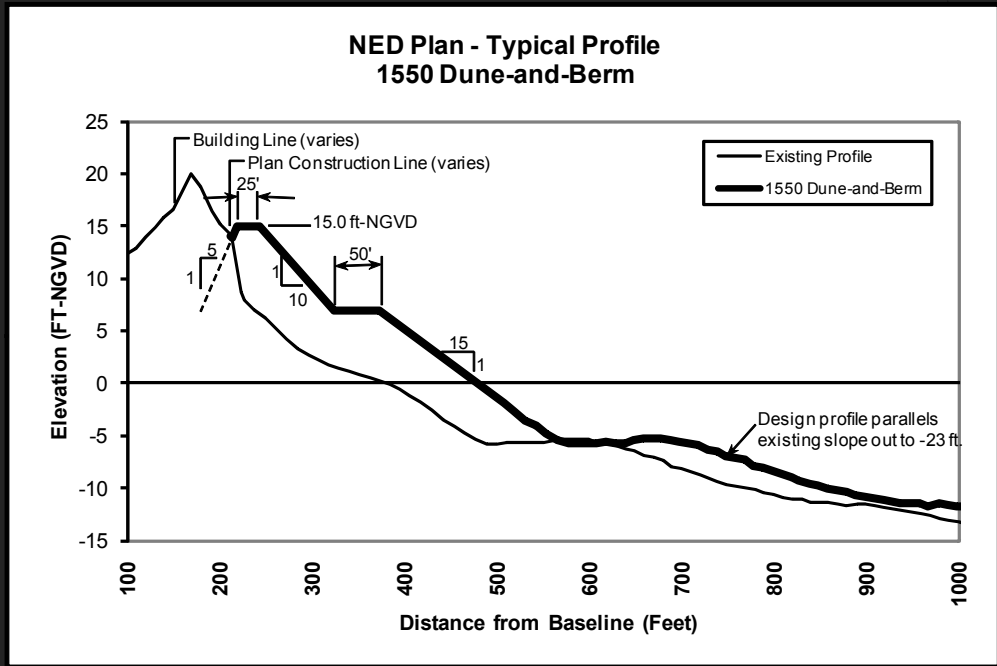


Municipal Limits

- Topsail Beach
- Surf City
- North Topsail Beach

Other Features

- CBRA Zone Boundary
- Borrow Areas
- Highways
- Streets
- Navigation Channel



Surf City / North Topsail Beach Coastal Storm Damage Reduction Project

Map Date: 5 August 2010
Imagery © 2010 Digital Globe

0 0.5 1 2 3 Miles



ECONOMICS

2010 Price Level

Initial Construction
\$127,973,000
(65/35 Cost Share)

Total Cost of Renourishment
(6-year Renourishment Cycle)
\$215,525,000
(50/50 Cost Share)

Total Annual Cost
\$11,585,000

Total Annual Benefits
\$40,779,000

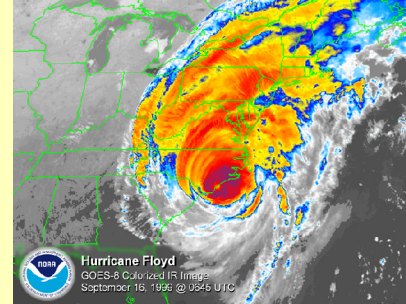
Total Annual Net Benefits
\$29,194,000

BCR
3.5 to 1



Recreation Benefits

Coastal Storm Damage Reduction Benefits



North Topsail Beach- Post Hurricane Fran (1996)

GEOTECHNICAL

Systems Analysis of Borrow Needs:

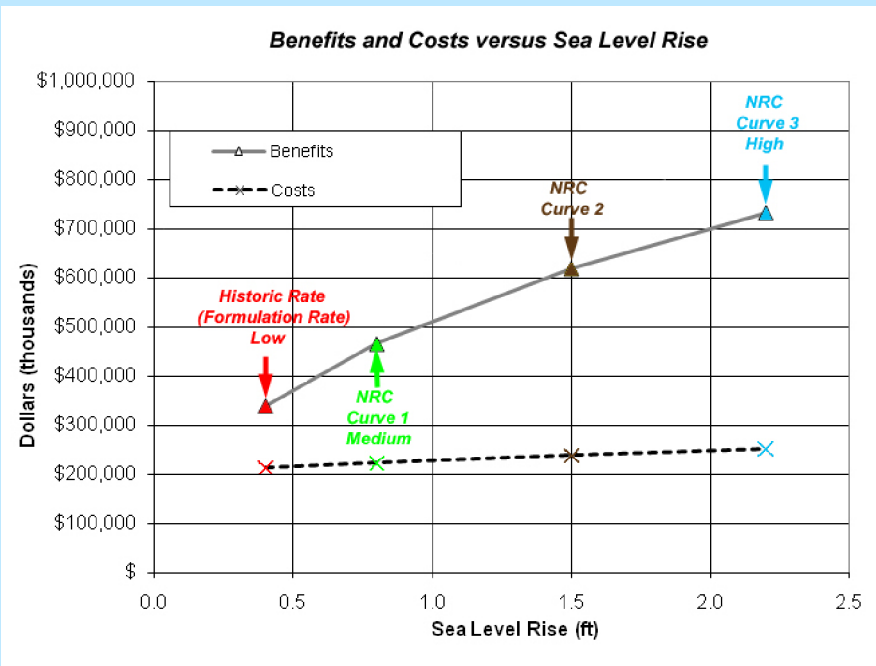
4 proposed projects on Topsail Island (2 federal and 2 non-federal). The two federal projects and one of the non-federal projects share some of the same offshore borrow areas.

Project	Volume (million cubic yards)
Surf City/North Topsail Beach federal	32.3
North Topsail Beach nonfederal	0.34
Topsail Beach federal	13.6
Topsail Beach nonfederal	0
Total, required	46.2
Total, available	50.5

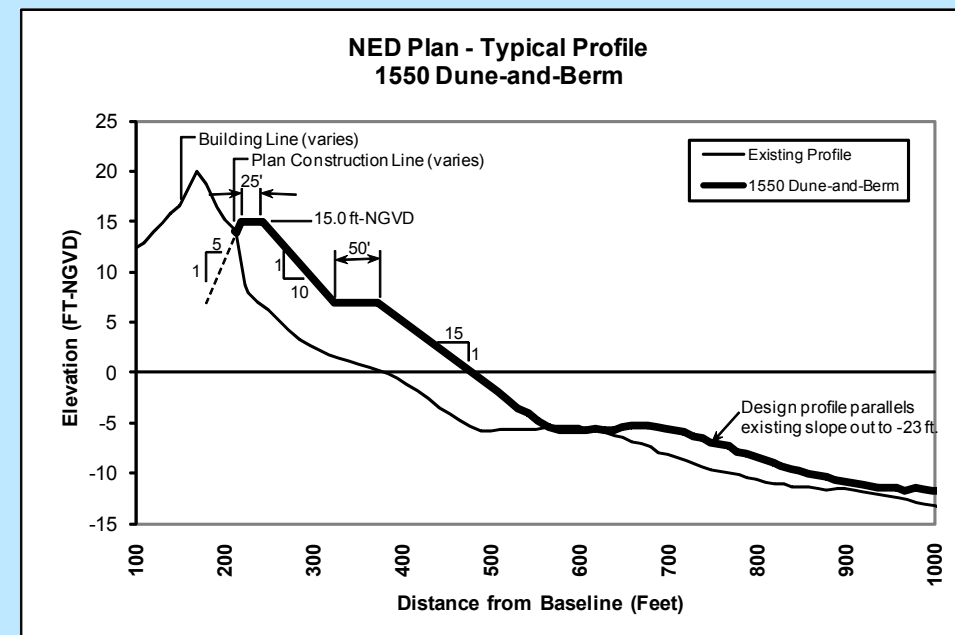


Total borrow requirements from borrow sources identified for the federal projects

COASTAL ENGINEERING



Sea Level Rise Effects on Project Economics
- As SLR increases, project net benefits increase.



ENVIRONMENTAL

The environmental goal of the project is to avoid and minimize adverse impacts to the maximum extent practicable.

Considerations include:

Seabeach Amaranth



Sea Turtles



Hard Bottom Resources



Shorebirds