

The North Ponte Vedra Beach Restoration Project

A Success Story from
St. Johns County, FL
Coastal Management



23 May 2024
olsenassociates, inc.

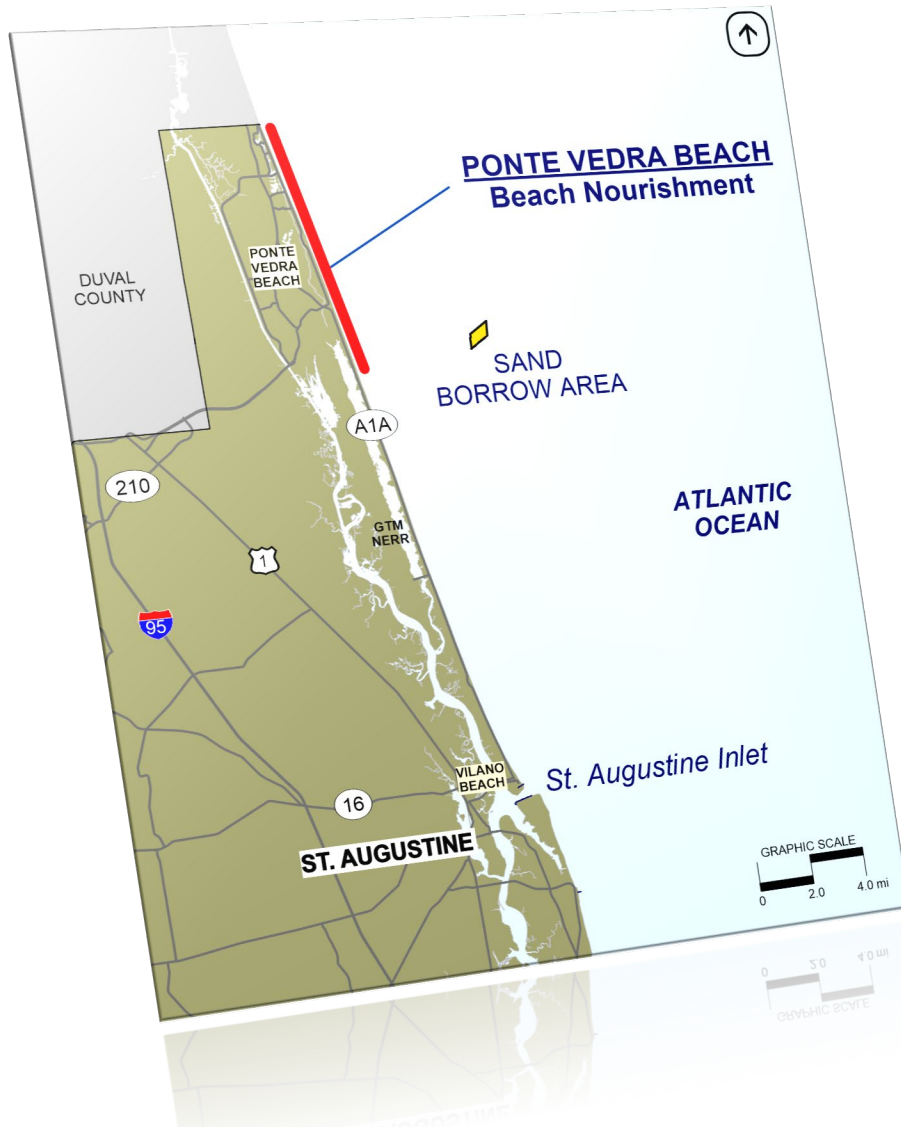
Florida Shore & Beach Preservation Association
National Conference on Beach Preservation Technology
February 5-7, 2025
Panama City Beach, FL

Road map to success

- ◆ Location
- ◆ First Restoration – Lots of FIRSTS!
- ◆ Easements
- ◆ ECL
- ◆ Funding
- ◆ Construction
- ◆ Hurricane Milton



