



FLORIDA DEPARTMENT OF Environmental Protection

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3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

DEP Project #R1804

Project Title:

Fruit Farm Creek Mangrove Restoration Project (FFCMRP)

Applicant:

Rookery Bay National Estuarine Research Reserve

Applicant Contact Information:

FDEP-Florida Coastal Office, Rookery Bay National Estuarine Research Reserve (NERR)

Name: Jeffrey A. Carter, Grant Manager

Address: 300 Tower Road

City: Naples

Zip Code: 34113

Area Code and Telephone Number: (239) 530-5942

E-Mail Address: jeffrey.a.carter@dep.state.fl.us

Sub-Contractor:

Coastal Resources Group

Josh Evans Engineer will be contracted out by the Sub-Contractor

This is a Project Award within the Florida Coastal Office (FCO) through the Florida Resilient Coastlines Program (FRCP) utilizing CSFA #37.098 funds from the FCO via the General Appropriations Act, Florida House Bill No. 5001, Section 5, page 252, #1694 Special Categories, Florida resilient Coastline Initiative. The funding for this project "Fruit Farm Creek Mangrove Restoration Project (FFCMRP) for \$276,948.00.

Any changes to this project award must be approved in writing by the FRCP Administrator.

The following allotments should be charged to:

Grant: R1804

Project: RC1804

Category: 100593

EO: AT

ORG: 3753801005

Total Budget Summary: Complete the amounts affiliated with each task and category for your project.

Task #	Category	Amount
1	Contractual Services	\$ 3,000
2	Contractual Services	\$ 10,000
3	Contractual Services	\$ 18,000
4	Contractual Services	\$ 20,000
5	Contractual Services	\$ 75,000
6	Contractual Services	\$ 15,000
7	Contractual Services	\$ 16,000
8	Contractual Services	\$ 2,000
9	Contractual Services	\$ 10,000
10	Contractual Services	\$ 14,000
11	Contractual Services	\$ 25,000
12	Contractual Services	\$ 67,650
TOTAL FUNDS		\$275,650.00

Total Project Timeline: The tasks must be completed by the corresponding task end date and all deliverables must be received by the designated due date.

Task No.	Task or Deliverable Title	Task Start Date	Task End Date	Deliverable Due Date	Task Funding Amount
1	Draft monitoring plan & coordination with collaborative agencies	2/20/2019	4/1/2019	4/01/2019	\$3,000
2	Determine what, if any, additional permitting is required and coordinate ecological and hydrological input into draft construction plan development.	2/20/2019	6/20/2019	6/20/2019	\$10,000
3	SR 92 Pre-design survey: Survey of right-of-way and 50' sections through project limits	2/14/2019	3/19/2019	3/19/2019	\$18,000
4	Draft monitoring plan development	2/01/2019	4/30/2019	4/30/2019	\$20,000
5	Culvert & roadway design: Complete design-plan set & specifications for construction	2/20/2019	4/30/2019	5/1/2019	\$75,000
6	Structural design of culverts & wingwalls	2/20/2019	4/1/2019	4/1/2019	\$15,000
7	(M.O.T.) Maintenance of traffic design: Prepare & finalize MOT plan to accommodate traffic continuously throughout the project.	2/20/2019	4/1/2019	4/1/2019	\$16,000
8	Response to comments	3/1/2019	5/19/2019	5/30/2019	\$2,000
9	Finalize monitoring plan & attend all required meetings	2/20/2019	6/20/2019	6/20/2019	\$10,000
10	Public utility coordination & relocation: Coordination of all public utilities within construction limits regarding relocation	3/1/2019	6/1/2019	6/1/2019	\$14,000

	and/or preservation of utility lines and infrastructure.				
11	City of Marco Island Right-of-Way (ROW) permitting: Acquire any permits required to allow for needed construction work & set the parameters of the culvert construction. (Marco Island is responsible manager of SR 92 ROW.	2/20/2019	6/1/2019	6/1/2019	\$25,000
12	Purchase of culverts: (Per FDOT) 54" of reinforced concrete pipe at \$275/Linear Foot. Need 3 x 82' of 54" pipe for a total length of 246 Linear Feet.	4/1/2019	6/15/2019	6/15/2019	\$67,650
Grand-Total			\$275,650		

Project Description:

This mangrove hydrologic restoration project is needed in order to re-establish proper hydrologic flow and tidal prism to the existing stressed, dead, and dying areas of mangroves and benthos. Similar past mangrove restorations completed within the Reserve and many others completed throughout Florida and across the globe demonstrate successes of the same kind of restoration proposed for this project. The work to be completed as part of this grant project will be guided overall by Rookery Bay National Estuarine Research Reserve (RBNERR) staff. RBNERR will contract CRG to oversee all tasks including creating a monitoring plan (and related tasks), as well as, oversight and reporting for subcontracting the engineering contractor (JEE) throughout all project design tasks and deliverables. All tasks will result in the procurement of any additional permits needed, and the completion of final construction-level signed and sealed plans.

Project Summary:

Within the RBNERR there is an area of approximately 250 acres of mangroves that are currently dead, dying, or severely stressed, and approximately 800 acres of the adjacent estuary that are impaired due to the lack of full connectivity to these mangroves. This is the result of a roadway (San Marco Road – 92, built pre-1950) that prohibits adequate hydrologic connection and tidal flow. Surface water levels are significantly higher and the hydroperiod is significantly longer in the damaged mangrove area than in adjacent reference sites. Extended periods of flooding within the damaged area have resulted in an expansion of the area of mangrove forest die-off. Furthermore, the movement of fish and invertebrates into and out of the area is very restricted, and the export of detrital material to the adjacent estuary is substantially reduced. As a result, the ecological function this area of RBNERR has been lost or impaired.

