

FLAGLER COUNTY, FLORIDA

Coastal Storm Risk Management Project (CSRMP) for Flagler County, FL

Flagler Beach Commission Meeting

U.S. Army Corps of Engineers
Jacksonville District

Presented by: Jason Harrah, Project Manager



June 13, 2019



Project Overview

50 Year Authorization: Water Infrastructure Improvements for the Nation Act of 2016

Appropriations: \$17.5 million (total fed/non-fed amount) received in 2018 Supplemental Bill

Location: ~3 miles of Flagler Beach Shoreline (north side of 6th Street to south side of 28th Street)

Design: Includes reconstruction and extension of dune footprint (prior to Hurricane Matthew)

- Existing elevation of dune ~19 ft. NAVD88
- Construction of dune will result in additional “towel space” wider beach berm after initial construction
- Native beach slopes/grades will be maintained
- Approximately 550,000 cubic yards of sand will be placed for initial construction
- Approximately 400,000 cubic yards of sand will be placed for each 11 year renourishment

Construction Schedule:

- Initial Construction 2020
- 1st Renourishment 2031
- 2nd Renourishment 2042
- 3rd Renourishment 2053
- 4th Renourishment 2064

Project becomes eligible for emergency beach repair funding after initial construction

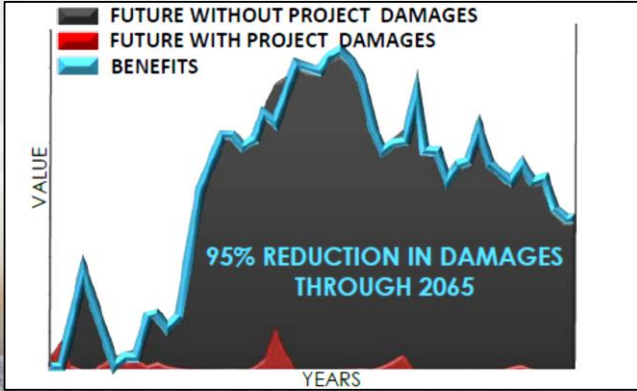
Project Benefits



Economics



Environmental



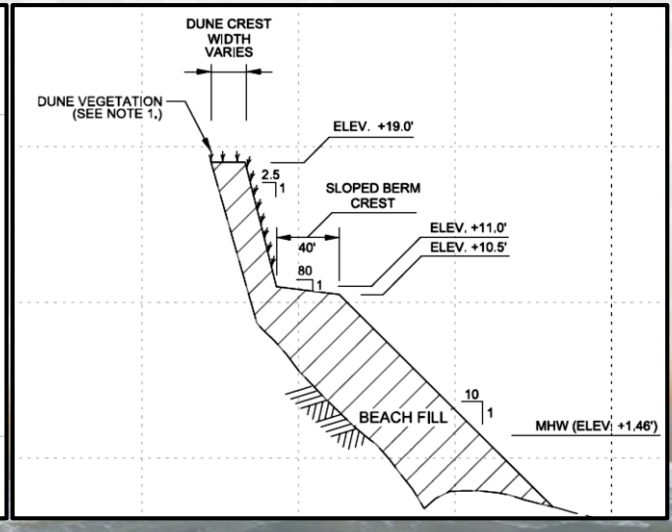
- Nesting habitat (~ 3 acres created)
- Shelter (protection from predators)
- Food source (for various wildlife)
- Biodiversity (increased plant species variety)
- Reduced Risk of future A1A damages