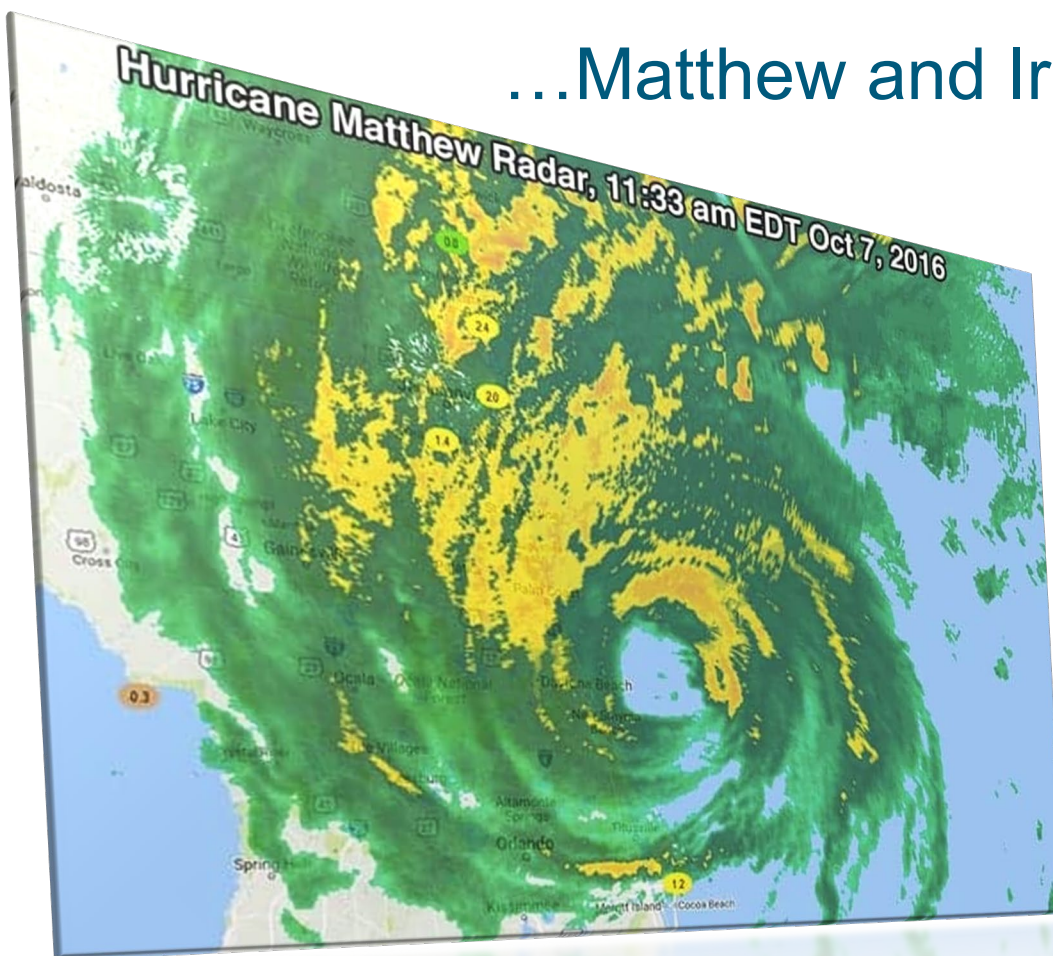
Project Area - Northern St. Johns County



- ◆ 8.9 miles of Atlantic shoreline
 - R-1: St. Johns/Duval County Line
 - Adjacent to the Duval County SPP
 - R-26 – R-31: FDEP Critically Eroded Area
 - R-46.2: Guana-Tolomato-Matanzas National Estuarine Research Reserve
- ◆ Offshore borrow area
 - 4.4 miles offshore
 - Federal Waters

The trouble all started when...

...Matthew and Irma came to town.



