A Win, Win, Win

Beneficial Use Placement and Stockpiling of Maintenance Dredging Material from the Intracoastal Waterway and Ponce De Leon Inlet

FSBPA 39th Annual National Conference on
Beach Preservation Technology
February 5, 2026 – Saint Augustine Beach, FL

Patrick J. Snyder, P.E., CFM
Chief, Shore Protection Section
Jacksonville District
U.S. Army Corps of Engineers

Trusted Partners Delivering Value
Today for a Better Tomorrow

U.S.ARMY

US Army Corps of Engineers
BUILDING STRONG®

All I do is Win, Win, Win no matter what

- DJ Khaled

WHAT IS BUDM?

Beneficial Use of Dredged Material (BUDM)

- Productive and positive uses of dredged material
- Broad use categories
  - Fish and wildlife habitat development
  - Human recreation
  - Industrial/commercial uses

BENEFICIAL USE

- Coastal Navigation:
  - 13,000 miles of coastal channels
  - 28 locks at 25 sites
  - 1,000+ other coastal navigation structures
- Inland Navigation:
  - 12,000 miles of inland waterways
  - 209 locks at 167 sites

BENEFICIAL USE

Status of USACE Beneficial Use

- Over 200 Mcy of material is dredged annually from federal navigation channels
- About 10-15% requires special handling (30 Mcy)
- Remaining 85% is available for beneficial use (170 Mcy)
  - Of this, about 30-35% is beneficially used (50-60 Mcy)

BENEFICIAL USE

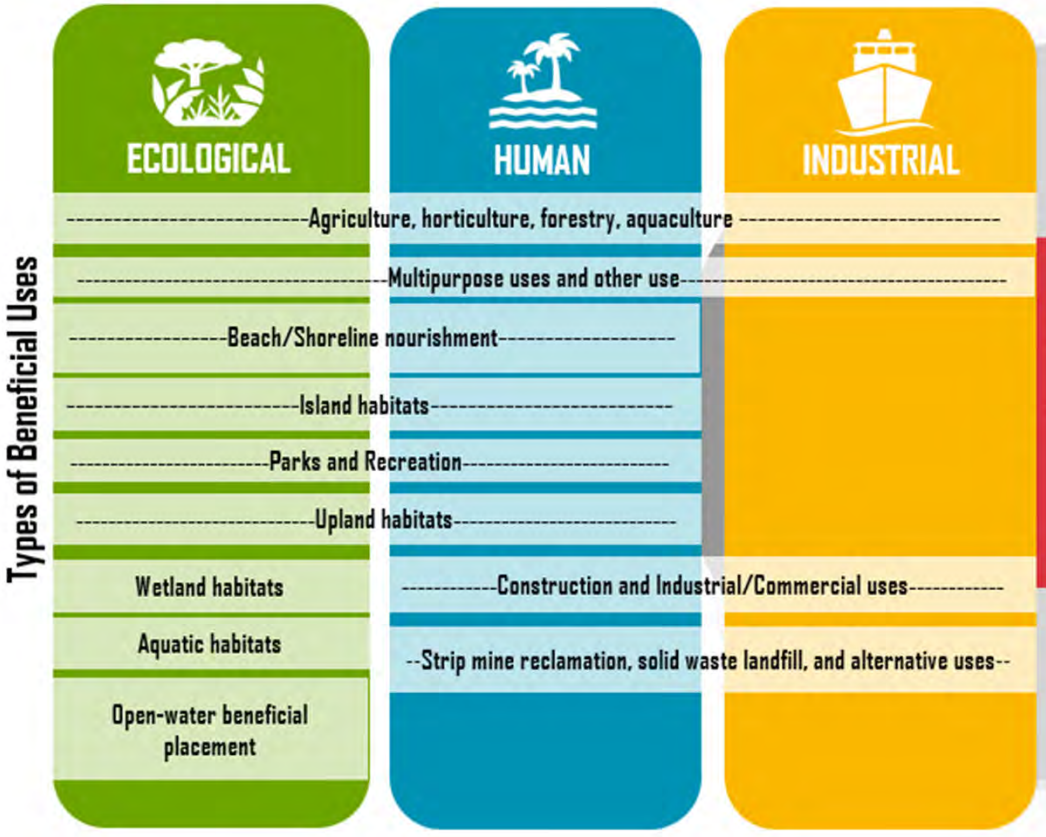
Goal of USACE Beneficial Use

- Goal set by LTG Spellmon to beneficially use 70% of dredged material by 2030
- Range of material fates qualify as BUDM
  - Not created equally
  - Not necessarily “optimal”

While the characteristics and quality of the material differs across the enterprise, it is important to innovate and explore the broad range of opportunities for beneficial use of dredged material, which can provide environmental, recreational, coastal storm risk reduction, and economic benefits.

BENEFICIAL USE OF DREDGED MATERIAL

DEFINITION: *Beneficial uses are defined as productive and positive uses of dredged material, which cover broad use categories ranging from fish and wildlife habitat development, to human recreation, to industrial/commercial uses.*



Achieving Our Goal

Our Goal: 70% Beneficial Use Practices by the year 2030

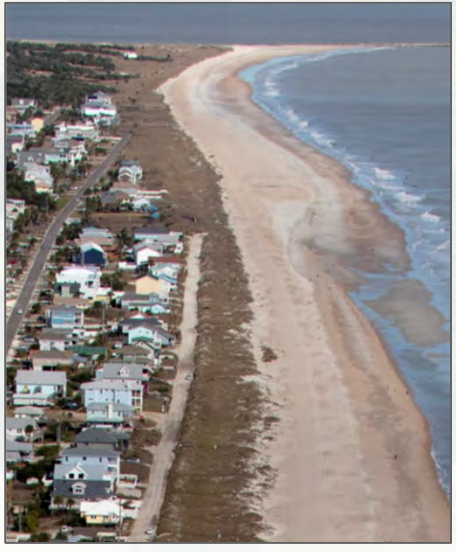
- Consider dredged material a valuable resource
- Quantify and document current success in beneficial use and identify opportunities
- Examine and update existing policies
- Develop innovative solutions
- Communicate and collaborate with internal and external partners
- Make beneficial use standard operating procedure within the Corps of Engineers

