

## FY2022/2023 Local Government Funding Request

### Final Beach Project Assessment

|               |                                                       |
|---------------|-------------------------------------------------------|
| Project Name  | Broward County Shore Protection Project - Segment III |
| Local Sponsor | Broward County                                        |

|                    |           |
|--------------------|-----------|
| Initial Assessment | 8/10/2021 |
| Group Assessment   | 8/18/2021 |
| Draft Assessment   | 8/31/2021 |
| Final Review       | 9/27/2021 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| The Broward County Shore Protection Project - Segment III is a 7.3-mile segment of shoreline located between DEP monuments R86-200' to R94 and R98 to R128 in Broward County, between the Port Everglades south jetty and the Miami-Dade County line. The project includes Dr. Von D. Mizell-Eula Johnson State Park, City of Dania Beach, City of Hollywood Beach, and the City of Hallandale Beach. The project was federally authorized in 1965 and was federally nourished for the first time in 1989. Between 1971 and 2020, over 7.4 million cubic yards of sand have been placed along Segment III beaches from 12 nourishment events. The requested funds are for the engineering, design, permitting, and construction of two dune projects: one within Dr. Von D. Mizell-Eula Johnson State Park scheduled for 2021/2022 and one within the City of Dania, Hollywood, and Hallandale Beach scheduled for 2022/2023. Staff have determined that 99.51% of the project within City of Dania, Hollywood, and Hallandale Beach and 100% of the project within the State Park is eligible for state cost sharing. |

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| Funds will be used for (list project phase, specify which phase is reimbursement, if applicable)                                           |
| Design (FY22/23 and reimbursement for FY19/20, FY20/21, and FY21/22), Construction (FY22/23 and reimbursement for FY21/22), and Monitoring |

|                    |                 |
|--------------------|-----------------|
| State cost share % | 49.75% and 100% |
|--------------------|-----------------|

| Project Budget Table       |         |               |                       |                       |                       |
|----------------------------|---------|---------------|-----------------------|-----------------------|-----------------------|
|                            | State % | Federal       | State                 | Local                 | Total                 |
| Feasibility                | 0.00%   | \$0.00        | \$0.00                | \$0.00                | \$0.00                |
| Design                     | 49.75%  | \$0.00        | \$479,009.53          | \$483,823.70          | \$962,833.23          |
| Design                     | 100.00% | \$0.00        | \$1,414,532.30        | \$0.00                | \$1,414,532.30        |
| Construction               | 49.75%  | \$0.00        | \$1,194,000.00        | \$1,206,000.00        | \$2,400,000.00        |
| Construction               | 100.00% | \$0.00        | \$304,664.00          | \$0.00                | \$304,664.00          |
| Year 1 Monitoring          | 49.75%  | \$0.00        | \$90,669.38           | \$91,580.63           | \$182,250.00          |
| Year 1 Monitoring          | 100.00% | \$0.00        | \$267,750.00          | \$0.00                | \$267,750.00          |
| Year 2+ Monitoring         | 0.00%   | \$0.00        | \$0.00                | \$0.00                | \$0.00                |
| <b>Total Project Costs</b> |         | <b>\$0.00</b> | <b>\$3,750,625.21</b> | <b>\$1,781,404.32</b> | <b>\$5,532,029.53</b> |

|                      |       |
|----------------------|-------|
| Federal cost share % | 0.00% |
|----------------------|-------|

|                                |     |
|--------------------------------|-----|
| Federal agency and description | N/A |
|--------------------------------|-----|

|                                         |      |
|-----------------------------------------|------|
| <b>TOTAL PROJECT SCORE (100 points)</b> | 45.8 |
|-----------------------------------------|------|

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| <b>Tier 1</b> |
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|                                  |       |     |
|----------------------------------|-------|-----|
| <b>Tourism-related impacts</b>   |       |     |
| Return on investment (10 points) | Score | 6.7 |

Local Sponsor: Project is requesting construction funds.

**Local Sponsor:** Request 100% state cost share for monitoring within State Park.

**Department:** Verified. State cost share for the construction and year 1 monitoring costs.

**Department:** Verified and updated monitoring cost share within State Park to 100%.

**Construction + Year 1 Monitoring Cost:** \$1,729,664.00

**Construction + Year 1 Monitoring Cost:** \$1,857,083.38

**Value:** 70.6

**Value:** 65.7

|                                    |              |     |
|------------------------------------|--------------|-----|
| <b>Economic impact (10 points)</b> | <b>Score</b> | 2.3 |
|------------------------------------|--------------|-----|

**Local Sponsor:** N/A

**Department:** Broward County, 2020 data. Tourism-related sales tax data = \$122,102,930.81. County sales tax collections = \$2,139,277,077.52

**Value:** 5.71

## Tier 2

### Federal involvement

|                                         |              |   |
|-----------------------------------------|--------------|---|
| <b>Federal authorization (5 points)</b> | <b>Score</b> | 5 |
|-----------------------------------------|--------------|---|

**Local Sponsor:** USACE Project Cooperation Agreement. Authorized in 1965, expires 2026. Memorandum of Agreement between USACE and Broward County for the dune design and construction during rehabilitation of Segment III.