Matthew/Irma storm damages



- ◆ Interim Measures:
 - '21-'22 FEMA Berm
 - Geotube Revetments

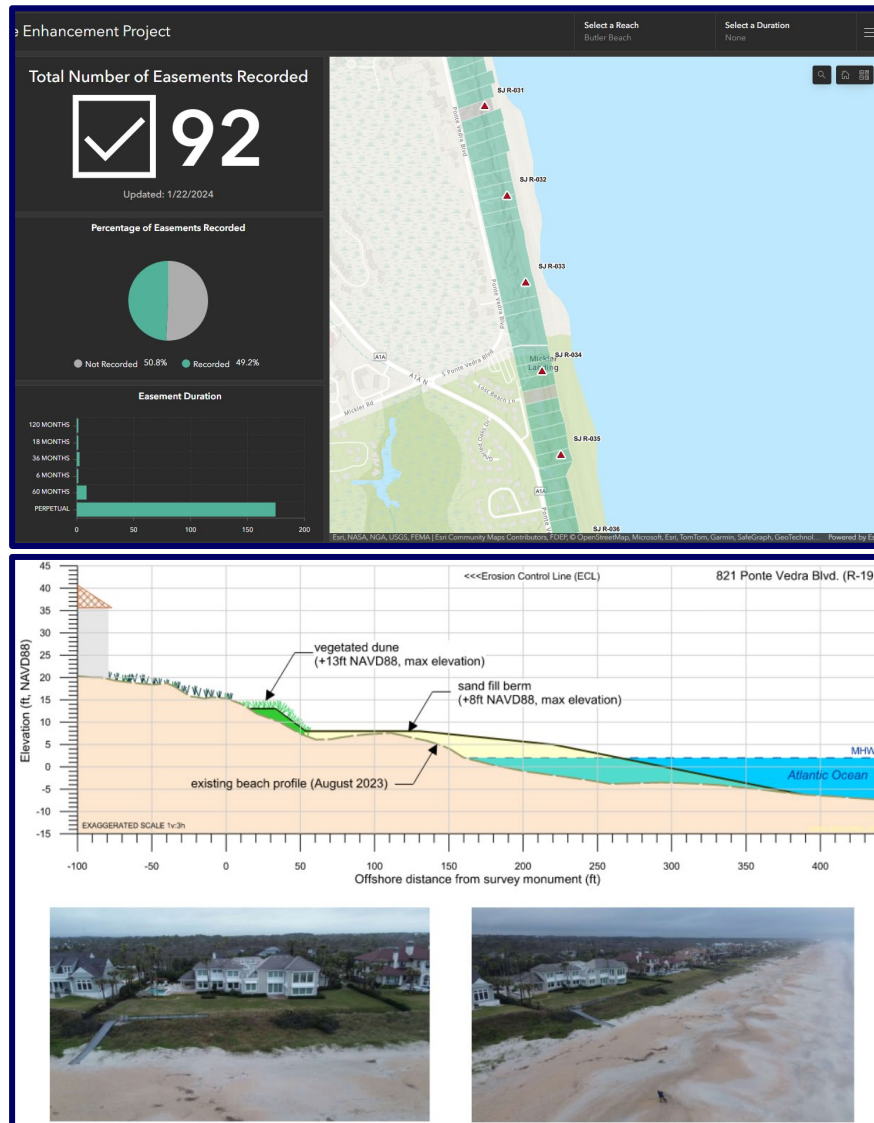


Preparation for full restoration

- ◆ Permitting
 - New FDEP Joint Coastal Permit and USACE DA Permit
 - BOEM Lease
- ◆ Erosion Control Line establishment
- ◆ Funding for project cost (\$36M):
 - \$30M secured from the State
 - \$8M secured from the County – Tourist Development Tax & General Fund
 - MSTU created, but ultimately not used
- ◆ Easements
 - Full set of easements needed for large-scale renourishment...



About those easements...



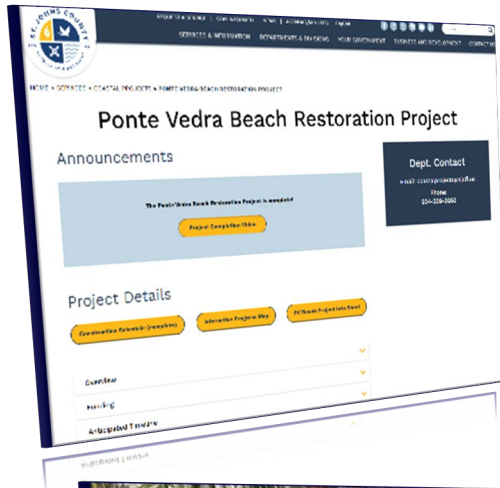
- ◆ Easement Acquisition
 - 272 Easements
 - In house GIS-database tracking
 - 100% participation
 - Mailings
 - Town Hall meetings
 - 1-on-1 meetings
 - Final easement received just after construction start

