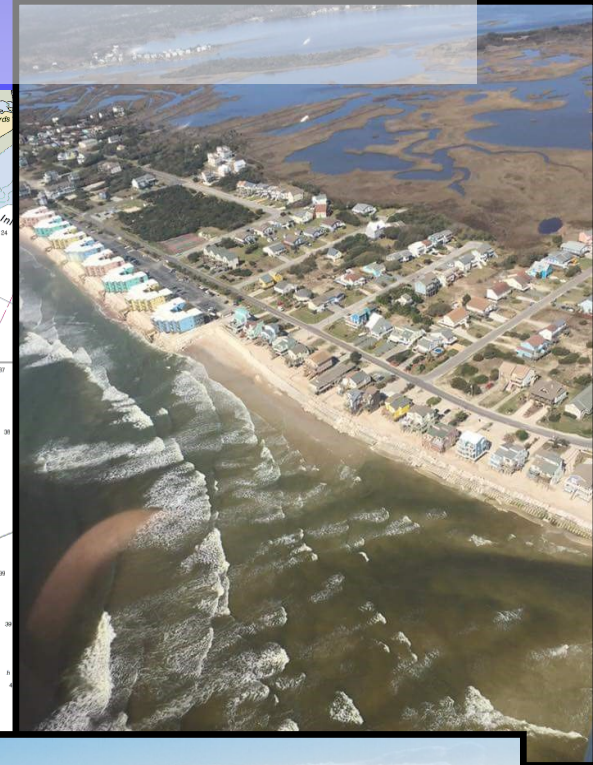
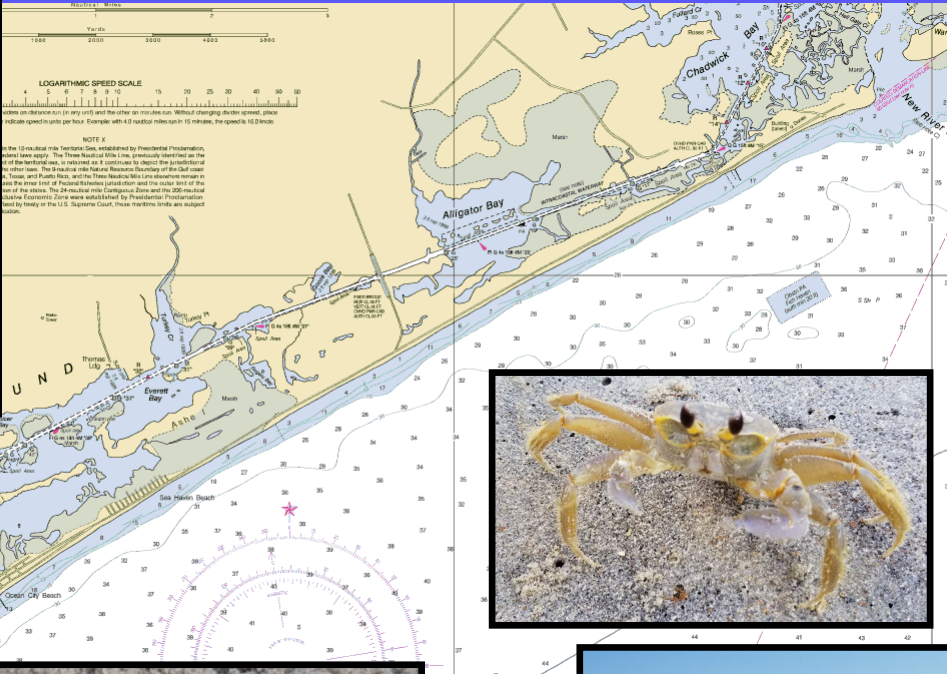


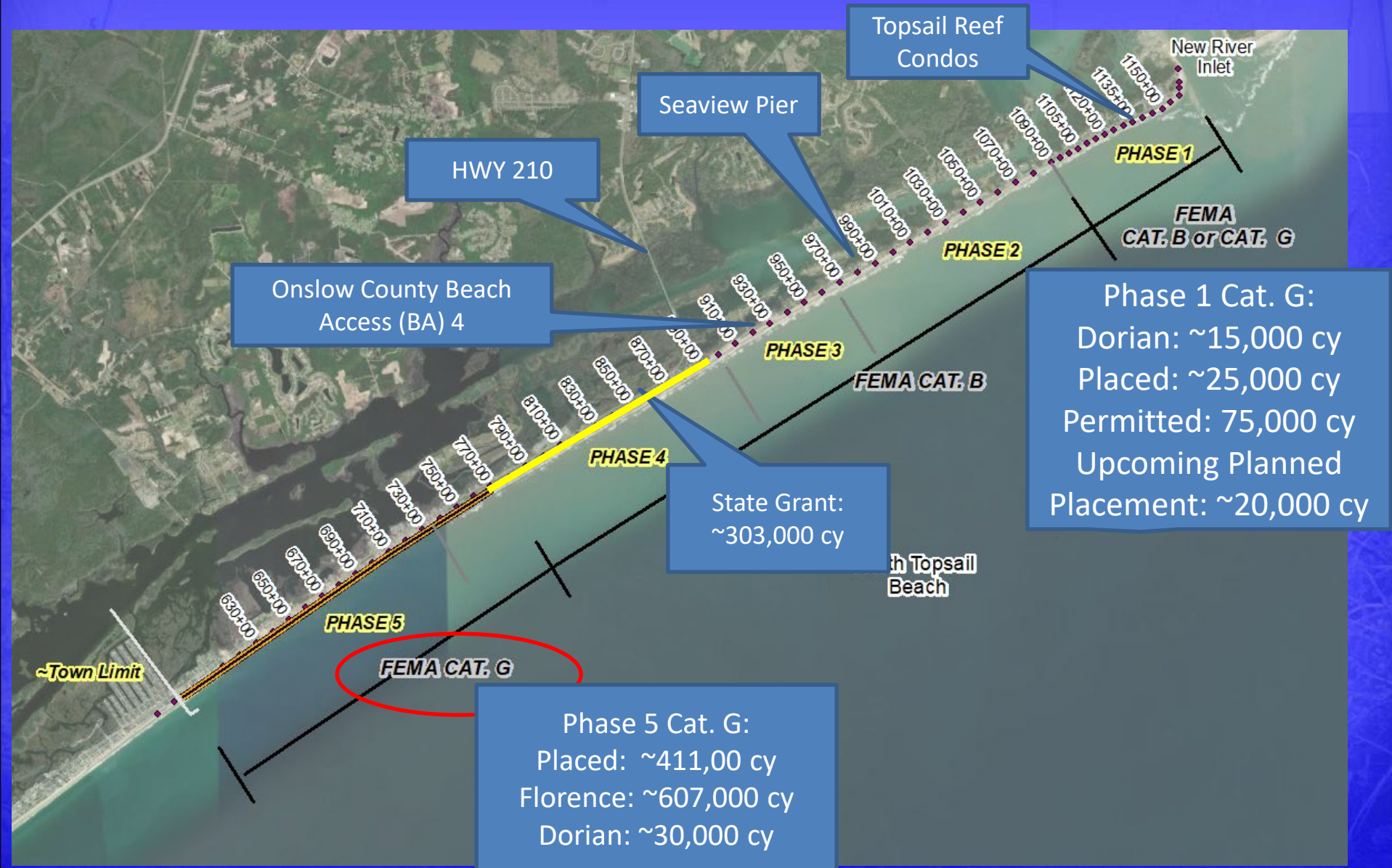
# North Topsail Beach Coastal Update September 2023