Project Design

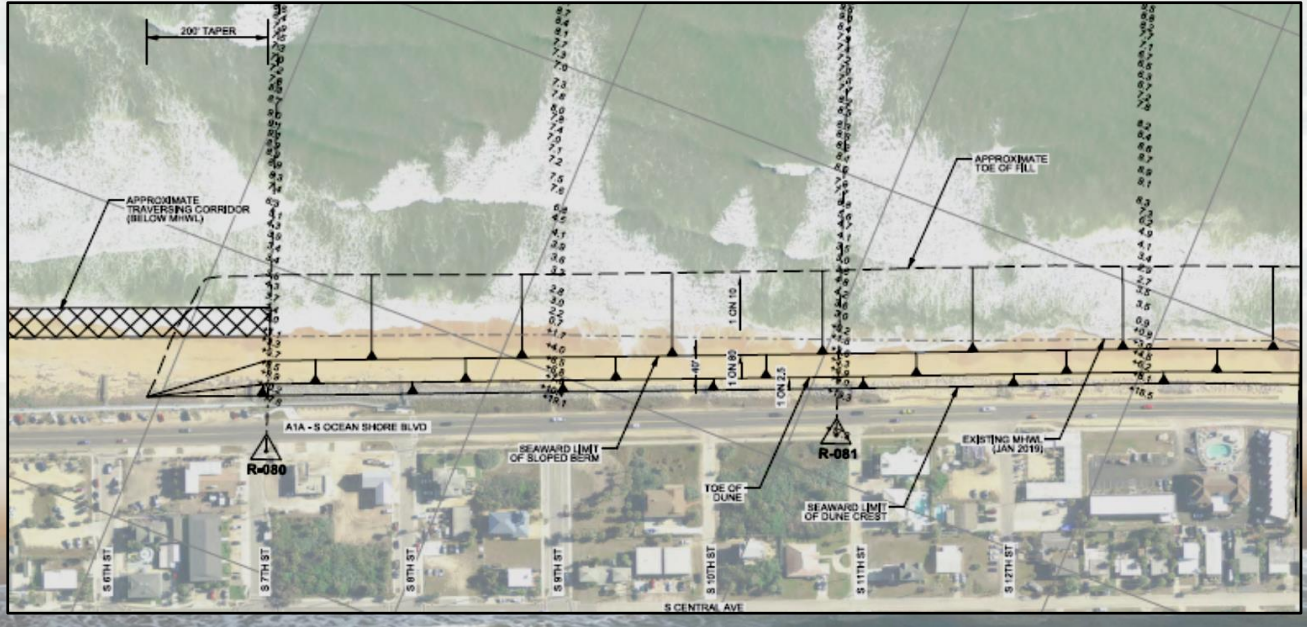
Limits of Project



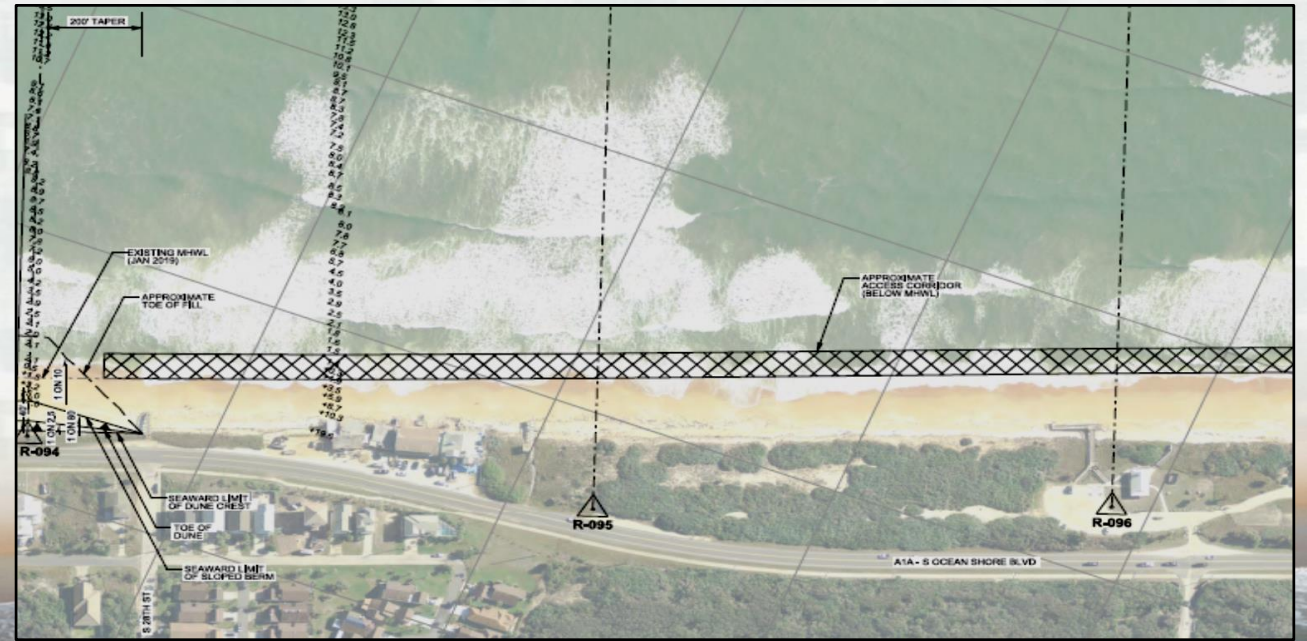
Typical Cross Section



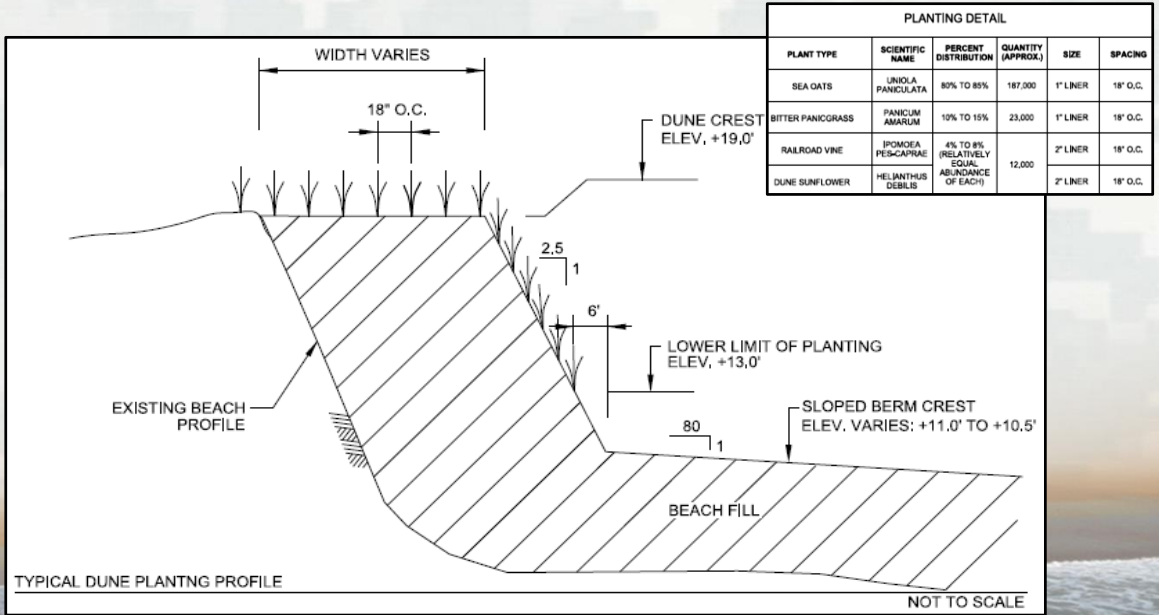
Northern Project Limit



Southern Project Limit



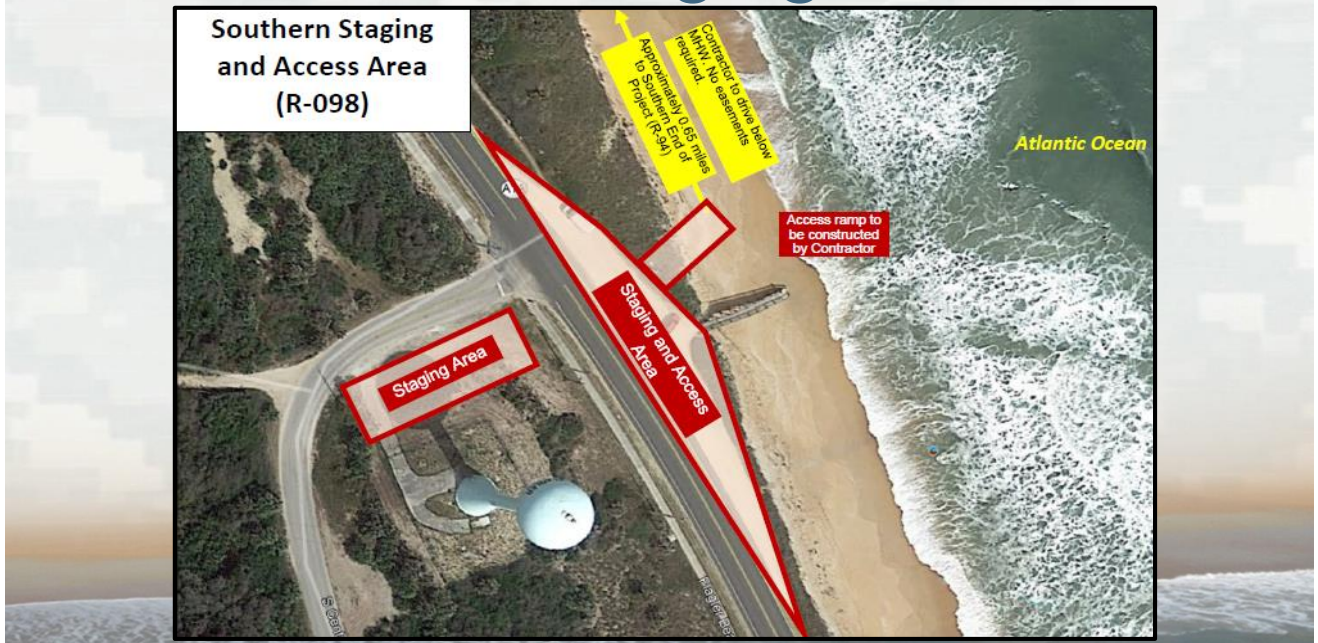
Dune Vegetation



Contractor Staging & Access



Contractor Staging & Access



Real Estate Requirements

