

# The South Amelia Island Shore Stabilization Project: Project Maintenance and Borrow Area Development at Nassau Sound

**FSBPA National Conference  
on Beach Preservation Technology  
St. Augustine Beach, FL  
2 February 2022**

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# Topics

- Setting / History
- The 2021-22 project
- Borrow area development
  - Nassau Sound shoals
  - Delft3D modeling
  - Islandwide Budget





# Regional Setting

- **Amelia Island:**
  - 13 miles
- **Project: 3.6 miles**
  - SAISS MSBU: 3.0 miles
  - State Park: 0.6 miles
- **R-59 to R-79**
  - Nassau County, FL



# Historical Perspective



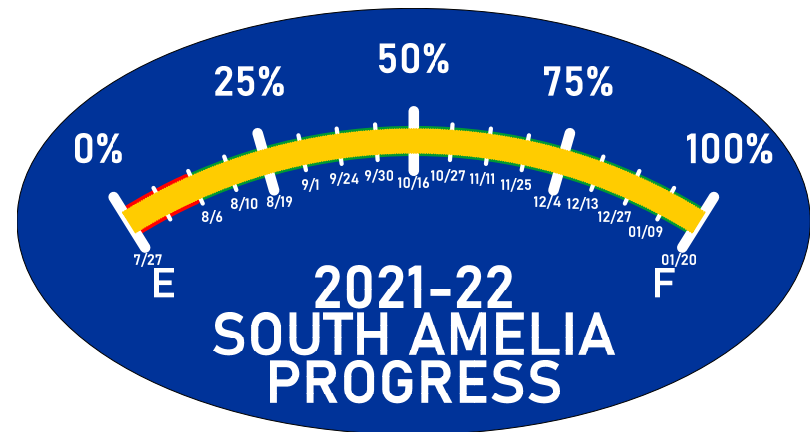
# Beach Nourishment – 1994, 2002, and 2011





# '21-'22 Renourishment

- Contract: 1.8 million cubic yards of sand
  - Hydraulic cutterhead/pipeline dredge used
    - Equivalent of about 120,000 dump truck loads
  - 105 cubic yards of sand per foot of shoreline
    - Equivalent of about 7 dump-truck loads per lineal foot
- July 27, 2021 – January 20, 2022
  - Amelia Island State Park to Burney Park