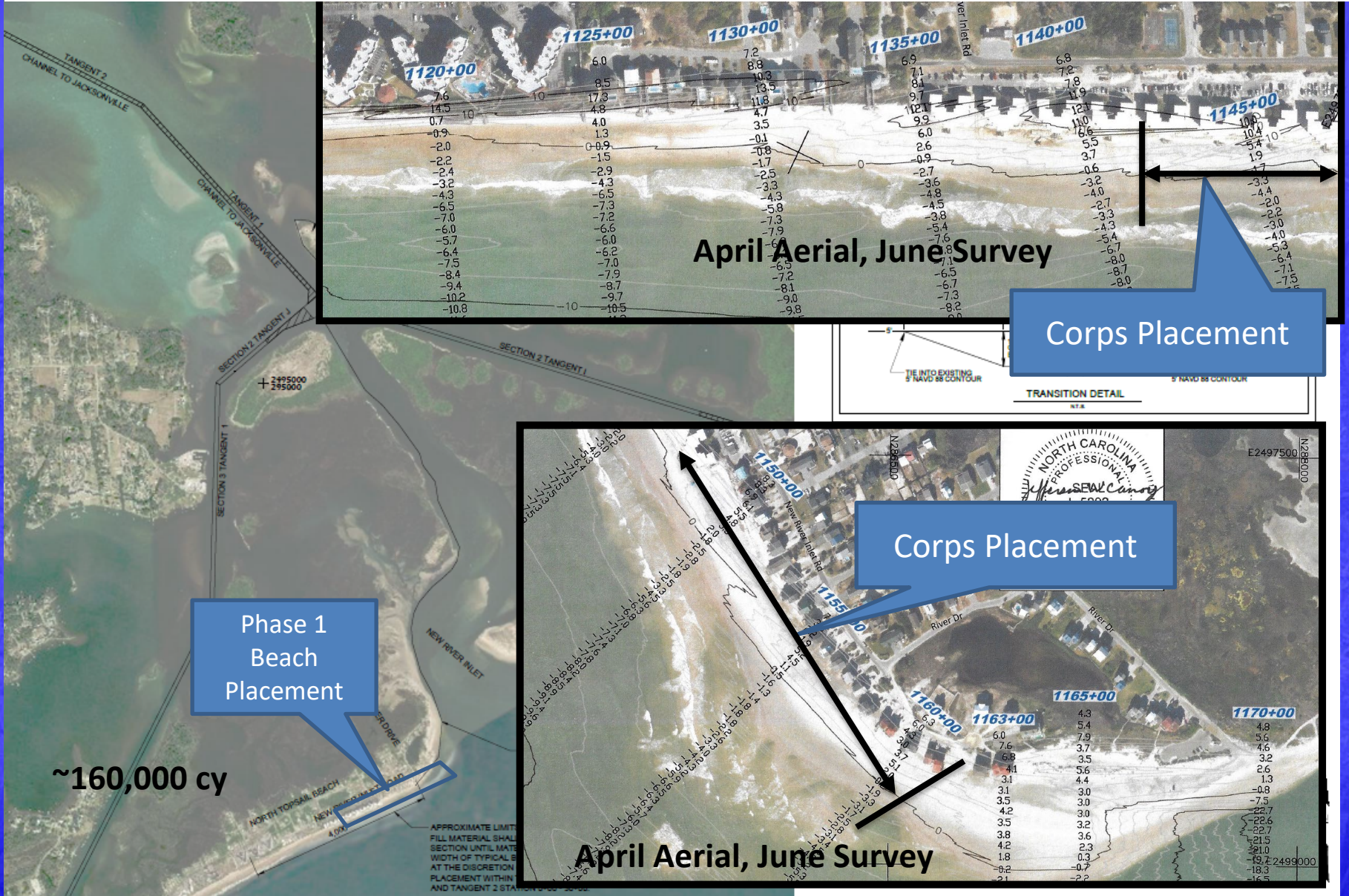
Marina, Coastal, Environmental  
& Water Resources Engineers

# Ongoing and Upcoming Projects Overview

## State Grant, Dorian and Florence FEMA Category G



# USACE (Corps) AIWW/Channel Dredging. Completed Mid March. June Survey Shows Material Still There.

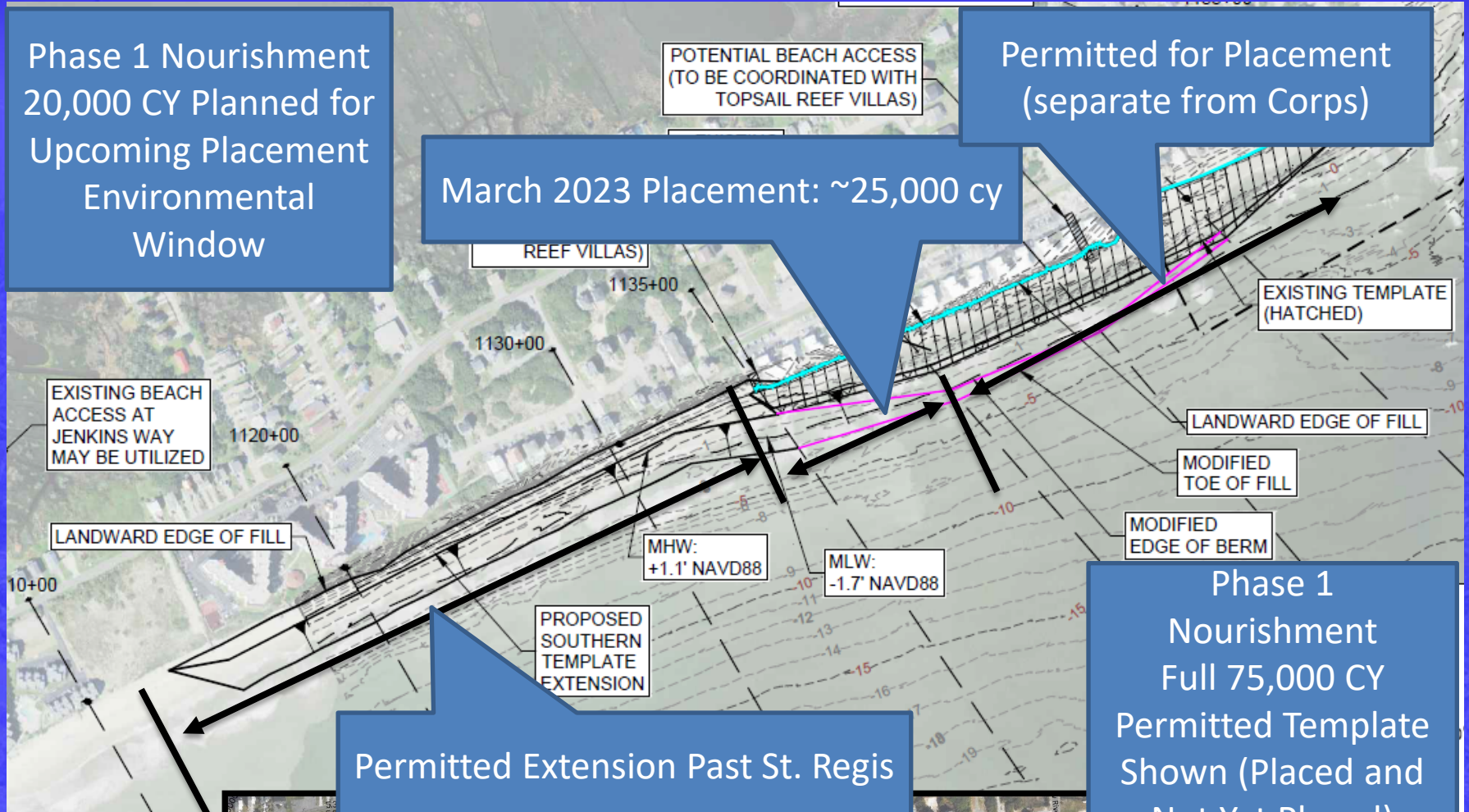


# Phase 1 Beach (not Dune) Truck Haul Nourishment

Phase 1 Nourishment  
20,000 CY Planned for  
Upcoming Placement  
Environmental  
Window

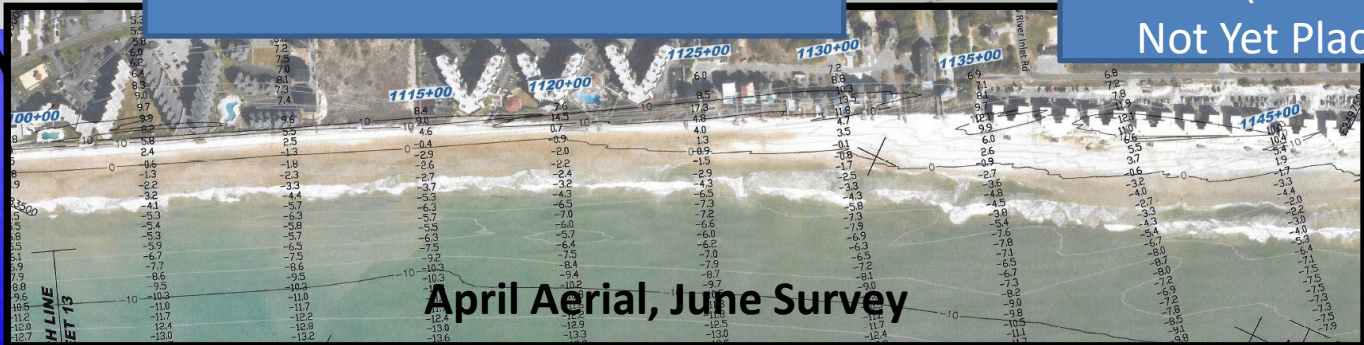
March 2023 Placement: ~25,000 cy

Permitted for Placement  
(separate from Corps)