Beach Fill Construction – 2024 Timeline

- ◆ Bid advertisement: Dec 28
- ◆ Contract Award: February 21
- ◆ NTP Issuance: March 5
- ◆ Mobilization: March 18
- ◆ Dredge Start: March 29
- ◆ Subst. Complete: June 15
- ◆ Final Acceptance: July 9



Project Communications

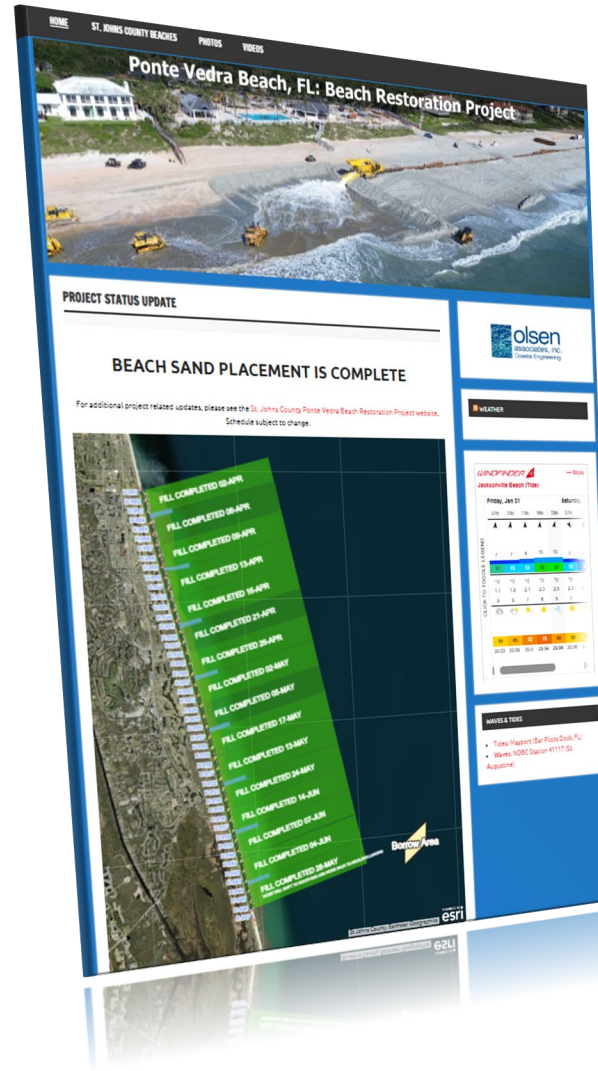


- ◆ Project Website(s)
- ◆ Sand-Breaking Event
- ◆ Mailers / Social Media
- ◆ Public Affairs Coordination