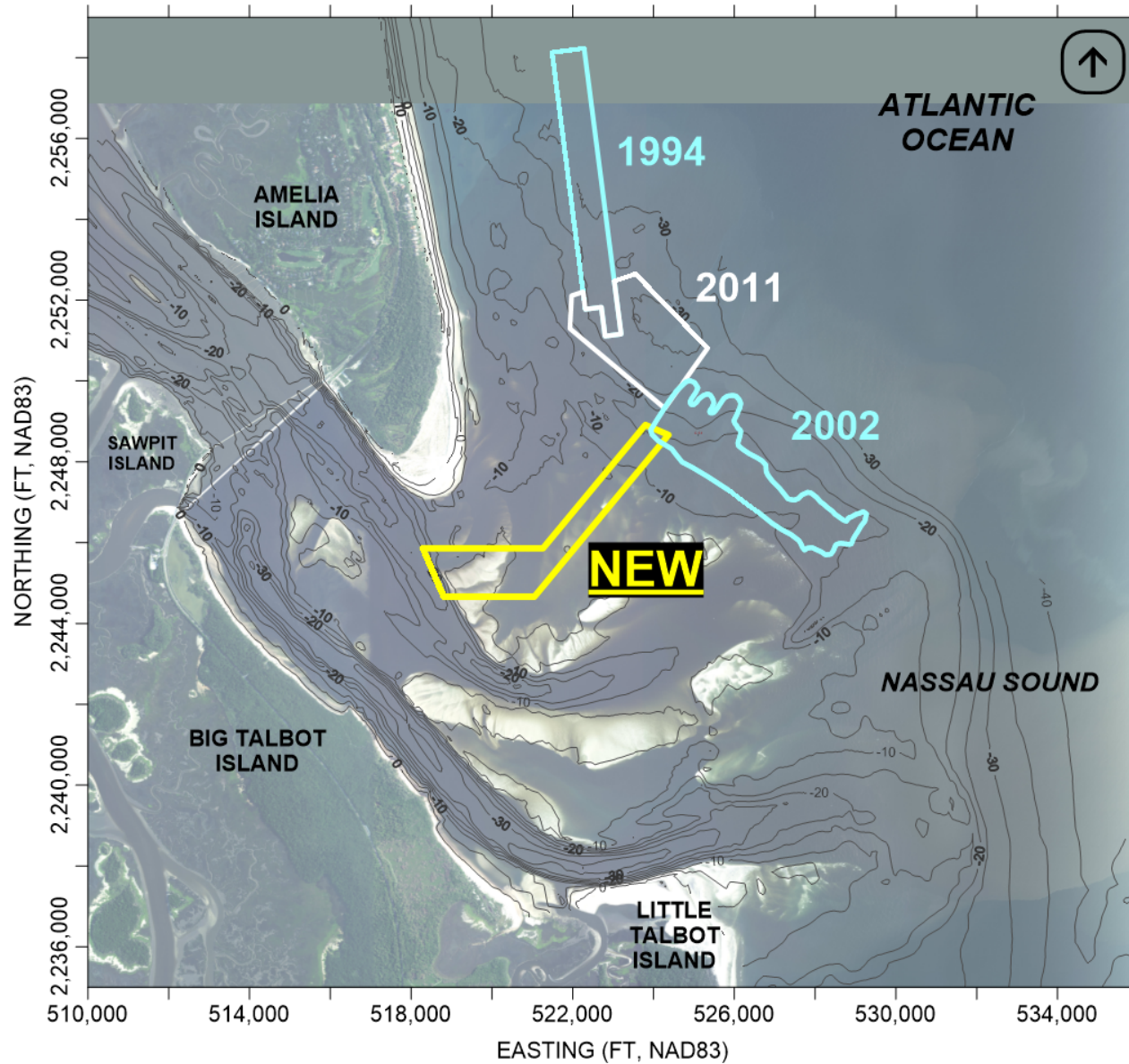


# 2021-2022 Beach Fill Construction





# SAISS Project Borrow Area History



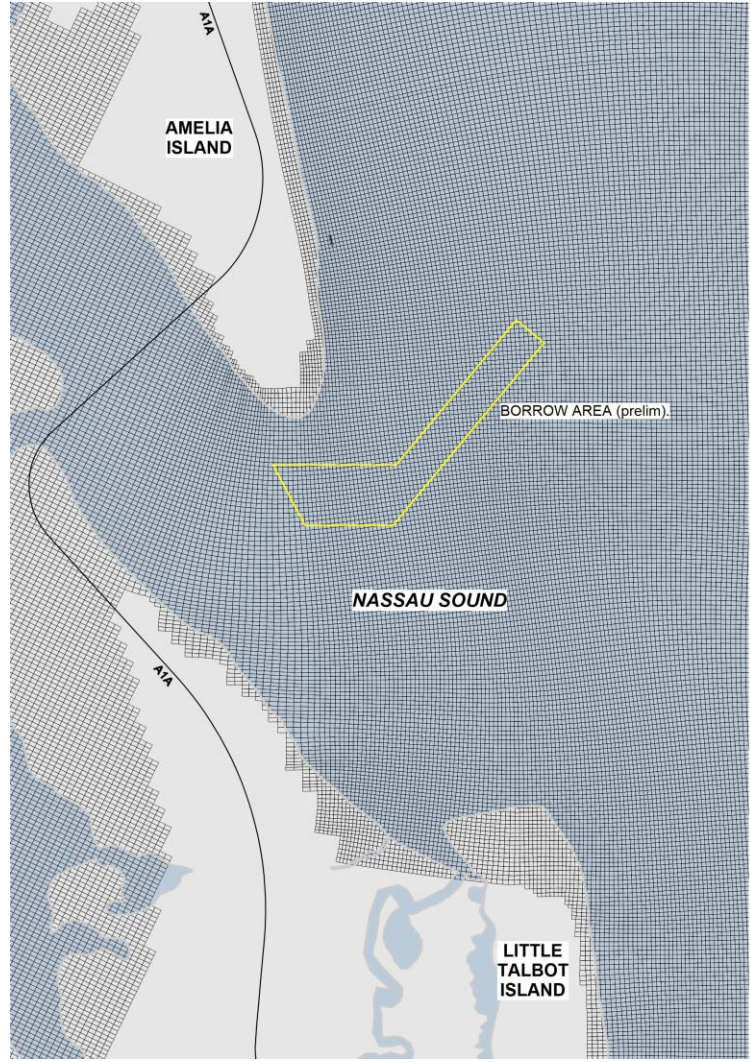
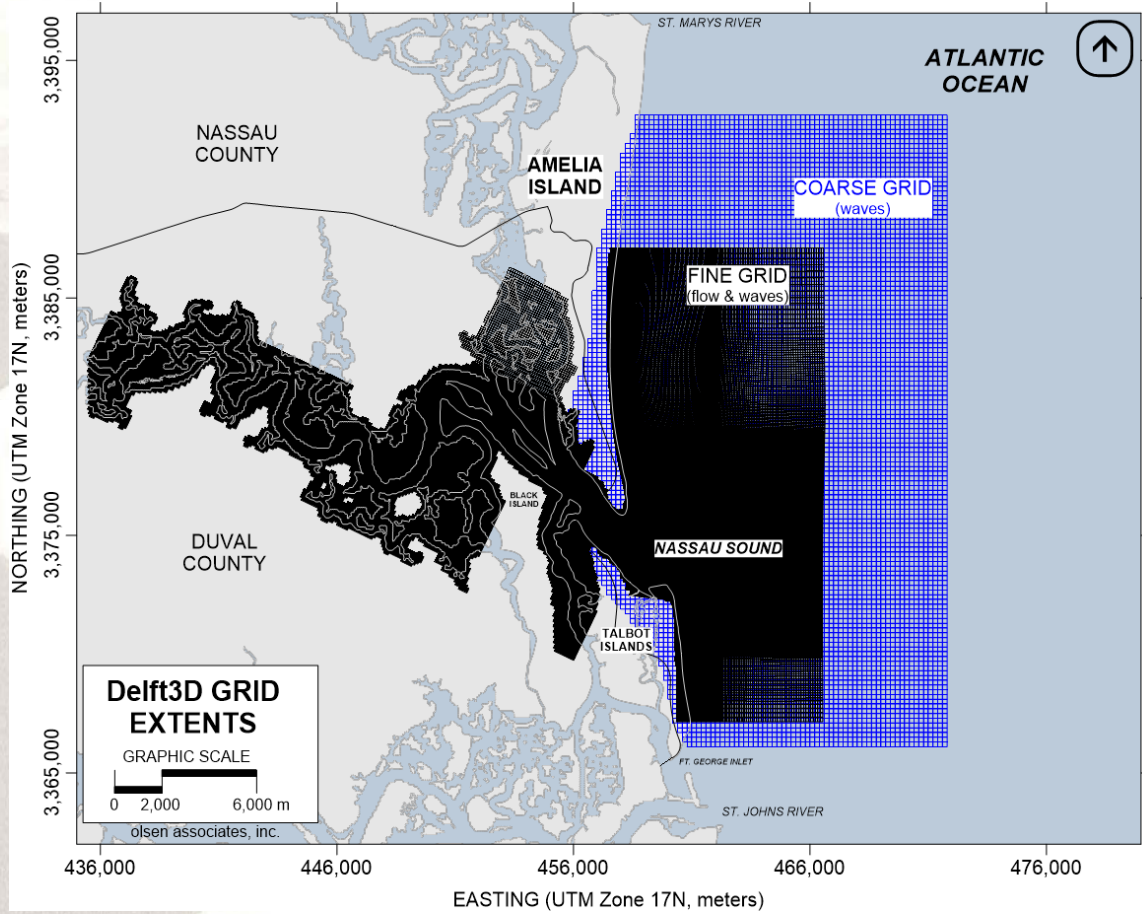


# Borrow Area Design

- Channel-like borrow area ‘recycles’ sand off Amelia Island
- Borrow area expected to re-fill for future projects, minimize benthic impacts
- Ebb shoal channel sand is a better match to beach sand
- Nassau Sound ebb shoal is close

