

FY2022/2023 Local Government Funding Request
Final Beach Project Assessment

Project Name	Estero Island Shore Protection Project
Local Sponsor	Town of Fort Myers Beach

Initial Assessment	8/16/2021
Group Assessment	8/18/2021
Draft Assessment	8/31/2021
Final Review	10/1/2021

Project Description
The Lee County Shore Protection Project - Estero Island Segment is 5.45 miles of shoreline located between DEP monuments R175-400' to R198 and R203 to R207 in Lee County. The northern 1.3 miles of project shoreline was restored in 2011 and included the construction of the Matanzas Pass terminal groin on the north end of the beach fill. In 2016 and 2020, the USACE placed dredged sand from Matanzas Pass between R182 and R187. In 2017, the West Coast Inland Navigation District and Lee County nourished between R203 and R206 using dredged sand from Big Carlos Pass. In 2017 and 2020, Lee County used upland sand to repair storm damages at R180 and R181 from Hurricane Irma and Tropical Storm Eta, respectively. In 2020, the Town of Fort Myers Beach took over local sponsorship from Lee County. Following additional storm damages along Estero Island in 2020 and 2021, the Town plans to extend the project nourishment length. The requested funds are for the design, construction, and year 1 monitoring of the next nourishment event scheduled for 2023. Staff have determined that 83.3% of the segment between R175-400' to R198 and 100% of the segment between R203 to R207 project is eligible for state cost sharing.

Funds will be used for (list project phase, specify which phase is reimbursement, if applicable)
Design, Construction and Monitoring

State cost share %	43% and 100%
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Project Budget Table					
	State %	Federal	State	Local	Total
Feasibility	0.00%	\$0	\$0	\$0	\$0
Design	43.00%	\$0	\$35,260	\$46,740	\$82,000
Construction	41.70%	\$0	\$6,162,426	\$8,615,574	\$14,778,000
Construction	100.00%	\$0	\$7,746,000	\$0	\$7,746,000
Year 1 Monitoring	43.00%	\$0	\$69,660	\$92,340	\$162,000
Year 2+ Monitoring	0.00%	\$0	\$0	\$0	\$0
Total Project Costs		\$0	\$14,013,346	\$8,754,654	\$22,768,000

Federal cost share %	0.00%
Federal agency and description	N/A

TOTAL PROJECT SCORE (100 points)	37.7
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Tier 1

Tourism-related impacts		
Return on investment (10 points)	Score	2

Local Sponsor: Project is requesting construction funds.

Department: Department requests to withdraw construction funds from request.

Department: Local sponsor provided reasonable justification to include construction and year 1 monitoring funds in the funding request.

Construction + Year 1 Monitoring Cost: N/A

Construction + Year 1 Monitoring Cost: \$13,978,086.00

Value: N/A

Value: 6.4

Economic impact (10 points)	Score	6.5
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Local Sponsor: N/A

Department: Lee County, 2020 data. Tourism-related sales tax data = \$89,735,702.85. County sales tax collections = \$911,958,100.49

Value: 9.84

Tier 2

Federal involvement

Federal authorization (5 points)	Score	0
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Local Sponsor: No

Department: Verified

Federal cost share (5 points)	Score	0
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Local Sponsor: N/A

Department: Verified

Federal funds available (5 points)	Score	0
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Local Sponsor: N/A

Department: Verified

Storm damage reduction benefits

Current conditions (8 points)	Score	2.7
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Local Sponsor: Advanced nourishment lost: 160,900 cy (-156,900 per calcs less 4,000 cy 2020 truck haul). Erosion rate: -14.5 ft/yr (R175 to R181, Jan 2020 to May 2021)

Department: The last nourishment was the restoration completed in 2011 for the North segment only. A volume analysis above the MHW was conducted by the Department utilizing the 2010 pre-construction, 2012 post-construction, and the 2020 surveys. The analysis showed that as of June 2020 53.6% of the fill volume above MHW was lost.

CEG calculated value: 53.60%

Threat to upland development (2 points)	Score	2
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Local Sponsor: N/A

Department:

The Department applied the SBEACH model for the 25-year storm conditions, using profiles from the June-2020 CEC survey for R-175 to R-186, the 2018 DEP survey (with offshore from 2010 appended to each profile) for R-186A to R-198, and the 2019 CEC survey for R-203 to R-207. Properties that have existing coastal armoring were deemed non-threatened. There were 12,535 feet of properties deemed threatened, or 43.5% of the total project length.

