



Beach Management Funding Assistance Program
Local Government Funding Request
Fiscal Year 2022/2023
Inlet Projects Application

PART I: GENERAL INFORMATION

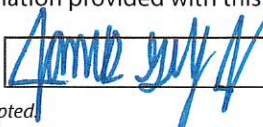
Local Sponsor	Sebastian Inlet District		
Federal ID Number (FEID)	592073525		
Primary Contact Name	James Gray, Jr	Title	Executive Director
Mailing Address Line 1	114 Sixth Ave.		
Mailing Address Line 2			
City	Indialantic	Zip Code	32903
		Telephone Number	321-724-5175
Email Address	jgray@sitd.us		

Additional Contact Information

Dave Kershaw
Sr. Accountant/Contracts Manager
Email - dkershaw@sitd.us
Office - 321-724-5175

PART II: CERTIFICATION

I hereby certify that all information provided with this application is true and complete to the best of my knowledge.

Signature of Local Sponsor 

Electronic or scanned signatures accepted

Printed Name James Gray, Jr.

Date 7/22/21



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PART III: EVALUATION CRITERIA

1. Project Name: As listed in the Inlet Management Plan (IMP) or Strategic Beach Management Plan (SBMP)

Sebastian Inlet (IMP) Implementation

2. Project Description: Include county, location with reference to DEP range monuments, brief project history, and description of proposed activities.

Sebastian Inlet forms the border between Brevard and Indian River Counties.

The project area is located between:

Brevard County, R-215 through R-219 and Indian River County, R-1 through R-17

Since 1918, numerous efforts to establish and stabilize Sebastian Inlet for navigation have occurred resulting in the construction of jetties and a sand trap. The current structural configuration consists of a north jetty approximately, 1,600 feet in length, and a southern jetty of approximately 1,200 feet. The sand trap has a design capacity of approximately 200,000 cubic yards.

The inlet channel, sand trap and associated structures are maintained by the Sebastian Inlet District Commission. Maintenance dredging of the channel and sand trap occur periodically, with placement of suitable material on the downdrift beaches located south of the inlet.

The District Inlet Management Plan was adopted in 2000 and reviewed in 2005 via the Technical Advisory Committee (TAC) process.

Since 2000, the District has placed 826,470 cubic yards of sand on the beach within the permitted template. In 2010-2011 the Inlet District partnered with Indian River County to fund the placement of approximately 298,700 cubic yards of sand on their Sector 3 beach project approximately six miles south of the inlet (R-20 to R-40). This material was trucked from an upland sand source. This additional material placed downdrift increases the volume bypassed to approximately 1,065,120 cubic yards.

In 2011, the design, permitting and construction of the Dredged Material Management Area (DMMA) was covered under a cost-share agreement between the Sebastian Inlet District and the DEP Bureau of Beaches and Coastal Systems, DEP Agreement No. 08IR1. This permanent facility, with a capacity of more than 30,000 cubic yards, allows the District to respond to storm events by repairing eroded dune and beach features with stockpiled sand. The District has implemented this strategy on four occasions between 2013 and 2021 placing between 30,000 and 60,200 cubic yards on the dune face.

Proposed activities over the next 20 years involve major dredging events of the Sand Trap and channel resulting in the placement of approximately 150,000 cubic yards on the beach every 4-5 years. During each major dredging event, at least 30,000 cubic yards will be placed in the DMMA to create a stockpile of beach quality sand. This material will be truck hauled to the beach in response to storm events during interval dredging years. Additional activities will include physical and biological monitoring of the project area with particular emphasis on hardbottom, shorebird and sea turtle monitoring.



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3. Use of Requested Program Funds: Provide a brief description of tasks to be completed in each requested phase (Feasibility, Design, Construction, or Monitoring). Indicate which tasks are cost reimbursement from previous fiscal years.