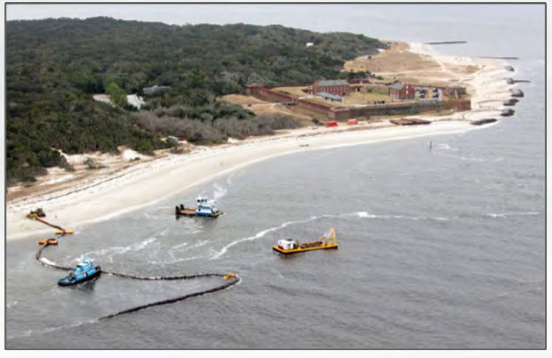
More information visit: https://www.usace.army.mil/Missions/Civil-Works/Beneficial-Use-Program/

THE FEDERAL STANDARD

BUILDING STRONG

Purpose: Federal funds must be allocated and spent responsibly for maintenance of Federal navigation channels.





The term "Federal Standard" comes from the Corps' Operation and Maintenance regulations of 26 April 1988 -33 CFR 209, 335, 336, 337, and 338.

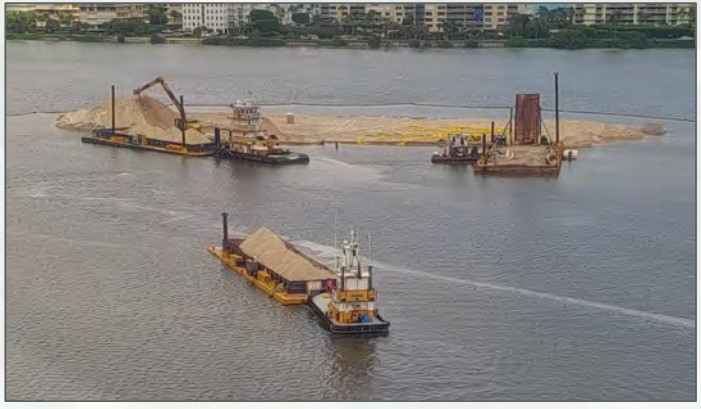
"Federal standard" means the dredged material disposal alternative or alternatives identified by the Corps which represent the **least costly** alternatives consistent with **sound engineering** practices and meeting the **environmental standards** established by the 404(b)(1) evaluation process or ocean dumping criteria.

USACE Engineering Regulation (ER 1130-2-520):

"Dredging shall be accomplished in an efficient, cost-effective, and environmentally acceptable manner to improve and maintain the Nation's waterways."

SEDIMENT MANAGEMENT

Emphasis solely on least cost can result in actions that remove sediment from the littoral system through upland or offshore disposal.



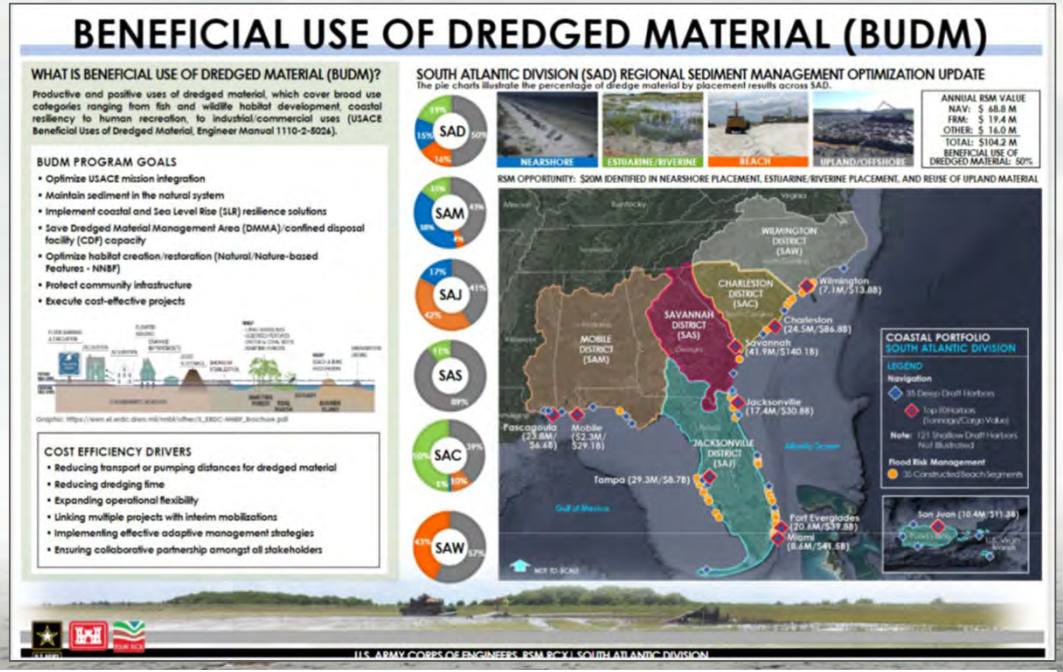
Too Much Sediment:	Too Little Sediment:	Sediment as a Resource:
▪ Obstruction of channels	▪ Beaches erode	▪ Construction material
▪ Rivers fill and flood	▪ Riverbanks erode	▪ Sand for beaches
▪ Reefs get smothered	▪ Wetlands are lost	▪ Wetland nourishment
▪ Turbidity	▪ River profile degradation	▪ Agriculture soil enrichment

REGIONAL SEDIMENT MANAGEMENT

BUILDING STRONG

Goal: Retain all suitable quality dredged material in the littoral zone in order to attempt to restore and maintain the national coasts as balanced natural systems. (Coastal Engineering Research Board, 1998)

- Promotes short-term cost efficiencies as well as longer-term costs savings with consideration for best management of resources across projects and programs within a region.
- Goal to ultimately reduce overall Civil Works expenditures in a region, better serving the Nation!



