indicate evaluation methods.

Public Engagement:
Although the MYIP recognizes that projects must be selected based on "meaningful input from the public, including broad-based participation from individuals, businesses, and nonprofit organizations..." it is not clear how this was accomplished. No list of public meetings or other documentation was included, nor a list of what community members of groups were engaged.

As for soliciting proposals from the public, although a Project Consideration Form and Flier were both posted on the website (October 14, 2014), we understand that no projects were submitted by the public. Given that other Florida Counties have received numerous project submittals when advertised to the public, the lack of public submittals in Hernando County may be an indication that the announcement of the funding opportunity or the application were not advertised widely enough or readily available. Because there was so little public participation, we would have liked to see Hernando County explore other avenues or seek assistance for partners.

As future opportunities for public input on RESTORE Act related issues become available, NWF would be happy to help engage the community through public workshops, social media, and outreach to community groups. Please do not hesitate to reach out to us.

Additional Information Omitted from Publically Available MYIP:
There were several elements that are required to be submitted to Treasury that were omitted from the MYIP available for public review and input.

According the U.S. Treasury Direct Component Guidance, the multiyear plan must include the Multiyear Implementation Matrix, a map showing the locations where the work will be performed, and the narrative description. We acknowledge that the published MYIP includes maps of the project locations, and well as brief project overviews and summaries. However, the Multiyear Implementation Matrix and Direct Component Multiyear Plan Narrative were not publically available (although those documents were available upon request). Given that the Guidance specifies the elements required for the MYIP, and all of those elements were not included in the document published on-line, the MYIP (published February 10, 2015) posted on the Hernando County website (http://co.hernando.fl.us/restoreact/index.php/restore-documents/12-2-10-2015-multi-year-implementation-plan/file) is incomplete and the Multiyear Implementation Matrix and Direct Component Multiyear Plan Narrative should be added.

As for reviewing the projects being considered for funding, the only information that we could locate describing projects being considered for inclusion in the MYIP, was a list of project titles contained within a presentation dated October 14, 2014:
http://co.hernando.fl.us/restoreact/index.php/restore-documents/4-restore-act-powerpoint/file.

Additional information on the proposed projects should have been readily available so that the public could more easily weigh in on their preferences; this could have been accomplished by posted a project summary on-line, or linking to the full proposals (which presumably was available to the internal review committee). We also recommend including a table/list on-line and/or in the MYIP including the following for all projects submitted for consideration:

- Project Title
- Brief Project Summary
- Project Location
- Project Cost (and match)
- Partners (if any)
- Final Project Rank

Project Goals and Hernando County Priorities:
An area where we feel Hernando County excelled in the MYIP Process is in the development and publication of their Direct Component Overview and Guidelines (Appendix A). We fully support the Goals and Priorities Hernando County identified (also listed in the Overview and Guidelines document). In addition, we support the inclusion of the Direct Component Scoring Criteria and Guide (Appendix B); as noted above, we support the objective project scoring and evaluation process for reviewing proposed projects.

Projects:

Although the MYIP process was not as transparent or accessible as it is for many of the other Florida coastal counties, we support[1] the projects selected by Hernando County for inclusion in their MYIP. All three projects have a direct connection back to the Gulf ecosystems that were directly impacted by the spill, will enhance nature-based tourism, and will in turn positively impact the local economy. Furthermore, two of the projects (Bayou Drive and Linda Pederson Park) address NWF's highest priority among the eligible activities: restoration/protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.

The Gulf Coast's economy and way of life are deeply entwined with the land and the water. The fines and penalties from the Deepwater Horizon disaster have great potential to restore and protect the Gulf of Mexico's lands, waters, wildlife, communities, and economy. However, there is a risk that some of these funds could be spent unwisely—even squandered on projects that would harm the very places the money was intended to benefit. The public can and should insist that all recovery monies are spent in a science-driven, transparent process that ensures a healthy Gulf of Mexico for wildlife as well as for future generations.

Although we support[1] the projects that were selected, we respectfully offer the following comments and recommendations on the Project Overview and Summary (Appendix C), as well as the unpublished Direct Component Multiyear Plan Narrative.

