



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

PART I: GENERAL INFORMATION

Local Sponsor Collier County - Growth Management Department - Coastal Zone Management Section

Federal ID Number (FEID) 59-60000558

Primary Contact Name Andrew Miller Title Manager

Mailing Address Line 1 2685 South Horseshoe Drive, Unit 103

Mailing Address Line 2

City Naples Zip Code 34104 Telephone Number (239)-252-2922, c (239) 300-5862

Email Address Andrew.Miller@colliercountyfl.gov

Additional Contact Information

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 Andrew Miller

Date

*Andrew Miller* 7.29.21



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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)

**Wiggins Pass Inlet Management**

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

The Wiggins Pass Project is located on the southwest Florida coastline in Collier County between Florida Department of Environmental Protection monuments R-16 and R-17 and the project is adjacent to approximately 2,300 feet of critically eroded Gulf shoreline. The dredge sites are located within Wiggins Pass, South and North Channels and the Gulf of Mexico. The nearshore and beach disposal sites are located north of the inlet, between DEP Reference monuments R-12 to R-15.5, and south of the inlet, between R-18 and R-20. The ebb shoal disposal area is located offshore of Wiggins Pass, approximately 300-1,000 feet north of the authorized inlet channel.

The project permits also includes the periodic maintenance dredging of 4,700 feet of the Water Turkey Bay navigational channel to the design depth of -5.0 feet MLW, with 0.5 foot over-depth allowance, for a maximum allowable dredge depth of -5.5 feet. The channel widths range from approximately 90 feet to 140 feet.

The initial phase of the latest Inlet Management Plan Study was implemented in 2013 by dredging approximately 107,000 cy for maintenance dredging and initial realignment of the channel. Per the Inlet Management Plan study, Wiggins Pass is currently dredged at regular intervals of approximately 4 years to maintain navigable depths for recreational boaters, with optional interim dredging events every two years to address shoaling across the navigation inlet gulf entrance. In 2015, an interim maintenance dredging project excavated 13,000 cy to clear the shoal across the main inlet entrance channel. Material was placed in the ebb shoal disposal area north of the channel and within the flood shoal disposal. FDEP finalized the inlet management plan in April 2018.

In Spring 2018, dredging of 100,000 cy with disposal split 2/3 of the total volume (67%) to the north and 1/3 of the total volume (33%) to the south to maintain the navigation of the inlet, refine and reinforce the alignment begun with the 2013 project. Dredging of Wiggins Pass was concurrent with the dredging of Doctors Pass as a means for sharing of common costs, such as mobilization to reduce costs.

In March 2020 the County conducted a small interim dredging project which removed approximately 21,400 cy from Wiggins Pass and 26,650 cy from Water Turkey Bay with placement in the nearshore zone north of Wiggins Pass along Barefoot Beach from FDEP reference monument R-12 to R-14. Due to storms since this project completion, the County is considering an emergency dredging project to remove shoals that impede navigation.





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**3. Use of Requested Program Funds:**

The applicant is requesting funding for Design, Construction and Monitoring for the 2022/2023 FY. The project may be implemented early to address the recent storm driven infill.

**4. Map:** Provide as an attachment.

The mapping is included with this application.

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

Inlet influence north and south of Wiggins Pass was initially investigated in 1986 (Hine, et al). By examining the offshore contours in the vicinity of Wiggins Pass, the authors concluded that the length of influence along the updrift beach (north) was approximately 3,300 feet. It is at this distance north of the inlet, that the offshore contours become parallel to one another. The authors also found that the corresponding inlet effects downdrift (south) of Wiggins Pass extended approximately 2,040 feet (CPE, 2012). The Inlet Management Plan (CPE, 2012 and FDEP, 2018) monitors an area approximately a mile north and south of Wiggins Pass for inlet management (R-11 to R-21).