DMMP AND BUDDI

BUILDING STRONG

Each Federal navigation project must demonstrate sufficient dredged material disposal capacity **for a minimum of 20 years**.

- Must demonstrate project's Federal Standard and must evaluate true cost of dredging combined with comprehensive benefits.

DMMP Preliminary Assessment
(15 – 25 pages)

For many projects with readily available information*, the preliminary assessment is all that is needed to determine continued maintenance is warranted.

* Port usage and economic productivity
* Maintenance records and disposal capacity

DMMP
(100+ pages)

For projects with disposal capacity concerns, a more detailed DMMP study is necessary beyond the preliminary assessment.

BUDDI
Beneficial Use Decision Document Integration

Updates Federal Standard to add a BU site without reopening full study (approved at District level)

BENEFICIAL USE

BUILDING STRONG

RSM Sediment Placement Data Viewer

Home | About the Data | Data Viewer

2022-Present

Filters
Note: All 2022-present data is still in review.

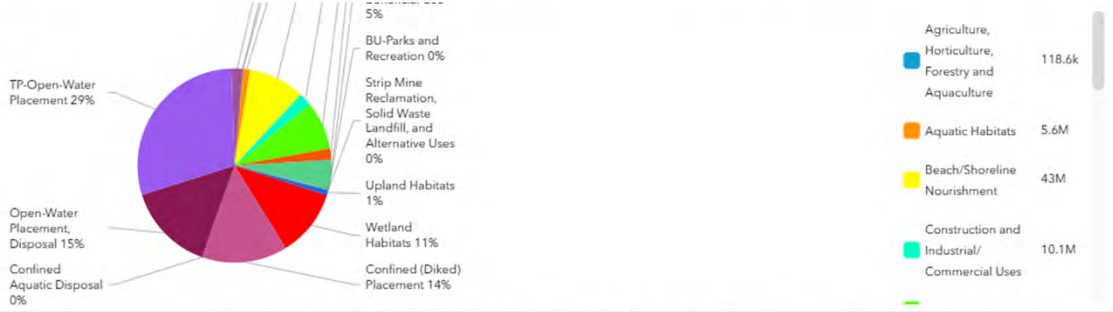
Fiscal Year	USACE Directorate	USACE Division	USACE District	Placement Category	Placement Type	Contract	Job Status	Job Status	Business Line
2022 - 2026	All	All	All	All	All	All	Select SubType	Show All / Completed Only	Navigation

Beneficial Use
Volume 56.3%
182.93M cy of 324.78M c
Events 795
1 Unreported Volum

Disposal
Volume 41.1%
133.37M cy of 324.78M c
Events 342
1 Unreported Volum

Unspecified
Volume 2.6%
8.47M of 324.78M cy
Events 117

Total Volume Summary by Placement Type (cy)



TOTALS
Volume 460.16M cy
Events 1,791
Years 5
Est. % Complete (Active & Complete)
75% Using Historic Avc

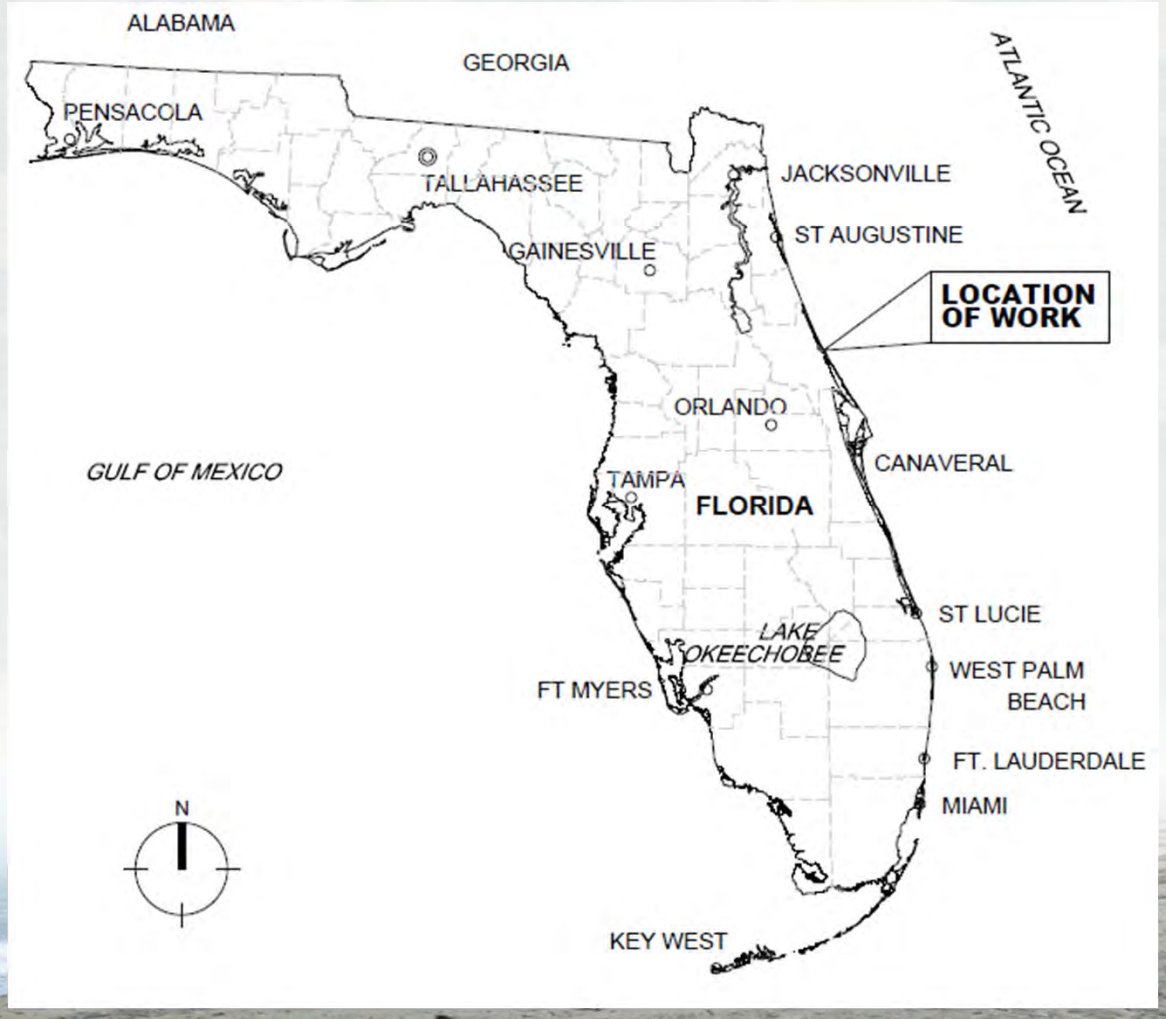
Transitional
Volume 135.4M cy
Events 537
3 Unreported Volume