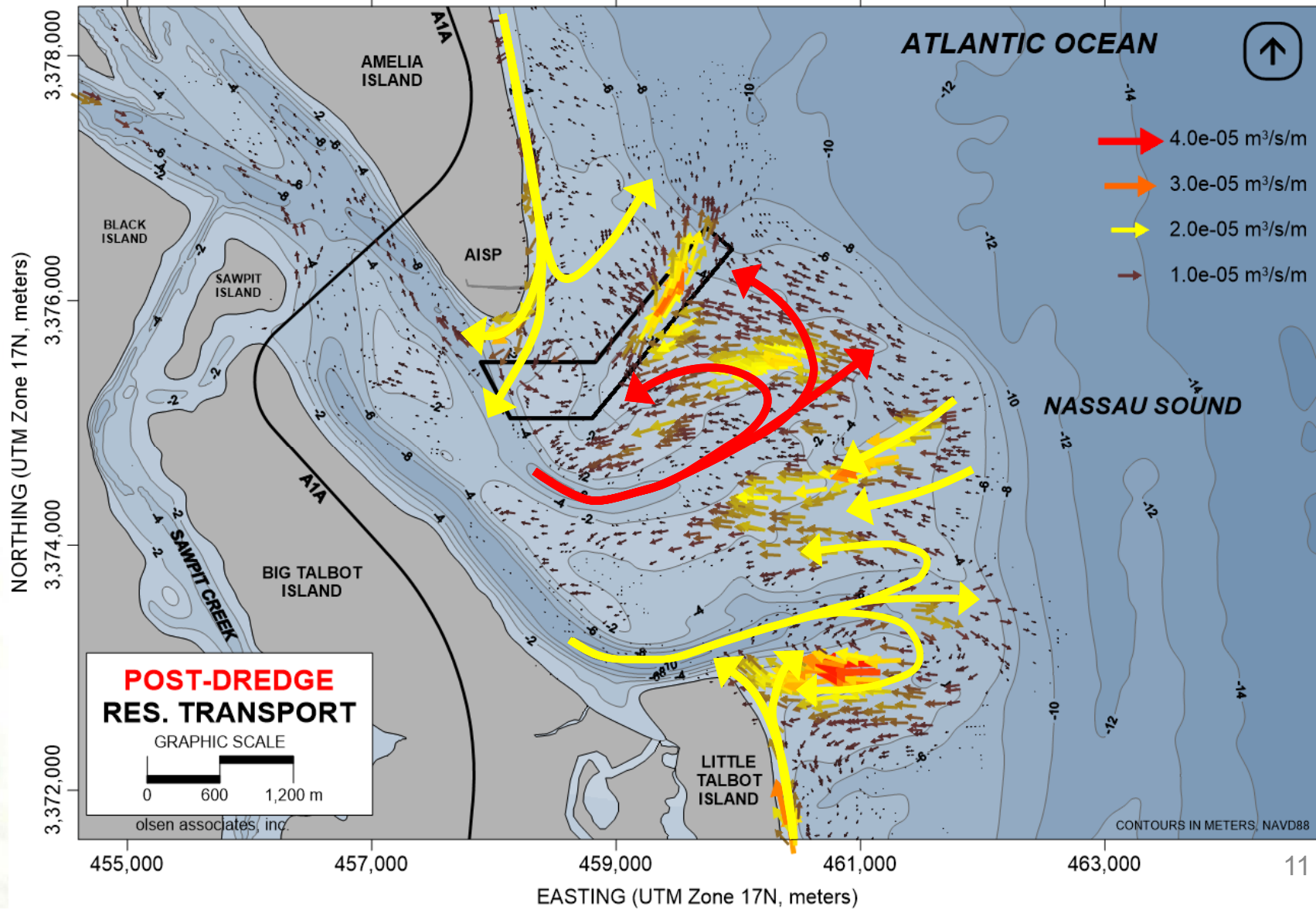


# Numerical Modeling (Delft3D)