**6. Schedule and Budget:**

| Year      | Proposed Phase | Description                                      | Total Estimated Cost | Federal Cost Share | State Cost Share | Local Cost Share |
|-----------|----------------|--------------------------------------------------|----------------------|--------------------|------------------|------------------|
| 2022/2023 | Design         | Dredging - Engineering and Permitting            | \$64,463             | \$0                | \$32,231         | \$32,231         |
|           | Monitoring     | Environmental & Physical Monitoring, and Tilling | \$102,000            | \$0                | \$51,000         | \$51,000         |
|           | Construction   | Channel Dredging (Emergency)                     | \$1,600,000          | \$0                | \$800,000        | \$800,000        |
|           | Construction   | Dredging Construction Services                   | \$75,000             | \$0                | \$37,500         | \$37,500         |
| 2023/2024 | Monitoring     | Environmental & Physical Monitoring, and Tilling | \$104,000            | \$0                | \$52,000         | \$52,000         |
| 2024/2025 | Monitoring     | Environmental & Physical Monitoring, and Tilling | \$106,000            | \$0                | \$53,000         | \$53,000         |
|           | Construction   | Interim Channel Dredging (25,000 CY)             | \$600,000            | \$0                | \$300,000        | \$300,000        |
|           | Construction   | Dredging Construction Services                   | \$50,000             | \$0                | \$25,000         | \$25,000         |
|           | Design         | Dredging - Engineering and Permitting            | \$75,000             | \$0                | \$37,500         | \$37,500         |
| 2025/2026 | Monitoring     | Environmental & Physical Monitoring, and Tilling | \$108,000            | \$0                | \$54,000         | \$54,000         |
| 2026/2027 | Monitoring     | Environmental & Physical Monitoring, and Tilling | \$110,000            | \$0                | \$55,000         | \$55,000         |
|           | Construction   | Channel Dredging                                 | \$1,748,363          | \$0                | \$874,182        | \$874,182        |
|           | Construction   | Dredging Construction Services                   | \$53,045             | \$0                | \$26,523         | \$26,523         |
|           | Design         | Dredging - Engineering and Permitting            | \$79,568             | \$0                | \$39,784         | \$39,784         |



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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:

**The bypass objective determined in the adopted Wiggins Pass Inlet Management Plan is 20,600 cubic yards per year. Based upon recent data, the annual volume of sediment reaching the inlet for the period 2018-2021 is 44,728 cy/yr (H&M, 2021). The volume change since 2018 has not yet been evaluated for a new bypass objective.**

#### 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:

**The Inlet Management Plan and the Strategic Beach Management Plan (FDEP, 2018) for Wiggins Pass states that on an average annual basis, the initial target inlet sand bypassing quantity shall be 20,600 cubic yards per year, with approximately one-third placed to the south of the inlet and approximately two-thirds placed to the north.**

- **2/3 to North target = 13,733cy/yr**
- **1/3 to South target = 6,833 cy/yr**

#### 9. Balancing the sediment budget

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

**The current annual 44,728 cy/yr meets the total IMP target.**

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.

**In 2011, 49,900 cy of material was removed from Wiggins Pass. In 2013 a total 107,370 cy was dredged from Wiggins Pass. The 2015 interim dredging excavated 9,400 cy from the inlet entrance channel and the connecting south channel. The 2018 project removed approximately 95,900 cy from Wiggins Pass. The 1995 Inlet Management Study and corresponding strategic beach management plan was implemented starting in 2001. A new study was completed in 2012, permitted and initiated in 2013. FDEP approved the final plan in April 2018.**

**The bypassing plan adopted in April 2018 was first implemented with the 2018 dredging event. Since the IMP adoption, the bypassing objectives have been met.**

**In March 2020 the County conducted a small interim dredging project which removed approximately 21,400 cy from Wiggins Pass and 26,650 cy from Water Turkey Bay with placement in the nearshore zone north of Wiggins Pass along Barefoot Beach from FDEP reference monument R-12 to R-14.**



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The Wiggins Pass Inlet Management Plan was adopted in 2018 as described in the FDEP report dated April 2018. Two inlet dredging events have occurred since, in 2018 and 2020. The dredge and disposal volumes are summarized below and average 27,700 cy/yr and 13,070 cy/yr north and south of the inlet respectively.

This calculation is based on dredging quantities and does not adjust for fill placed on the beach or in the nearshore. In addition, the quantity placed from the south (Vanderbilt) channel is not shown, since the sand comes from outside the active sand exchange system.

Historical bypassing volumes:

| Year                                         | Quantity Bypassed (cy) - Sand Transfer Plant | Quantity Bypassed (cy) - Dredging |               | Dredge Location                | Placement or Disposal Area |
|----------------------------------------------|----------------------------------------------|-----------------------------------|---------------|--------------------------------|----------------------------|
|                                              |                                              | North                             | South         |                                |                            |
| 2008                                         |                                              |                                   |               |                                |                            |
| 2009                                         |                                              | 38,927                            | 12,373        | Ebb Shoal                      | R11.5-R14 and R18-R20.5    |
| 2010                                         |                                              |                                   |               |                                |                            |
| 2011                                         |                                              | 49,900                            | 0             | Ebb Shoal                      | R12-R14.2                  |
| 2012                                         |                                              |                                   |               |                                |                            |
| 2013/2014                                    |                                              | 66,064                            | 0             | Ebb Shoal                      | R12-R16                    |
| 2015                                         |                                              | 9,400                             | 0             | Ebb Shoal and Interior Channel | R15.5-R16                  |
| 2016                                         |                                              |                                   |               |                                |                            |
| 2017                                         |                                              |                                   |               |                                |                            |
| 2018                                         |                                              | 44,000                            |               | Ebb Shoal and Interior Channel | R12-R14                    |
| 2018                                         |                                              | 13,000                            |               | Ebb Shoal and Interior Channel | R-16                       |
| 2019                                         |                                              |                                   |               | Ebb Shoal and Interior Channel |                            |
| 2020                                         |                                              |                                   | 37,000        | Ebb Shoal                      | Nearshore R18-R20          |
| 2020                                         |                                              | 21,400                            |               | Ebb Shoal Navigation Channel   | Nearshore R12-R14          |
| <b>Total per method (since IMP adoption)</b> |                                              | <b>78,400</b>                     | <b>37,000</b> |                                |                            |
| Total bypass volume (since IMP adoption)     |                                              | 27,700                            | 13,070        |                                |                            |
| Years since IMP adoption                     |                                              | <b>2.83 years (since 2018)</b>    |               |                                |                            |
| Annual average bypass since IMP adoption     |                                              | <b>40,070</b>                     |               |                                |                            |
| Bypass objective                             |                                              | 2/3                               | 1/3           |                                |                            |
| Percentage of bypass objective               |                                              | 100%                              | 100%          |                                |                            |



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Note: The channel through Water Turkey Bay was dredged in 2020 of 26,500 cy which was placed north of the inlet. This was not a traditional bypassing operation.

**10. Increased bypassing and cost-effectiveness**

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

**None proposed at this time**

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

**Yes, the adopted bypassing objective is currently being met. Preliminary (20,600 cy/yr). Current Period (44,700 CY/yr which is an increase of 24,100 cy/yr. The project is combined with Doctors pass for economies of scale.**

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

**Construction phase funds are requested at this time. There may be enough funds in the current contract to meet both the emergency and routine dredging needs.**

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.

**The cost per cubic yard for this project has been determined by Steve Keehn, PE to be \$15.35/cy based on a weighted unit cost of a two-inlet project and the 2020 project bid sheet.**

**11. Inlet Management Plans**

Select all that apply:

**X Existing IMP:** The proposed project has an existing IMP or completed Inlet Management Study that has been approved by the Department.

**12. Enhanced longevity of proximate beach nourishment projects**

Annualized beach nourishment volume of proximate beach nourishment project:

**In March 2020 the County conducted a small interim dredging project which removed approximately 21,400 cy from Wiggins Pass and 26,650 cy from Water Turkey Bay with placement in the nearshore zone north of Wiggins Pass along Barefoot Beach from FDEP reference monument R-12 to R-14. Since the adoption of the inlet management plan 44,728 CY has been placed on average per year along the shoreline adjacent to Wiggins Pass. The recent approval of a cultural resources report on the Delnor Wiggins Park beaches should clear the way for disposal of dredged material on the dry beach. This will have increased staying power compared to recent practices.**



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**13. Active permits**

Does the project have an active state permit? **Yes** Does the project have an active federal permit? **Yes**

**FDEP Permit No. 01452538-008-JC**

**Permit number SAJ-2004-07621(IP-MJD)**

**Permit Modification No. 0142538-014-JN**

**Authorization date 2/13/2013**

**Authorization date 1/2/2013**

**Expiration date 2/13/2023**

**Expiration date 1/2/2023**

**14. Federal funds available**

Does the proposed project have federal funds available? If so, provide supporting documentation. **No**