Overall, the Multiyear Plan Narrative (available only upon request) provided more of the project details that should have been included in Appendix C (posted online and publically available). In addition, it would have been useful to see a check-list or table within Appendix C that indicated which of the project goals, eligible activities, and project priorities (included in Appendix B) each project fulfilled.

Furthermore, according the Treasure Guidance, projects related to Natural Resources are required to be based on "Best Available Science". Nowhere in the Project Summary or Narrative was a description of the science used to select, evaluate, or review the projects. The inclusion of Best Available Science should cross-cut several sections of each Project Description, including project need, purpose, benefit, high-level milestones, and measures of success. Additional details on Treasury's specific requirements regarding Best Available Science can be found on Page 30 of "RESTORE Act Direct Component Guidance and Application to Receive Federal Financial Assistance" (within Section 5.0 DIRECT COMPONENT APPLICATION FORMS AND INSTRUCTIONS). If you need assistance in locating this information, please do not hesitate to contact me.

Bayou Drive:
Additional details and project specifics should be included in the Project Summary of Appendix C, as well as the Narrative. For instance, as noted above, there is no indication that Best Available Science has been used to evaluate the need for the project. What species of exotics are currently present at the site? Was a survey done to indicate the percent cover, abundance, and distribution? Are there studies to support that removal of exotics and planting of natives will improve fish and wildlife habitat? In addition, there are no high-level milestones (related to the "restoration objectives" vice the "project engineering phases"). Similarly, the MYIP should include specific measures of success

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[1]NWF supports the use of Direct Component funds for creation of artificial reefs as an eligible activity related to mitigation of damage to fish; promotion of tourism in the Gulf Coast region, including recreational fishing; and promotion of the consumption of seafood harvested from the Gulf Coast region, that also have been developed in coordination with the Florida Fish and Wildlife Conservation Commission (FWC) Artificial Reef Program. Our support for Hernando Beach Shallow Water Reef Project is contingent on endorsement by the FWC Artificial Reef Program.

that would indicate restoration of natural resources. In general, measures of success should be closely tied to the eligibility, as well as the priorities the project is intended to address. Examples of measures of success could include such measures as percent of exotics removed, increase in abundance and distribution of natural vegetation, percent increase in fish or wildlife, and/or increase in use by anglers or birders.

Hernando Beach Reef Project:
As with the Bayou Drive project, additional details should be included in the Project Summary of Appendix C, as well as the Narrative covering Best Available Science, high-level milestones, and measures of success. In addition, the published project description lacks a lot of detail relevant to the evaluation of the project. For instance, specifics on water depth, existing substrate type, and proximity to other habitat types would be useful, as well as inclusion of information related to partners and status of permits. From speaking with artificial reef volunteers in Hernando County, I learned that this project was part of a large area management zone, that permits had been applied for through Army Corp of Engineers (ACOE), and the Florida Fish and Wildlife (FWC) Artificial Reef program staff are actively involved in Hernando County's artificial reef program. This is all relevant information that should have been included in the Project Summary and Narrative.

NWF agrees that the Hernando Beach Reef Project provides an opportunity to fulfill several RESTORE Act eligible activities, including Mitigation of damage to fish, wildlife, and natural resources, Infrastructure projects benefitting the economy or ecological resources, Promotion of tourism in the Gulf Coast region, including recreational fishing, and Promotion of the consumption of seafood harvested from the Gulf Coast region. However, we do not feel that construction of artificial reefs falls under "Restoration/protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region" (given that artificial reefs are not natural habitat). We ask that you remove "restoration of natural resources" as an applicable activity

Linda Pederson Park:
As with the Bayou Drive project, additional details should be included in the Project Summary of Appendix C, as well as the Narrative covering Best Available Science, high-level milestones, and measures of success. I am personally familiar with the park and have paddled and snorkeled in Jenkins Creek. The Narrative (only available upon request) provided much more detail than the Project Summary in Appendix C, including mentioning use of the area by West Indian (Florida) manatees. The spring and association run of Jenkins Creek serve as a winter refuge for Florida manatees. If this project results in increased use by paddlers and snorkelers during the winter months, we anticipate the County will careful monitor to ensure manatees seeking thermal refuge in the spring are not disturbed.

We applaud Hernando County for being leaders in the state and among the first to select projects and prepare a Draft MYIP. Given our experience with all 23 Gulf Coast Counties, we support[1] **Projects** selected by Hernando County but recommend significant improvements in the **Process** (and the **Plan** itself), before submitting to the U.S. Department of Treasury.