For FY 2022/2023 requested funds will be for:

1. The continuation of post-construction physical and biological monitoring (Year 2).
2. Feasibility Study - Inlet Management Plan Update

4. Map: Provide as an attachment.

- **Format:** The project area must be formatted at a minimum of 1" = 200' scale and include a compass rose and legend.
- **Required elements:** Project boundary, DEP reference monuments, shoreline designated as critically eroded, area of inlet influence, and permitted sand bypassing placement area

5. Project length: Total restored project boundary (in feet) as listed in the IMP or SBMP.

17,000 ft. downdrift

6. Schedule and Budget: Provide as a separate attachment, if needed. Clearly indicate project phase: Feasibility (F), Design (D), Construction (C), or Monitoring (M). Include the year of post-construction monitoring in the description.

- **Cost Reimbursement:** Specify eligible costs incurred during the three years prior to the current application's fiscal year that are not in a current DEP agreement and have not been reimbursed (this includes fiscal years 19/20, 20/21, and 21/22). Eligible costs will be added to the current funding request.
- **Current and Future Costs:** Specify eligible costs for the current application's fiscal year that are not in a current DEP agreement and have not been reimbursed as well as the estimated costs for the next 4 years. Note: If Construction costs are requested in the current fiscal year, then the Year 1 Post-Construction Monitoring costs will be added to the current funding request.

Fiscal Year	Project Phase	Description	Federal Cost	State Cost	Local Cost	Total Cost
19/20						
19/20						
19/20						
20/21						
20/21						
20/21						



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Fiscal Year	Project Phase	Description	Federal Cost	State Cost	Local Cost	Total Cost
21/22						
21/22						
21/22						
22/23		Please see the attached for additional information				
22/23						
22/23						
23/24						
23/24						
23/24						
24/25						
24/25						
24/25						
25/26						
25/26						
25/26						
26/27						
26/27						
26/27						

Additional Documentation LGFR FY 22/23 - Sebastian Inlet District
Question 6 - Schedule and Budget

Year	Phase	Description	State %	Total Estimated Cost	Federal Cost Share	State Cost Share	Local Cost Share
22/23	Monitoring	Physical - Year 2	50%	\$30,000	\$0	\$15,000	\$15,000
		Biological	50%				
		Sea Turtle - Year 2	50%	\$125,000	\$0	\$62,500	\$62,500
		Hardbottom - Year 2	50%	\$125,000	\$0	\$62,500	\$62,500
		Sea Grass - Year 2	50%	\$35,000	\$0	\$17,500	\$17,500
	Feasibility	IMP Update	50%	\$150,000	\$0	\$75,000	\$75,000
23/24	Monitoring	Physical - Year 3	50%	\$30,000	\$0	\$15,000	\$15,000
		Biological	50%				
		Sea Turtle - Year 3	50%	\$125,000	\$0	\$62,500	\$62,500
		Hardbottom - Year 3	50%	\$125,000	\$0	\$62,500	\$62,500
		Sea Grass - Year 3	50%	\$35,000	\$0	\$17,500	\$17,500
24/25	Engineering	Bidding/Const. Managt	50%	\$150,000	\$0	\$75,000	\$75,000
	Construction	Bypass - Mob, Dredging	50%	\$3,500,000	\$0	\$1,750,000	\$1,750,000
	Monitoring	Physical and Biological	50%	\$315,000	\$0	\$157,500	\$157,500
25/26	Monitoring	Physical - Year 1	50%	\$35,000	\$0	\$17,500	\$17,500
		Biological					
		Sea Turtle - Year 1	50%	\$135,000	\$0	\$67,500	\$67,500
		Hardbottom - Year 1	50%	\$135,000	\$0	\$67,500	\$67,500
		Sea Grass - Year 1	50%	\$37,500	\$0	\$18,750	\$18,750
26/27	Sup Bypass	Truck Haul from DMMA	50%	\$800,000	\$0	\$400,000	\$400,000
	Engineering	Bidding/Const. Managt.	50%	\$125,000	\$0	\$62,500	\$62,500
	Monitoring	Physical and Biological	50%	\$342,500	\$0	\$171,250	\$171,250
27/28	Monitoring	Physical and Biological					