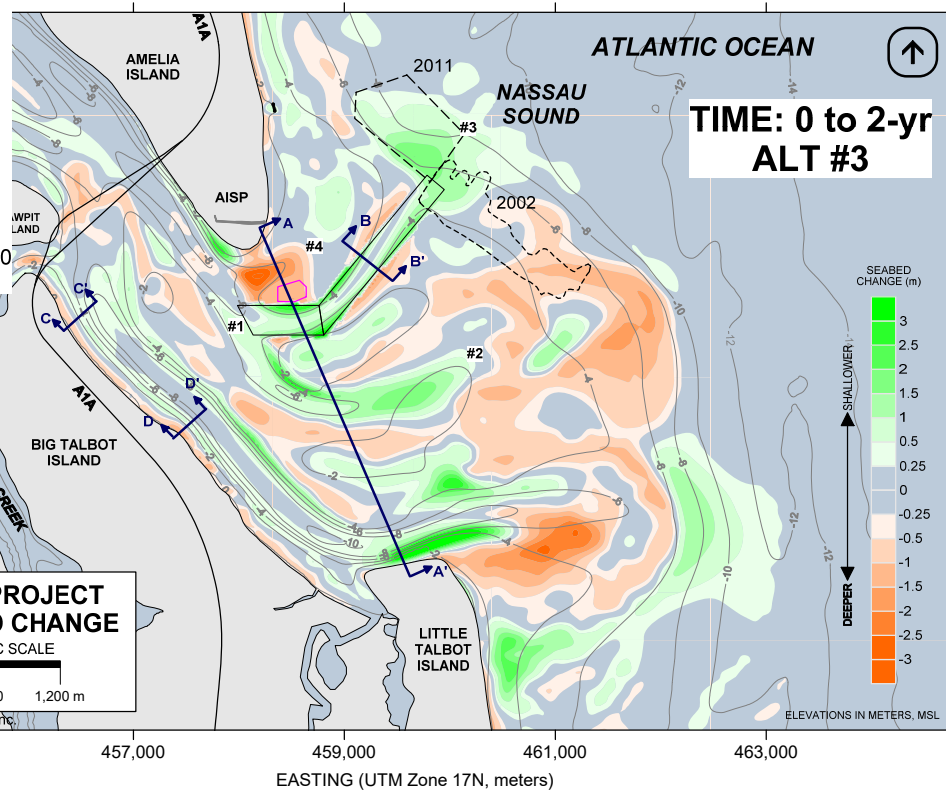
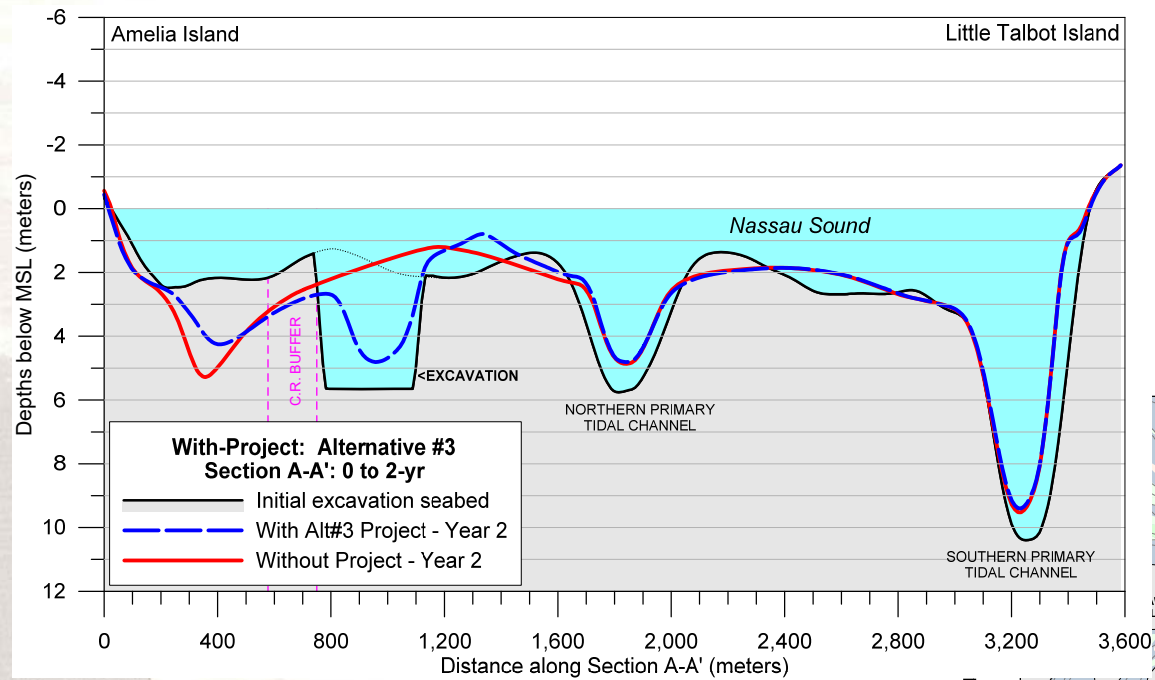