**15. Secured local funds**

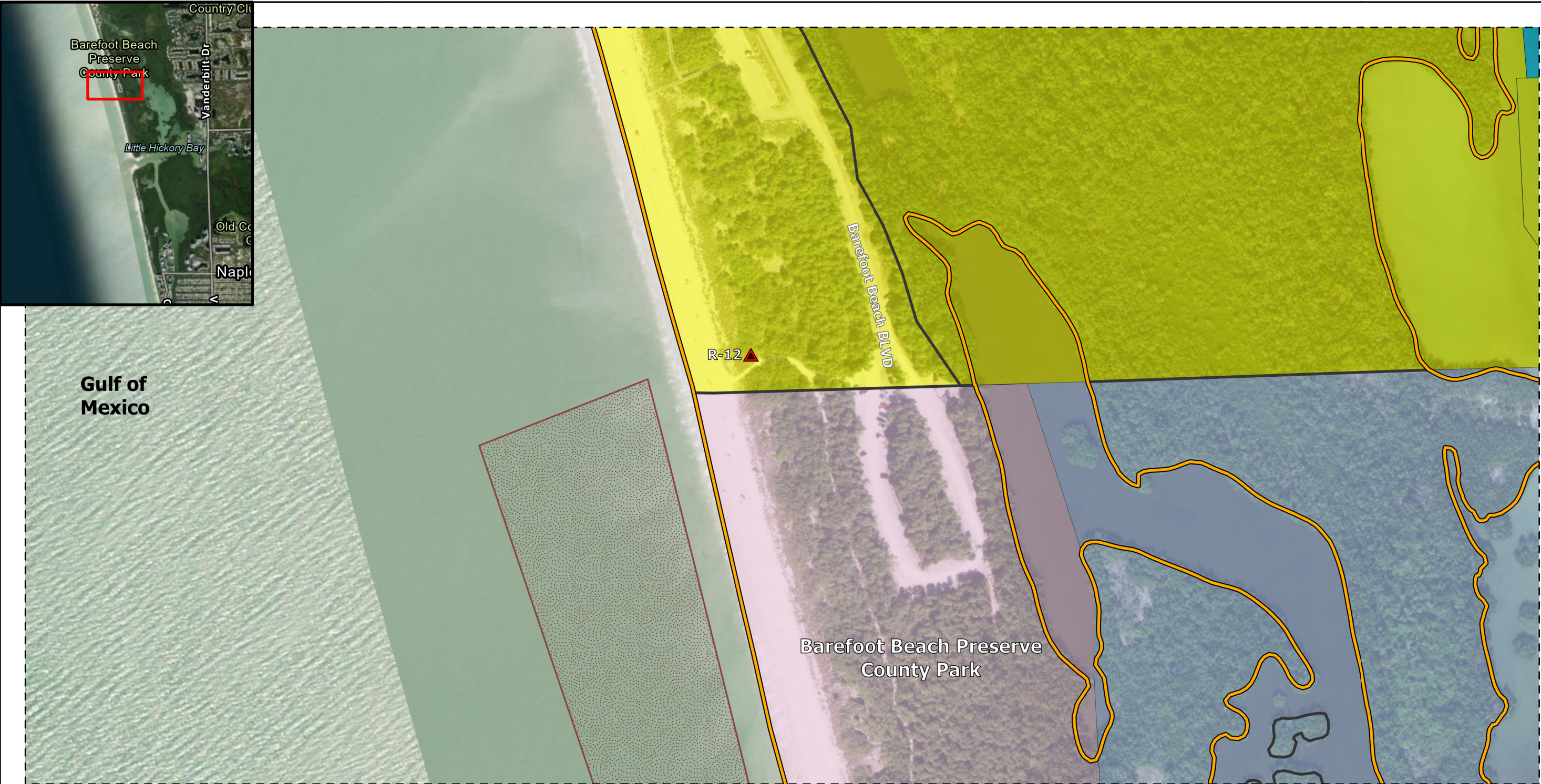
Has the necessary local funding been secured for the proposed project? If so, provide a copy of the draft Resolution. The signed Resolution is due by September 21, 2021. **Yes**



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ATTACHMENT 1  
LGFR MAPS





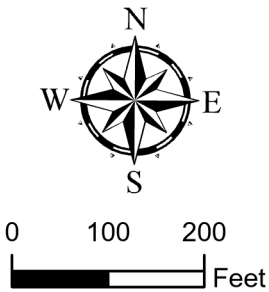
Matchline Figure 2

**Notes:**

- 1. Background imagery is from ESRI's Imagery basemap, provided by Collier County, dated December 24, 2018.
- 2. Parcel data downloaded from Florida Department of Revenue.

**Legend:**

- |               |               |                                     |
|---------------|---------------|-------------------------------------|
| 2020 Parcels  | Zoning: PUD   | Publicly-Owned Property             |
| Disposal Area | Single Family | FDEP Coastal Critical Erosion Areas |
|               | Conservation  | FDEP Monument                       |
|               | Agricultural  |                                     |