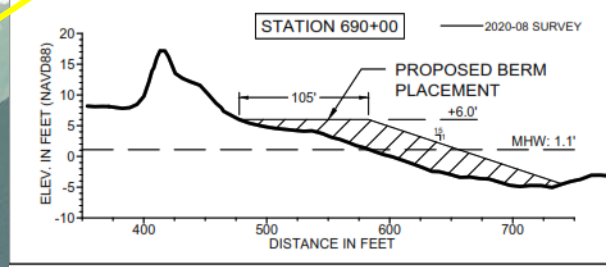
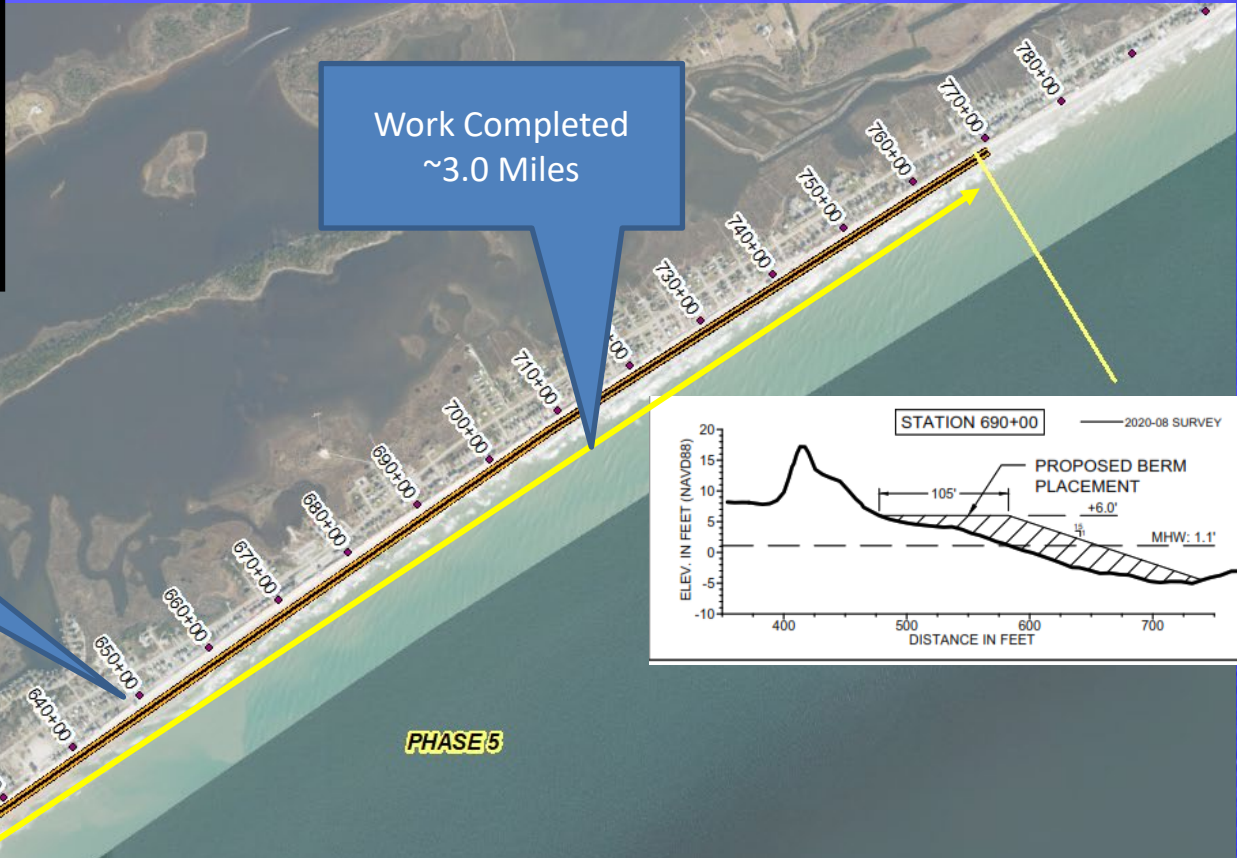
Permitted Extension Past St. Regis

Phase 1  
Nourishment  
Full 75,000 CY  
Permitted Template  
Shown (Placed and  
Not Yet Placed)



