

March 9, 2017 - Work Session
Agenda Item #1

Subject

Beach Renourishment

Briefings

None

Contact and/or Presenter Information

Charlie Hunsicker, Director, Parks and Natural Resources

Action Requested

Update on Beach Renourishment Project at Coquina Beach, which has been completed.

Enabling/Regulating Authority

FS 125

Background Discussion

The beach renourishment project at Coquina Beach, known as the Cortez Groins project, is complete. The history of the project, the cost, and the benefit will be presented to the Board.

County Attorney Review

Not Reviewed (No apparent legal issues)

Explanation of Other

Reviewing Attorney

N/A

Instructions to Board Records

None

Cost and Funds Source Account Number and Name

N/A

Amount and Frequency of Recurring Costs

N/A

Attachment: [Beach Renourishment Project Presentation.pdf](#)



Manatee County Beach Management Program

Charlie Hunsicker, Director
Parks and Natural Resources

March 9, 2017

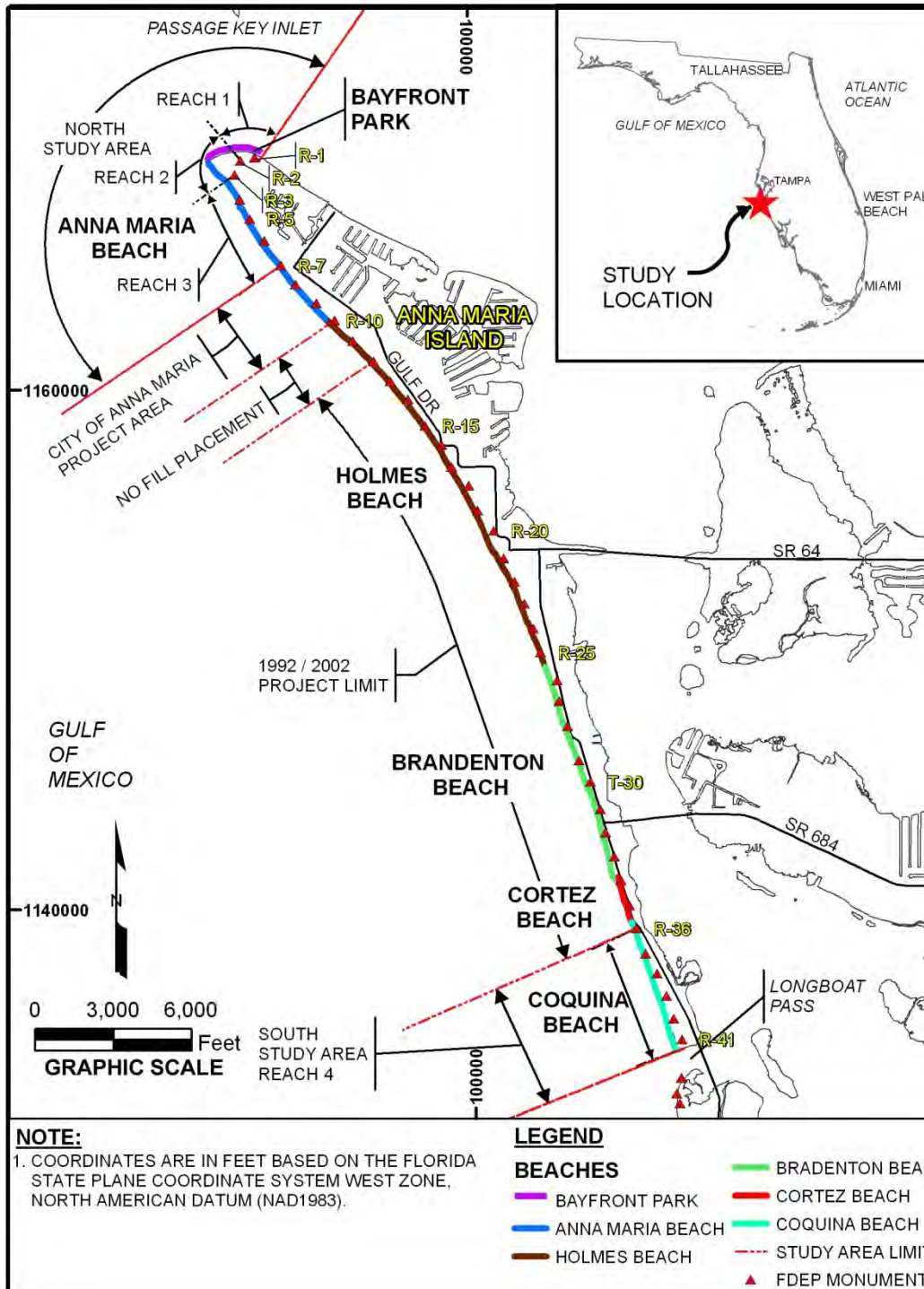




Manatee County Beach Management Program

- Beach Nourishment Program History
- Cost Analysis
- Passage Key Inlet Management Study
- Manatee Public Pier
- Erosion Control Projects
- Summary