Placement Summary | Volume/Year | % BU/D by Year | Placement by District | # Events | #Events/Year | All Details | Data Gaps - Event Counts

https://experience.arcgis.com/experience/448e41753a1f408e9dd2c98896e818c0/page/Home

PONCE DE LEON INLET

BUILDING STRONG

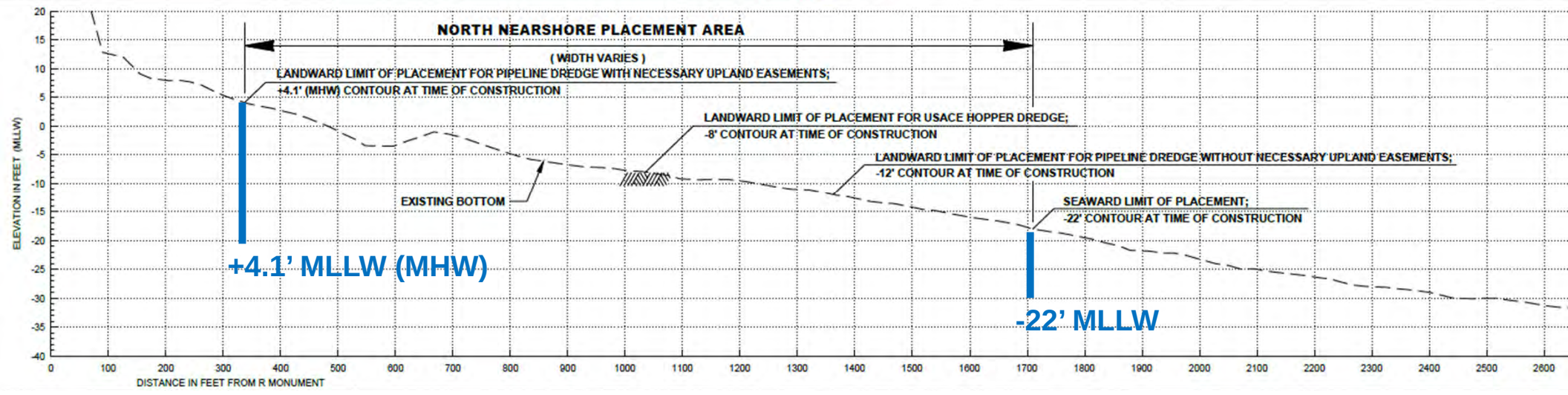


PONCE DE LEON INLET

BUILDING STRONG

PONCE DE LEON INLET

BUILDING STRONG



PONCE DE LEON INLET

Historical Placement

- Mostly North Beach (including inlet shoreline)
- Some offshore in 1970s

Recent Placement

- North Beach a few times
- DMMA (Rattlesnake Island) until reach capacity
- Almost exclusively nearshore since then
- Exclusively South Beach Nearshore since 2014
  - Small, particularly emergency, projects tend to nearshore

PONCE DE LEON INLET 2025 O&M

BUILDING STRONG

Dredging

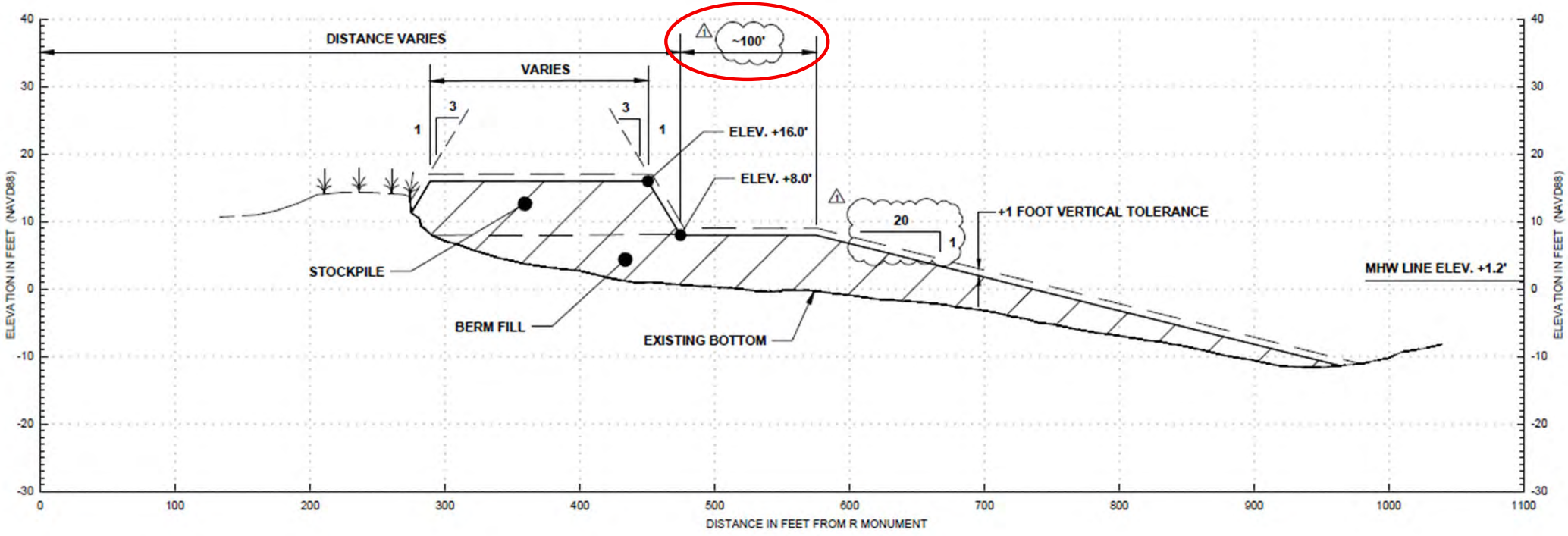
- 14 miles of IWW channel
- Ponce de Leon Inlet: 435,000 cy 383,858 cy
- Intracoastal Waterway: 478,000 cy 416,671 cy
- Total 913,000 cy 800,529 cy (88%)

