

LFIR # 1564

Brevard County Sykes Creek Phase 2 Environmental Dredging and Interstitial Water Treatment

2. Senate Sponsor Debbie Mayfield

3. Date of Request 02/15/2023

4. Project/Program Description

Building on the approximate 100,000 cubic yards of decaying muck removed in Phase 1, in Phase 2, approximately 250,000 cubic acres of organic muck will be removed from Sykes Creek and adjacent residential canals in the Banana River via environmental dredging and treatment of interstitial water. The Phase 2 project location consists of approximately 45 acres of submerged land next to the Ulumay Wildlife Sanctuary. Phase 2 dredging and treatment of interstitial water is estimated to reduce the annual nitrogen flux by roughly 25,000 pounds and phosphorus flux by greater than approximately 400 pounds. This will increase oxygen, reduce algae blooms, fish kills and the accumulation of toxic hydrogen sulfide, as well as help to preserve healthy, adjacent sediments that provide habitat for marine life and promote ecosystem services like coupled nitrification-denitrification to mitigate excess nitrogen.

5. State Agency to receive requested funds

Department of Environmental Protection

State Agency contacted? No

6. Amount of the Nonrecurring Request for Fiscal Year 2023-2024

Type of Funding	Amount
Operations	0
Fixed Capital Outlay	8,648,004
Total State Funds Requested	8,648,004

7. Total Project Cost for Fiscal Year 2023-2024 (including matching funds available for this project)

Type of Funding	Amount	Percentage
Total State Funds Requested (from question #6)	8,648,004	50%
Matching Funds		
Federal	0	0%
State (excluding the amount of this request)	0	0%
Local	8,648,004	50%
Other	0	0%
Total Project Costs for Fiscal Year 2023-2024	17,296,008	100%

8. Has this project previously received state funding? No

Fiscal Year	Amount		Specific	Vetoed	
(уууу-уу)	Recurring	Nonrecurring	Appropriation #		

9. Is future funding likely to be requested?

No

a. If yes, indicate nonrecurring amount per year.

b. Describe the source of funding that can be used in lieu of state funding.



10. Has the entity requesting this project received any federal assistance related to the COVID-19 pandemic?

Yes

If yes, indicate the amount of funds received and what the funds were used for.

ARPA: 1st tranche of \$58.5M went to Infrastructure, Revenue Replacement & Vaccine Incentive. 2nd tranche of \$58.5M went to qualified expenditures including Infrastructure, Negative Economic Impacts, Public Health & Revenue Replacement. CARES Act: \$105M for Public Safety Needs & Economic Support; \$20.4M for Transit, Housing, Fire Rescue, Valkaria Airport, & Sheriff's Community Programs: \$32.6M for Emergency Rental Assistance; \$6.6M for HUD Programs, \$4.2M for Housing Programs; \$3M for Transit.

Complete questions 11 and 12 for Fixed Capital Outlay Projects

11. Status of Construction

a. What is the current phase of the project?

OPlanning ODesign OConstruction

b. Is the project "shovel ready" (i.e permitted)?

c. What is the estimated start date of construction?

Yes	
03/01/2022	
1/1/2030	

d. What is the estimated completion date of construction?

12. List the owners of the facility to receive, directly or indirectly, any fixed capital outlay funding. Include the relationship between the owners of the facility and the entity.

N/A - Does not pertain to environmental demucking of state submerged lands.

13. Details on how the requested state funds will be expended

Spending Category	Description	Amount		
Administrative Costs:				
Executive Director/Project Head Salary and Benefits		0		
Other Salary and Benefits		0		
Expense/Equipment/Travel/Supplies/ Other		0		
Consultants/Contracted Services/Study		0		
Operational Costs: Other				
Salary and Benefits		0		
Expense/Equipment/Travel/Supplies/ Other		0		
Consultants/Contracted Services/Study		0		
Fixed Capital Construction/Majo	r Renovation:			
Construction/Renovation/Land/ Planning Engineering	Construction and construction oversight. Data collection and permitting are complete. Construction for Phase 2 is anticipated to begin 10/01/2023 and the project is anticipated to take up to 7 years.	8,648,004		
Total State Funds Requested (m	ust equal total from question #6)	8,648,004		



14. Program Performance

a. What specific purpose or goal will be achieved by the funds requested?