Assuming that additional RESTORE funds will be available upon the settlement of Clean Water Act Penalties to be paid by BP, we would encourage Hernando County to better advertise the availability of funds and find additional avenues for engaging the public in the future. As indicated above, NWF will be more than happy to assist with such efforts and provide for an even more robust and inclusive process.

Thank you very much for considering our comments. Please do not hesitate to contact me to further discuss these comments, concerns, and recommendations.

Sincerely,

Jessica Koelsch
Florida Policy Specialist
National Wildlife Federation

Gonya, Paula

From: James Fogarty [JFogarty@tindaleoliver.com]
Sent: Monday, August 03, 2015 3:30 PM
To: restore
Subject: Restore Plan Comments

To whom it may concern,

Thank you for your diligent work in selecting projects to be funded by the Restore Plan. One project in particular, the assessment of vulnerability to the impacts of sea-level rise and infrastructure resiliency plan, will be an important effort for the county and should be the top priority for funding from the Restore plan. The scope of the project includes identification of mitigation measures to protect vulnerable infrastructure, which is a critical need for the employment center of Pinellas County. Mitigation strategies that would protect employment centers and other critical infrastructure could provide a tremendous public benefit for the county and help to retain vital industries and jobs. As a Pinellas County native and current resident, I hope that the county will continue to support this effort.

Thank you for the opportunity to provide public input on this funding plan.

James G. Fogarty, P.E., LEED AP
PROJECT MANAGER

Tampa Headquarters
1000 N. Ashley Dr., Suite 400
Tampa, FL 33602
(813) 224-8862 ext. 1270
Fax (813) 226-2106

jfogarty@tindaleoliver.com
www.tindaleoliver.com

Tindale Oliver

Gonya, Paula

From: Erich Jaeger [maverickfishingcharters@gmail.com]
Sent: Thursday, August 20, 2015 5:43 AM
To: restore
Subject: Usf restore public comment

I am a commercial/charter boat owner. Any money that is granted for scientific research in our area essential not just for the work but the welfare of our gulf and ecosystems.
I also believe real time data from Passagrille will be most useful to my industry. Thanks.

Sent from my iPhone

Gonya, Paula

From: Charlie Paxton [charlie.paxton@noaa.gov]
Sent: Wednesday, August 19, 2015 1:36 PM
To: restore
Subject: Comment on RESTORE plan

- Coastal ocean monitoring and prediction system (University of South Florida's College of Marine Science) - $233,934

This is an excellent system that will provide a more realistic observation of nearshore wave conditions than the data from offshore buoys. The data will provide verification for our coastal waters forecasts, for our rip current forecasts, and for a joint National Weather Service, National Ocean Service, U.S. Geological Survey project of rip current and wave run-up forecasting a Sunset Beach on Treasure Island.

--
Charles H Paxton PhD
Science and Operations Officer
NWS Tampa Bay Area
2525 14th Ave SE
Ruskin, FL 33570
813-645-2323
weather.gov/tampa

RESTORE Act Program Director
Pinellas County Natural Resources Division
22111 U.S. Highway 19 N., Bldg. 10
Clearwater, FL 33765

August 7, 2015

Richard Knudsen
Assistant Research Scientist/GIS Analyst
State Scientific Support Coordinator for Oil Spills
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 Eighth Avenue SE
Saint Petersburg, Florida 33701

Cameron Hunt
President
Metanomy, Inc., 501(c)(3)
606 26th Avenue,
Saint Petersburg, FL 33604

Dear Sir or Madam,

We are writing you today with regards to public comment on the Pinellas County public notice on proposed Restore Act projects available online at:
http://go.activecalendar.com/pinellascounty/site/pressrelease/event/public-can-comment-on-restore-plan/

We would like to express our specific STRONG support for the following two projects:

- Coastal ocean monitoring and prediction system (University of South Florida's College of Marine Science) - $233,934

- A very high resolution estuary circulation nowcast/forecast model for Tampa Bay and vicinity (USF College of Marine Science) - $479,493

We are jointly writing this letter because these projects support a common responsibility: protecting the greater Tampa Bay from environmentally hazardous materials. Mr. Knudsen is responsible for the contingency plans used for oil spill response throughout the state of Florida. Mr. Hunt's charity provides data and analysis used to prioritize marine debris (trash) cleanup throughout Tampa Bay. Both oil and trash are spread by the same ocean currents, and a better prediction system allows us to each to better respond to these threats, and meet our public obligations.