**Department:** Verified

|                                      |              |   |
|--------------------------------------|--------------|---|
| <b>Federal cost share (5 points)</b> | <b>Score</b> | 0 |
|--------------------------------------|--------------|---|

**Local Sponsor:** USACE 58.46%

**Department:** No federal cost share on the proposed project phases, therefore not eligible for the award of points.

|                                           |              |   |
|-------------------------------------------|--------------|---|
| <b>Federal funds available (5 points)</b> | <b>Score</b> | 0 |
|-------------------------------------------|--------------|---|

**Local Sponsor:** USACE Project Cooperation Agreement. Authorized in 1965, expires 2026. Memorandum of Agreement between USACE and Broward County for the dune design and construction during rehabilitation of Segment III.

**Department:** No federal cost share on the project phases submitted with the funding request, therefore not eligible for the award of points.

### Storm damage reduction benefits

|                                      |              |   |
|--------------------------------------|--------------|---|
| <b>Current conditions (8 points)</b> | <b>Score</b> | 2 |
|--------------------------------------|--------------|---|

**Local Sponsor:** Volume lost: 553,600 cy (Nov. 2019, Yr 2 Post-Dorian Physical Survey). Erosion rate: 160,000 cy/yr, 2 ft/yr (2004 GRR)

**Department:**

The last full nourishment was completed in 2006. Since then there have been numerous smaller spot placements at erosion hot spots. To determine volume of advanced nourishment lost, the pre-construction survey of 2005, the post-construction survey of 2006, and the recent post-Dorian survey of 2019 were utilized at R monuments R86-R91 and R99-R126. The assumption is that the smaller spot placements did not add to the advanced nourishment. These surveys show that 640,325 cy were placed above MHW in 2005/2006 and 358,485 remain (56%) as of October 2019. Therefore, 44% has been lost above MHW.  $-\log(1-0.44) \times 8 = 2.0$  points.

**CEG calculated value:** 44%

|                                                |              |     |
|------------------------------------------------|--------------|-----|
| <b>Threat to upland development (2 points)</b> | <b>Score</b> | 0.5 |
|------------------------------------------------|--------------|-----|

**Local Sponsor:** N/A

**Department:**

The SBEACH model was run using October 2019 post-Dorian survey profiles for the 25-year return interval storm conditions for the beach segments. The model results were overlaid on aerial imagery and showed 1,785 feet of unarmored property was threatened. This equates to 1,785/38,750 or 4.6% of the project length.

**CEG calculated value:** 4.6

|                                            |              |   |
|--------------------------------------------|--------------|---|
| <b>Value of upland property (5 points)</b> | <b>Score</b> | 5 |
|--------------------------------------------|--------------|---|

**Local Sponsor:** N/A

**Department:**

Local sponsor did not submit data with application materials. Department GIS staff calculated with 2020 data.

**Total value:** \$8,811,508,570.00

#### **Cost-effectiveness**

|                                          |              |     |
|------------------------------------------|--------------|-----|
| <b>Cost/volume/mile/year (10 points)</b> | <b>Score</b> | 6.7 |
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**Local Sponsor:**

Sand placement volume = 840,000 cy beach fill (USACE project); 46,250 cy dune fill (State Park and HDD). Nourishment interval = 6 years (2004 GRR)

**Local Sponsor:**

Request to revise the project length to 38,550' based on current measurements in GIS from R86-200' to R94 and R98+290' to R128.

**Department:**

Construction cost = \$2,704,664, volume = 46,250 cy, length = 7.34 mi, nourishment interval = 10 yrs (Both segments restored in 1977-1979 and have received nourishments at varying times. Disregarding the very small projects, the average nourishment interval has exceeded the design interval of 6 years, for an average of 10 years.)

**Department:**

The Department agrees with the revision of the project length to 38,550'. The value does not change, so \$0.80 will be maintained.

**Value:** \$0.80

|                                                                                                 |              |   |
|-------------------------------------------------------------------------------------------------|--------------|---|
| <b>Enhanced longevity, dune addition, innovative technology, and regionalization (5 points)</b> | <b>Score</b> | 3 |
|-------------------------------------------------------------------------------------------------|--------------|---|

**Local Sponsor:**

Dune addition as a non-federal storm damage reduction feature to Segment III beach nourishment project. Adds 6,250 cy sand to State Park and 40,000 cy sand to remainder of Segment III shoreline. Dune will reduce upland storm costs and increase project longevity.

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

### Tier 3

#### Previous state commitment

|                                    |       |   |
|------------------------------------|-------|---|
| Previously funded phases (1 point) | Score | 1 |
|------------------------------------|-------|---|

**Local Sponsor:** Yes

**Department:** Verified

|                                             |       |     |
|---------------------------------------------|-------|-----|
| Total amount of previous funding (3 points) | Score | 0.9 |
|---------------------------------------------|-------|-----|

**Local Sponsor:** N/A

**Department:** Fiscal year 2012/2013 through 2021/2022

**Total funds:** \$817,338.50

|                                          |       |   |
|------------------------------------------|-------|---|
| Previous partial appropriation (1 point) | Score | 0 |
|------------------------------------------|-------|---|

**Local Sponsor:** Yes

**Department:** Project has not received a partial appropriation for the proposed project phase and therefore not eligible for the award of points.