Overview: The local sponsor of the USACE project (i.e. Flagler County) is required to obtain all lands, easements, rights of way required to construct and maintain the project. This includes perpetual storm damage easements on shorefront public and private parcels and staging/access areas.

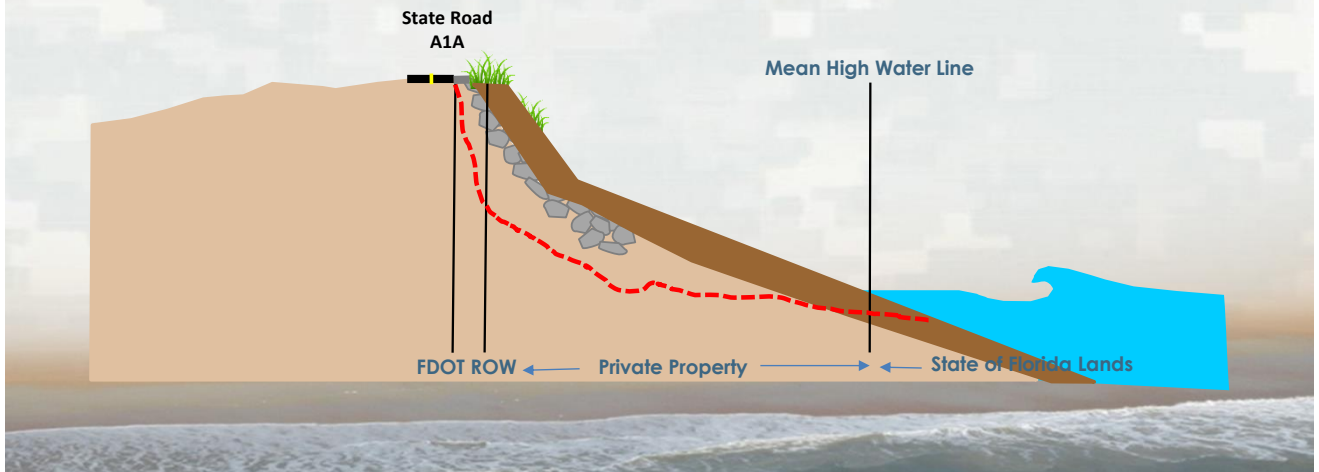
Staging/Access Areas: North Beach Access at 3rd Street and South Beach Access near Water Tower

- Both properties are owned by City of Flagler Beach.
- North Beach Access – Improvements will be made to the existing ramp to allow vehicle access. This access will be used to fuel equipment, etc. Contractor will leave ramp improvements in place if local sponsor desires.
- South Beach Access – Beach parking area will be closed for duration of construction. This access will be used to move equipment, pipe, etc. Contractor will restore any improvements back to original conditions including vegetation, etc.

