

FY2022/2023 Local Government Funding Request

Final Beach Project Assessment

Project Name	Brevard County Shore Protection Project - North and South Reaches
Local Sponsor	Brevard County

Initial Assessment	8/12/2021
Group Assessment	8/20/2021
Draft Assessment	8/31/2021
Final Review	10/5/2021

Project Description
The Brevard County Shore Protection Project - North and South Reaches is located between DEP monuments R1 and R54.5 and R118.3 and R141.1 in Brevard County. The North Reach was restored in 2000/2001 and the South Reach was restored in 2002/2003. Nourishments have been completed in 2005 (both Reaches), 2010 (South Reach), 2013/2014 (both Reaches), 2017/2018 (both Reaches) and 2020/2021 (both Reaches) to repair storm losses as needed. The requested funds are for reimbursement of the non-federal portion of the 2020/2021 South Reach nourishment, reimbursement of during, immediate, and year 1 post-construction monitoring for both Reaches, and upcoming year 2 post-construction monitoring for both Reaches. Staff have determined that 100% of the project is eligible for state cost sharing.

Funds will be used for (list project phase, specify which phase is reimbursement, if applicable)
Construction (FY20/21 reimbursement) and Monitoring (FY22/23 and reimbursement for FY20/21)

State cost share %	50.00%
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Project Budget Table					
	State %	Federal	State	Local	Total
Feasibility	0.00%	\$0	\$0	\$0	\$0
Design	0.00%	\$0	\$0	\$0	\$0
Construction	50.00%	\$12,731,197	\$834,402	\$834,402	\$14,400,000
Year 1 Monitoring	50.00%	\$0	\$150,000	\$150,000	\$300,000
Year 2+ Monitoring	50.00%	\$0	\$195,000	\$195,000	\$390,000
Total Project Costs		\$12,731,197	\$1,179,402	\$1,179,402	\$15,090,000

Federal cost share %	88.41%
Federal agency and description	USACE. North Reach has a 100% federal cost share and South Reach has a 56.3% federal cost share. North Reach is 70.3% of the project shoreline and South Reach is 29.7% of the project shoreline.

TOTAL PROJECT SCORE (100 points)	51.7
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Coastal Engineering note: The Construction phase funding request is for the South Reach 2021 project, therefore the pre-construction data is used for the South Reach segment where applicable.

Tier 1

Tourism-related impacts

Return on investment (10 points)	Score	4.7
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Local Sponsor: Project is requesting construction funds.

Department: Verified

Construction + Year 1 Monitoring Cost: \$984,402.00

Value: 27.8

Economic impact (10 points)	Score	1.3
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Local Sponsor: N/A

Department: Brevard County, 2020 data. Tourism-related sales tax data = \$27,321,782.82. County sales tax collections = \$541,662,333.79

Value: 5.04

Tier 2

Federal involvement

Federal authorization (5 points)	Score	5
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Local Sponsor: The Project is federally authorized by the USACE

Department: Verified

Federal cost share (5 points)	Score	5
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Local Sponsor: 88.41% for Construction

Local Sponsor: The North Reach is 100% federally cost-shared, while the South Reach is federally cost-shared at 56.3%. Overall, this calculates to a federal cost share of 88.41% over the entire project length.

Department: Federal cost share percentage only from the USACE, cost share from FCCE is not eligible for inclusion. The federal cost share of the project is 56.3%.

Department: Based on the Local Sponsor's submitted information and documentation, the 88.41% federal cost share is verified for the Project.

Federal funds available (5 points)	Score	5
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Local Sponsor: Federal funds already spent on project as part of USACE Work Plan. A signed PPA for the project exists.

Department: Verified

Storm damage reduction benefits

Current conditions (8 points)	Score	0
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Local Sponsor:

Because after the fact reimbursement is being sought for renourishment Nov 2019-April 2021 if the South Reach June/July 2020 survey data is used the 79,700 CY of initial fill placement at south end Dec 2019 to April 2020 should be accounted for. See Olsen 2-year post construction south reach report (Jan 2021). After April 2020 the USACE calculated another 100,000 CY loss which triggered a contract change order and non-federal funding request to increase volume.

Department:

Calculations by the Department were used to calculate volume above the MHW contour for both the North Reach and South Reach. For the North Reach the 2017 pre-construction, 2018 post-construction, and the most recent survey available of 2020 show more material above MHW in 2020 than in 2018. Certainly due to bypass material from Port Canaveral. For the South Reach, the 2017-December pre-construction, the 2018-June post-construction, and the 2019-July (this is the last survey before the 2020/21 project) shows a minimal loss of material above MHW of 0.6%. As the South Reach is 29.7% of the project length the total fraction of advance fill loss is 0.18%

CEG calculated value: 0.18%

Threat to upland development (2 points)	Score	0
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Local Sponsor:

N/A

Department:

Both the North and South Reaches nourishments completed in 2018 have much of their advanced fill remaining and are expected to provide protection to upland development from a 25-year return interval storm, therefore no award of points.

