

M E M O R A N D U M

TO: Tom Harmer, Town Manager
FROM: Isaac Brownman, Public Works Director
REPORT DATE: September 25, 2019
MEETING DATE: October 01, 2019
SUBJECT: Comprehensive Beach Management Plan Update

Recommended Action

Adopt the Updated Comprehensive Beach Management Plan and proceed with Construction Scenario #3.

Background

At the January 22, 2019 Regular Workshop Meeting, the Comprehensive Beach Management Plan update was discussed. The primary focus of the update included current beach conditions, the Scope of the next Comprehensive Beach Management Plan Update, the North End Stabilization project status, and the most recent communications with the U.S. Army Corps of Engineers. An additional update was provided on June 17, 2019 at the Regular Workshop Meeting. More recently, staff provided a preliminary Comprehensive Beach Management Plan Update and Timeline for Referendum Process at the September 23, 2019 Regular Workshop Meeting.

Comprehensive Beach Management Plan History

The Town presently maintains over ten (10) miles of engineered beaches along the Gulf of Mexico shoreline in Manatee and Sarasota Counties. The largest component of the Town's maintenance approach to date has been, and will likely continue to be, large-scale beach nourishments. To guide the management of the beaches, the Town maintains a Comprehensive Beach Management Plan, first developed in 1995, to document the beach activities and identify future needs for beach nourishment and other shore protection measures. The Comprehensive Beach Management Plan for the Town was last updated in 2008.

Comprehensive Beach Management Plan Update

The updated plan has been finalized and will provide an up-to-date guiding document for the Town's beach management activities and serve to support State reimbursement. The Comprehensive Beach Management Plan update and Executive Summary will be available through the Town Clerk's office. Elements of the plan to be presented include the following:

- Purpose of the Plan
- Demonstrate the near-term objectives
- An overview of beach profiles, design baseline, beach width and shore protection

- Depict the ‘Four Areas of Need’ related to Beach Segments, indicating the hotspots and projected sand volume needs. These are delineated as Beach Project Areas A (North End), B (Gulfside Road), C (Central Key), and D (South End) in the plan.
- Evaluate existing sand resources and their characteristics
- Indicate costs associated with the different sand source options and extraction methods
- Examples of current beach conditions
- Evaluate the different construction costs and volume scenarios
- Show status of existing structure project
- Summary and Recommendations

Upon completion of the presentation, the Town Commission will be asked to approve the updated Comprehensive Beach Management Plan, which would then be used as the guidebook for managing the shoreline now, and over time.

Funding Scenarios

Project costs are largely based on projected sand volume requirements, sand source, quality of sand, respective contractor methods and equipment to acquire, and market demand for contractor services and equipment.

At the May 20, 2019 budget workshop, the proposed beach capital budget included approximately \$42 million worth of projects over the next 5-years. Of that total, a budget amount of \$25 million is being used to plan the next major re-nourishment project in key erosional beach sections. An additional \$10 million budget is budgeted for the North end stabilization project. A reasonable total projected sand volume needed for the 2022 re-nourishment project is approximately 912,000 cubic yards (CY). This level of effort could facilitate the desired 8-year nourishment cycle, under optimal conditions, for Project Areas A, C, and D and 3 – 4 years for Project Area B (Gulfside Road). This desired 8-year nourishment cycle does not account for storm event losses, wind speeds and direction over time, etc.

Depending on the type of sand desired, location where that sand can be sourced, corresponding method to extract, and acceptable project budget amounts will dictate project level of service. Below is an estimate of costs to achieve the optimal 912,000 cubic yards with various sand quality and also the level that can be achieved with the budgeted \$25 million amount.

- Construction Scenario #1: 912,000 CY at approximately \$19.76 million
 - Coarse Gray Sand
 - Extracted from a Local Inlet Dredge and Offshore Shoals
 - 8-year nourishment interval for North, Central and South Segments with a 3-4 year for Gulfside Road
- Construction Scenario #2: 912,000 at approximately \$32.6 million
 - Coarse White Sand

- Extracted from a Local Inlet Dredge and Truck Haul
- Could provide for 774,500 CY at the programmed \$25 million budget (8-year nourishment interval for North and Central Segments, 1-year interval for Gulfside Road, and a 6-year interval for the South Segment)
- Construction Scenario #3: 912,000 CY at approximately \$30 million
 - Finer White Sand
 - Extracted from Local Inlet Dredge and Passage Key
 - Could provide for 812,000 CY at programmed \$25 Million budget (8-year nourishment interval for North and Central Segments, 1-year interval for Gulfside Road, and a 7-year interval for the South Segment)

Construction Scenario #3 appears to provide the best compromise solution to sand color/quality versus construction acquisition and placement cost. It also minimizes the community impacts of a truck haul project. Actual costs will be determined at the time of bid opening. The Beach Budget is based on the adopted capital five-year plan and currently assumes a 6 year borrowing of \$24 million to fund the overall plan. Funding considerations of the preferred scenario, including the borrow term, will be discussed further at the October 15th Commission Workshop.

Next Steps

1. Financial review and funding consideration for Scenario #3 (October 15, 2019)
2. Ordinance first reading (November 4, 2019)
3. Ordinance second reading (December 2, 2019)
4. Public Outreach
5. Referendum Ballot/Vote (March 2020)

Staff Recommendation

Adopt the Updated Comprehensive Beach Management Plan and proceed with Construction Scenario #3.

Attachments

- A. Introductory PowerPoint (available in the Town Clerk’s Office)
- B. Olsen Associates, Inc. PowerPoint (available in the Town Clerk’s Office)
- C. Comprehensive Beach Management Plan (available in the Town Clerk’s Office)

End of Agenda Item