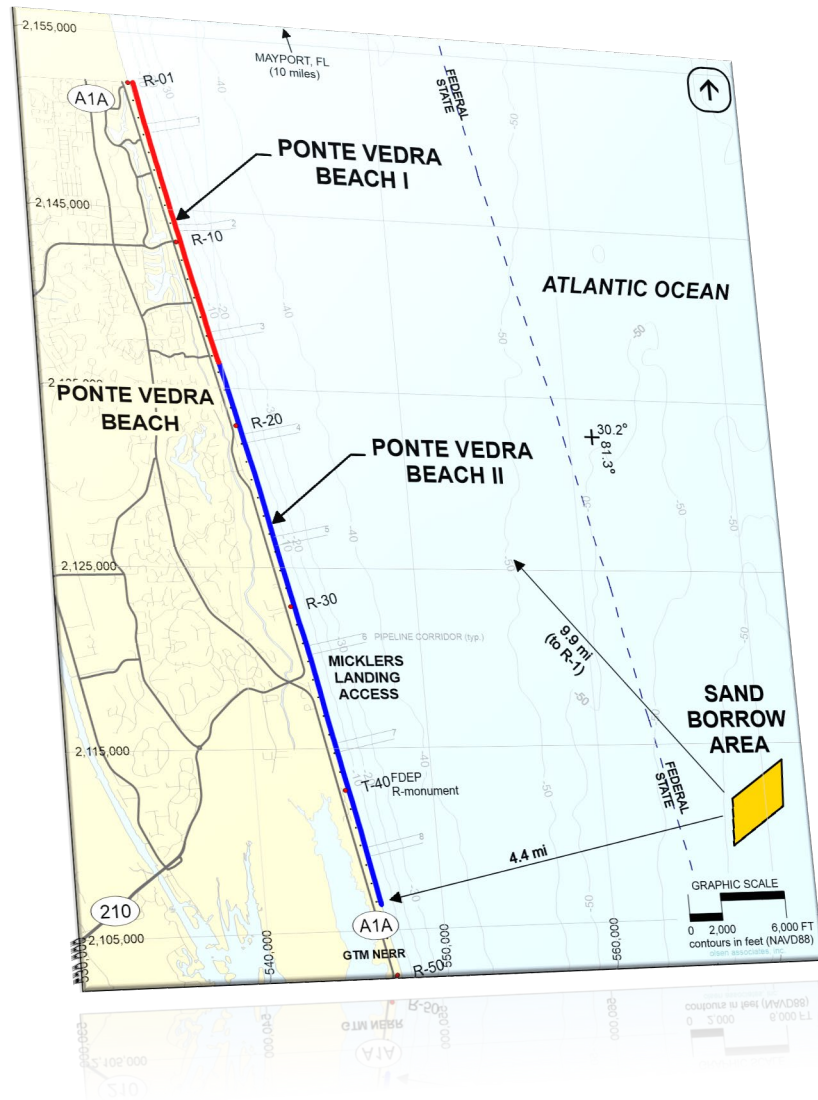


Helpful construction period tools

- ◆ Detailed routine “walk-aheads”
 - Structure conditions/photos
 - Fill template changes
- ◆ Project KMZ files
- ◆ Drone photography
- ◆ Dune conservation signage
- ◆ Daily construction observation
 - VIA Consulting Services
- ◆ Vibration monitoring
 - Gray Seismic



Project details



- ◆ Beach – 8.88 miles
 - 2,033,000 cubic yards (Pay)
 - 2,291,000 cubic yards (Gross)
 - 48.8 cy/ft (Gross Avg.)
- ◆ Borrow Area
 - 4.4 miles offshore
 - 196 acres (47 acre mod)
 - 8 Pipeline corridors



