



Beach Management Funding Assistance Program
Local Government Funding Request
Fiscal Year 2023/2024
Inlet Projects Application

PART I: GENERAL INFORMATION

Local Sponsor

Federal ID Number (FEID)

Primary Contact Name Title

Mailing Address Line 1

Mailing Address Line 2

City Zip Code Telephone Number

Email Address

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

Date



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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 - R-219) and Indian River County (R-1 - 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 approximately 1,200 feet in length. The sand trap has a designed sediment volume 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 beach compatible material on the downdrift beaches located south the of inlet.

The District's Inlet Management Plan was adopted in 2000, revised in 2005 via a Technical Advisory (TAC) and is currently undergoing a 2022 TAC update.

Since 2000, the District has placed 826,195 cubic yards of sand on the beach within the permitted template. In 2010-2011 the District partnered with Indian River County to fund the placement of approximately 298,580 cubic yards of trucked upland sand on their Sector 3 project between R-20 and R-40. The total District sediment bypassing (2000-2021) is approximately 1,125,045 cubic yards.

In 2011, the design, permitting and construction of a Dredged Material Management Area (DMMA) was covered under FDEP cost share agreement 08IR1. Under FDEP State Lands Easement No. 32057, the DMMA has a capacity of more than 30,000 cubic yards, allows the District to efficiently sort dredged materials for sediment bypassing and the ability to stockpile sand for rapid dune repair following significant storm events.

Future Inlet management plan activities include continuing sediment bypassing of dredged sand trap and channel materials at a frequency of every 4-6 years, supplemental upland sand truck haul bypassing and post project permit required monitoring (physical, biological and sea turtle).



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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.

FY 2023/2024 requested funds are for:

1. The continuation of post-construction physical and biological monitoring (Year 3)
2. Supplemental sediment bypassing project – Upland Truck Haul
- Approximate volume up to 30,000 CY

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 20/21, 21/22, and 22/23). 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
20/21		N/A				
20/21						
20/21						
21/22		N/A				
21/22						
21/22						

Additional Documentation LGFR FY 23/24 - Sebastian Inlet District
Question 6 - Schedule and Budget

Year	Phase	Description	State %	Total Estimated Cost	Federal Cost Share	State Cost Share	Local Cost Share
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
	Engineering	Bidding/Const. Managt	50%	\$125,000	\$0	\$62,500	\$62,500
	Construction	Upland Truck Haul	50%	\$1,125,000	\$0	\$562,500	\$562,500
24/25	Monitoring	Physical - Year 1	50%	\$35,000	\$0	\$17,500	\$17,500
		Biological	50%				
		Sea Turtle - Year 1	50%	\$150,000	\$0	\$75,000	\$75,000
		Hardbottom - Pre Const.	50%	\$150,000	\$0	\$75,000	\$75,000
		Sea Grass - Pre Const.	50%	\$40,000	\$0	\$20,000	\$20,000
24/25	Engineering	Bidding/Const. Managt	50%	\$200,000	\$0	\$100,000	\$100,000
	Construction	Bypass - Mob, Dredging	50%	\$5,800,000	\$0	\$2,900,000	\$2,900,000
25/26	Monitoring	Physical - Year 1	50%	\$400,000	\$0	\$200,000	\$200,000
		Biological					
		Sea Turtle - Year 1	50%	\$160,000	\$0	\$80,000	\$80,000
		Hardbottom - Year 1	50%	\$160,000	\$0	\$80,000	\$80,000
		Sea Grass - Year 1	50%	\$45,000	\$0	\$22,500	\$22,500
26/27	Sup Bypass	Truck Haul from DMMA	50%	\$1,500,000	\$0	\$750,000	\$750,000
	Engineering	Bidding/Const. Managt.	50%	\$150,000	\$0	\$75,000	\$75,000
	Monitoring	Physical and Biological	50%	\$350,000	\$0	\$175,000	\$175,000
27/28	Monitoring	Physical and Biological	50%	\$350,000	\$0	\$175,000	\$175,000



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Fiscal Year	Project Phase	Description	Federal Cost	State Cost	Local Cost	Total Cost
22/23		N/A				
22/23						
22/23						
23/24		Please see attached for additional information				
23/24						
23/24						
24/25						
24/25						
24/25						
25/26						
25/26						
25/26						
26/27						
26/27						
26/27						
27/28						
27/28						
27/28						



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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:

2008 SBMP = 90,000 Cubic Yards

9. Balancing the sediment budget

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

65,039 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

Sebastian Inlet District

Historical Bypassing Volumes - Without IRC Nourishment on Sectors 1 and 2 2008-2021 (IRC R-1 - R-40)