28/29	Engineering	Bidding/Const. Managt.					
	Construction	Bypass - Mob, Dredging					
	Monitoring	Physical and Biological					
29/30	Monitoring	Physical and Biological					
Year	Phase	Description		Total Estimated Cost	Federal Cost Share	State Cost Share	Local Cost Share
30/31	Monitoring	Physical and Biological					
31/32	Sup Bypass	Truck Haul from DMMA					
	Engineering	Bidding/Const. Managt.					
	Monitoring	Physical and Biological					



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7. Sand reaching the inlet

Provide the estimated annual quantity (cubic yards) of beach quality sand reaching the updrift boundary of the improved jetty or inlet channel:

150,000 cubic yards

8. Severity of erosion

Provide the annual bypassing objective (cubic yards/year) adopted by the IMP or SBMP or as determined by a Department-approved study:

70,000 cubic yards

9. Balancing the sediment budget

Provide the current annual average of bypassed material (cubic yards) since the adoption of a bypass objective:

50,720 cubic yards

Provide a brief description of when the last sediment budget engineering analysis was completed for the inlet and area of inlet influence. Discuss any proposals to update the sediment budget.

Please see the attached for additional information.

Additional Documentation LGFR FY21/22

Question 9 - Balancing the Sediment Budget

Completed April 2021, the annual update of the State of Sebastian Inlet includes five major areas of work: 1) an update of the analysis of volume contained in the sand reservoirs of the inlet system, 2) analysis of morphologic changes within the inlet system, 3) analysis of the sand budget based on the results of the sand volume analysis, 4) an update of the shoreline change analysis, and 5) numerical modeling analysis of hurricane impacts and infilling patterns of the sand trap. The volumetric analysis includes the major sand reservoirs within the immediate inlet system and sand volumes within the extended sand budget cells to the north and south of Sebastian Inlet. The volume analysis for each inlet sand reservoir extends over the 14-year period between 2006 to 2020.

Similar to the sand volume analysis, the results of shoreline mapping from survey data and aerial imagery vary considerably by time scale. During the 14-year time scale from 2006 to 2020, shoreline changes south of the inlet reflect the position of beach fill placement in 2007, 2011, 2012, 2014, 2015, 2019, and 2020. These beach nourishment projects provided sections of advancing or stable shoreline. The influence of sand placement from the sand trap excavation in 2014 and 2019 along with the benefits of a recent 3-year period of falling sea level can be seen in the shoreline accretion between 2013 and 2020 and in the comparison of the 2016-2020 shoreline positions.

The sand budget for the Sebastian Inlet region is reported at three-time scales, including a longer time scale of 10 years, a time scale of 5 years, and a shorter time scale of 3 years.

Over the time period of 2006-2020, the benefits of sand by-passing from the sand trap and beach fill placement projects to the south of the inlet can be shown to mitigate sand volume losses on the south side of Sebastian Inlet even when other areas are losing sand volume (State of Sebastian Inlet Report: 2020)



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Historical bypassing volumes: In the table below, provide the annual bypassing volumes (cubic yards/year), for the previous ten years (from the last calendar year or the most recent calculation). Attach additional documentation as needed.

Year	Quantity Bypassed (cy) - Sand Transfer Plant	Quantity Bypassed (cy) - Dredging	Dredge Location	Placement or Disposal Area
2009				
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
Total per method				

Total bypass volume:

Years since IMP adoption:

Annual average bypass:

Bypass objective:

Percentage of bypass objective:

**Sebastian Inlet District
Historical Bypassing Volumes - 2009-2020 (IRC R-1 - R-40)
LGFR FY 22/23**

Year	Quantity Bypassed (CY)	Source of Beach Compatible Material	Placement or Disposal Area
1999/2000			IMP Adopted
2009/2010			
* 2010/2011	298,850	Approved Upland Sand Mine	IRCo Sector 3 - SID Partner R-20 - R-40
2011/2012	119,900	Sand Trap	R-6 to R-17
2012/2013			
2013/2014	34,600	DMMA + Approved Upland Sand Mine	R-6 to R-17
2014/2015	111,200	Sand Trap	R-6 to R-17
2015/2016	55,800	DMMA + Approved Upland Sand Mine	R-6 to R-17
2016/2017			
2017/2018	30,700	DMMA	R-6 to R-17
2018/2019	113,570	Sand Trap	R-10 to R-17
2019/2020			R-10 to R-17
**2020/2021	60,200	DMMA	R-10 to R-17
Total Bypass Volume (CY)	764,620		
Years since IMP adoption	20		
Annual average bypass	76,462		
***Bypass Objective (2009-2020) (CY)	90,000		
Percentage of Bypass Objective	84.96%		