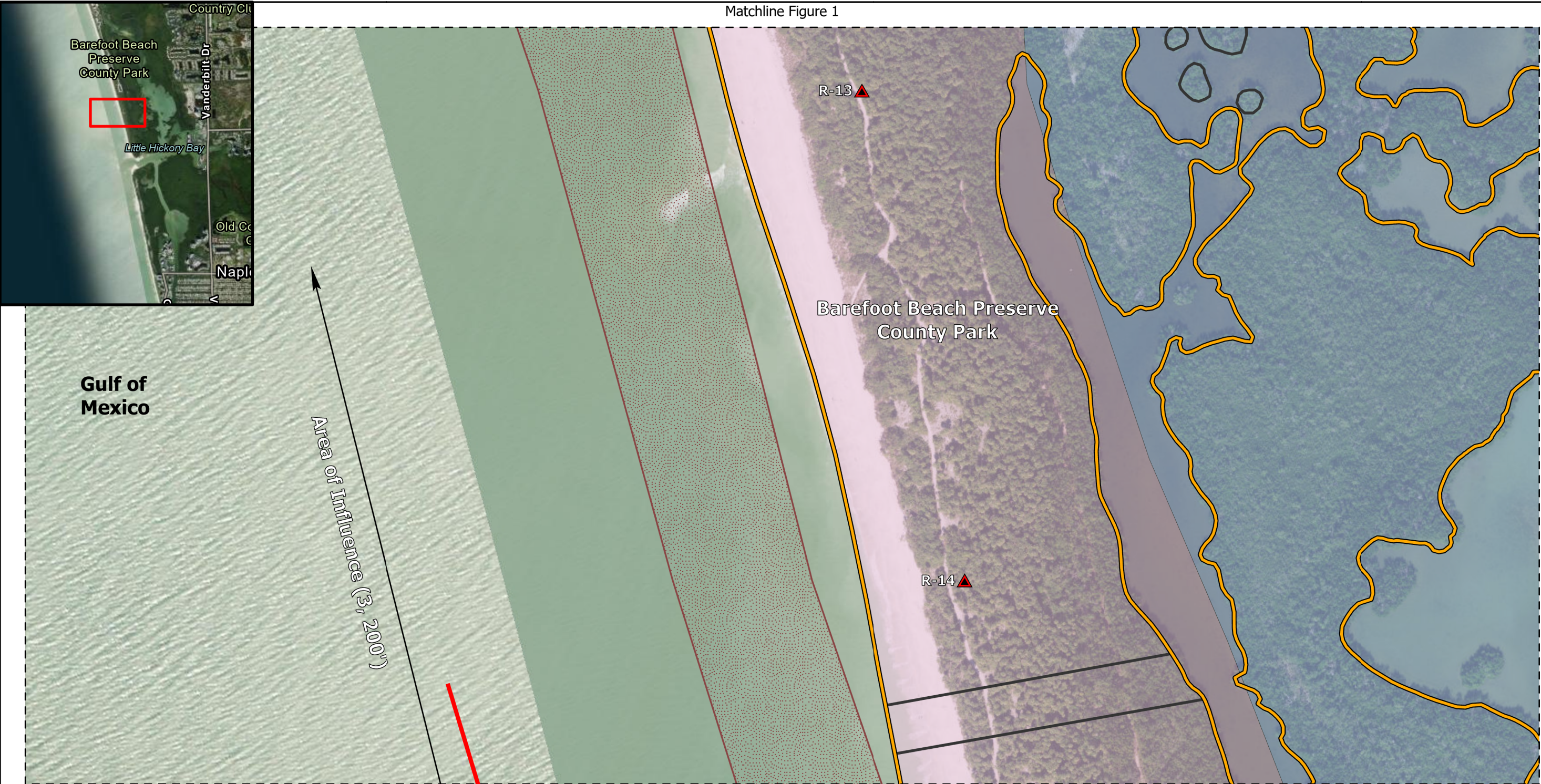


**Collier County Beach  
Local Range Beach Plan  
Wiggins Pass**



APTIM Environmental & Infrastructure, LLC  
6401 Congress Avenue, Suite 140  
Boca Raton, FL 33487  
PH. (561) 391-8102  
Fax. (561) 391-9116



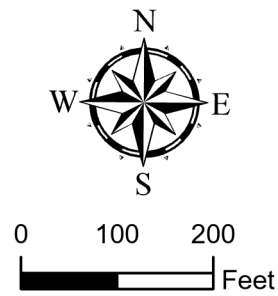


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**Legend:**

- |               |              |                                     |
|---------------|--------------|-------------------------------------|
| 2020 Parcels  | Conservation | Publicly-Owned Property             |
| Disposal Area | Agricultural | FDEP Coastal Critical Erosion Areas |
|               |              | FDEP Monument                       |



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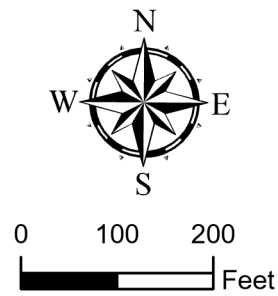


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**Legend:**

- |               |              |                                     |
|---------------|--------------|-------------------------------------|
| 2020 Parcels  | Conservation | Publicly-Owned Property             |
| Disposal Area | Agricultural | FDEP Coastal Critical Erosion Areas |
|               |              | FDEP Monument                       |