LGFR FY 23/24 Question 9 - Balancing the Sediment Budget

Year	Quantity Bypassed (CY)	Source of Beach Compatible Material	Placement or Disposal Area
1999/2000			IMP Adopted
2008			Bypass Objective Update FDEP SBMP
2007/2008	86,000	Sand Trap	IRCo & SID Sectors 1&2 - R-4 to R-17
2008/2009			
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	59,925	DMMA	R-10 to R-17
Total Bypass Volume (CY)	910,545		
Years since IMP adoption (2008 SBMP)	14		
Bypass Objective 2008-2021 (90,000 CY/Yr)	1,260,000		
Surplus (Deficit) (CY)	-349,455		
Annual Average of Bypassed Material (CY)	65,039		
Percentage of Bypass Objective	72.27%		

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

Additional Documentation LGFR FY23/24

Question 9 - Balancing the Sediment Budget

Over the past 14 years and since the revised bypassing objective of 90,000 CY/YR was established in 2008, there has been an annual bypass volume of 65,039 CY/YR through 2021. The bypass rate is 72.27% of the bypass objective.

Completed May 2022, 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 15-year period between 2006 to 2021.

Similar to the sand volume analysis, the results of shoreline mapping from survey data and aerial imagery vary considerably by time scale. During the 15-year time scale from 2006 to 2021, shoreline changes south of the inlet reflect the position of beach fill placement in 2007, 2011, 2012, 2014, 2015, 2019, 2020 and 2021. 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 4-year period of falling sea level can be seen in the shoreline accretion between 2013 and 2021 and in the comparison of the 2016-2021 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 2006-2021, 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: 2022)

In addition to the annual State of the Sebastian Inlet Reports (2007-2022), on January 26, 2022, Sebastian Inlet District and FDEP convened an Inlet Management Plan – Technical Advisory Committee (TAC) to discuss and update the sediment budget and area of inlet influence. The TAC is anticipated to continue through the end of 2022.



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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
2010				
2011				
2012				
2013				
2014				
2015				
2016			Please see the attached	
2017				
2018				
2019				
2020				
2021				
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 - 2010-2021 (IRC R-1 - R-40)
LGFR FY 23/24

Year	Quantity Bypassed (CY)	Source of Beach Compatible Material	Placement or Disposal Area
1999/2000			IMP Adopted
* 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	59,925	DMMA	R-10 to R-17
Total Bypass Volume (CY)	824,545		
Years since IMP adoption	21		
Annual average bypass	82,455		
**Bypass Objective (2009-2021) (CY)	90,000		
Percentage of Bypass Objective	91.62%		

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

** 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? No

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:

100% - Ambersand (R-3 - R-17)

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?

Permit number: SAJ-1992-01224

Authorization date: October 4, 2013

Expiration date: Permit Renewal Expected August 2022



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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 October 5, 2022.

Yes

Additional
comments

RESOLUTION NO. 07.13.22.01

**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**

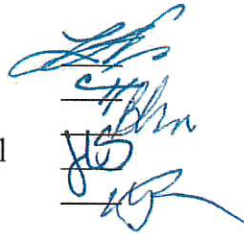
BE IT HEREBY RESOLVED that the Board of Commissioners of the Sebastian Inlet District supports proposed Sebastian Inlet sand transfer projects, including dredging of the Inlet Sand Trap and channel, and post-construction monitoring, and providing local cost-share for a cooperative agreement with Florida's 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 2023-2024.

THIS RESOLUTION shall become effective on July 13, 2022.

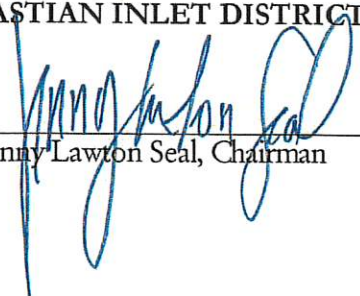
Upon motion by Commissioner Frazier and second by Commissioner Mitchell, the Board approved the Resolution as follows:

Lisa Frazier
Chris Hendricks
Beth Mitchell
Jenny Lawton Seal
Michael Rowland

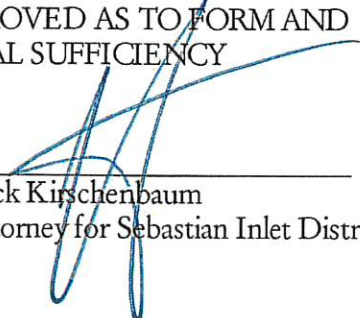


The Chair thereupon declared the resolution duly passed and adopted this 13th day of July 2022

SEBASTIAN INLET DISTRICT

By: 
Jenny Lawton Seal, Chairman

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY

By: 
Jack Kirschenbaum
Attorney for Sebastian Inlet District