CEG calculated value: 0

Value of upland property (5 points)	Score	4
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Local Sponsor:

\$3,431,907,940.00

Department:

Calculated by GIS staff using 2020 data.

Total value:

\$3,892,413,220.00

Cost-effectiveness

Cost/volume/mile/year (10 points)	Score	10
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Local Sponsor:

Dec 2019- April 2021 787,988 cy was placed in South Reach and 472,526 cy in North Reach BUT only approximately 100,000 CY in south reach was associated with non-storm erosion. Nourishment interval: 6 years.

Department: Construction cost = \$14,400,000, volume = 787,988 cy, length = 13.95 mi, nourishment interval = 6 yrs

Value: \$0.22

Enhanced longevity, dune addition, innovative technology, and regionalization (5 points)	Score	3
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Local Sponsor: Dune addition - project template includes a dune component. Brevard was the first federal project to incorporate a dune.

Department: Verified and eligible for the award of points for dune addition.

Tier 3

Previous state commitment

Previously funded phases (1 point)	Score	1
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Local Sponsor: Yes, all phases.

Department: Verified

Total amount of previous funding (3 points)	Score	1.1
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Local Sponsor: N/A

Department: Fiscal year 2012/2013 through 2021/2022

Total funds: \$862,744.00

Previous partial appropriation (1 point)	Score	0
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Local Sponsor: N/A

Department: No previous partial appropriations.

Recreational benefits

Accessible beach area (2 points)	Score	2
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Local Sponsor: 41.42 acres of accessible beach. ECL and design profile MHWL. North Reach: R1 to R54. South Reach: R118 to R141. Olsen, Jan. 2021 South Reach monitoring.

Department:

The North Reach design is approximately 91 foot design beach width from the ECL (Olsen, May 2015 monitoring report, page 11). R-1 to R-14 (15,430 feet) utilized the 1995 MHWL which is LANDWARD of the ECL from R-1 to R-5 (5105 feet). Subtracting this project length results in accessible beach area for the North Reach of 91 feet X (51,737-5,105) feet = 4,243,512 ft². The South Reach design is outlined in the South Reach 2017/18 Renourishment 2-Year Post-Construction Physical Monitoring Report – January 2021 (Olsen Associates, Appendix E) which shows a 91 foot design beach width from the ECL. For the South Reach the accessible beach area is thus 91 feet X 21,900 feet = 1,992,900 ft². Combining these two values results in an accessible beach area of 6,236,412 square feet. Raw calculated score is 2.6, but only eligible for maximum of 2 points.

Total area:

6,236,412

Recreational benefits (3 points)	Score	1.1
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Local Sponsor:

38.30%

Department:

Verified

Percentage:

38.30%

Mitigation of inlet effects (5 points)	Score	0.4
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Local Sponsor:

North Reach project is necessary to mitigate impacts from Canaveral Harbor. North Reach project mitigates a 45,000 cy per year shortfall from the Canaveral project.

Department:

The target average annual bypassing objective of Port Canaveral Inlet is 156,000 cubic yards as adopted in Department's Inlet Management Implementation. Based upon project records in the Department's files the volume of inlet sand bypassing (inlet sand bypassing) since adoption of the bypassing objective has been met. The revised Port Canaveral IMP (2014) states in order to bypass the natural net annual longshore sediment transport (210,000 cy), an additional quantity equal to at least 54,000 cy/yr shall be placed. In the seven years since the revised IMP a total of 1,364,942 cy has been bypassed of the 1,470,000 (210,000 cy X 7 years). This results in a shortfall of 105,058 cy (7.1%) of which the North Reach project will meet this additional bypass objective.

CEG calculated value:

7.10%

Volume/mile/year (5 points)	Score	3.1
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Local Sponsor:

N/A

Department:

The project nourishment interval as documented in the application is 6 years. The project length is 73,637 feet or 13.95 miles. The 2021 sand placement volume as stated in the application is 787,988 cy.

CEG calculated value: 9,414

Tier 4

Successive unfunded requests (5 points)	Score	0
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Local Sponsor: No

Department: Verified

Environmental habitat enhancement (5 points)	Score	0
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Local Sponsor: Critical habitat for Loggerhead and Green sea turtles. Project had the first turtle-friendly design in Florida for a USACE project. Approximately 12,125 ft of armoring in North and South Reaches.

Department: Project is within a designated critical habitat area, but only 0.16 miles or 1.1% of the project shoreline is armored. This does not exceed the extensive armoring threshold of 30% and is therefore not eligible for the award of points.

Overall readiness to proceed

Readiness to construct (1 point)	Score	1
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Local Sponsor: N/A

Department: The Project received the points below and is eligible for this award of one point.

Active permits (1 point)	Score	1
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Local Sponsor: Yes - active state permit. Federal permit not required because federally-authorized project.

Department: Verified

Easements acquired (1 point)	Score	1
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Local Sponsor: Yes

Department: Verified

Local funds secured (1 point)	Score	1
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Local Sponsor: Yes

Department: Signed Resolution was submitted by application deadline.

Erosion Control Line established (1 point)	Score	1
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Local Sponsor: Yes

Department: Verified