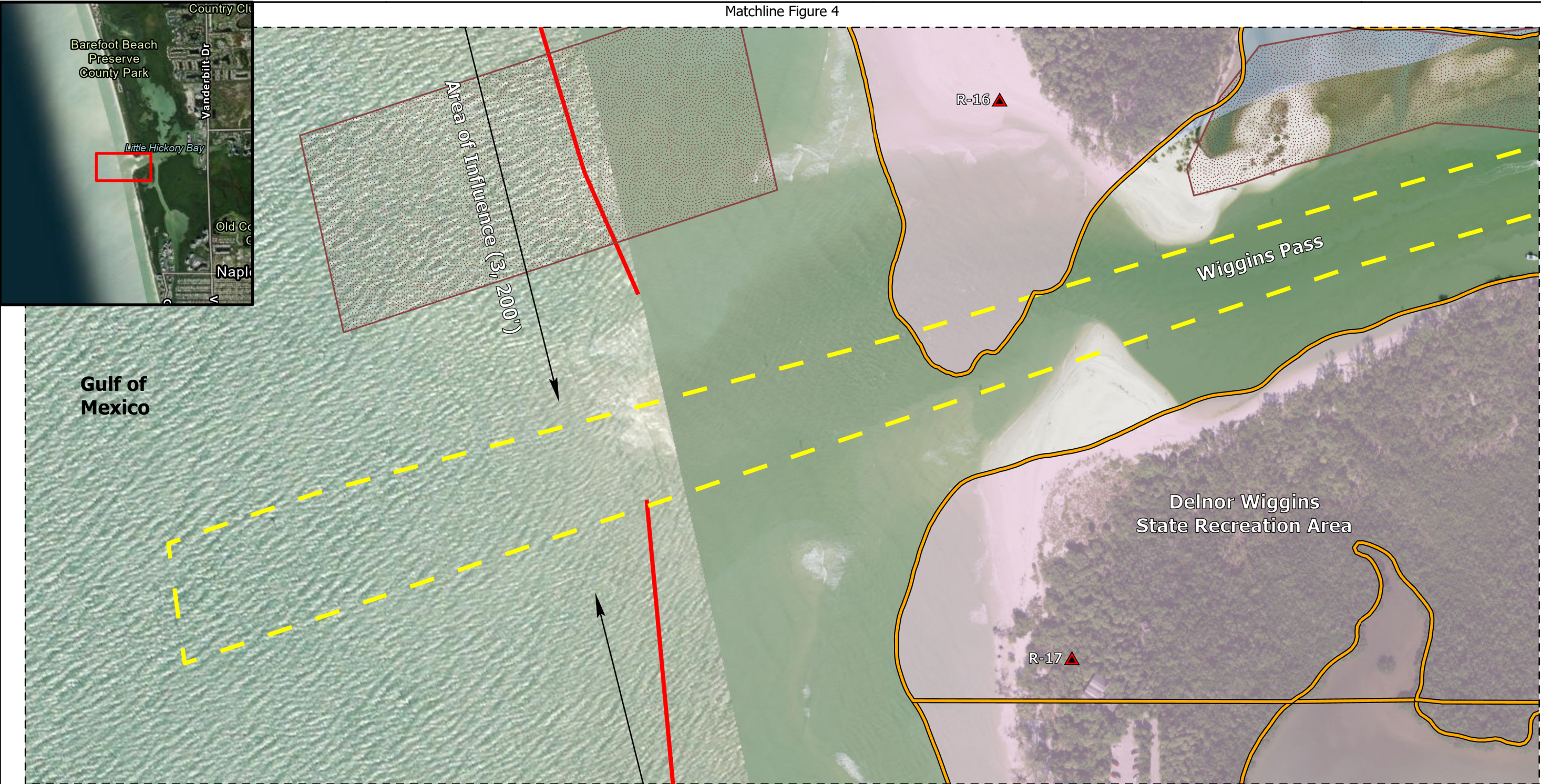


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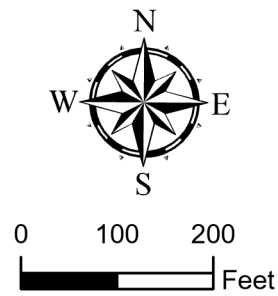


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**Legend:**

- |                 |                |                                     |
|-----------------|----------------|-------------------------------------|
| 2020 Parcels    | <b>Zoning:</b> | Publicly-Owned Property             |
| Disposal Area   | Conservation   | FDEP Coastal Critical Erosion Areas |
| Dredge Template | Agricultural   | FDEP Monument                       |