Program History & Overview

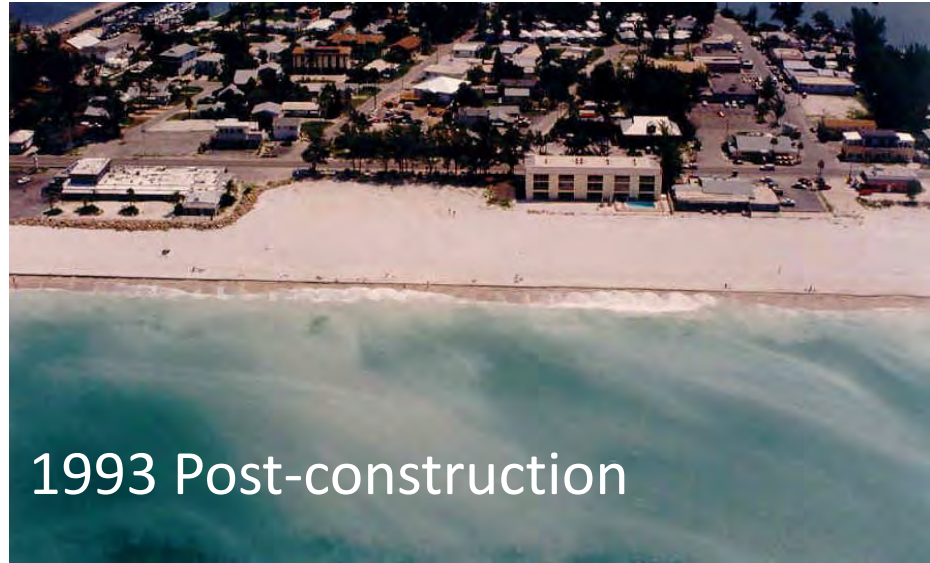


- Northern Study Area (1.2 miles):
 - Reaches 1, 2, 3
- City of Anna Maria Project (0.6 mile):
 - 2011
- Central Project (4.5 miles):
 - 1992-93
 - 2002
 - 2005-06
 - 2013/2014
 - 2021/2022
- Coquina Beach Project (1.5 miles):
 - 2011
 - 2013/2014
 - 2020/2021

Pre-construction



1993 Post-construction



2014 Construction



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Comparison of Unit Price of Sand (\$ per Cubic Yard)