Real Estate Requirements

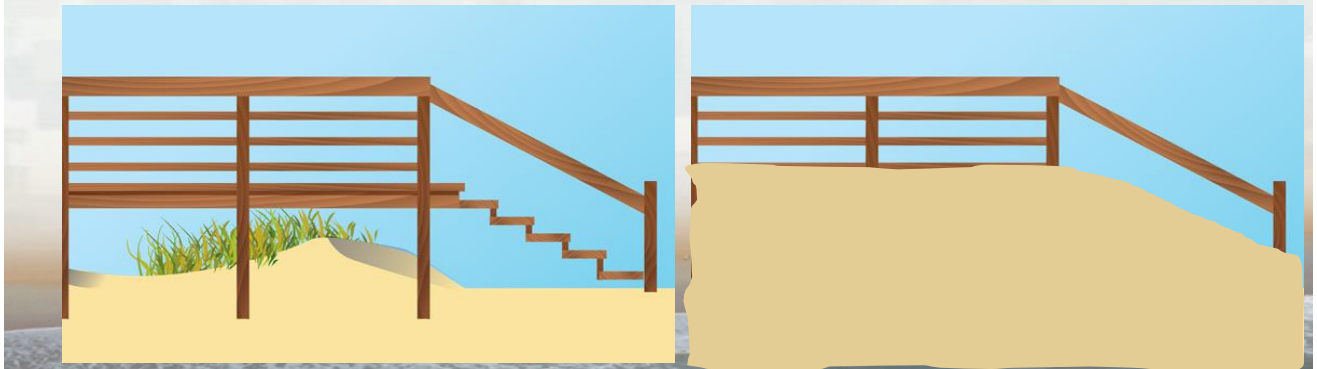
Perpetual Storm Damage Easements: Approximately 139 perpetual easements are required for the Flagler Federal project.

- 41 easements from City of Flagler Beach
- 98 easements from private residents



Dune Walkovers

- Approximately 42 walkovers located within the federal project footprint.
- Contractor will place sand on, around and underneath each walkover to maintain continuous protective dune.
- Sand will naturally equilibrate and expose walkover steps over time.
- Photos will be taken of each walkover prior to construction.
- Contractor bonded and insured if damage occurs as a result of construction activities.



Cost Summary

	Federal Share	Non-Federal Share	Total Cost
Initial Construction	\$11,371,000	\$6,123,000	\$17,494,000
4 Periodic Renourishments	\$40,652,000	\$40,652,000	\$81,304,000
Total Cost	\$52,023,000	\$46,775,000	\$98,798,000

Notes:

- The Bipartisan Budget Act (BPA) of 2018 allocated \$17.5M (total federal and non-federal share) for initial construction.
- BPA allows federal government to pay non-fed share upfront for initial construction (~ \$2,490,000) with payback over 30 years w/interest (current interest rate 2.875%).
- Payback starts after initial construction is complete to Department of Treasury.
- Once initial construction is completed, federal government will repair erosion damages to the constructed beach after approval from USACE HQ.

Schedule

- 29 April 2019** Draft Plans/Specs Complete
- 11 June 2019** FDEP Water Quality Permit Application
- 17 June 2019** Flagler County Commission Approves PPA
- TBD** PPA Executed between USACE and Flagler County
- 22 Nov 2019** FDEP Water Quality Permit Received
- 31 Dec 2019** Erosion Control Line Established by FDEP and Flagler County
- 03 Jan 2020** Flagler County certifies all lands to USACE
- 03 Jan 2020** Final Plans/Specs Complete and Certified
- 27 Jan 2020** Construction Contract Advertised
- 13 Mar 2020** Bids Opened
- 21 Apr 2020** Contract Awarded
- 05 Jun 2020** Construction Starts
- 31 Dec 2020** Construction Completed (weather pending)

During and After Construction

DURING

- Contract will stage equipment near the beach (metal pipe, trucks, etc.).
- Construction will likely occur 24/7 until complete.
- Sand will be pumped onto the beach from offshore and graded into place by bulldozers and other equipment.
- Sections of the beach will be closed off while working.
- Updated progress maps will be published on social media and local news.
- Safety personnel will be on site to direct the general public away from potential hazards.