April Aerial, June Survey

# Ongoing Florence & Dorian Nourishment in Phase 5 Beach (not Dune) Nourishment. ~3.0 Miles of New Beach Completed



Access at Gray Street and Working South

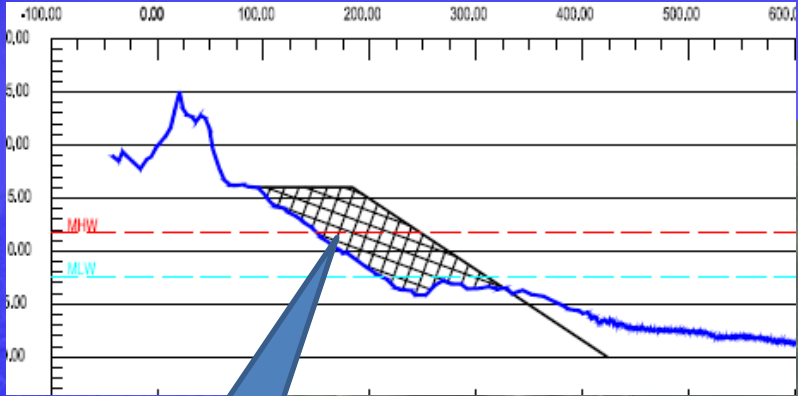
Remaining Work

Town Limit

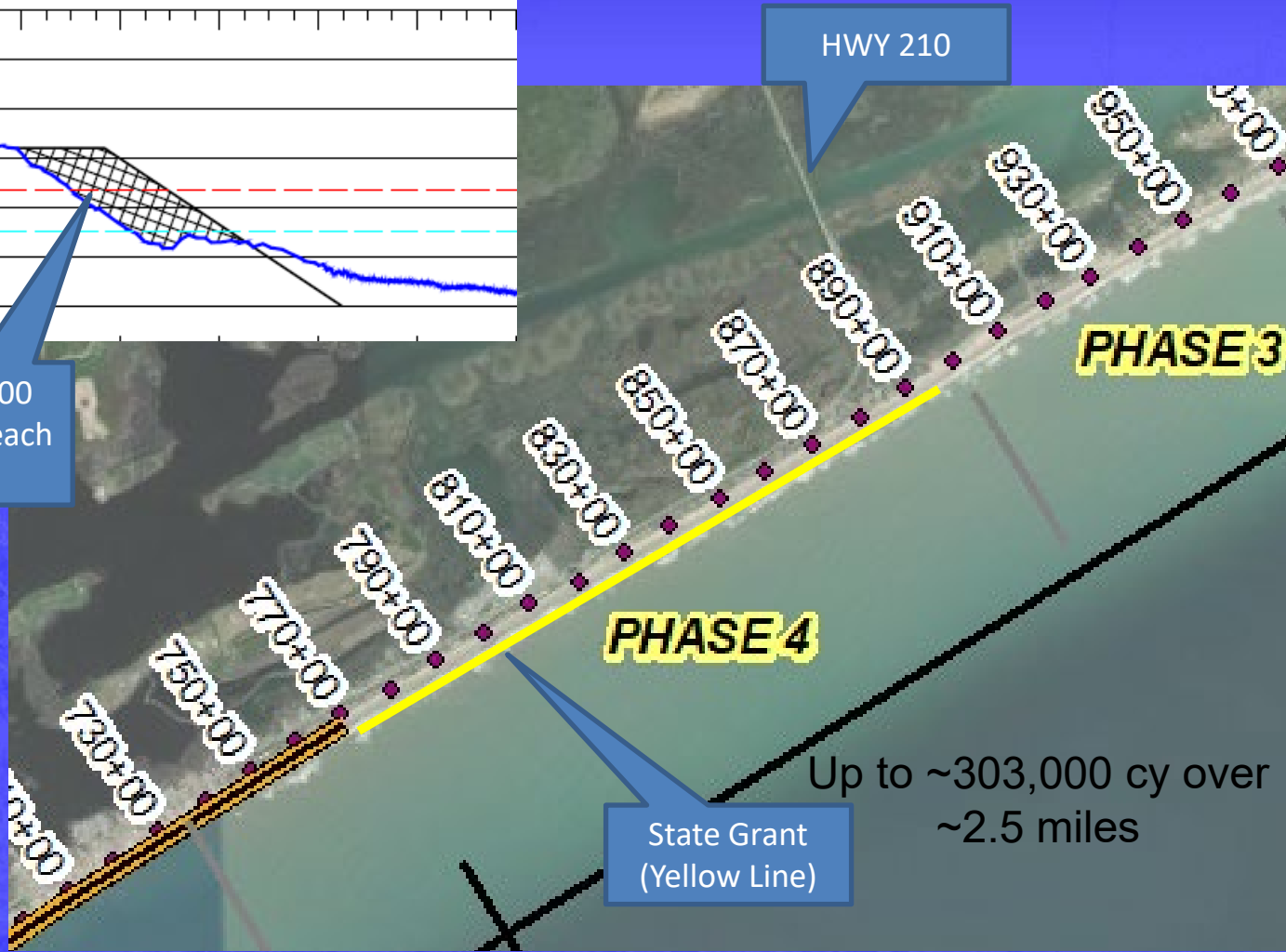


April Aerial June Survey

# Successful State Grant in Phase 4. Beach (not Dune) Nourishment



~80 to 100 Feet of Beach Width



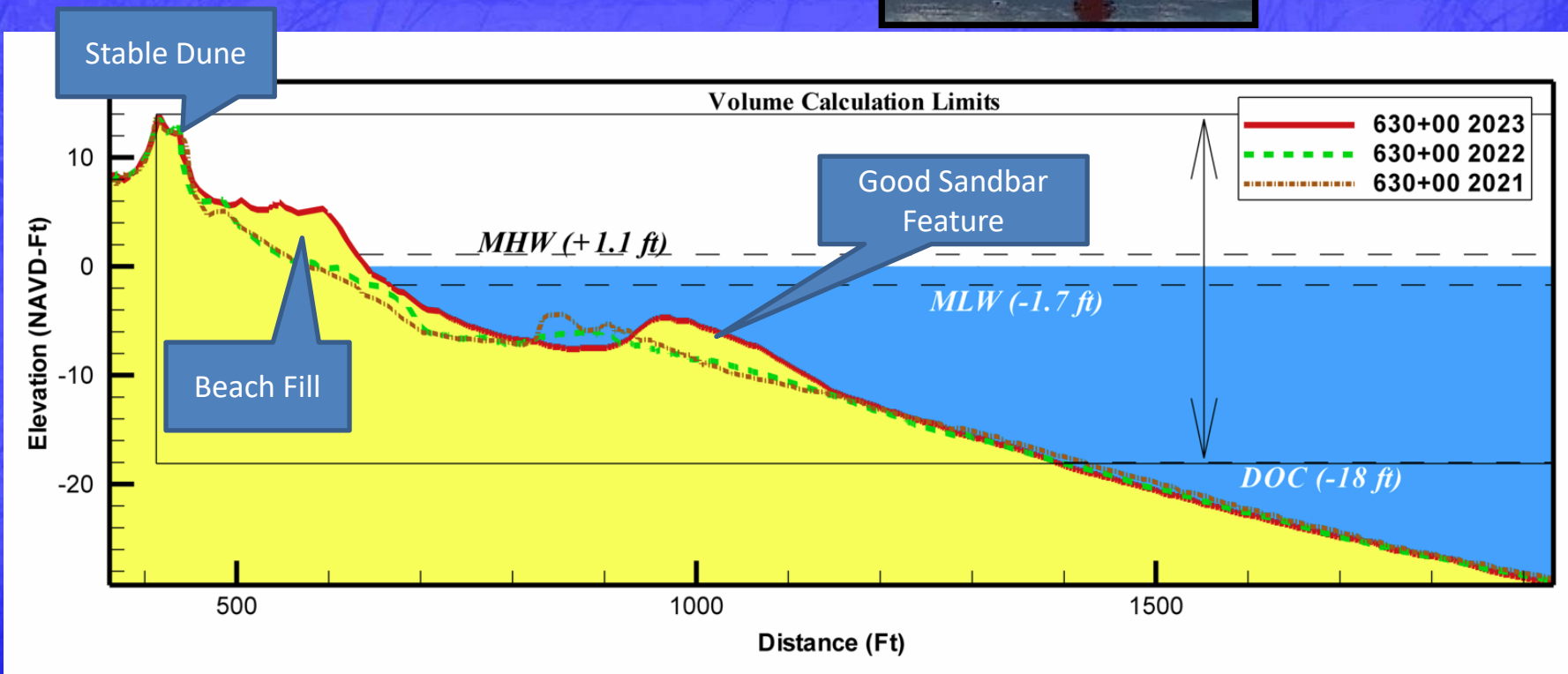
State Grant (Yellow Line)

Up to ~303,000 cy over ~2.5 miles

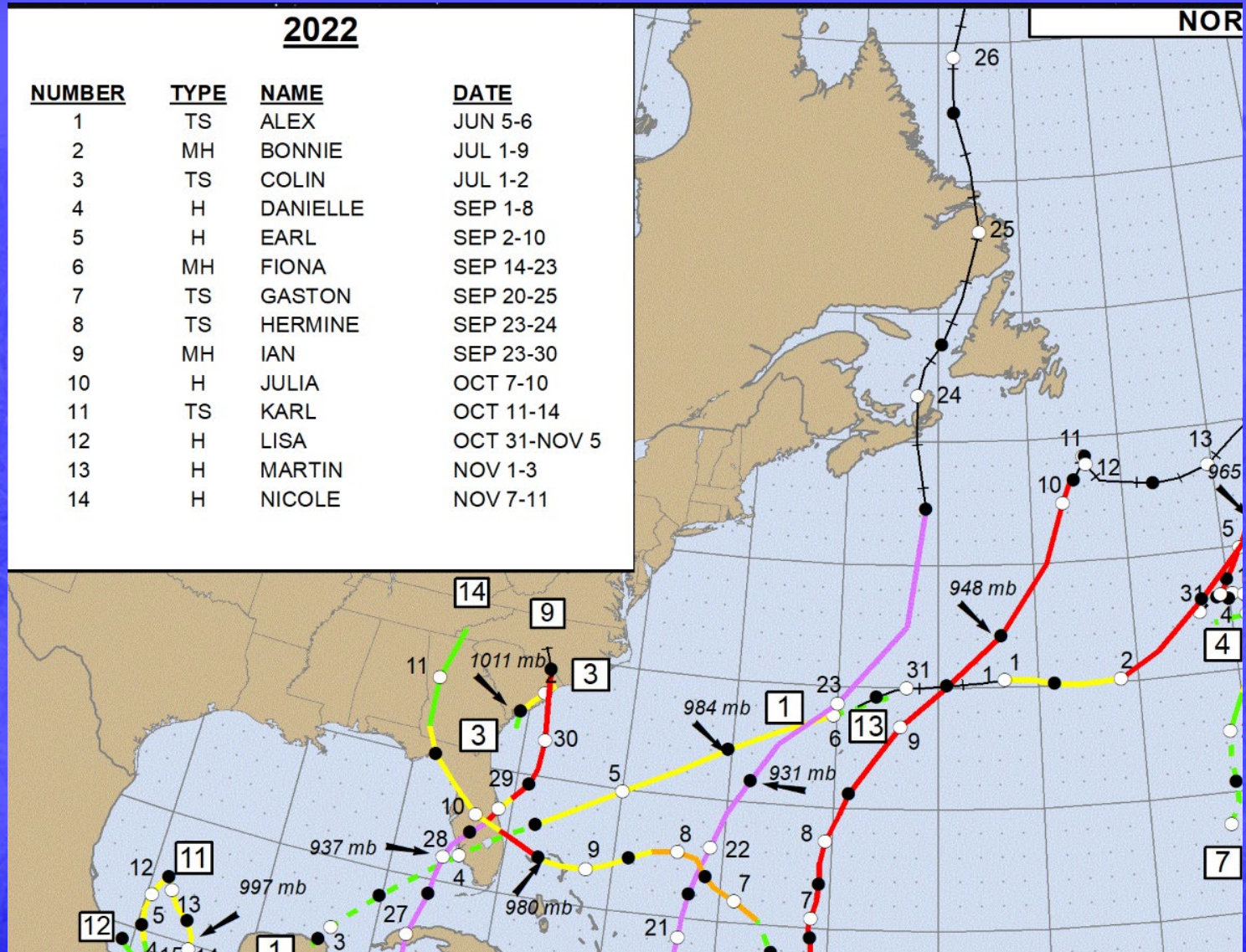
Project Timing vs Project Production

# Annual Monitoring Results

- Volume Change
- Shoreline Change
- Occurs annually in ~June/July (before the heart of hurricane season)
- Nourishment Planning
- FEMA Eligibility and Document Pre-Storm Conditions (if needed)
- Survey is Town Wide from Dune out to ~500 Yards Offshore