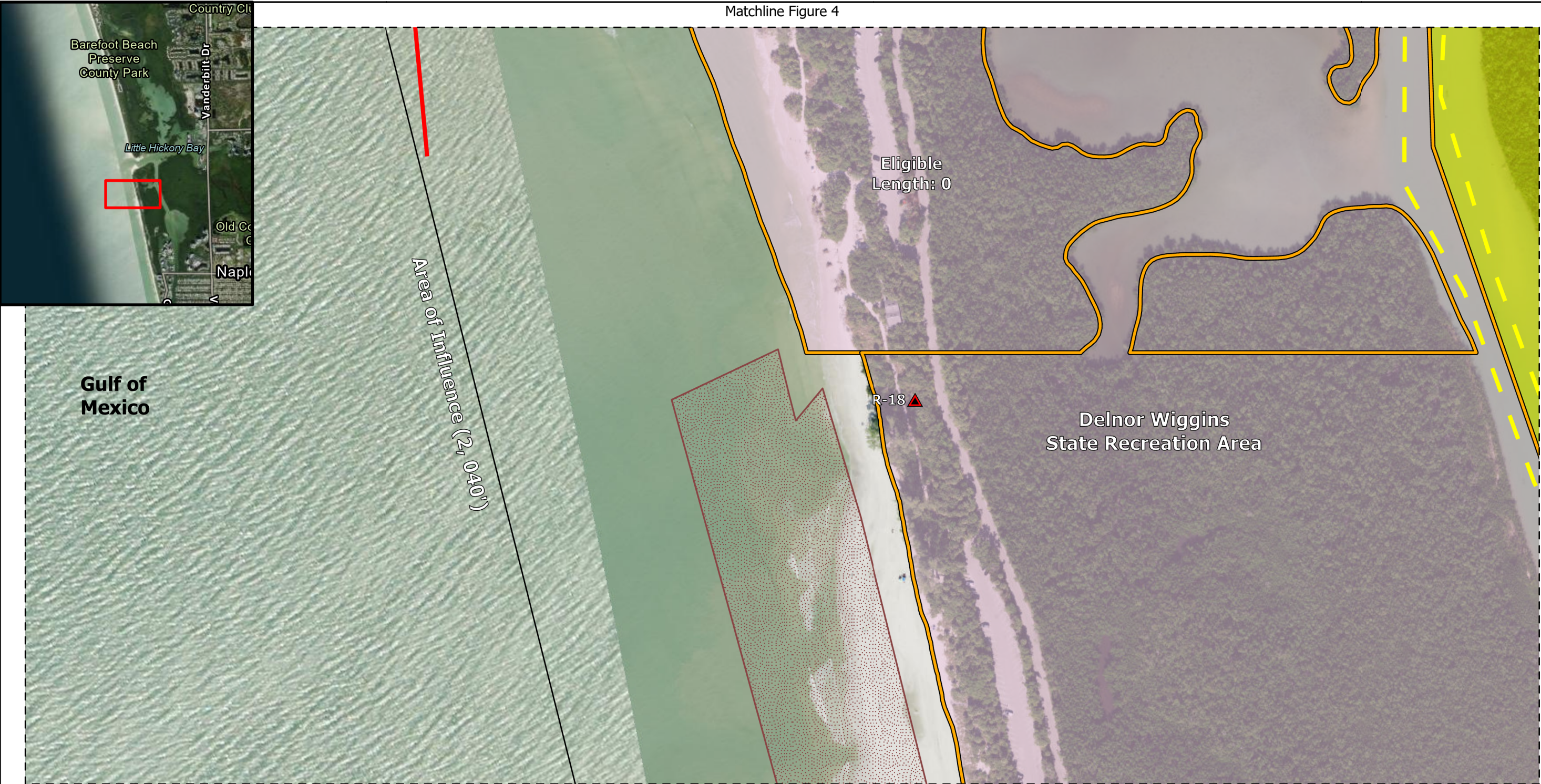


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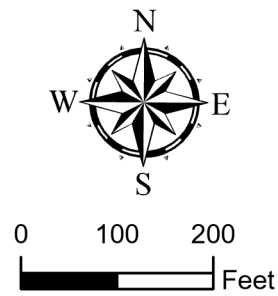


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**Legend:**

- |                 |                |                                     |
|-----------------|----------------|-------------------------------------|
| 2020 Parcels    | <b>Zoning:</b> | Publicly-Owned Property             |
| Disposal Area   | PUD            | FDEP Coastal Critical Erosion Areas |
| Dredge Template | Conservation   | FDEP Monument                       |