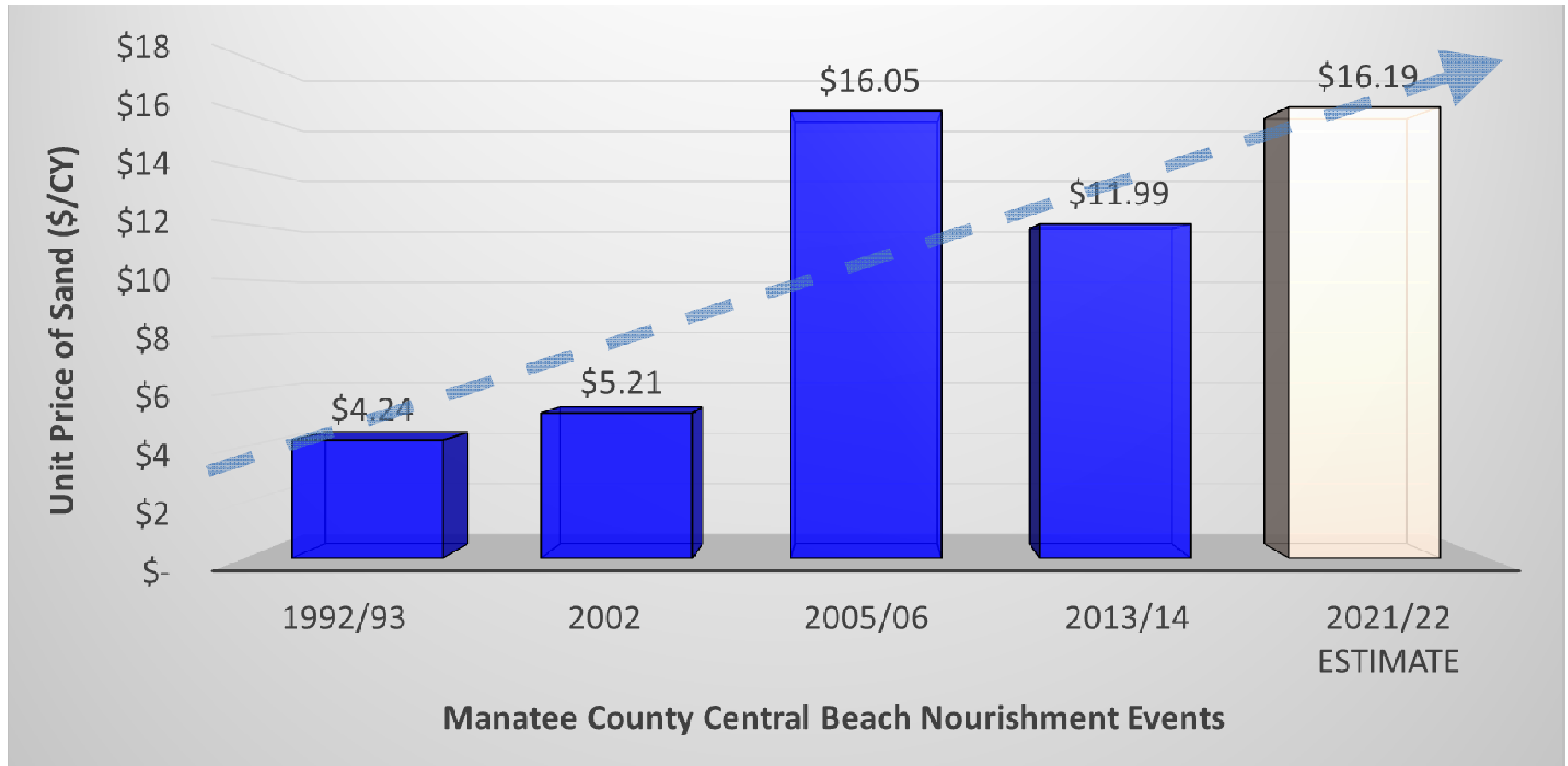


Notes: (1) Captiva & Sanibel Islands and Pinellas County projects utilize offshore sand sources. Delray Beach utilized sand deposits directly offshore. Longboat Key, Collier and Broward County projects shown utilized upland mine sand sources.

(2) The unit cost of sand for Manatee County projects is based on actual construction cost and constructed volume. For the other project costs, the unit cost of sand is based on total bid amount and bid volume.