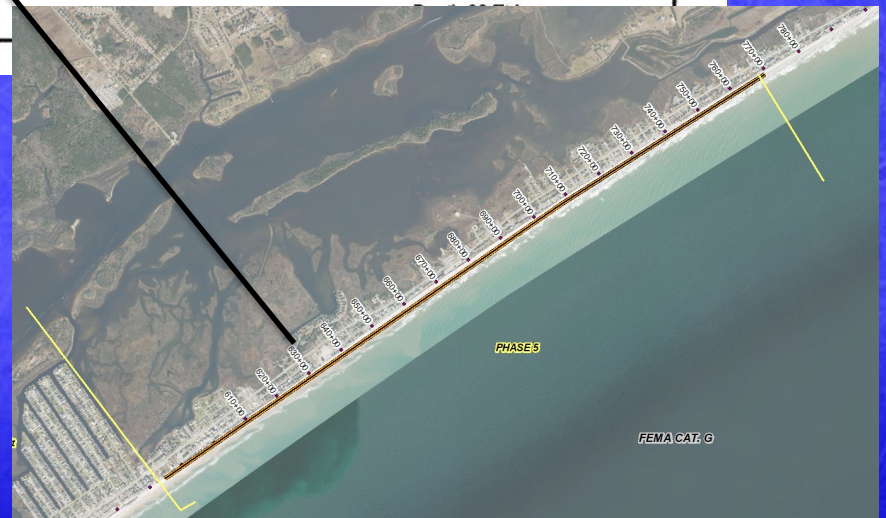
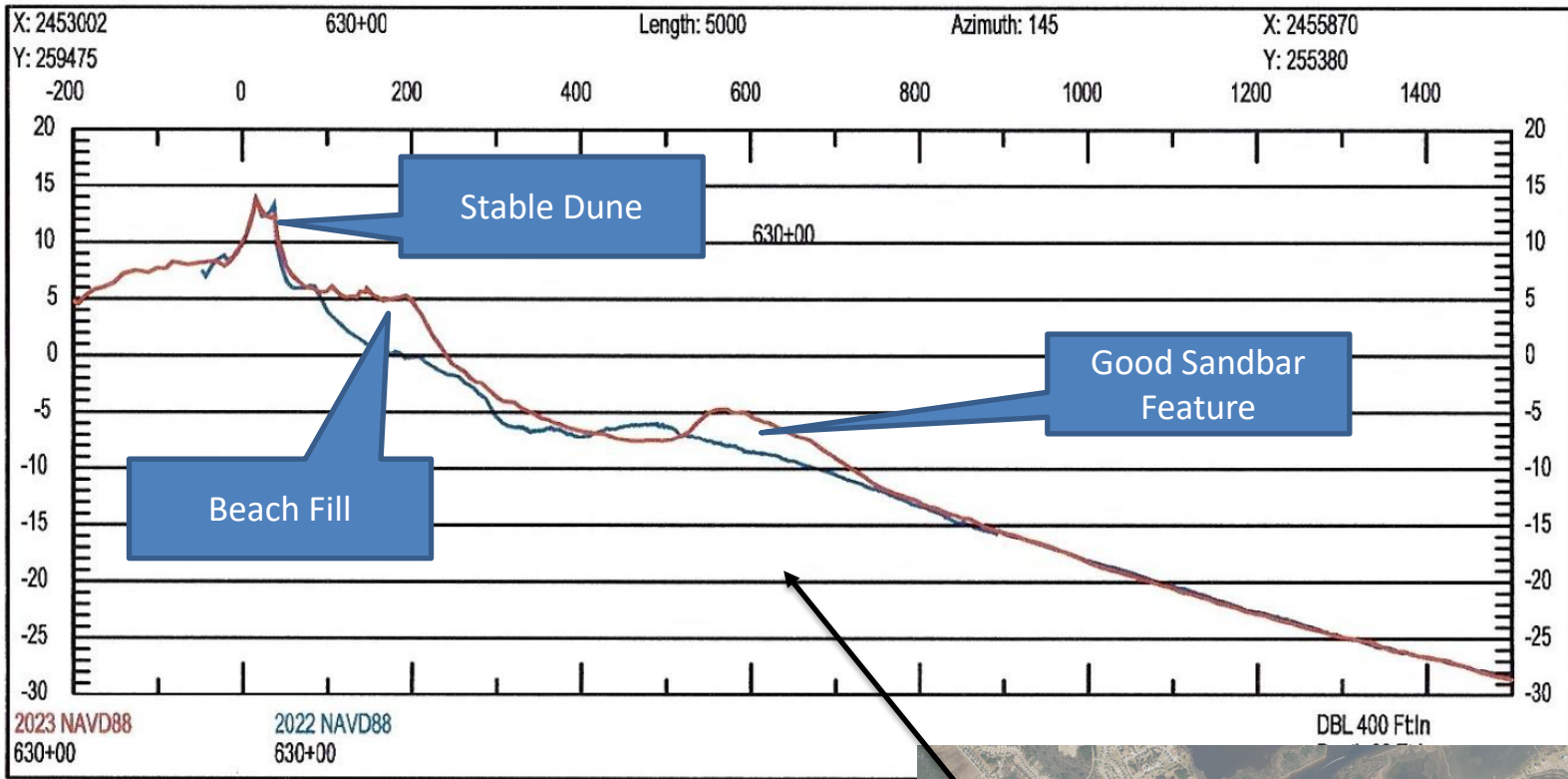


# Previous Hurricane Season (2022) Affecting Annual Monitoring Calculations

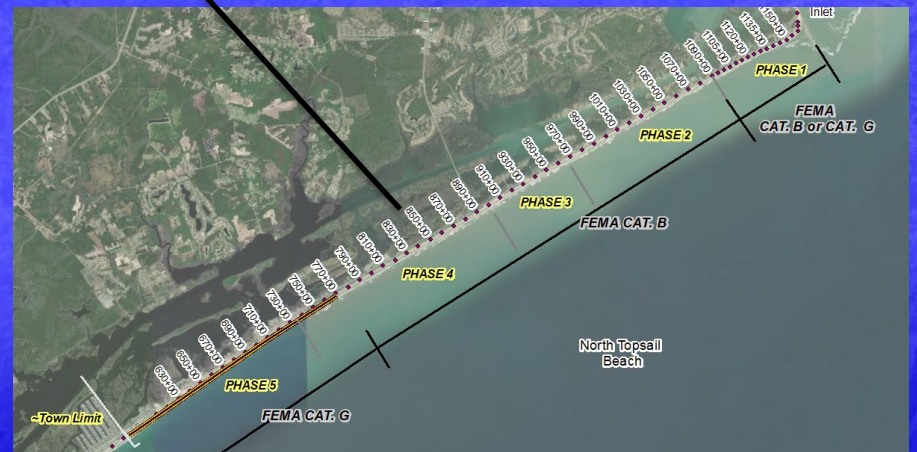
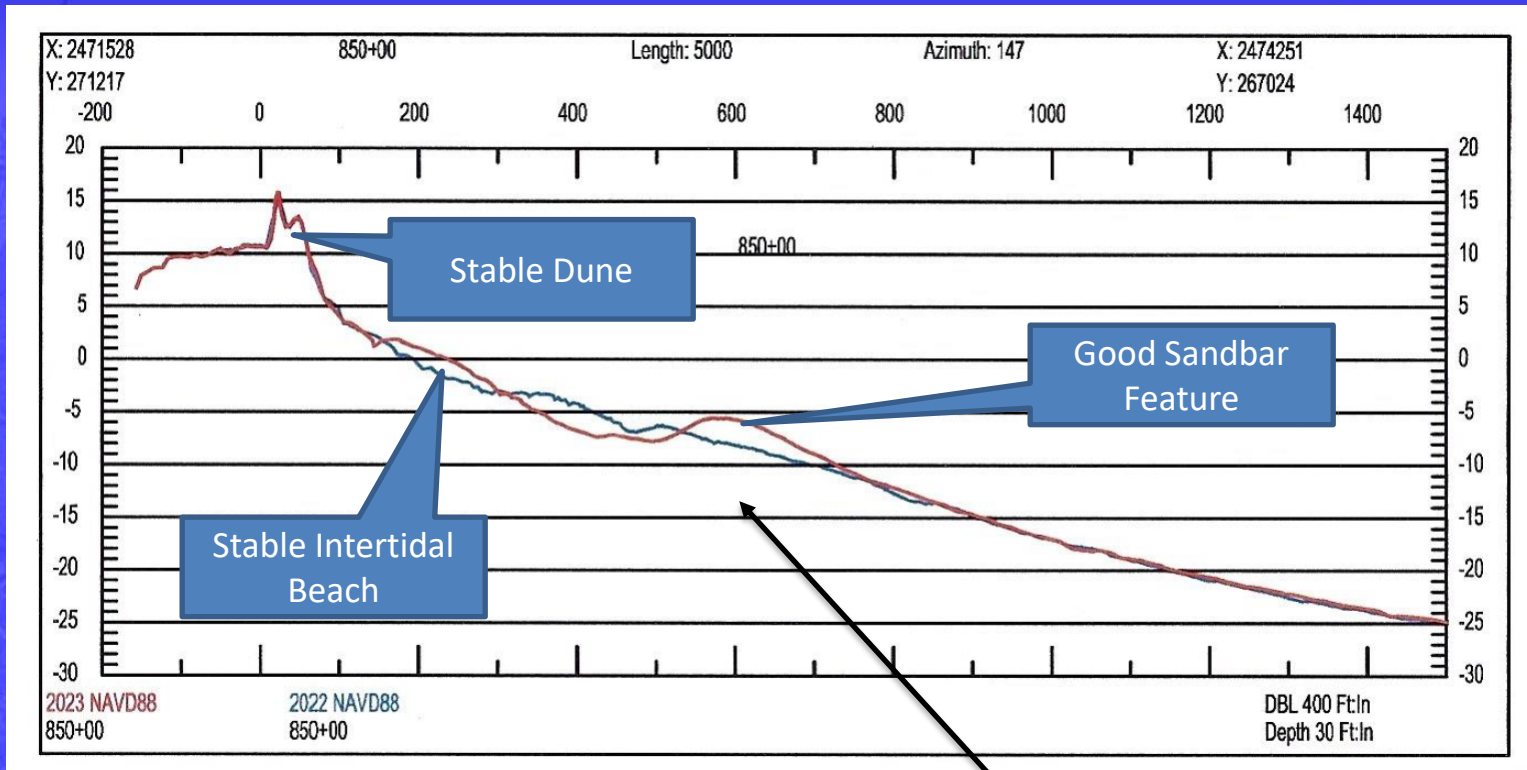