#### Recreational benefits

|                                  |       |     |
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| Accessible beach area (2 points) | Score | 0.6 |
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**Local Sponsor:** Landward edge is ECL, seaward edge is the MHWL. R86-200' to R94, R98+200' to R128. 2004 GRR/FEIS.

**Department:** The USACE 2005 design for the State Park segment appears to maintain the ECL as the MHWL (Olsen graphs, 2/4/2020 Performance Evaluation, Attachment A). The SBMP describes the design for the larger southern segment to be 50 feet seaward of the ECL. This segment is 30,363 feet which multiplied by 50 feet yields an accessible beach area of 1,518,150 square feet.

**Total area:** 1,518,150

|                                  |       |     |
|----------------------------------|-------|-----|
| Recreational benefits (3 points) | Score | 2.3 |
|----------------------------------|-------|-----|

**Local Sponsor:** Commercial, recreational, public lodging = 75.8%. Total project length = 38,542 ft. Zoned commercial, recreational, public lodging = 29,200 ft.

**Department:** Total project length = 38,750 ft.

**Percentage:** 75.35%

|                                        |       |     |
|----------------------------------------|-------|-----|
| Mitigation of inlet effects (5 points) | Score | 4.2 |
|----------------------------------------|-------|-----|

**Local Sponsor:** N/A

**Department:** The Port Everglades Inlet bypassing objective was 44,000 cy/yr from 1999 to 2018, and 41,700 cy/yr since 2018 (961,100 cy total 1999-2020). Since 1999 the Port Everglades Inlet has bypassed 160,200 cy to the south. The deficit is 83.3% of the total; the nourishments in Segment III have mitigated this deficit.

**CEG calculated value:** 83.30%

|                                    |              |            |
|------------------------------------|--------------|------------|
| <b>Volume/mile/year (5 points)</b> | <b>Score</b> | <b>0.6</b> |
|------------------------------------|--------------|------------|

**Local Sponsor:** N/A

**Local Sponsor:** Request to revise the project length to 38,550' based on current measurements in GIS from R86-200' to R94 and R98+290' to R128.

**Department:** Both segments were restored in 1977-1979 and have received nourishments at varying times. Disregarding the very small projects, the average nourishment interval has exceeded the design interval of 6 years for an average of 10 years. The project length is 38,750 feet or 7.34 miles. The planned sand placement volume for the dune component as stated in the application is 46,250 cy.

**Department:** The Department agrees with the revision of the project length to 38,550' and has updated the calculated value.

**CEG calculated value:** 630

**CEG calculated value:** 634

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| <b>Tier 4</b> |
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| <b>Successive unfunded requests (5 points)</b> | <b>Score</b> | <b>0</b> |
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**Local Sponsor:** N/A

**Department:** Verified

|                                                     |              |          |
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| <b>Environmental habitat enhancement (5 points)</b> | <b>Score</b> | <b>0</b> |
|-----------------------------------------------------|--------------|----------|

**Local Sponsor:** Project within designated critical habitat area and exceeds best management practices. Turtle-friendly beach profile, constructed outside of nesting season, County lighting ordinance (Chapter 39, Article IX, Section 39-107) consistent with Certified Wildlife Lighting standards of FWC. Code enforced through night time beach lighting surveys and offenders reported to city code enforcement.

**Department:** The project is not within a designated critical habitat area. 1.15 miles or 15.7% of the project shoreline is armored, with the addition of threat to upland structures for a total of 20.3%, which does not meet the threshold of 50% to be considered extensive armoring, therefore not eligible for the award of points.

**Overall readiness to proceed**

|                                         |              |          |
|-----------------------------------------|--------------|----------|
| <b>Readiness to construct (1 point)</b> | <b>Score</b> | <b>1</b> |
|-----------------------------------------|--------------|----------|

**Local Sponsor:** N/A

**Department:** Eligible for the award of the readiness to construct point.

|                                 |              |          |
|---------------------------------|--------------|----------|
| <b>Active permits (1 point)</b> | <b>Score</b> | <b>1</b> |
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**Local Sponsor:** Yes, active state and federal permit.

**Department:** Verified

|                                     |              |          |
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| <b>Easements acquired (1 point)</b> | <b>Score</b> | <b>1</b> |
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**Local Sponsor:** Yes

**Department:** Verified

|                               |       |   |
|-------------------------------|-------|---|
| Local funds secured (1 point) | Score | 1 |
|-------------------------------|-------|---|

Local Sponsor:

Yes

Department:

Signed Resolution received.

|                                            |       |   |
|--------------------------------------------|-------|---|
| Erosion Control Line established (1 point) | Score | 1 |
|--------------------------------------------|-------|---|

Local Sponsor:

Yes

Department:

Verified