Mr. Knudsen was materially involved in the Deepwater Horizon response by coordinating the delivery of NOAA oil spill trajectory modeling products to numerous state agencies including the FDEP, FWC, and Florida Division of Emergency Management and was also responsible for

assembling the contingency plans used for oil spill response throughout the Southeastern US and US Caribbean, including Pinellas County.. He is particularly well suited to state that these two projects will make great strides in supporting the Florida Commission on Oil Spill Response Coordination (FCOOSRC) recommendation #6:

- USCG oil spill contingency plans, state spill plans, and other plans, should be amended to ensure support for—and participation in—coastal mapping and oil spill movement, monitoring, modeling, and interoperable spatial data analysis (e.g., The Florida Marine Spill Analysis System, Digital Area Contingency Plans, Geospatial Assessment Tool for Operations and Response [GATOR], and the Environmental Response Management Application [ERMA]). (Section 2.3, page 17)

The University of South Florida has already demonstrated a strong commitment to coordination with Federal and State agencies in oceanographic modeling and further support for them will only enhance regional capabilities, particularly for modeling oil spills for drills and exercises in the West Florida Shelf and Tampa Bay region. USF provides this service by making their oceanographic data available in standardized open-source data formats to the NOAA GNOME Online Oceanographic Data Server (GOODS) http://gnome.orr.noaa.gov/goods, amongst other means. GNOME is the acronym for the General NOAA Operational Modeling Environment which is software used extensively in oil spill response and contingency planning throughout US and protectorate waters. By supporting USF in these projects, Pinellas County can ensure that they will be well covered for these capabilities.

Mr. Hunt leads Metanomy, Inc, a 501(c)(3) focused on citizen science and providing infrastructure to support volunteer survey, mitigation, and clean-up activities around Tampa Bay. As part of their grant award from the Tampa Bay Estuary Program, Metanomy is building a Tampa-focused marine debris mobile application, and a web-based map application to support collaborative tracking and cleanup of marine debris. Integrating the USF monitoring, prediction, and nowcast/forecast models into the web-based map application will allow our volunteers to identify likely locations for marine debris, especially in the aftermath of storms which tend to push debris into concentrations in sensitive areas (e.g., mangroves, marshes, etc).

Finally, we believe that there is value in funding these models and making them available to other stakeholders in the area. Specific capabilities these models support include:

- **Better Coastal and Marine Resource Management:** Oceanographic modeling more tightly integrated with marine and terrestrial resources geographic information systems (GIS) data and ecosystem models provides better allocation of scarce management resources.
- **Better Fisheries Management:** Oceanographic modeling data more readily available for studies on fish and invertebrate health and fecundity.
- **Human Health Protection:** Oceanographic modeling data more readily available for studies on human health and safety issues such as red tide, nutrient pollution, pathogens, sea-level rise, and search and rescue.

- **Public Data and Citizen Science:** Oceanographic modeling data more readily available in *open-source mapping services* for integration into a myriad array of natural resource and socio-economic management concerns, all supportive of RESTORE ACT objectives.

We welcome any inquiries or follow-up regarding our support of these two worthwhile projects.

Richard Knudsen
Assistant Research Scientist/GIS Analyst
State Scientific Support Coordinator for Oil Spills
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Email: Richard.knudsen@MyFWC.com

Cameron Hunt
President
Metonomy, Inc., 501(c)(3)
Email: Cameron.Hunt@metanomy.org