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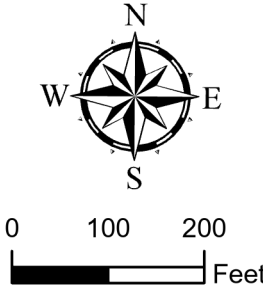
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**Legend:**

- |                                                                                                   |                                                                                                               |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|  2020 Parcels  | Zoning:                                                                                                       |
|  Disposal Area |  Conservation            |
|                                                                                                   |  Publicly-Owned Property |

- |                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------|
|  FDEP Coastal Critical Erosion Areas |
|  FDEP Monument                       |



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ATTACHMENT 2  
RESOLUTION

**RESOLUTION NO. 21 - \_\_\_\_\_**

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF COLLIER COUNTY, FLORIDA SUPPORTING THE COUNTY'S "FLORIDA BEACH MANAGEMENT PROGRAM 2022/2023 FUNDING REQUESTS" TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR LONG RANGE FUNDING REQUESTS FOR FISCAL YEARS 2022/2023, AGREEING TO SERVE AS THE LOCAL SPONSOR, SUPPORT PROPOSED PROJECT ACTIVITIES AND COMMITMENT TO PROVIDING THE REQUIRED LOCAL COST SHARE.**

**WHEREAS**, Collier County's Coastal Zone Management, acting on behalf of the Collier County Board of County Commissioners, has prepared Florida Beach Management Program 2021/2022 Funding Requests to the Florida Department of Environmental Protection (FDEP) for long range grant funding for Fiscal Years 2022/2023; and

**WHEREAS**, the funding requests are to fund the following three Collier County Projects:

1. Collier County Nourishment
  - a. FY 2022/2023 Construction - Collier County Beach Renourishment Project and Doctors Pass Dredging.
  - b. FY 2022/2023 Construction - Engineering and Permitting for Collier County Beach Renourishment Project and Doctors Pass Dredging.
2. Marco Island Nourishment
  - a. FY 2022/2023 Monitoring - Environmental, Physical Monitoring and tilling for FY 2020/2021 Construction
3. Wiggins Pass Dredging
  - a. FY 2022/2023 Monitoring – Environmental, Physical Monitoring and tilling
  - b. FY 2022/2023 Design – Engineering and Permitting for FY 2022/2023 Construction



c. FY 2022/2023 Construction – Emergency Channel Dredging and Dredging Construction Services for FY 2022/2023

**WHEREAS**, the timely maintenance and restoration of these high quality and readily accessible public recreational beaches is critical to preserve their value and viability, and to provide a boost to both the environment and the economy of Collier County tourism, including hotels, restaurants and related commercial activities; and

**WHEREAS**, the role of the County government in maintaining and restoring beaches is appropriate and crucial; and

**WHEREAS**, the Board of County Commissioners supports these three funding requests and requests approval from the FDEP for each funding request for Fiscal Years 2021/2022; and

**WHEREAS**, the Board of County Commissioners agrees to serve as the Local Sponsor; and

**WHEREAS**, the Board of County Commissioners is able and committed to providing the required Local Cost Share; and

**WHEREAS**, the Board of County Commissioners agrees to support proposed project activities; and

**WHEREAS**, the Board of County Commissioners supports funding contained in previously approved funding contracts, and

**WHEREAS**, the Board of County Commissioners has enacted the Tourist Development Tax Ordinance No. 92-60, as amended, which commits funding to beach renourishment, beach maintenance and beach park facilities.



**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF COLLIER COUNTY, FLORIDA, that:**

1. The Board supports the Florida Beach Management Program 2022/2023 Funding Requests prepared for submittal to the Florida Department of Environmental Protection for long range funding for Fiscal Years 2022/2023, and requests approval from the FDEP for each funding request;

2. The Board of County Commissioners is willing to serve as the Local Sponsor and support the maintenance and renourishment projects. The Collier County's Coastal Zone Management has the staff dedicated to provide Project Management and Administrative support; and,

3. The Board of County Commissioners is committed to providing the required Local Cost Share. The required funds have been committed through the Tourist Development Tax Ordinance No. 92-60, as amended.

**THIS RESOLUTION ADOPTED** after motion, second and majority vote favoring same, this \_\_\_\_ day of \_\_\_\_\_, 2021.

DATE:  
ATTEST:  
CRYSTAL K. KINZEL, CLERK

BOARD OF COUNTY COMMISSIONERS  
COLLIER COUNTY, FLORIDA

\_\_\_\_\_  
As Deputy Clerk

By: \_\_\_\_\_  
Penny Taylor, CHAIRMAN

Approved as to form and legality:

  
\_\_\_\_\_  
Colleen M. Greene  
Managing Assistant County Attorney