* SID funded IRC Sector 3 Beach Nourishment - ILA (2007,2008, 2010)

**Placement not included in the bypassing volumes at this time

*** Although not adopted formally by Sebastian Inlet District, FDEP bypass objective is 90 KCY (FDEP 2008)



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10. Increased bypassing and cost-effectiveness

Provide the estimated increase in annual bypassing of sand (cubic yards/year) proposed for the project:

none proposed

Provide the estimated shortfall of annual bypassing of sand (cubic yards/year) within the inlet system:

no shortfall reported

Is the proposed project requesting construction phase funds for a major inlet management project component?

If yes, and for the award of points for the cost-effectiveness of using inlet sand criteria, provide an opinion of probable cost per unit volume of the inlet and all other sand sources, certified by a licensed professional engineer.

11. Inlet Management Plans

Select all that apply:

- ☒ **Existing IMP:** The proposed project has an existing IMP or completed Inlet Management Study that has been approved by the Department.
- ☐ **Updated IMP:** The Department has received and approved an update to an existing IMP in the form of a current Inlet Management Study/sediment budget analysis within the previous five years, or there is an update proposed to an existing IMP in the current application.
- ☐ **New IMP:** A new inlet management study is proposed for submission to the Department for an adoption in an IMP.

12. Enhanced longevity of proximate beach nourishment projects

Annualized beach nourishment volume of proximate beach nourishment project:

13. Active permits

Does the project have an active state permit?

Yes

Permit number:

0270746-006-JC

Authorization date:

October 1, 2013

Expiration date:

October 1, 2028

Does the project have an active federal permit?

No

Permit number:

SAJ-1992-01224 (in permit renewal)

Authorization date:

October 4, 2013

Expiration date:

May 4, 2020



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14. Federal funds available

Does the proposed project have federal funds available? If so, provide supporting documentation.

No

15. Secured local funds

Has the necessary local funding been secured for the proposed project? If so, provide a copy of the draft Resolution. The signed Resolution is due by September 21, 2021.

Yes

Additional
comments

RESOLUTION NO. 08-11-21 -XXX

**A RESOLUTION OF THE BOARD OF COMMISSIONERS OF
THE SEBASTIAN INLET DISTRICT, SUPPORTING PROPOSED SEBASTIAN
INLET SAND TRANSFER AND MONITORING PROJECTS AND COOPERATION
WITH FLORIDA'S BEACH MANAGEMENT PROGRAM**

BE IT HEREBY RESOLVED that the Board of Commissioners of the Sebastian Inlet District supports proposed Sebastian Inlet sand transfer projects, including dredging of the Inlet Sand Trap and channel, and post-construction monitoring, and providing local cost-share for a cooperative agreement with Florida's Beach Management Program.

BE IT ALSO RESOLVED that the Board of Commissioners of the Sebastian Inlet District authorizes Executive Director, James Gray, Jr. to apply to the Florida Department of Environmental Protection for cost-sharing for the fiscal year 2022-2023.

THIS RESOLUTION shall become effective on August 11, 2021.

Upon motion by Commissioner _____ and second by Commissioner _____,
the Board approved the Resolution as follows:

Lisa Frazier _____
Chris Hendricks _____
Beth Mitchell _____
Jenny Lawton Seal _____
Michael Rowland _____

2021 The Chair thereupon declared the resolution duly passed and adopted this 11th day of August

SEBASTIAN INLET DISTRICT

By: _____
Jenny Lawton Seal, Chairman

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY

By: _____
Jack Kirschenbaum
Attorney for Sebastian Inlet District