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kathi Ward [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 6:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Kathi Ward
727 27th Ave N
Saint Petersburg, FL 33704-2740
kathi.ward@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Laurette Farmer [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 11:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Laurette Farmer
247 Grove Cir S
Dunedin, FL 34698-7549
hogiebar@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Leslie Poms [NationalWildlifeFederation@nwf.org]
Sent: Wednesday, August 12, 2015 1:32 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 12, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Leslie Poms
521 Mandalay Ave Apt 1007
Clearwater Beach, FL 33767-1795
heartmessenger@usa.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kerry Borrego [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 03, 2015 6:02 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 3, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Dr. Kerry Borrego
2138 Wrens Way
Clearwater, FL 33764-6413
rjisambb@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Lee Miller [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Lee Miller
125 22nd Ave SE
St Petersburg, FL 33705-3207
lsm.lsm@knology.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Linda Harsin [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 11:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Linda Harsin
5837 24th Ave S
Gulfport, FL 33707-5031
linda.harsin17@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Marios Psomas [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 11:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Marios Psomas
1013 Connecticut Rd
Tarpon Springs, FL 34689-2828
marios_psomas@hotmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mervin Robeson [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 2:23 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Mervin Robeson
710 Buckingham Ave W
Oldsmar, FL 34677-3341
terjerfl@hotmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of N. Colton [NationalWildlifeFederation@nwf.org]
Sent: Friday, August 07, 2015 6:16 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 7, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, birds and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. N. Colton
6900 7th St S
St Petersburg, FL 33705-6234
nancolton@me.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Nancy Bahls [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 9:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Nancy Bahls
256 19th Ave NE
St Petersburg, FL 33704-3509
thescootzone@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of patricia bullington [NationalWildlifeFederation@nwf.org]
Sent: Tuesday, August 04, 2015 3:48 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 4, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. patricia bullington
2010 Castille Dr
Dunedin, FL 34698-9415
patriciabullington@rocketmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Pharon Beckett [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 2:53 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Pharon Beckett
153 Thistle Ct
Dunedin, FL 34698-8230
pharonb@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Rosetta Di Stefano [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 11:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Rosetta Di Stefano
662 Bellingham Pl
Palm Harbor, FL 34684-4242
sachad22@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Suzanne Green [NationalWildlifeFederation@nwf.org]
Sent: Saturday, August 01, 2015 7:20 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 1, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Suzanne Green
10424 66th Ave
Seminole, FL 33772-6442
vst4acs@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of William Phipps [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 03, 2015 10:34 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 3, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to receive Gulf spill restoration dollars (dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise) will help the environment and improve the local quality of life.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. William Phipps
6803 Sea Gull Dr S
Saint Petersburg, FL 33707-3838
billphipps@msn.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Anna-Lina Levi [NationalWildlifeFederation@nwf.org]
Sent: Saturday, August 01, 2015 6:50 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Aug 1, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Anna-Lina Levi
1308 Alameda Ave
Clearwater, FL 33759-3307
annalina57@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Babette Bruton [NationalWildlifeFederation@nwf.org]
Sent: Sunday, August 02, 2015 11:25 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Aug 2, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Babette Bruton
12470 6th St E
Treasure Island, FL 33706-2925
bbruton3@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Curtis Hinckley [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 6:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Curtis Hinckley
1095 Pinellas Point Dr S
Apt 435
Saint Petersburg, FL 33705-6386
chinckle@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Harriette Weller [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:52 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Harriette Weller
13811 Kimberly Dr
Largo, FL 33774-4502
hweller53@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of James Blackburn [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 1:53 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. James Blackburn
594 Centerwood Dr
Tarpon Springs, FL 34688-7217
kblackbu12@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Laura Kuzma [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 8:23 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Laura Kuzma
2220 Cimarron Ter
Palm Harbor, FL 34683-4900
lkuzma@americaii.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Linda Giere [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 10:53 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Linda Giere
2087 Ashbury Dr
Clearwater, FL 33764-6707
lsgiere@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Nancy Fellenz [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 9:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Nancy Fellenz
4908 38th Way S Apt 302
St Petersburg, FL 33711-4843
mtnpeace2@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Rebecca Straw [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 6:24 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Rebecca Straw
2580 62nd Ave S
St Petersburg, FL 33712-5242
cobygirl50@ymail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Sandra Jackson [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Sandra Jackson
1340 Gulf Blvd
Clearwater Beach, FL 33767-2879
sanddollar81@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Tammy Bobbitt [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Tammy Bobbitt
3813 Gulf Blvd Apt 518
St Pete Beach, FL 33706-3927
tammy.bobbitt@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Veronica Moore [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 10:53 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Veronica Moore
2295 Tuscany Trce Unit 210
Palm Harbor, FL 34683-7727
vmoore727@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ann Lokey [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 6:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Ann Lokey
1775 Briar Cir
Dunedin, FL 34698-3603
aslokey30@hotmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Bob Kimsel [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 6:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Bob Kimsel
650 Pinecrest Dr
Largo, FL 33770-3188
bobdolphins@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Carolyn Warner [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 8:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Carolyn Warner
5153 Isla Key Blvd S Apt 312
Saint Petersburg, FL 33715-1685
cajwarner@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mary Jane Jeffery [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 6:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Mary Jane Jeffery
6400 Mockingbird Way S
Saint Petersburg, FL 33707-3822
mjsackela@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Michael Travis [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 8:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Dr. Michael Travis
3028 Cascade Dr
Clearwater, FL 33761-4011
miketphd@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Nancy Angelovich [NationalWildlifeFederation@nwf.org]
Sent: Sunday, August 09, 2015 9:57 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 9, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Miss Nancy Angelovich
7893 Sailboat Key Blvd S Apt 403
South Pasadena, FL 33707-6323
nlangelovichlmhc@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Pamela Demar [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 7:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Pamela Demar
8537 76th Ave
Seminole, FL 33777-4423
pdemar1054@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Patti Bachteler [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 2:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Patti Bachteler
4948 Aurora Ct
Oldsmar, FL 34677-5229
patti72536@verizon.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Richard Brett [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 03, 2015 3:05 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 3, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Richard Brett
1623 Rachel Ct
Clearwater, FL 33756-4569
rlbrett7@verizon.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Susan DeWitt [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 8:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Susan DeWitt
8500 Ulmerton Rd
Largo, FL 33771-3842
sedewitt4@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Suzanne Saunders [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 2:53 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Suzanne Saunders
8455 13th St N Apt D
St Petersburg, FL 33702-7950
segnbora@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Amanda Fenick [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 10:53 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Amanda Fenick
469 E Lake Dr
Largo, FL 33771-1502
amandafenick@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ashly Bargman [NationalWildlifeFederation@nwf.org]
Sent: Saturday, August 01, 2015 4:49 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Aug 1, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Ashly Bargman
5725 18th Ave S
Gulfport, FL 33707-4124
gratefulashly@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Barbara Sartor [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 9:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Barbara Sartor
1332 Fairway Dr
Dunedin, FL 34698-2210
bsartor@live.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Dick Evans [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Dick Evans
7234 Dr Martin Luther King Jr St N
Saint Petersburg, FL 33702-5822
dick944@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Holly Crawford [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 8:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Holly Crawford
800 27th Ave N
St Petersburg, FL 33704-2743
crawfordburgos@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Julie Rose [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 6:54 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Julie Rose
1582 Gulf Blvd Apt 1207
Clearwater, FL 33767-2911
julierosefl@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Leticia Malagon [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 7:23 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Leticia Malagon
201 Cordova Grn
Seminole, FL 33777-2248
lamalagon50@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Loretta Wells [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 6:23 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Loretta Wells
Pob
Pinellas Park, FL 33780
ladyacct69@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Pamela Robinson [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 7:53 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Thank you for all that you do.