# Predicted Residual Sediment Transport (post-dredge)

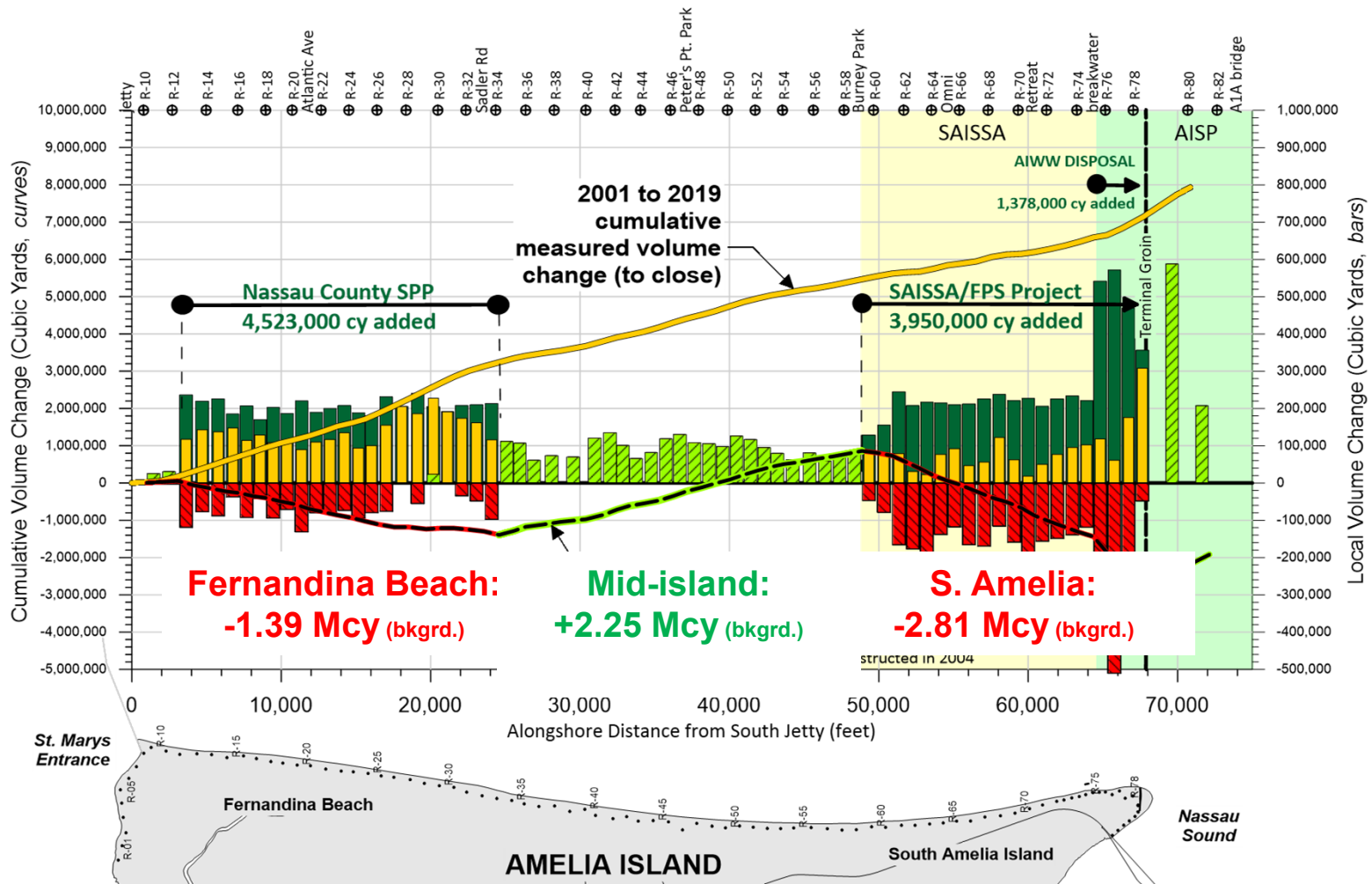


# Morphological Modeling (post-dredge)





# Islandwide Volume Changes: 2001-2019



# 2021 South Amelia Island Shore Stabilization Project



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24 August 2021  
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