This pre-construction work proposed will consist of contracted project planning, coordination, monitoring and reporting, as well as, the required project design and permitting. Coastal Resources Group, Inc. (CRG) will be responsible for all tasks and will sub-contract the engineering work out to Josh Evans Engineering (JEE). There will be required cooperation and communication by these two entities to bring this project phase to a successful completion. Much of the work to be completed by JEE must be guided by the science and monitoring done by CRG. (Following completion of the project, direct measurement of the increased function of restored fish and invertebrate habitat will be made as part of this proposed science-based restoration program.)

Task 1: (\$3,000)

CRG coordination with potential collaborative agencies in preparation for the development of a *draft* comprehensive monitoring plan.

Deliverable 1.1: Report of Agency Outreach to Interested Parties and *Draft* Monitoring Plan.

Completion Date: 4/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 2: (\$10,000)

CRG will contact all required regulatory agencies to determine what and if any additional permitting is required (Collier County, City of Marco Island, State and Federal). Contractor will coordinate with all agencies and partners as needed to produce a draft construction plan. Contractor will also determine (with coordination with RNERR staff, partners, and regulatory staff) what ecological and hydrological input is needed to input into the final Draft version of the project Construction plan(s).

Deliverable 2.1:

Copies of correspondence regarding additional permitting required and/or copies of permits obtained; and draft construction plans including ecological and hydrological considerations.

Completion Date: 6/20/19

*(Deliverables are due no later than 10 days after the completion date).

Task 3: (\$18,000)

CRG will coordinate with sub-contracted engineer to complete a survey of right-of-way and 50' sections through project limits along SR 92 within the project area and as necessary for completion of engineering and development of plans.

Deliverable 3.1:

Copies of engineering plans including right-of-way surveys for 50' sections through the project limits.

Completion Date: 3/19/19

*(Deliverables are due no later than 10 days after the completion date).

Task 4: (\$20,000)

CRG coordination with RBNERR research and stewardship staff in the development of the final version of a *Draft* monitoring plan.

Deliverable 4.1:

Copy of the Final *Draft* Monitoring plan.

Completion Date: 4/30/19

*(Deliverables are due no later than 10 days after the completion date).

Task 5: (\$75,000)

CRG to coordinate with sub-contracted engineer (JEE) to produce a final and complete (signed & sealed) set of full plans laying out all necessary culvert and roadway designs (and related logistics) to fulfill all permit requirements needed to facilitate a full project completion for this restoration project.

Deliverable 5.1:

Complete design-plan set & specifications for construction.

Completion Date: 5/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 6: (\$15,000)

CRG will coordinate with sub-contracted engineer to finalize and complete all necessary design and construction plans for all project needed culverts and wingwalls necessary to meet all permit and restoration requirements.

Deliverable 6.1:

Copies of design and construction plans for project culverts and wingwalls.

Completion Date: 4/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 7: (\$15,000)

Contracted engineer will prepare & finalize Mobilization of Transportation (MOT) plan to accommodate traffic continuously throughout the project. JEE & CRG will work closely with regulatory agencies, Collier County staff, and City of Marco Island staff to insure that all requirements needed to complete this project in a timely manner are successfully planned and executed.

Deliverable 7.1:

Copy of final MOT plan

Completion Date: 4/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 8: (\$2,000)

CRG coordination with written responses to all comments submitted by all partners and collaborative agencies, such as TNC or others. Responses will be written as related to each comment submitted by any and all partners and collaborative entities working with RBNERR on this project.

Deliverable 8.1:

Copies of all comments and responses as described in Task 8.

Completion Date: 5/30/19

*(Deliverables are due no later than 10 days after the completion date).

Task 9: (\$10,000)

CRG contractor will attend all necessary meetings needed to finalize the Monitoring Plan (as directed and required by RBNERR staff and regulatory agencies). CRG will also finalize the writing and editing (as approved by RBNERR staff, and as directed by regulatory agencies if required). This deliverable is to be completed and submitted to RBNERR staff 1 week prior to the stated due date. RBNERR staff will review and then submit to the DEP/FCO Grant office.

Deliverable 9.1:

Copy of Final edited version of project Monitoring Plan as described above.

Completion Date: 6/20/19

*(Deliverables are due no later than 10 days after the completion date).

Task 10: (\$14,000)

CRG will coordinate with sub-contracted engineer to coordinate with all necessary public utilities within construction limits regarding relocation and/or preservation of utility lines and infrastructure.

Deliverable 10.1:

Copy of the list of all completed required public utilities relocations and preservations.

Completion Date: 6/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 11: (\$25,000)

Contracted engineer will partner with CRG to acquire any permits required to allow for needed construction work & set the parameters of the culvert construction. (Marco Island is responsible manager of SR 92 ROW.

Deliverable 11.1:

List of right-of-way permits required and copies of any right-of-way permits applied for and/or acquired.

Completion Date: 6/01/19

*(Deliverables are due no later than 10 days after the completion date).

Task 12: (\$67,650)

CRG will coordinate with sub-contracted engineer to purchase needed culverts for this project. (Per FDOT average cost of material, the 54" Reinforced Concrete Pipe cost \$275 / LF. We need 3 x 82' of 54" pipe for a total length of 246 LF = \$67,650

Deliverable 12.1:

Receipts for purchase of culverts as described in Task 12 above.

Completion Date: 6/15/19

*(Deliverables are due no later than 10 days after the completion date).