God
Bless,
Pamela
Robinson

Sincerely,

Miss Pamela Robinson
1437 1/2 Hamlet Ave
Clearwater, FL 33756-2077
pegasuspam920@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ronald Bowen III [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 8:53 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Ronald Bowen III
3925 Belle Vista Dr
St Pete Beach, FL 33706-3811
remember69@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Susan Krawiecki [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 12:52 AM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Susan Krawiecki
3775 59th St N Apt 3
Saint Petersburg, FL 33710-1948
susan.krawiecki@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Tara Hottenstein [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 8:22 PM
To: restore
Subject: [BULK] Thank you for wildlife-friendly restoration!

Importance: Low

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Tara Hottenstein
1314 53rd St S
Gulfport, FL 33707-3522
thottens@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Alysia Thompson [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Alysia Thompson
3812 Anglers Ln
Largo, FL 33774-1002
alysia_256@hotmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of bob kenny [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 10, 2015 1:59 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 10, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. bob kenny
12300seminolebv
Largo, FL 33778-2738
bob.kenny19@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Buster Sanders [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 03, 2015 9:33 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 3, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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Sincerely,

Mr. Buster Sanders
2411 Bay Blvd
Indian Rocks Beach, FL 33785-3090
buster_sanders@hotmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Christiaan Petersen [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 2:23 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

Some of the highest priorities for our community are clean water, abundant fish and wildlife, and improving natural habitats. The projects you selected to complete with the Gulf spill restoration dollars dune walkovers at Ft Desoto Park, coastal ocean monitoring and estuary circulation studies, and impacts of sea level rise will both directly and indirectly help the environment, improve quality of life for locals, attract visitors and in turn boost our economy.