Weeks Marine, Inc. – trailing suction hopper dredges

RB Weeks

289 loads



- ◆ 6,140 cy/load (gross average)
- ◆ 78 days of dredging

Magdalen

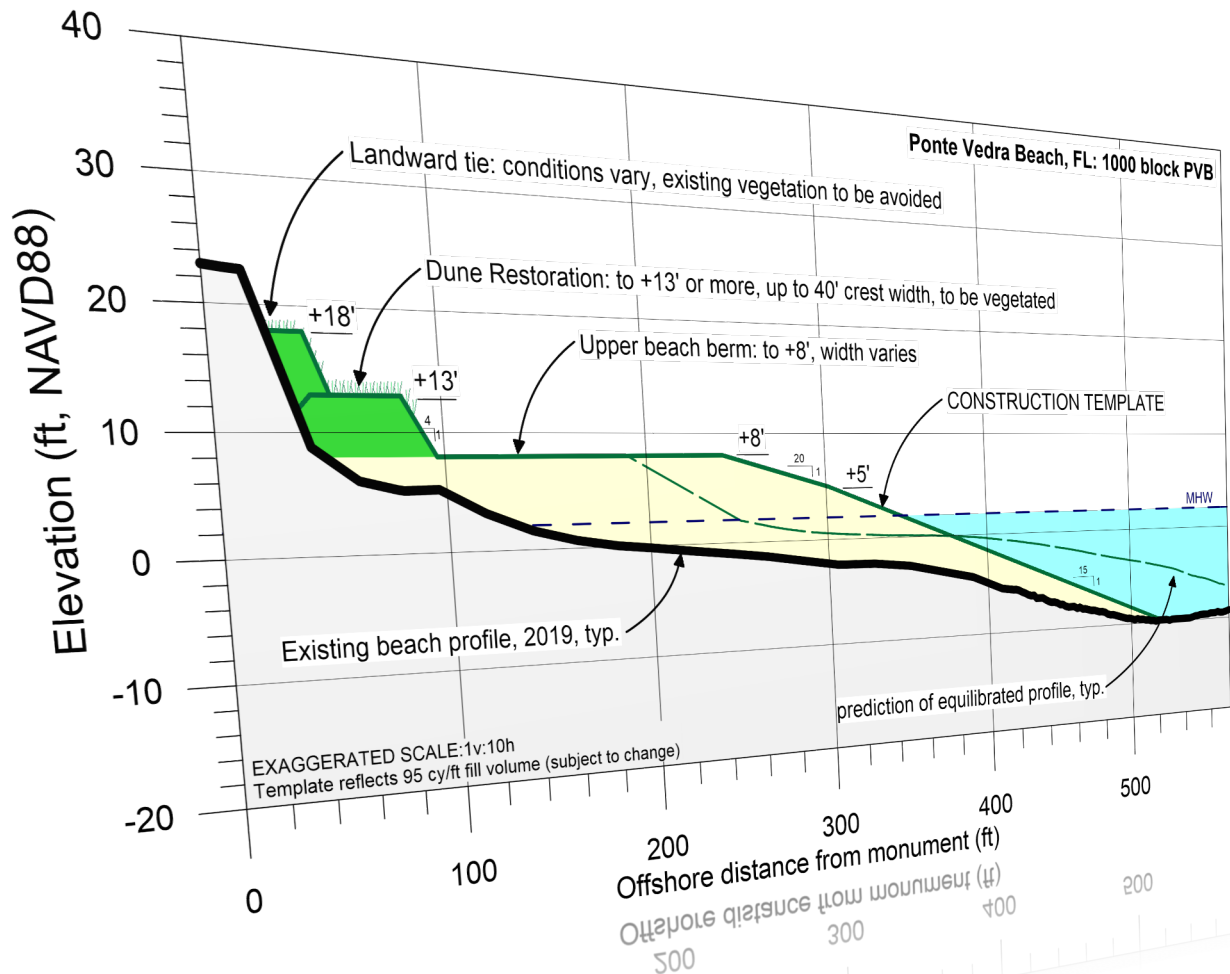
84 loads



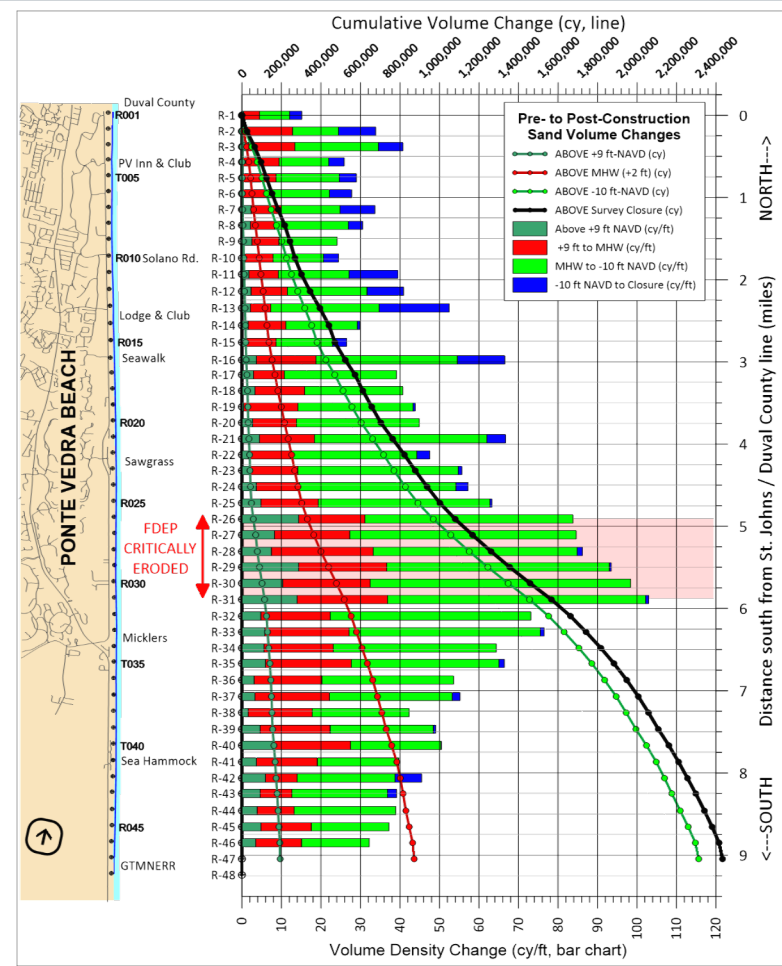