Unit Price of Sand for Manatee County's Central Beach Project

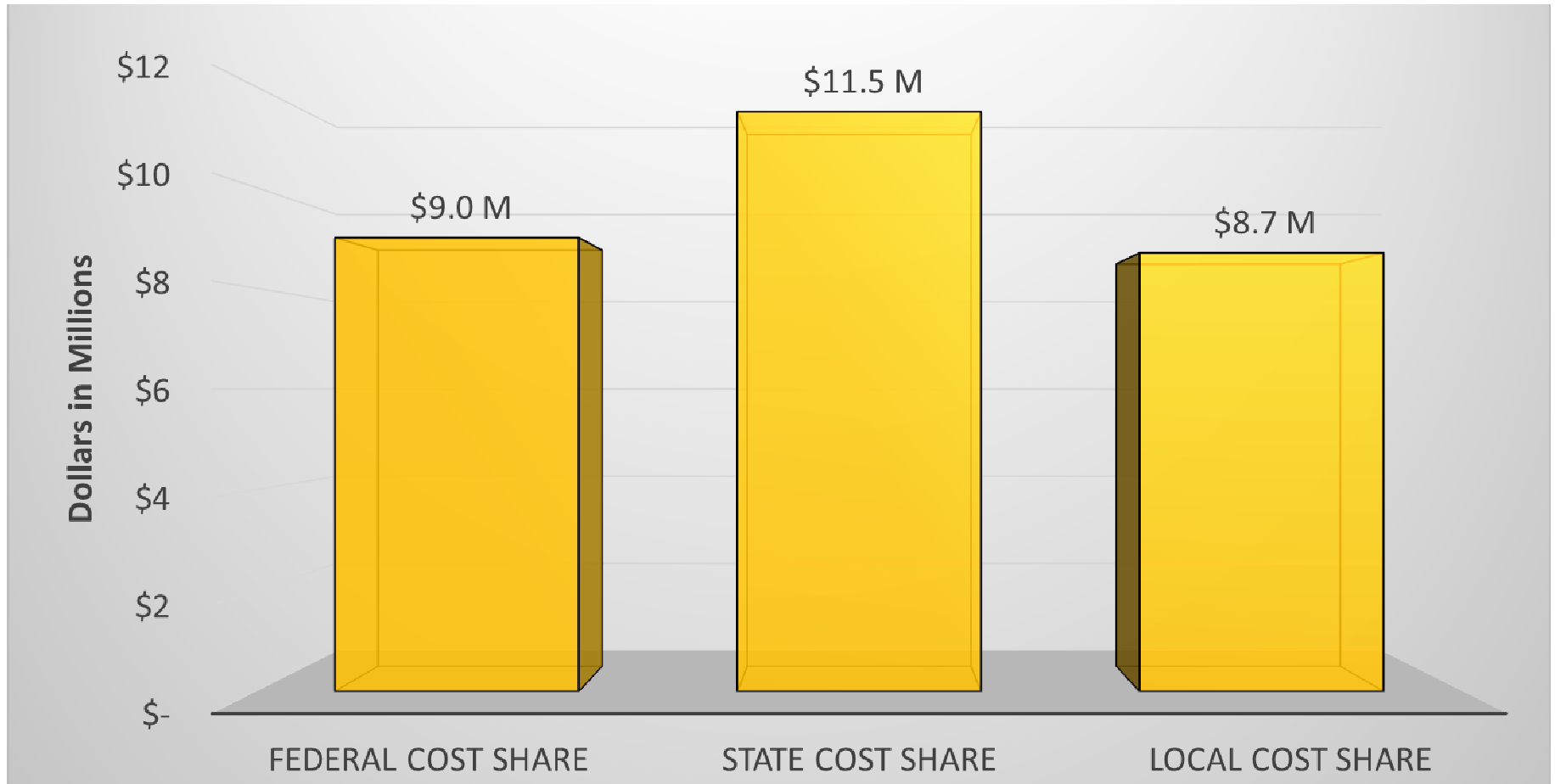


Note: (1) Includes costs for construction, mitigation, engineering, design and admin. Estimated costs are subject to change in the future.

(2) 1992/93, 2002, 2005/06 cost share percentages: Federal 54.29%; State 22.855%; Manatee County 22.855%
2013/14, 2021/22 Estimate cost share percentages: Federal 59.95%; State 20.03%; Manatee County 20.03%