I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Christiaan Petersen
PO Box 66926
St Petersburg, FL 33736-6926
chrisjpetersen@yahoo.co.uk

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Cynthia Bilheimer [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 9:43 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Cynthia Bilheimer
4121 67th Ave N
Pinellas Park, FL 33781-5834
goingndoing@aol.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Deb Kowal [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 6:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Deb Kowal
1110 Granada St
Clearwater, FL 33755-1036
soldbyd@msn.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Elisabeth Carroll [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 9:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Elisabeth Carroll
19201 Vista Ln
Indian Shores, FL 33785-2262
ehcarroll@earthlink.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Daniel Scharaldi [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 12:23 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Daniel Scharaldi
462 Wexford Leas Blvd
Palm Harbor, FL 34683-6136
danscharaldi84@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Donna Ream [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Donna Ream
1026 11th St N
St Petersburg, FL 33705-1116
dream_13_friday@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ernst Angenent [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 11:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Ernst Angenent
425 73rd Ave N
Saint Petersburg, FL 33702-5305
ngnnt@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Falisha Sachon [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 10:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Falisha Sachon
12800 88th Ave
Seminole, FL 33776-2707
carpediem0205@msn.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Gloria Sterling [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 8:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Gloria Sterling
115 1st St E
Bldg 4
Tierra Verde, FL 33715-1772
glsterling@msn.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jacob Wurtz [NationalWildlifeFederation@nwf.org]
Sent: Monday, August 03, 2015 7:06 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 3, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mr. Jacob Wurtz
306 10th Ave NE
St Petersburg, FL 33701-1913
jacob@happyfeet.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Frances Culbertson [NationalWildlifeFederation@nwf.org]
Sent: Tuesday, August 04, 2015 2:19 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 4, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Frances Culbertson
12402 Sunshine Ln
Treasure Island, FL 33706-5036
frances.culbertson@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Guy Hancock [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 5:22 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Dr. Guy Hancock
11371 122nd Ter
Largo, FL 33778-2612
ghancock@sentientllc.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jill Mossor [NationalWildlifeFederation@nwf.org]
Sent: Friday, August 07, 2015 4:05 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 7, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Jill Mossor
542 Division St
Tarpon Springs, FL 34689-3318
jillmossor@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jo Wiest [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 10:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Jo Wiest
705A East Bay Dr Apt 226C
141
Largo, FL 33770-3725
gojojorn@gmail.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of John Randall Johnson [NationalWildlifeFederation@nwf.org]
Sent: Thursday, July 30, 2015 7:52 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 30, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Dr. John Randall Johnson
980 Wood St
Largo, FL 33770-1663
randy_do@verizon.net

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jill Mossor [NationalWildlifeFederation@nwf.org]
Sent: Friday, August 07, 2015 4:05 PM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Aug 7, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Ms. Jill Mossor
542 Division St
Tarpon Springs, FL 34689-3318
jillmossor@yahoo.com

Gonya, Paula

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Joanne Dowell [NationalWildlifeFederation@nwf.org]
Sent: Friday, July 31, 2015 9:53 AM
To: restore
Subject: Thank you for wildlife-friendly restoration!

Jul 31, 2015

Pinellas County RESTORE Act Program Director

Dear RESTORE Act Program Director,

I care deeply about the fish, wildlife, and natural areas in Pinellas County. The 2010 oil spill in the Gulf of Mexico was a horrible tragedy, and it is imperative that we use the restoration funds resulting from the spill to improve the water quality and restore wildlife habitats locally, so we can repair the Gulf Coast as a whole.

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I support the projects that you have selected for this initial round of funding and I encourage you to take a similar approach when additional restoration funds become available.

Sincerely,

Mrs. Joanne Dowell
1858 Elaine Dr
Clearwater, FL 33760-1403
joanne.dowell@raymondjames.com