- ◆ 11 load peak daily production



Beach Fill Design



Field adjustments during construction to match current conditions



Beach Fill Construction



Beach Fill Construction

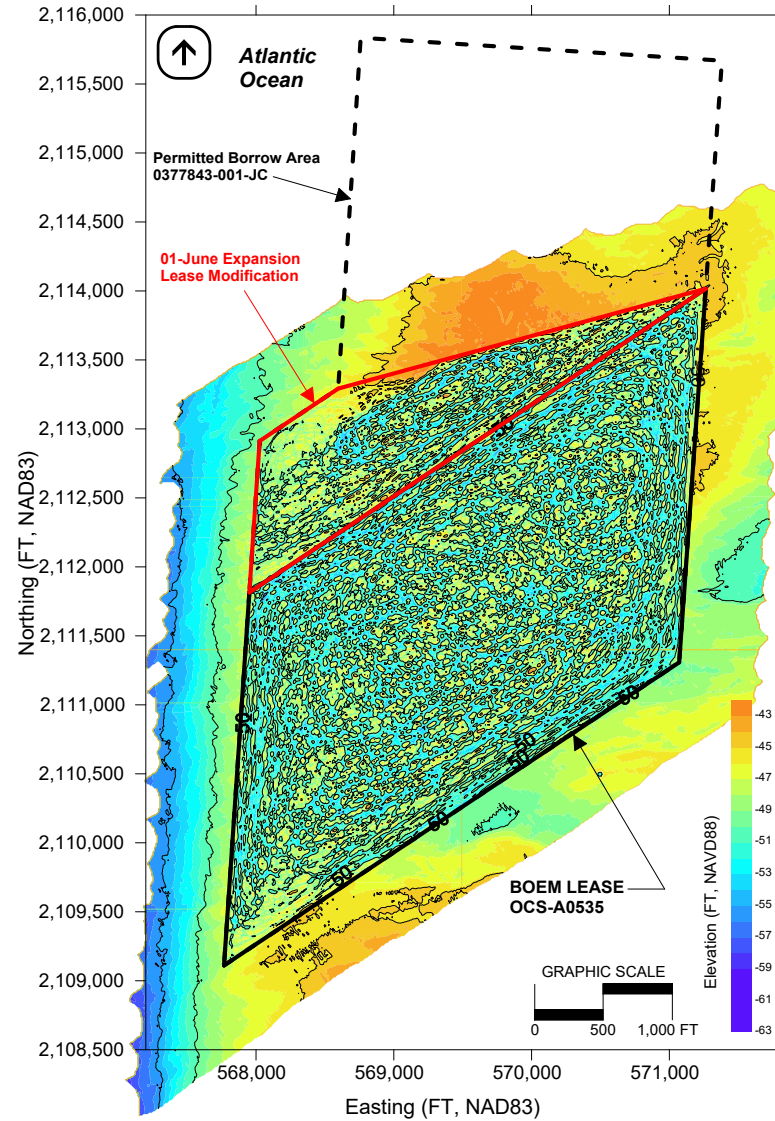
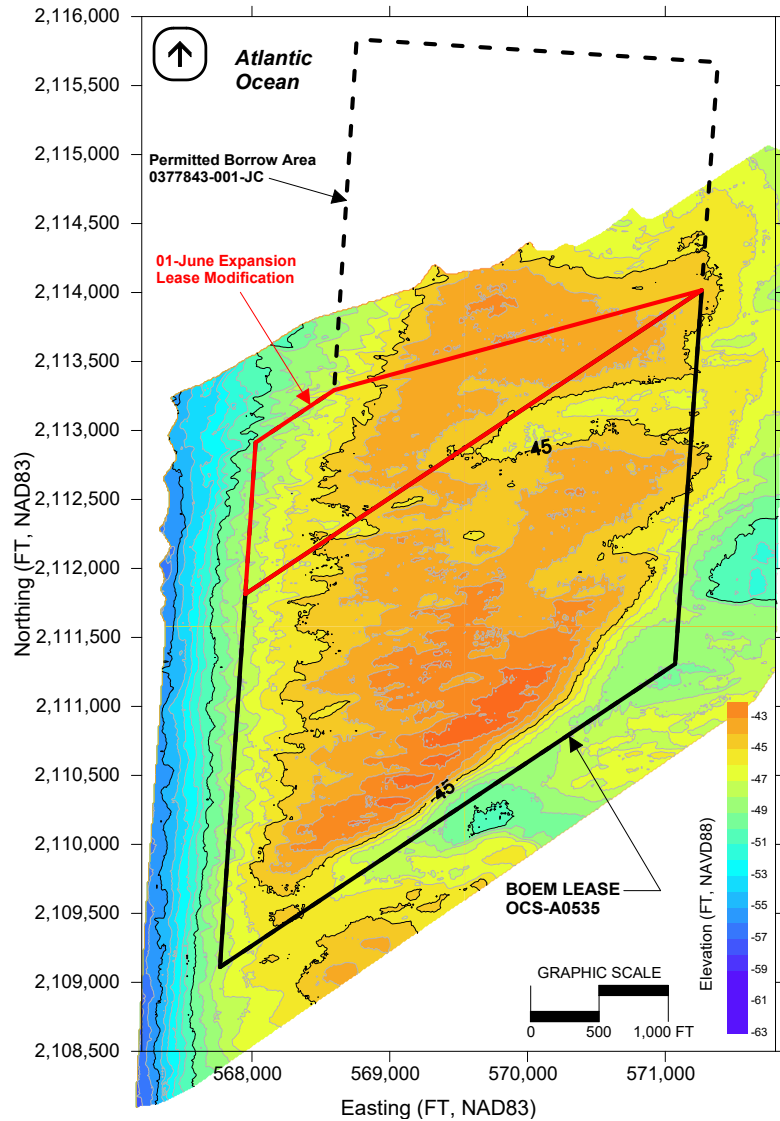