AFTER

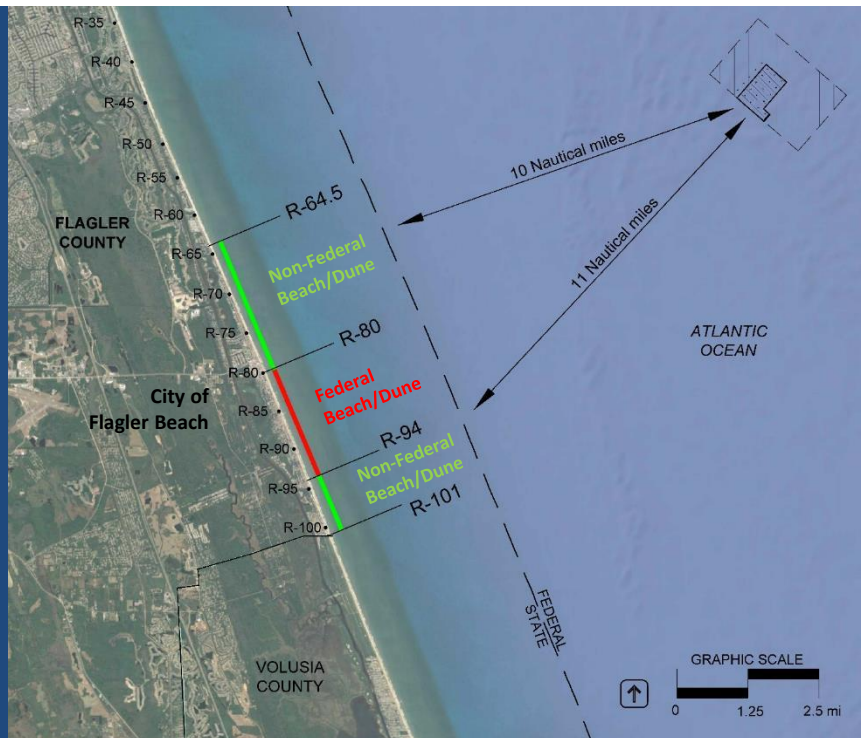
- Beach will naturally reshape and equilibrate.
- Escarpments will form along the new template (local sponsor is responsible to remove and maintain beach template).
- Dune vegetation will be planted by USACE.
- Walkovers will naturally become exposed as sand erodes.
- Signs will be posted warning the public to stay off the newly constructed dunes (local sponsor responsibility).
- Protection measures will be implemented for new dunes (i.e. fencing, marking areas of walkovers, etc.).
- USACE and Sponsor will monitor the beach frequently to determine when renourishment is needed or soon after major storm events.

Flagler County, FL Non-Federal Beach/Dune Restoration Project



PROJECT LOCATION & COMPONENT GOALS

BEACH FILL





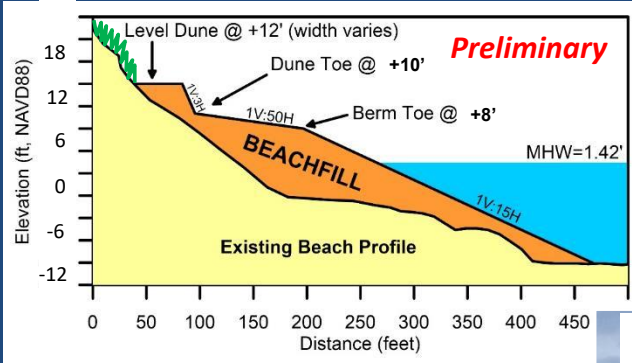
Northern End of Northern Non- Federal Project Area (Looking northward)



Southern Non-Federal Project Area (Looking southward)