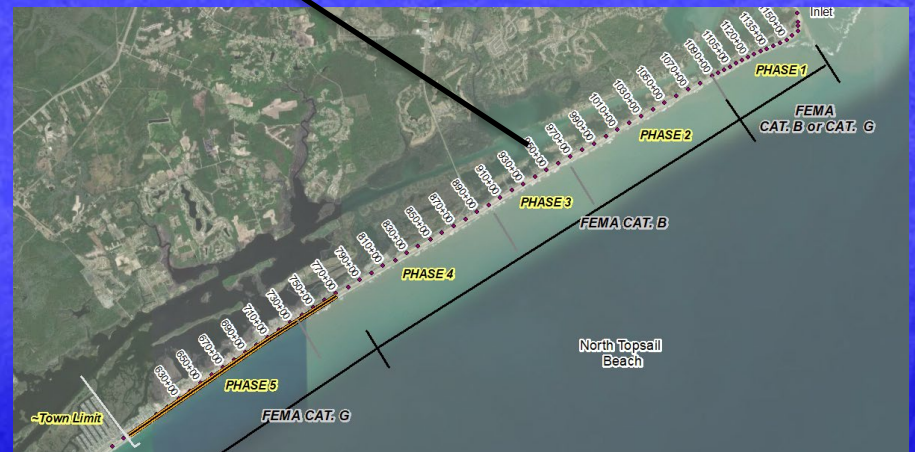
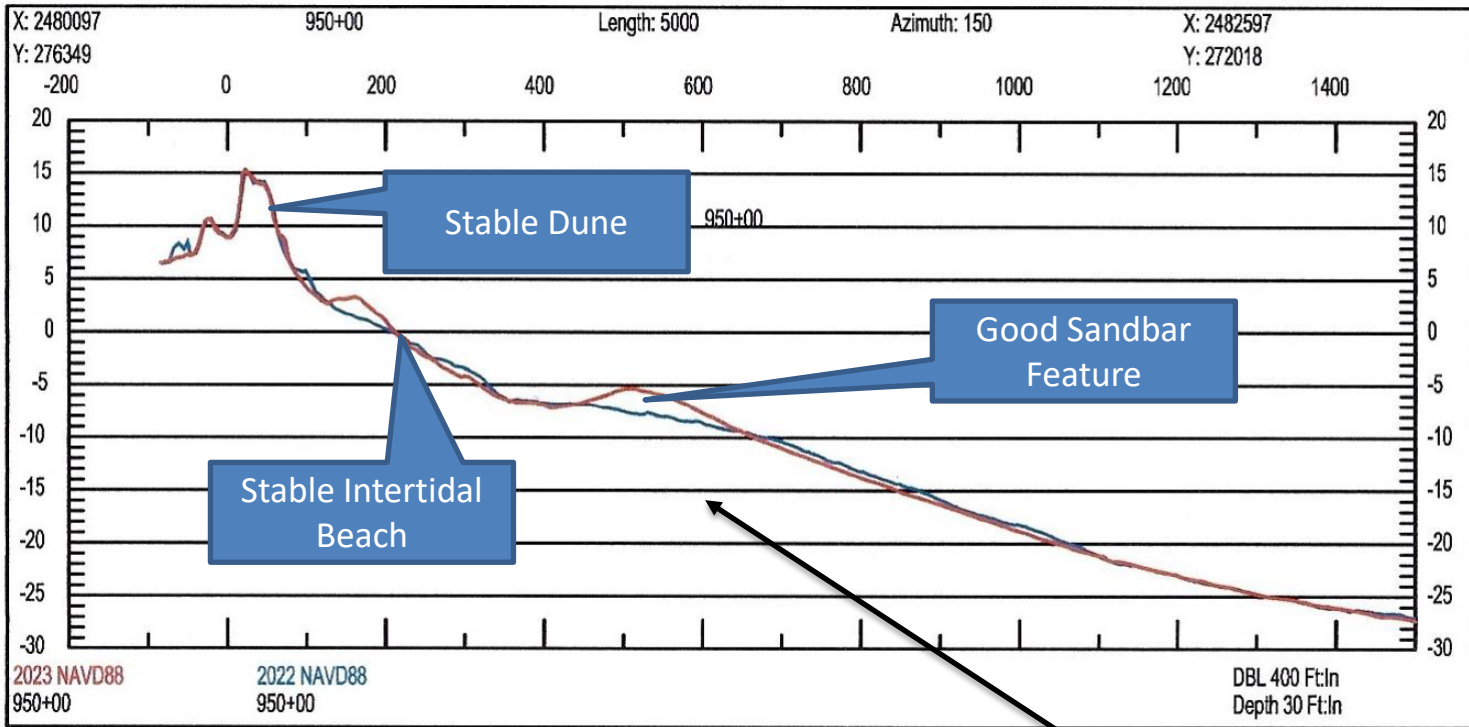
# Phase 5 Example Annual Monitoring Profile



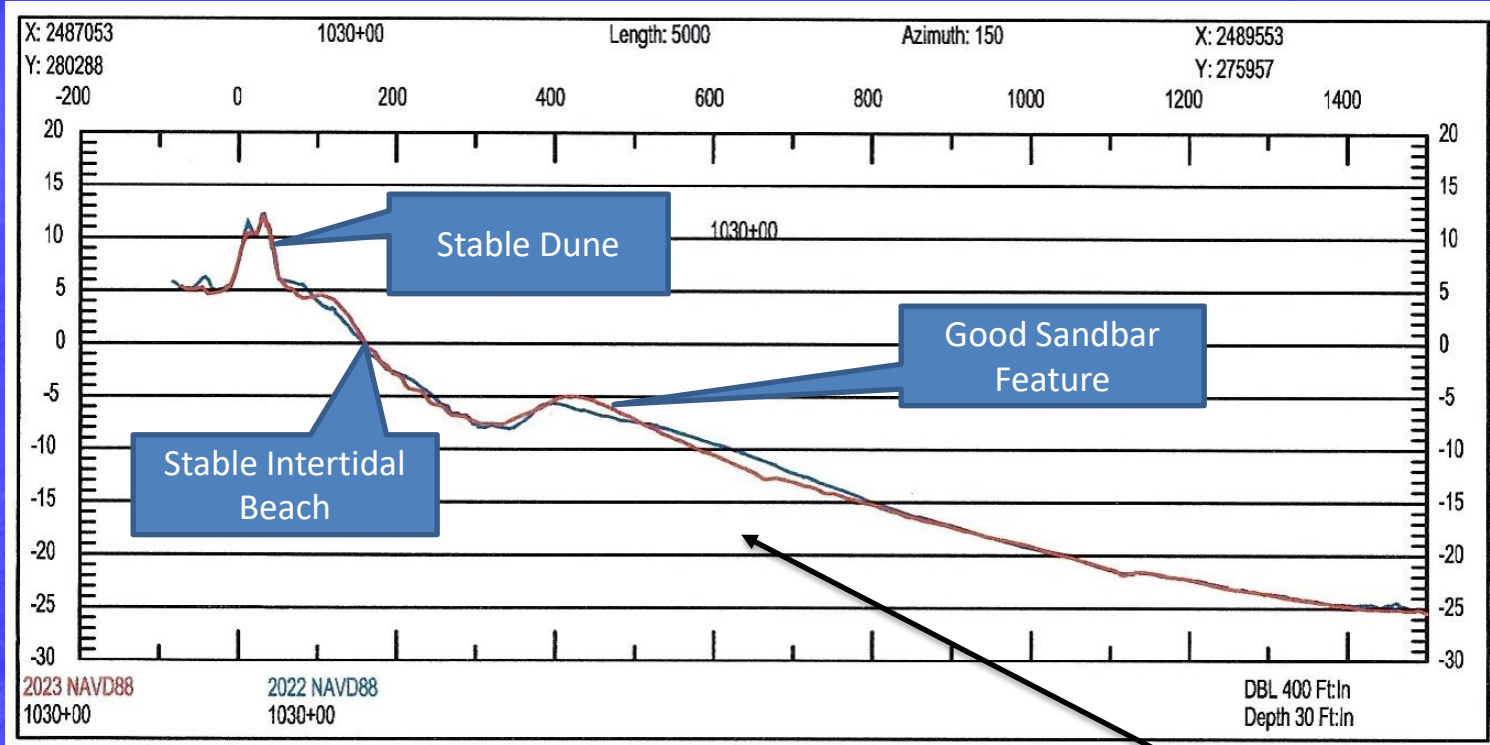
# Phase 4 Example Annual Monitoring Profile