Placement

- R-139 to R-145 (5,500 feet)
- 800,000 cy (140+ cy/ft)
- Dune *Stockpile: 200,000 – 250,000 cy

PONCE DE LEON INLET 2025 O&M

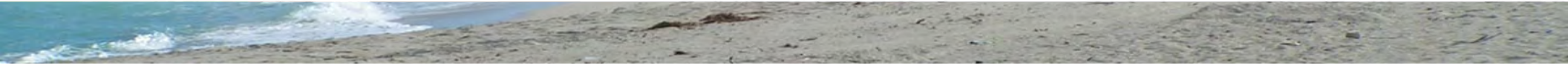
BUILDING STRONG



NORTH BEACH TYPICAL PLACEMENT PROFILE

VERTICAL SCALE: 0 10' 20'

HORIZONTAL SCALE: 0 50' 100'



PONCE DE LEON INLET 2025 O&M

BUILDING STRONG

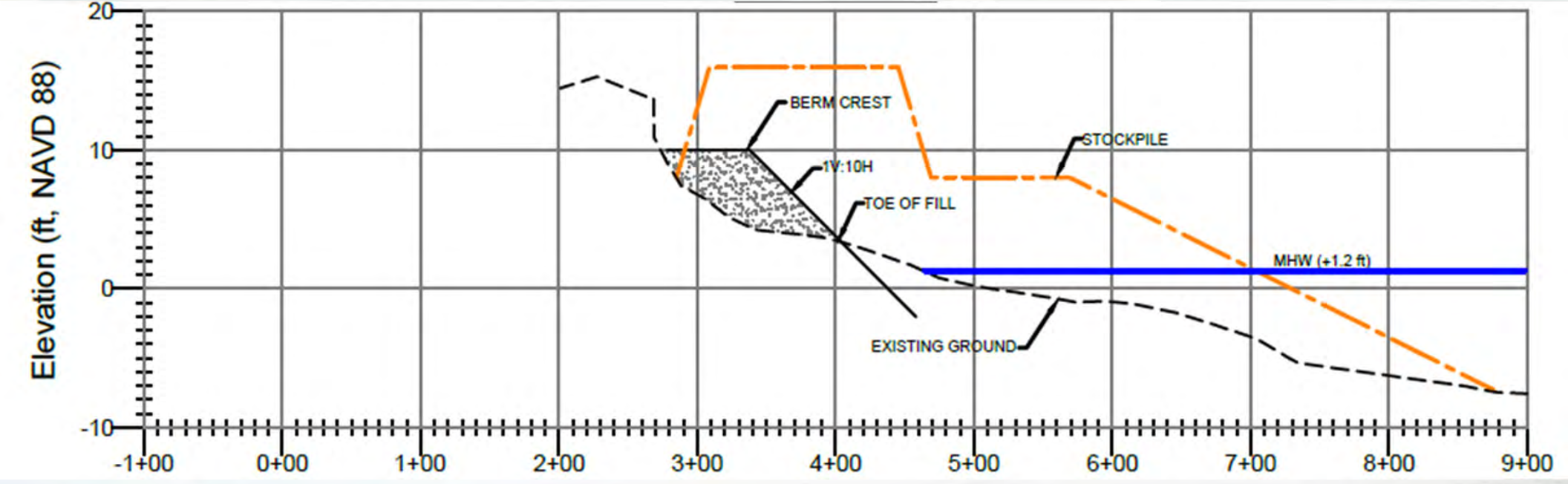
LOCAL TRUCK HAUL

Berm Restoration North of Ponce de Leon Inlet - USACE 2024 Ponce Inlet and ICWW Maintenance Dredging Material Beneficial Use

- Sponsor: Volusia County
- Engineer: INTERA
- Contractor: Halifax Paving Inc.
- Sunglow Pier to Ponce Inlet
- Hauling up to 4 miles
- 370,000 cy (~13,000 truck loads)
  - About half of the hydraulically placed volume