Sand screening

- ◆ 100% of material screened
 - Eastman Aggregates, Inc.
 - Extractor 3300
- ◆ Debris and MEC removed
- ◆ Shell material replaced



Borrow Area



◆ Multi-beam surveys

- Highlight tracks
- One-draghead operation creates different challenges in BA management

Dune Planting

- ◆ EarthBalance – 1,225,000 plants
 - 90% sea oats / 10% diversity species



Environmental Monitoring



- ◆ Marine Turtles
 - 3 different permit holders
 - 107 Nests –
 - 104 Loggerhead, 1 Green, 2 Kemp's Ridley
 - 23 Nests Relocated – all Loggerhead
- ◆ Shorebirds - Daily Monitoring
- ◆ Gopher Tortoise
 - 1 Relocation



Hurricane Milton

- ◆ October 2024
- ◆ Sand loss and 'expedited equilibration'
- ◆ Surveys and analyses underway

To be continued...



The North Ponte Vedra Beach Restoration Project



A Success Story from St. Johns County, FL Coastal Management



Sloane Stephens

sstephens@sjcfl.us

904-209-2402

Stephen Hammond



Sergio Peña

Sergio.Pena@Foth.com

904-387-6114

Al Browder

Krista Egan

Florida Shore & Beach Preservation Association
National Conference on Beach Preservation Technology
February 5-7, 2025
Panama City Beach, FL