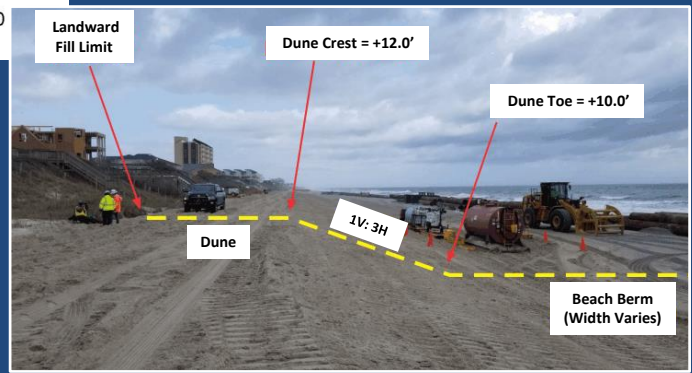


Southern Non-Federal Project Area (Looking northward)



Example of Constructed Beach/Dune Conditions (Non-Federal Project)

Note: The ultimate scope and dimension of the beach/dune project is subject to funding availability.



Flagler County, FL Non-Federal Beach/Dune Restoration Project

Real Estate Requirements (Easements)

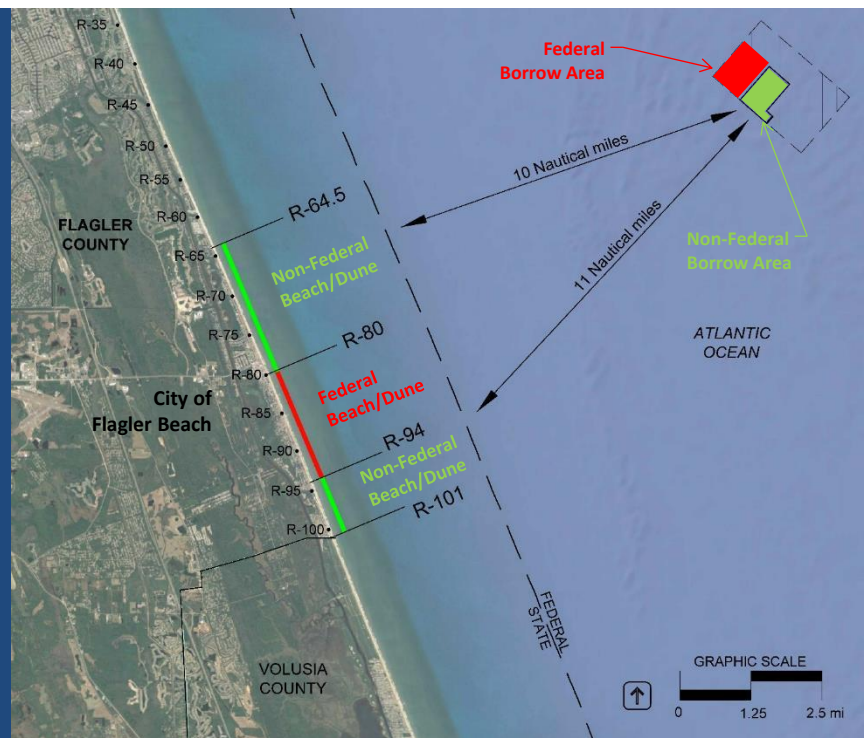
Goal: Permission to construct and maintain Non-Federal Project

- 137 Non-Federal Parcels: 83 Private and 54 Public (City of FB)
- One Additional Staging Area Required at North End
- Overwalks will be protected consistent with Federal Project