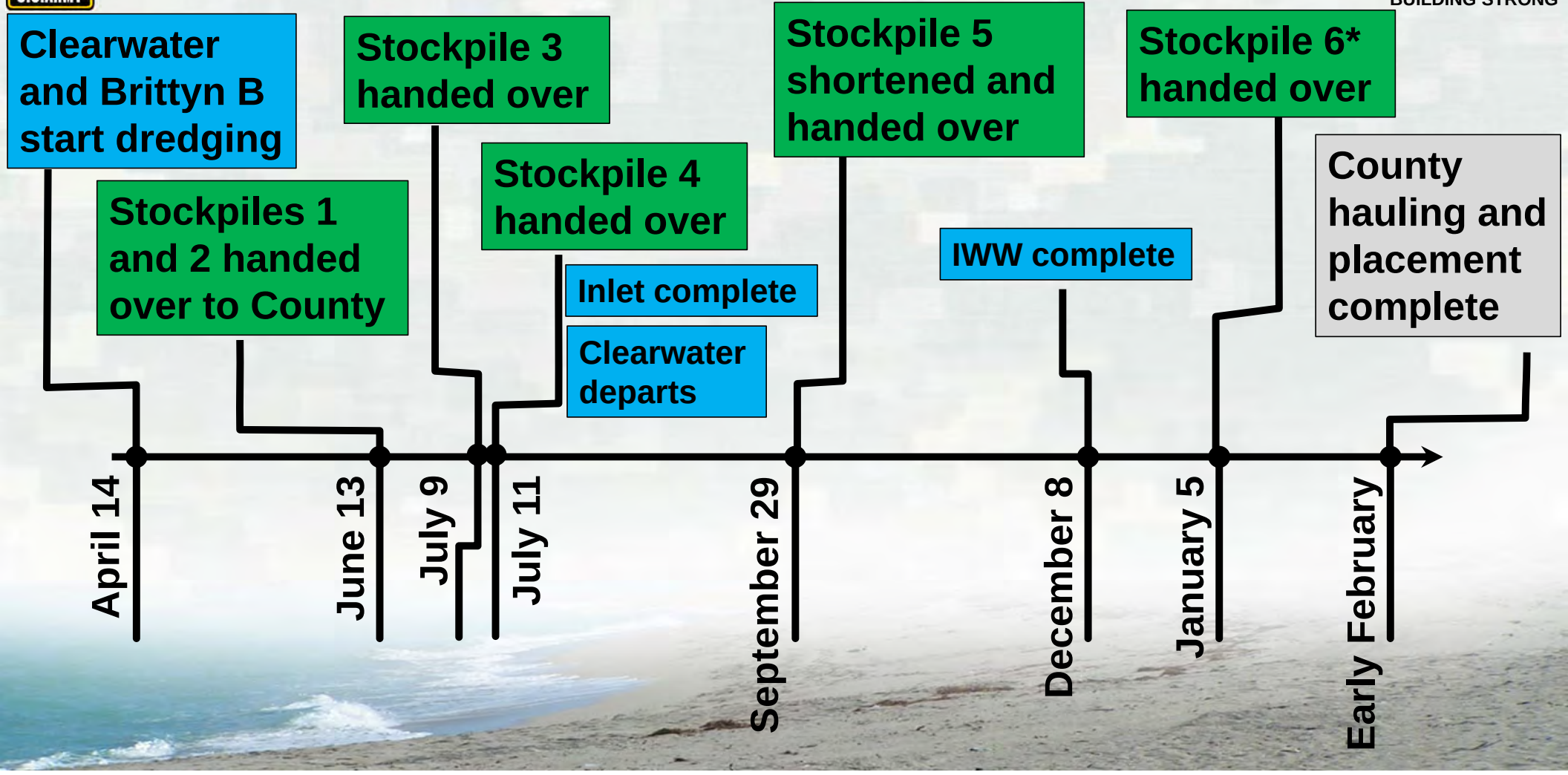
LOCAL TRUCK HAUL

BUILDING STRONG



CONSTRUCTION

BUILDING STRONG



CONSTRUCTION

BUILDING STRONG

CONSTRUCTION

BUILDING STRONG

CONSTRUCTION

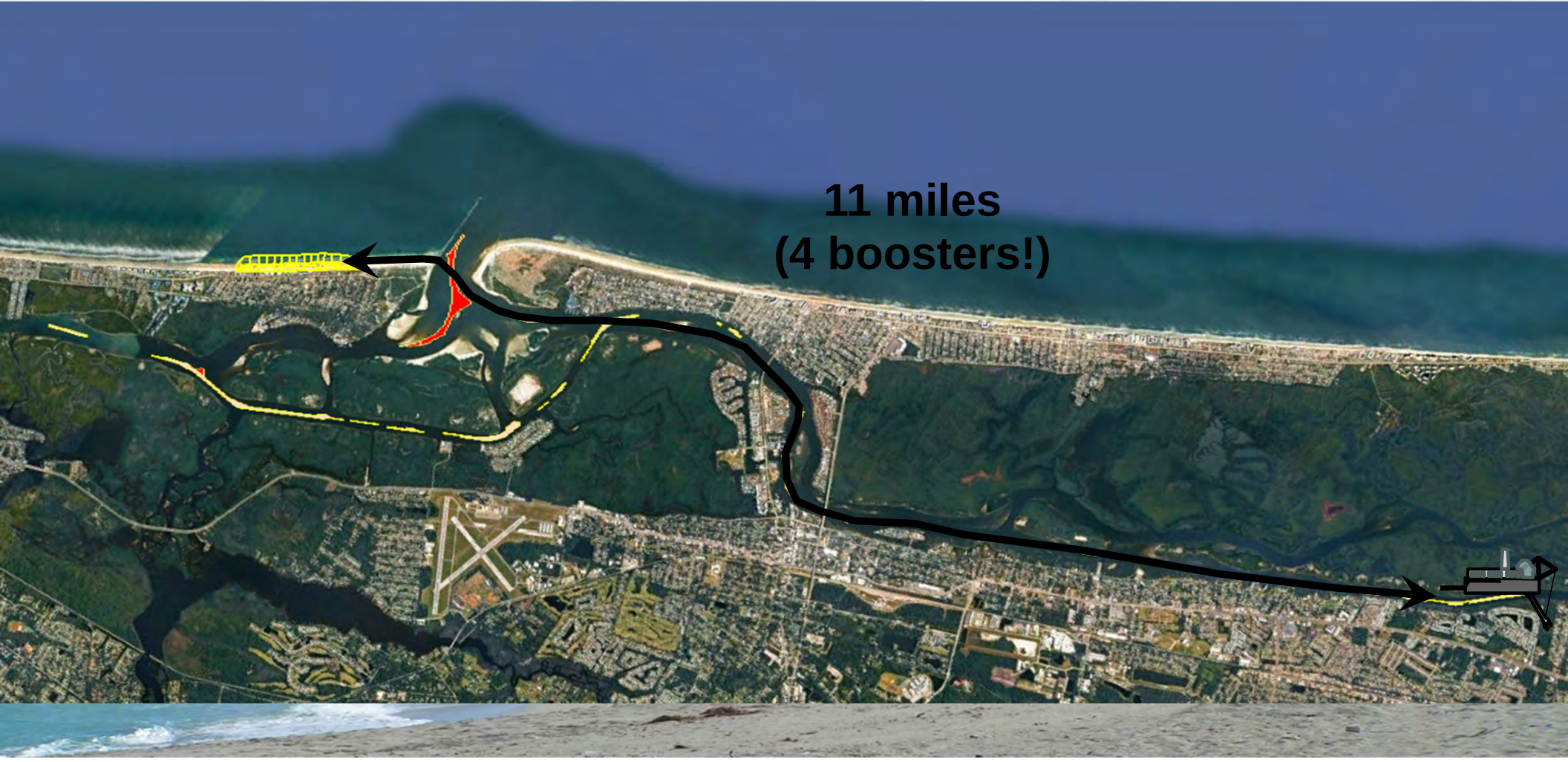
BUILDING STRONG

CONSTRUCTION

BUILDING STRONG

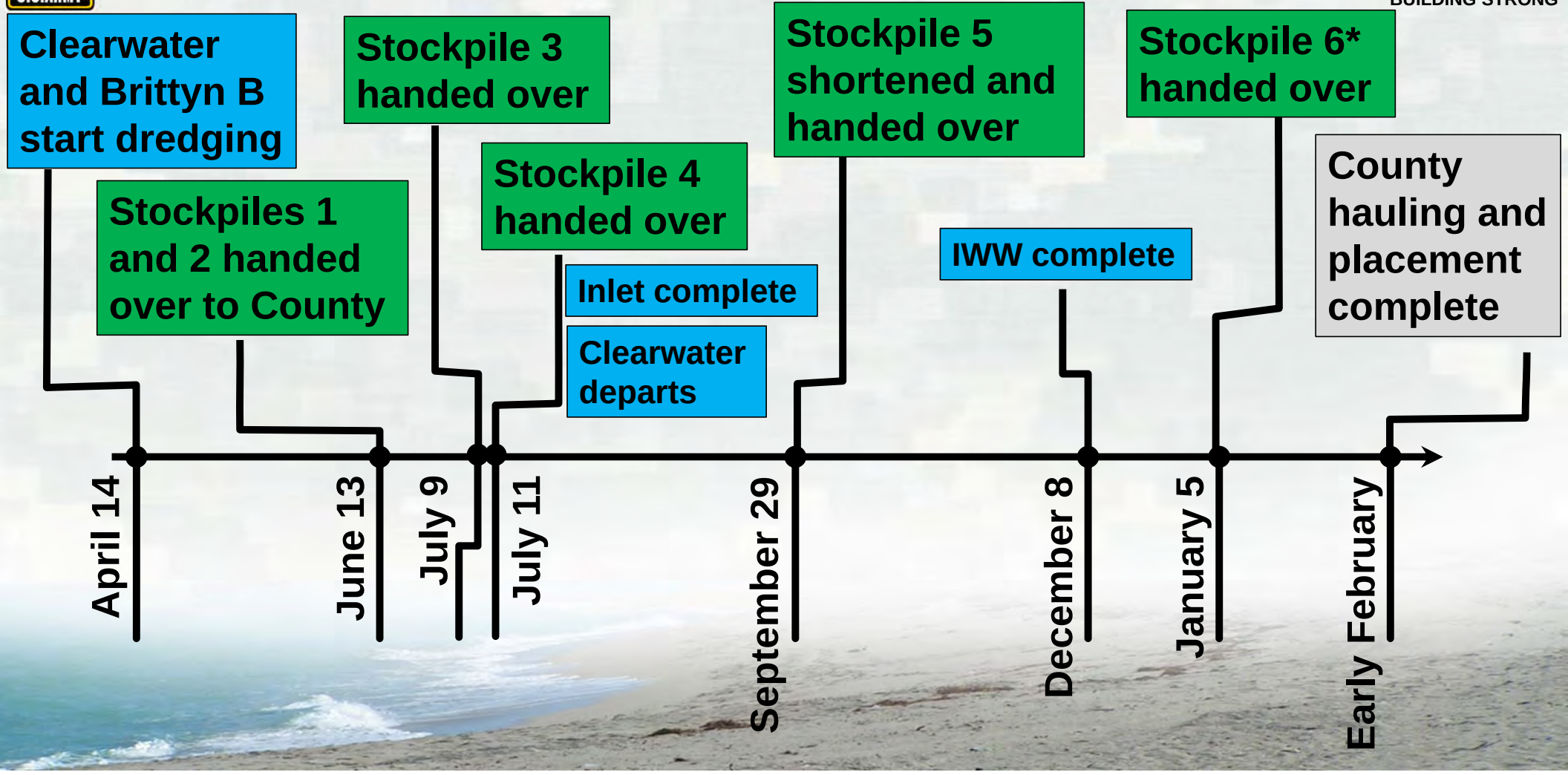
CONSTRUCTION

BUILDING STRONG



CONSTRUCTION

BUILDING STRONG



CONSTRUCTION

BUILDING STRONG

CONSTRUCTION

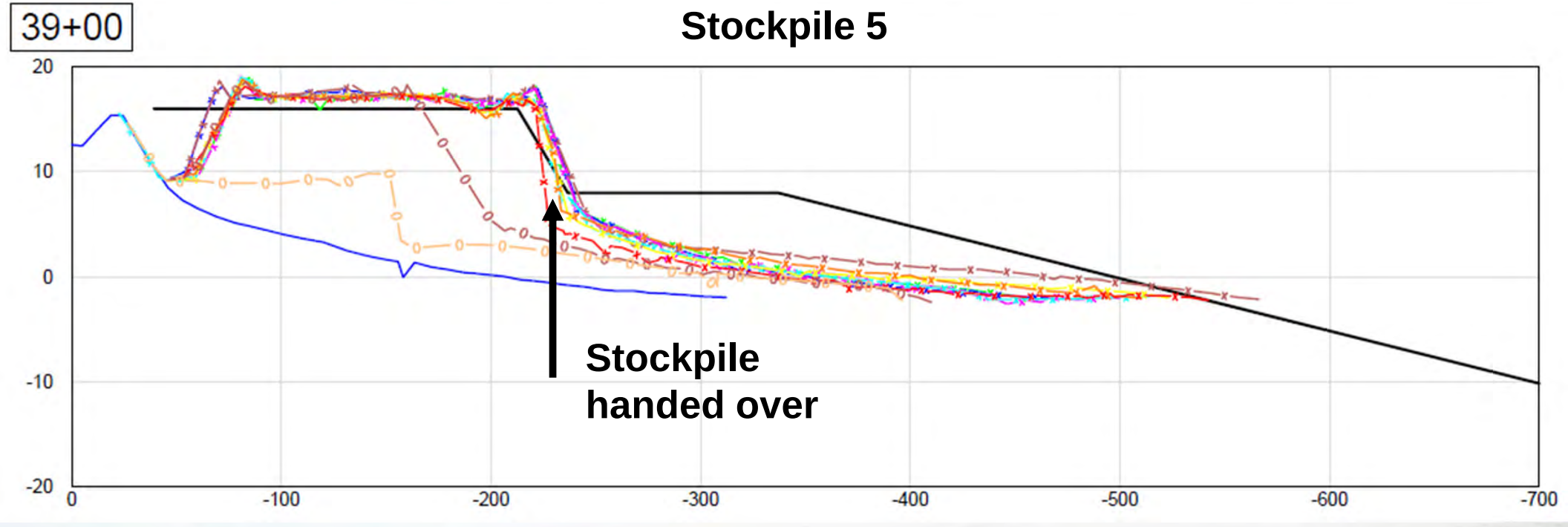
BUILDING STRONG