This project will remove accumulations of muck from Sykes Creek and adjacent residential canals in the Banana River via environmental dredging. The Phase 2 project location consists of 167 acres of submerged land along Sykes Creek next to the Ulumay Wildlife Sanctuary. Phase I is removing approximately 100,000 cubic yards of muck. There is about 500,000 cubic yards of decaying muck in the Phase II area. Phase II dredging and treatment of interstitial water is estimated to reduce the annual nitrogen flux by 33,000 pounds and phosphorus flux by greater than 400 pounds This will increase oxygen, reduce algae blooms and fish kills, as well as help to preserve healthy, adjacent sediments that provide habitat for marine life and promote ecosystem services to mitigate excess nitrogen pollution.

b. What activities and services will be provided to meet the intended purpose of these funds?

Environmental dredging of muck, dewatering of the dredged slurry and advanced treatment of the interstitial water (similar to advanced wastewater treatment) before it is discharged to the lagoon. Solids may be used as a soil amendment on agricultural lands distant from the Indian River Lagoon.

c. What direct services will be provided to citizens by the appropriation project?

Restoration of healthy sediments for seagrass, marine habitat and to promote ecosystem services like coupled nitrification-denitrification; reduced turbidity, total suspended solids, nutrient release, sulfuric acid and sediment oxygen demand; improved water clarity, water quality, light penetration, and dissolved oxygen levels; decreased potential and severity for algal blooms and fish kills.

d. Who is the target population served by this project? How many individuals are expected to be served?

The entire population of Brevard County (~660,000), tourists engaging in lagoon-dependent activities as well as local and state economic sectors tied to the health of the Indian River Lagoon.

e. What is the expected benefit or outcome of this project? What is the methodology by which this outcome will

be measured?

The expected benefit of this project is the reduction of nutrient input, turbidity, and total suspended solids from muck in the Indian River Lagoon as well as preventing the degrading of nearby healthy, sandy sediments. Muck area, volume and associated nutrient content removed from the lagoon will be measured in acres, cubic yards and tons. Combined dredging and treatment of interstitial water is estimated to reduce annual nitrogen and phosphorous flux by approximately 33,000 pounds and greater than approximately 400 pounds, respectively. Water quality improvements (nutrient concentrations, water clarity, turbidity, total suspended solids, light penetration, dissolved oxygen, and bloom levels) will be recorded using pre- and post-project monitoring data from stations operated by SJRWMD or Florida Tech and located near the project. Return water will be tested frequently for nutrient concentrations.

f. What are the suggested penalties that the contracting agency may consider in addition to its standard penalties

for failing to meet deliverables or performance measures provided for the contract?

Past performance should be taken into account by bill sponsors. Brevard County continues to meet its deliverables, however there could be a penalty of non-payment until contractual obligations are met.

15. Requester Contact Information

a. First Name	Virginia	Last Name	Barker	
b. Organization	Brevard County			
c. E-mail Address	virginia.barker@brevardfl.	gov		
d. Phone Number	(321)633-2016	Ext.		
16. Recipient Contact Information				

a. Organization Brevard County



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b. Municipality and	County Breva	ırd			
c. Organization Typ	be				
□For Profit Entity					
□Non Profit 501(c)(3)				
□Non Profit 501(c)(4)				
☑Local Entity					
□University or Co	lege				
□Other (please sp	ecify)				
	• •				
d. First Name	Jeanne		Last Name	Allen	
e. E-mail Address	jeanne.allen@b	revardfl.gc	V		
f. Phone Number	(321)633-2016				
Lobbyist Contact I	nformation				
a. Name	Ronald L. Book				
b. Firm Name	Ronald L. Book	PA			
c. E-mail Address	ron@rlbookpa.c	om			
d. Phone Number	(305)935-1866				

Please complete the questions below for Water Projects only.

18. Have you applied for alternative state funding?

□ Waste Water Revolving Loan

- Drinking Water Revolving Loan
- □ Small Community Wastewater Treatment Grant

□ Other (please specify)

☑ N/A

17.

19. What is the population economic status?

- □ Financially Disadvantaged Community (ch. 62-552, F.A.C)
- □ Financially Disadvantaged Municipality (ch. 62-552, F.A.C)
- □ Rural Area of Economic Concern
- □ Rural Area of Opportunity (s. 288.0656, Florida Statutes)



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⊠ N/A

20. What is the status of construction?

Dredging permits acquired for Phase I and Phase 2

21. What percentage of the construction has been completed?

50% of Phase I, 0% of Phase II

22. What is the estimated completion date of construction?

01/01/2030