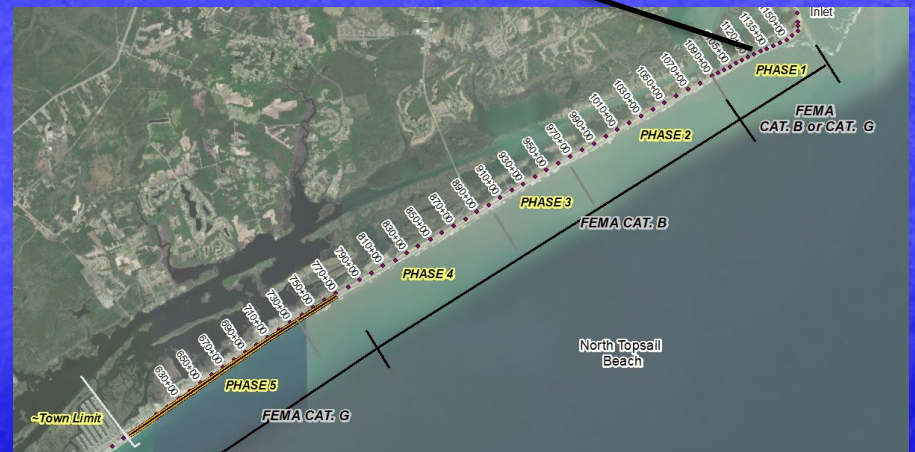
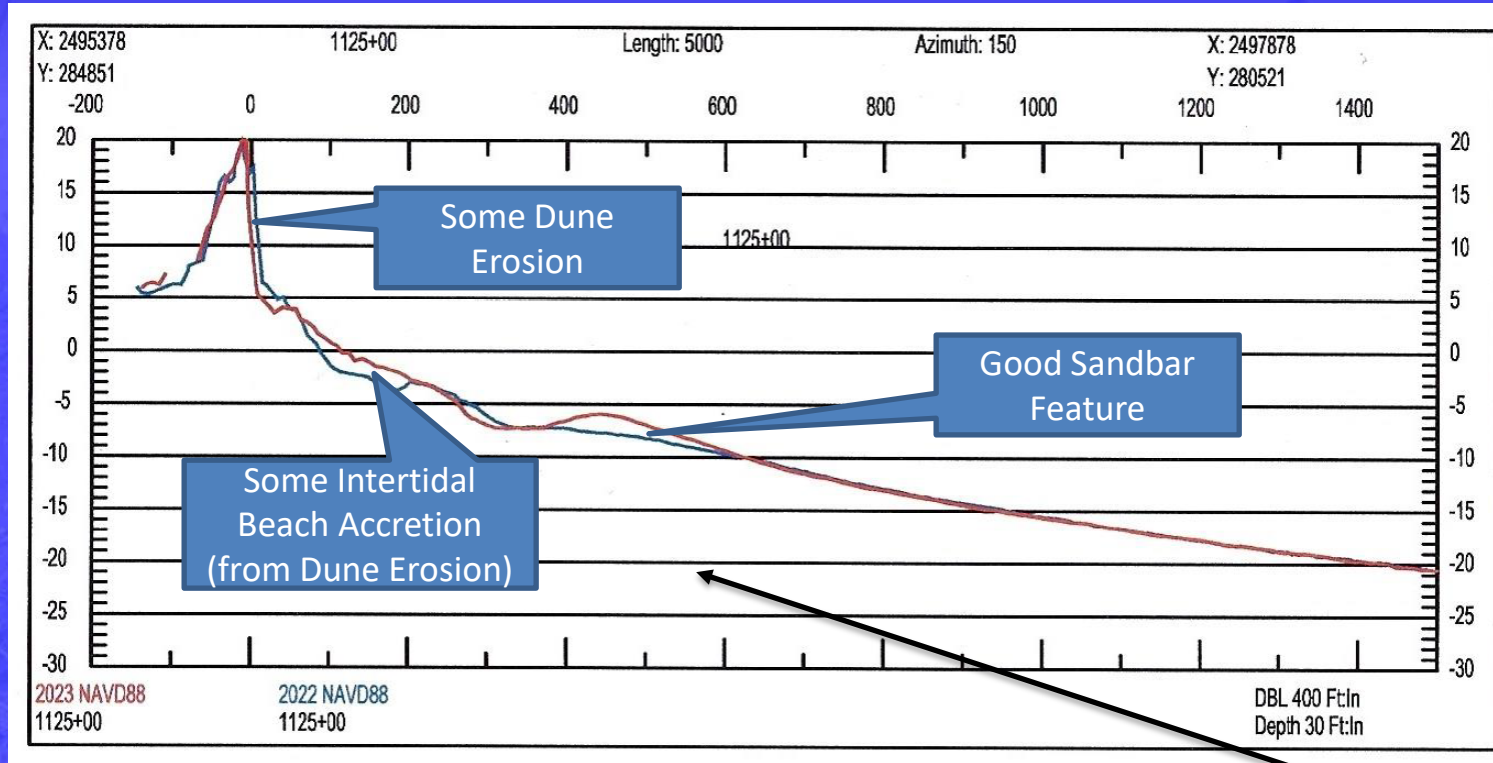
# Phase 3 Example Annual Monitoring Profile



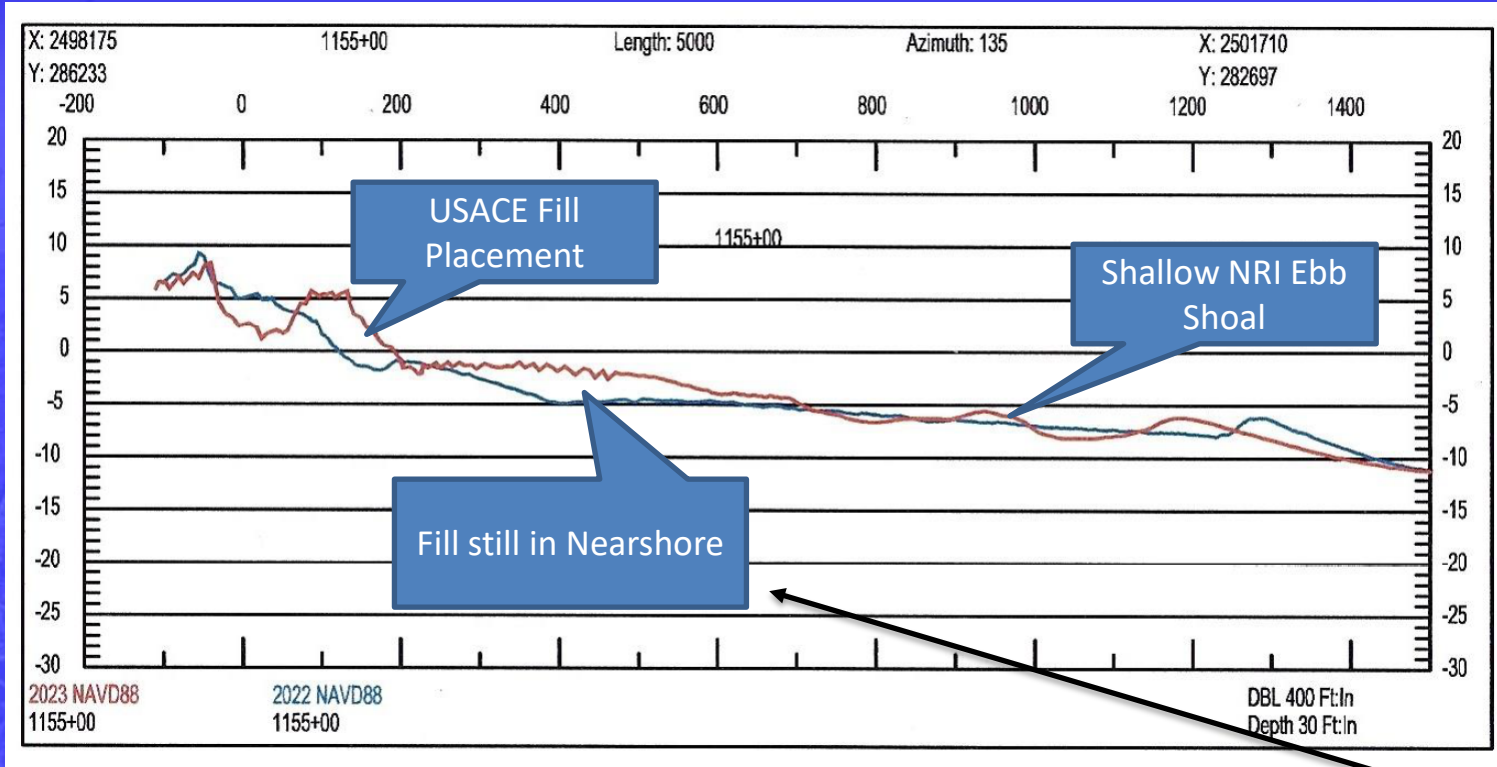
# Phase 2 Example Annual Monitoring Profile