CONSTRUCTION

BUILDING STRONG

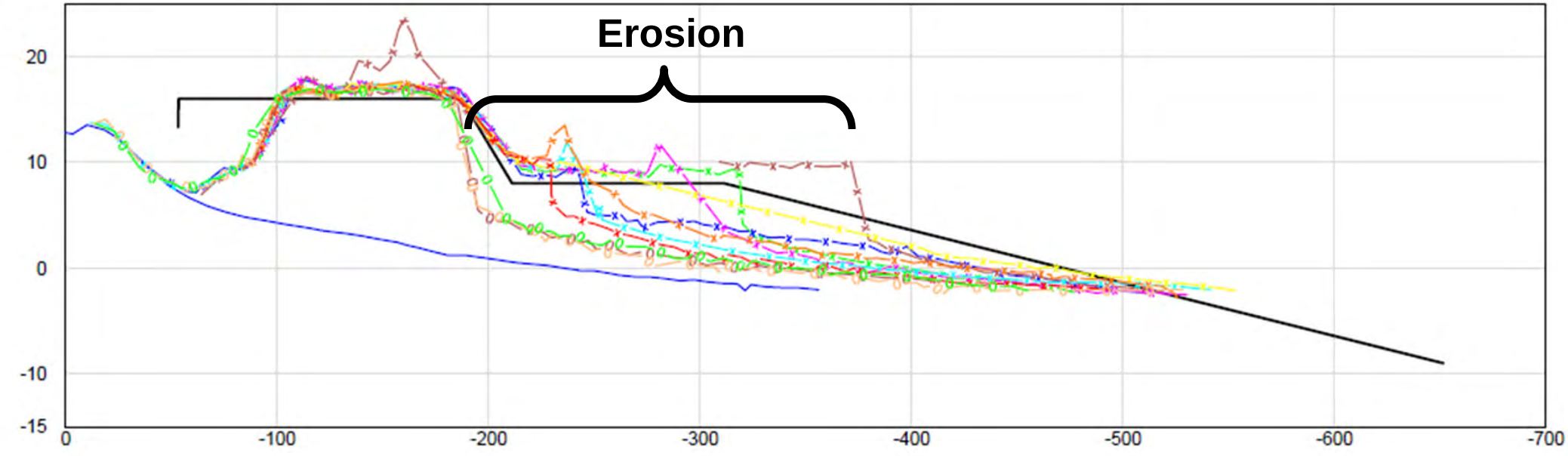
CONSTRUCTION

BUILDING STRONG


39+00
Stockpile 5
20
10
0
-10
-20
0
-100
-200
-300
-400
-500
-600
-700
Stockpile
handed over

45+00

Stockpile 6



SUMMARY

USACE has guidance (and motivation!) to implement and improve Beneficial Use of Dredged Material

- Need support (and prodding) from Sponsors/stakeholders
- Always room for improvement

Advance Planning and Coordination Critical

- BUDDI, Real Estate, Permitting, Cost Share
- Public outreach, communication

Truck haul from beach stockpile a balancing act

- Doubly so with multiple contracts, contractors

QUESTIONS?

BUILDING STRONG

Thank you!

Partners

Volusia County FLORIDA

Atlantic Florida Inland Navigation District Intracoastal

INTERA

Gator Dredging

Halifax Paving Inc.

Special Thanks to:

USACE: Joe Daly, Geoff Klug,
Matt Andrews, Eduardo Marin
Volusia County: Jessica Fentress, Niles Cyzycki
Intera: Mike Trudnak

Patrick.J.Snyder@usace.army.mil