CEG calculated value: 43.50%

Value of upland property (5 points)	Score	3.5
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Local Sponsor: N/A

Department: Calculated by Department GIS staff with 2020 data.

Total value: \$2,388,571,542.00

Cost-effectiveness

Cost/volume/mile/year (10 points)	Score	6.9
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Local Sponsor: Sand placement volume: 930,000 cy (614,000 cy North-Central, 316,000 cy South); nourishment interval: 10 years

Department: The Department requested to withdraw the construction phase funds and therefore the project is not eligible for the award of points for this metric.

Department: Construction cost = \$22,524,000, volume = 930,000 cy, length = 5.45 mi, nourishment interval = 10 yrs

Value: N/A

Value: \$0.44

Enhanced longevity, dune addition, innovative technology, and regionalization (5 points)	Score	5
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Local Sponsor:

Enhanced longevity and dune addition. The Town of Fort Myers Beach has expanded the original 2011 Shore Protection Project to include all of the designated critically eroded shoreline along the ECL and/or Critical Wildlife Area (state owned land on Estero Island). Beach segments without existing dune vegetation will incorporate at grade dune plantings upon completion of construction, as consistent with the Fort Myers Beach Dune Management Plan.

Department:

The proposed project extends the project length and incorporates revegetation of the dune and is therefore eligible for the award of points for enhanced longevity and dune addition.

Tier 3

Previous state commitment

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

Department: Verified

Total amount of previous funding (3 points)	Score	0.3
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Local Sponsor: N/A

Department: Fiscal year 2012/2013 through 2021/2022

Total funds: \$173,381.00

Previous partial appropriation (1 point)	Score	0
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Local Sponsor: No

Department: Verified

Recreational benefits

Accessible beach area (2 points)	Score	0.8
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Local Sponsor: Landward and seaward edge: 75ft wide design beach width plus advanced nourishment width (varies from 10ft to 110ft), plus equilibrium profile adjustment width of 60ft (refer to Project Description and Attachment 13-1); project boundaries: C174.5/terminal groin to R198, R203 to R207; references: Attachment 13-1 CEC Beach Fill Preliminary Design Plans (2021) and Attachment 13-2 CEC Estero Island Beach Renourishment Due Diligence Report (2020)

Department: For the previous project in the north segment the Design is 40 feet extension of 2000 MHWL (CPE, January 2001, Supp. Eng. Report). The accessible beach area calculated by GIS for just the north segment is 254,593 square feet. The central and south segments have not yet been restored; the preliminary design is a 75 foot extension of the existing beach width. The length of the central and south segments is 21,370 which multiplied by 75 feet results in an accessible beach area of 1,602,750 square feet. Thus, the total accessible beach area is 1,857,343 square feet.

Total area: 1,857,343

Recreational benefits (3 points)	Score	3
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Local Sponsor: 100%

Department: Verified

Percentage: 100%

Mitigation of inlet effects (5 points)	Score	0
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Local Sponsor: N/A

Department: Not applicable for the proposed project, therefore not eligible for award of points.

CEG calculated value: N/A

Volume/mile/year (5 points)	Score	2
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Local Sponsor: Volume = 930,000 cy, length = 5.45 mi, nourishment interval = 10 yrs

Department: The Department requested to withdraw the construction phase funds and therefore the project is not eligible for the award of points for this metric.

Department: This nourishment is planned for 10 years after the restoration for a nourishment interval of 10 years. The project length is 5.45 miles. The proposed sand placement is 930,000 cy.

CEG calculated value: N/A

CEG calculated value: 17,064

Tier 4

Successive unfunded requests (5 points)	Score	0
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Local Sponsor: N/A

Department: Verified

Environmental habitat enhancement (5 points)	Score	0
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Local Sponsor: Not within a designated critical habitat area or within a non-designated critical habitat area with extensive shoreline armoring.

Department: The project is not within a designated critical habitat area. 1.19 miles or 21.8% of the project shoreline is armored, which does not meet the 50% threshold to be considered extensive armoring and is therefore not eligible for the award of points.

Overall readiness to proceed

Readiness to construct (1 point)	Score	0
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Local Sponsor: N/A

Department: Not eligible for the award of the one point.

Active permits (1 point)	Score	0
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Local Sponsor: No active state or federal permit.

Department: Verified

Easements acquired (1 point)	Score	0
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Local Sponsor: No

Department: Verified

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

Department: Draft Resolution was submitted by application deadline.

Department: Signed Resolution received.

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

Department: Verified