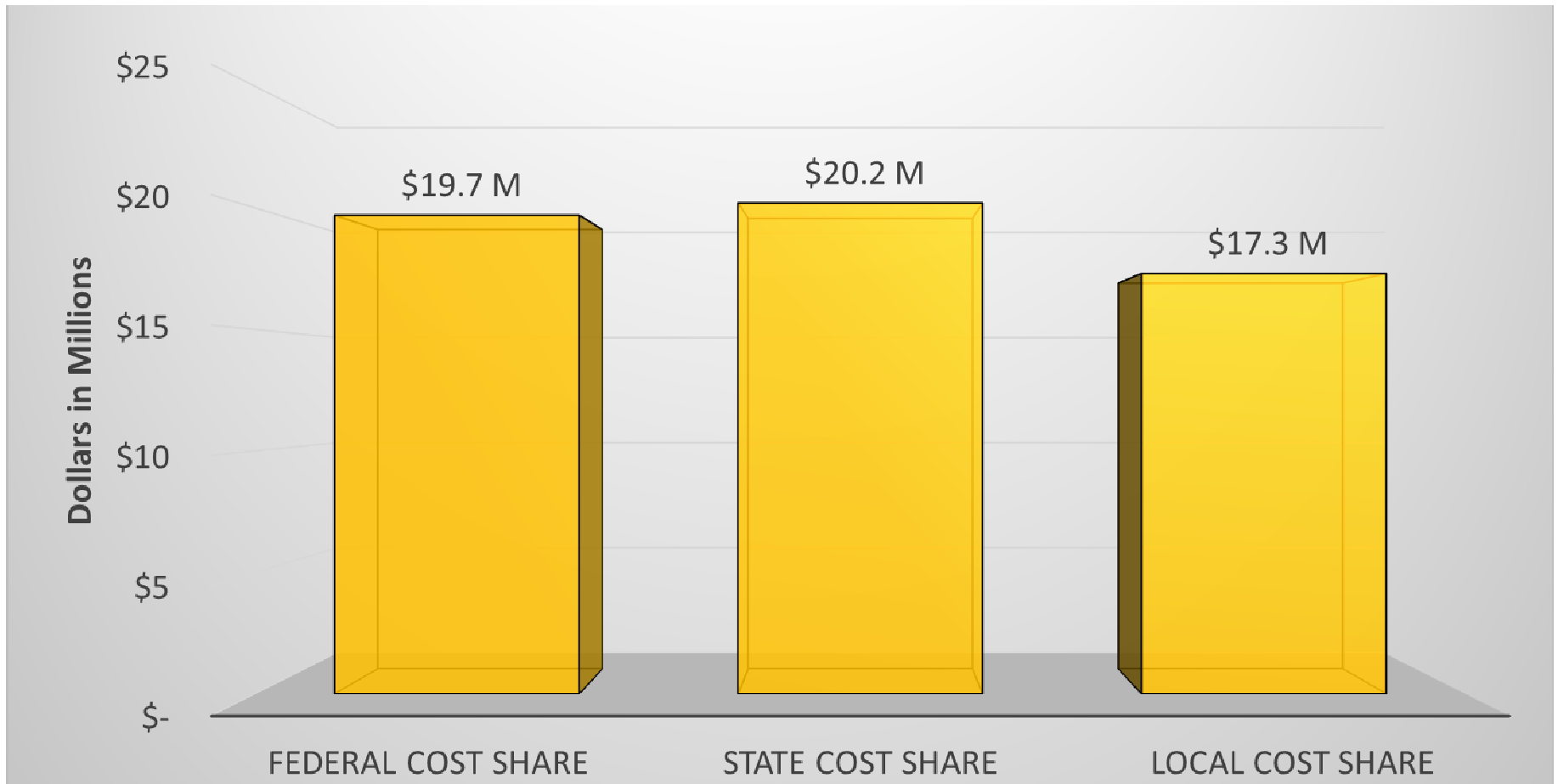
5 Year Projected Total Costs for Manatee County Program 2017-2031



Note: 5-year projected costs are estimates and are subject to change in the future.



15 Year Projected Total Costs for Manatee County Program 2017-2031



Note: 15-year projected costs are estimates and are subject to change in the future.

- Sand source for Anna Maria Island's nourishment projects
- Inlet Management Study: \$350,000
- Additional geotechnical studies to be determined



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- Pier existence dates back to the 1960's
- Demolished in 2010 due to unsafe conditions
- Former pier erosion control function evaluated
- Beach performing well



“Based on the beach performance two years following the 2013/2014 Central Beach nourishment project, the data analysis does not support the need of an erosion control structure at this time. The data demonstrates that the former pier area has experienced slower rates of recession compared to other areas.” (CB&I, 2016 Draft Report)

Cortez Beach Groins

- Three permeable pier-type groins that were installed in 1960s/70s were replaced with permeable adjustable groins (PAGs)
- Construction: March 2015 – December 2016
- \$7.8M*

*Costs include EDS&A



Longboat Pass Jetty

- Porous crib structure
- Geotextile Tube installed in 2012 - limit losses of sand through jetty
- 2017 Feasibility Assessment / Preliminary Engineering
- Estimated \$5.05 M*

*Costs include EDS&A





Next steps for this program...

- **Continue physical & biological monitoring and evaluate for project performance.**
- **Anticipate construction on 8-10 year interval for Central Beach and Coquina Beach Projects.**
- **Replace/rehabilitate existing Longboat Pass Jetty for sand tightening benefits.**
- **Develop Passage Key Inlet Management Plan for continued use as sand source for island's beaches.**
- **Consider former Port Dolphin Gulf pipeline alignment location as a favorable beach compatible sand source.**
- **Continue seeking state and federal assistance.**
- **FEMA assistance for City of Anna Maria and Coquina Beach for Hurricane Hermine impacts.**



THANK YOU