# Phase 1 Example Annual Monitoring Profile

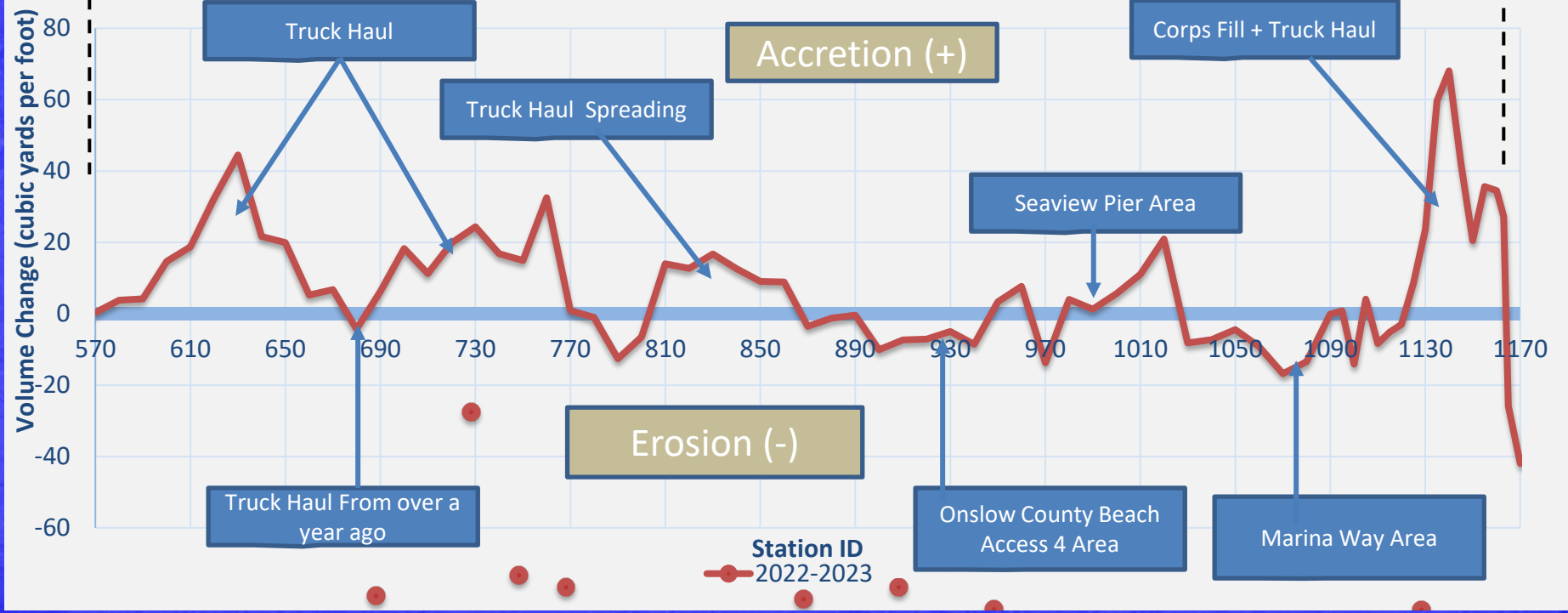


# Phase 1 Example Annual Monitoring Profile Near Inlet



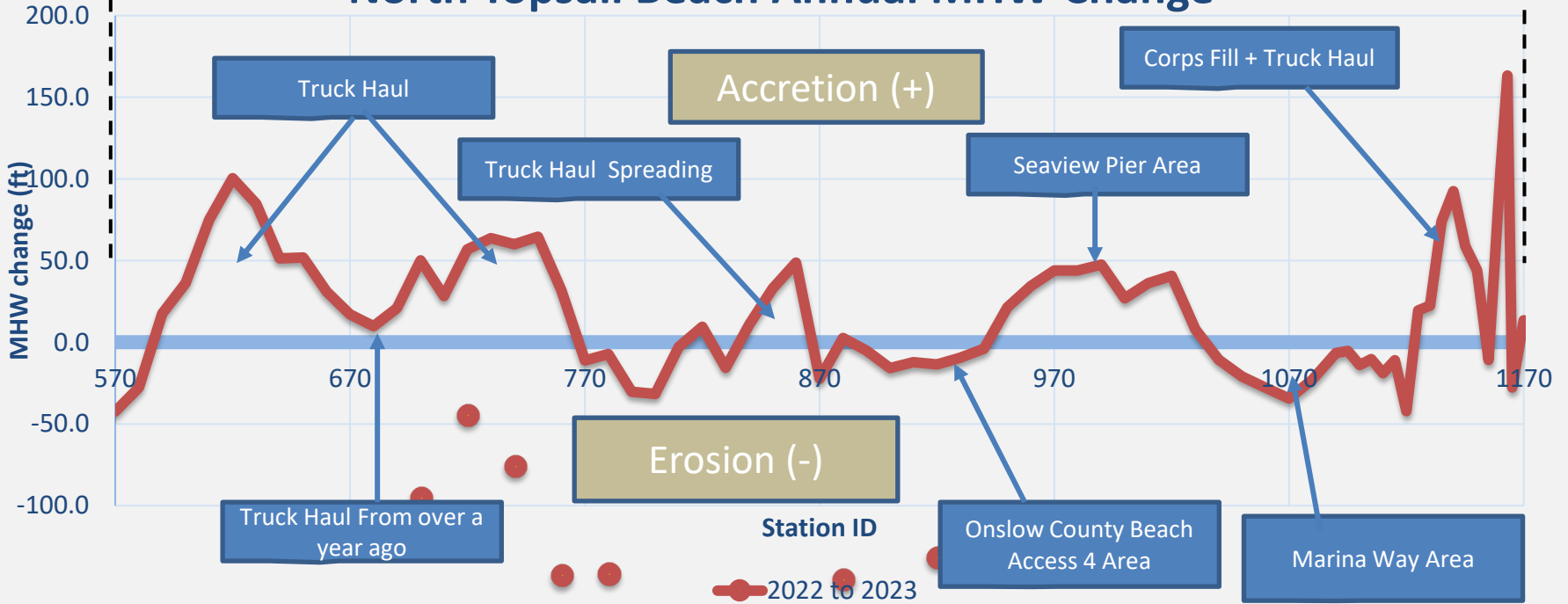


# North Topsail Beach Annual Unit Volume Change





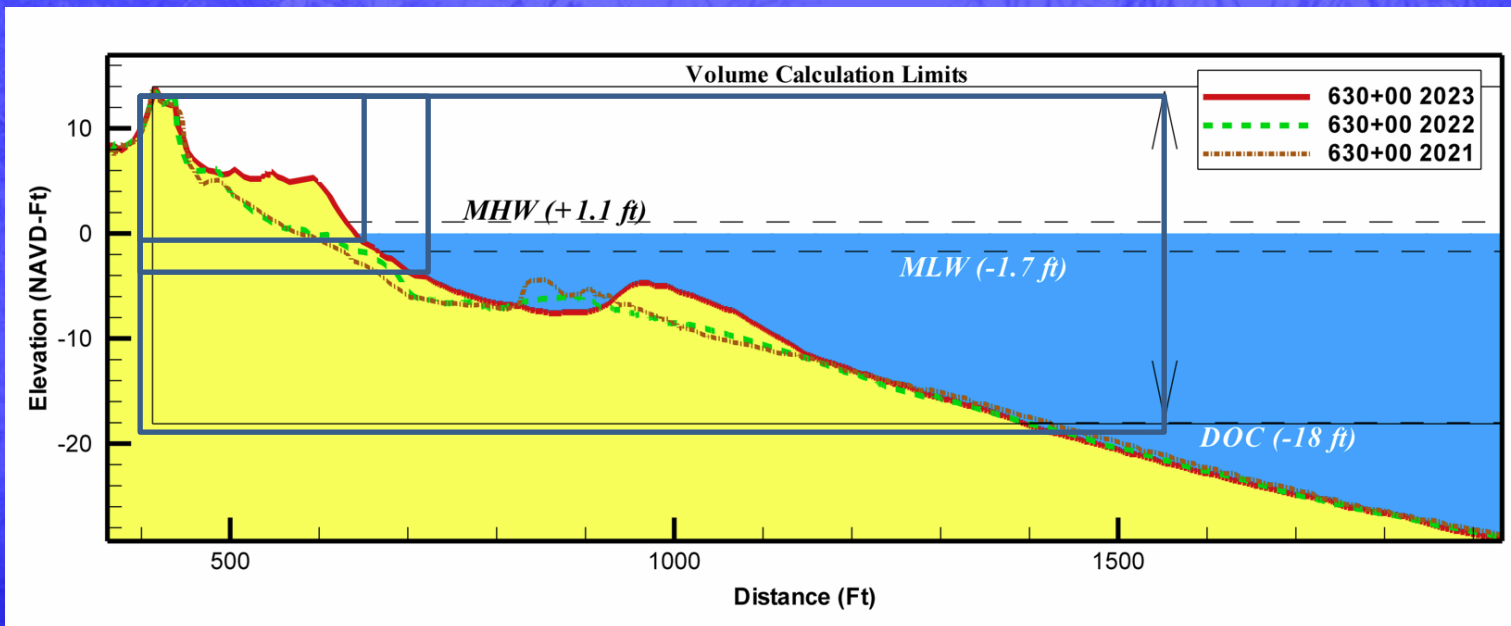
## North Topsail Beach Annual MHW Change





|                | Annual Monitoring Gain/Loss (CY)               |                 |                 |
|----------------|--|-----------------|-----------------|
| Volume Limits: | Dune to Depth-Of-Closure (~300 yards offshore) | Dune to MLW     | Dune to MHW     |
| PHASE 1        | +120,481                                       | +56,267         | +36,947         |
| PHASE 2        | -23,352  | -8,380          | -3,866          |
| PHASE 3        | -28,884  | -27,494         | -22,790         |
| PHASE 4        | +100,335                                       | +45,771         | +11,008         |
| PHASE 5        | +255,868                                       | +164,282        | +114,411        |
| <b>Total</b>   | <b>+424,448</b>                                | <b>+230,446</b> | <b>+135,709</b> |

|              | Annual MHW Change (ft) |
|--------------|------------------------|
| PHASE 1      | +24.8                  |
| PHASE 2      | +10.9                  |
| PHASE 3      | +0.2                   |
| PHASE 4      | +8.5                   |
| PHASE 5      | +36.8                  |
| <b>TOTAL</b> | <b>+19.1</b>           |



# Town Beach Projects Updates

- Annual Monitoring Completed in June. Beach wide overall gain of ~424,000 cy over the last year (largely due to nourishment efforts).
- Phase 1 - ~20,000 cy planned for placement this winter.
- New River Inlet Management Master Plan EIS: Draft EIS under development.
- State Grant Nourishment - ~303,000 cy in Phase 4 and connects with Phase 5 Truck Haul.
- Phase 5 Beach Nourishment – Placed ~411,000 cy. Remaining volume (~226,000 cy).
- Working with NTB Finance Officer and DEC Associates regarding funding for FEMA and State funded projects
- Permitting Coordination (all projects)