PROJECT LOCATION & COMPONENT GOALS

BORROW AREA



SEABED CONTOURS: NON-FEDERAL OFFSHORE BORROW AREA

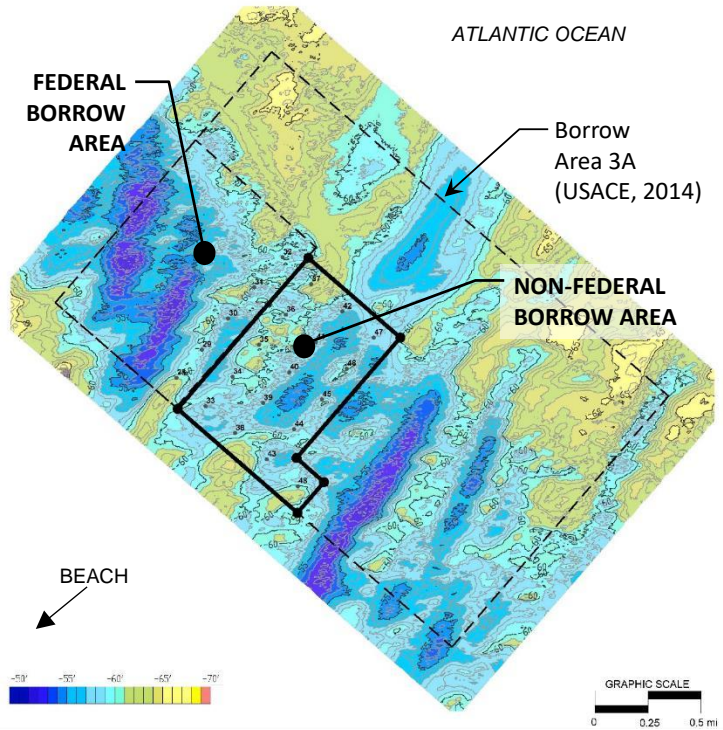
10.5 nmi offshore
366 acres
~55 to 60 ft depths

-64 ft cut = ~3.2 mcy of sand
-65 ft cut = ~3.8 mcy of sand
-66 ft cut = ~4.4 mcy of sand

Note: The ultimate allowable dredge depth is subject to sand quality and permit review.



USACE
MULTIBEAM BATHYMETRIC SURVEY
MAY 2019

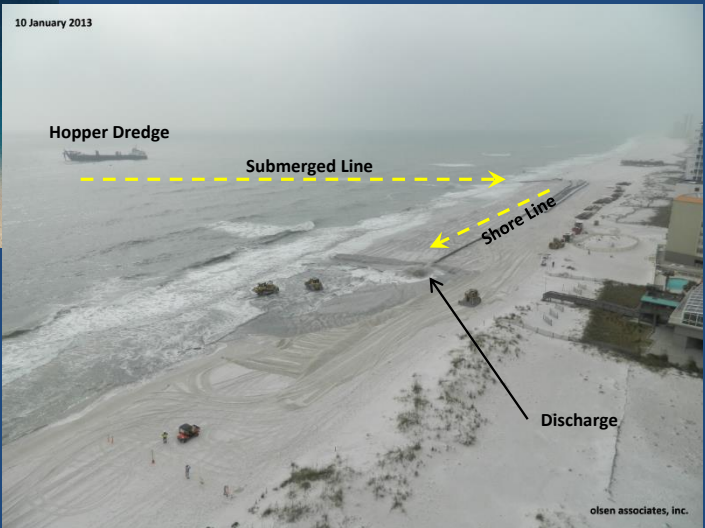


Hopper dredge loading sand from seafloor



HOPPER DREDGE

Hopper dredge unloading sand to beach





HOPPER DREDGE

Delivery and Placement from Offshore



25 January 2013



HOPPER DREDGE

Hopper dredge unloading sand to beach



Loaded hopper dredge preparing to unload sand to beach



Flagler County, FL Non-Federal Beach/Dune Restoration Project

Schedule Goals

Goal: Piggy-back on Federal Project and Dredge Mobilization

- **Summer 2019 - FDEP/USACE Permit Application Submittals**
- **June-Oct 2020 – Federal Project Construction**
- **Nov 2020 – Non-Federal Start at Completion of Federal Project (3-5 months to construct)**



Note: Success in meeting schedule goal will depend, in part, upon issuance of FDEP and USACE permits in a timeframe that will allow Nov 2020 construction start.

Project Funding Sources

- U.S. Army Corps of Engineers (USACOE) \$17,494,000
 - Local Match \$6,123,000 - the source of our local match will be coming from the remaining FDEP Grant and from FDOT
- Department of Environmental Protection (FDEP) for Emergency Dune Restoration
 - The County completed approximately 11.4 miles of dunes from north end of River to Sea Park through the north end of Flagler Beach; The County utilized in-house staff and equipment to complete the project; rental track trucks and off road dump trucks were also utilized to haul beach compatible sand from the staging locations to each beach segment.
 - Total Grant Amount \$12,116,559; Total Amount Eligible for Reimbursement (FDEP Share) \$8,220,630; Remaining Grant Funds \$3,895,929
- Florida Department of Transportation (FDOT) \$16,641,800