



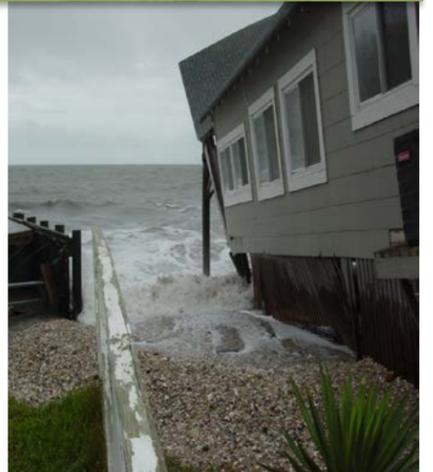
**PROJECT OVERVIEW**

March 2014



Edisto Island is a barrier island located at the mouth of the South Edisto River in Colleton County, South Carolina, approximately 45 miles southwest of Charleston and approximately 20 miles east-northeast of Beaufort, South Carolina. It is about a one hour drive from Charleston. State Highway 174 provides the only road access to Edisto Island. If it were cut off, there would be no practical way to evacuate or to return to provide emergency and recovery services to the community.

Edisto Beach is a quiet family-oriented community of single-family residences and cottages. The community hosted over 700,000 visitors last year. Visitors are attracted to its pristine beaches, abundant wildlife nearby, and its relaxed atmosphere. Wildlife includes threatened and endangered species including sea turtles and shorebirds which forage and build their nests in the dunes and maritime forest.



**ECONOMIC ANALYSIS**

Recommended Plan



Alternative Results-Net Benefits				
Reach	Alt 1	Alt 2	Alt 3	Alt 4
Size	Mid-sized	Minimum	Maximum	Economic Bracketing
Inlet Reach	\$213,290	\$27,553	\$386,954	\$386,954
Atlantic Reach South	\$244,010	\$235,136	\$241,996	\$287,289
Atlantic Reach North	\$880,268	\$580,798	\$903,515	\$945,230
Total	\$1,337,568	\$843,487	\$1,532,465	\$1,619,473



**COSTS**

**FIRST COST:** \$54,000,000  
**INITIAL CONSTRUCTION:** \$21,000,000 [\$13.7M Fed/\$7.3M Non-Fed]  
**3 RENOURISHMENTS:** \$33,000,000 [\$16.5M Fed/ \$16.5M Non-Fed]  
**AVERAGE ANNUAL:** \$1,500,000  
**OPERATION AND MAINTENANCE:** \$83,000/YR [Non-Fed]

**BENEFITS (Average Annual)**

**STORM DAMAGE REDUCTION:** \$3,000,000  
**RECREATION:** \$ 573,000  
**TOTAL:** \$ 3,500,000  
**NET BENEFITS:** \$ 2,000,000

**BENEFIT/COST RATIO (BCR)**

**BCR: 2.3**  
 Recommended Plan is the National Economic Development Plan (NED).

**ENVIRONMENT**



Edisto Beach has the 3<sup>rd</sup> highest number of sea turtle nests in South Carolina. The study revealed that a diverse number and type of threatened and endangered (T&E) species are known to occur in the study area. Besides sea turtles, these include: whales, sturgeon, piping plover, and manatee.

The T&E species most likely to significantly benefit from a project is the loggerhead sea turtle. Between May and August, around 150 nests are laid with clutch sizes of about 100 or more eggs each. It is worth noting that Edisto Beach is home to an extensive network of volunteers who monitor these turtles and their habitat.



The ACE Basin gets its name from the three waterways that flow through it: The Ashepoo, Combahee, and Edisto Rivers. It contains roughly 350,000 acres of protected land. It is one of the largest protected estuarine systems on the East Coast and provides a safe haven for wildlife and remains a buffer to encroaching development.

If the erosion is allowed to continue, the quantity and quality of sea turtle nesting and shorebird habitat will decrease as the shoreline encroaches on structures and armoring systems designed to protect structures.



**INCIDENTAL BENEFITS**



Protects the island's only evacuation and return route



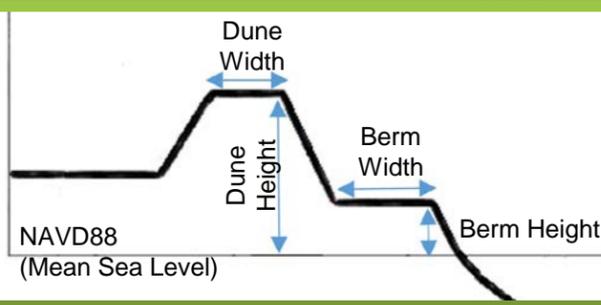
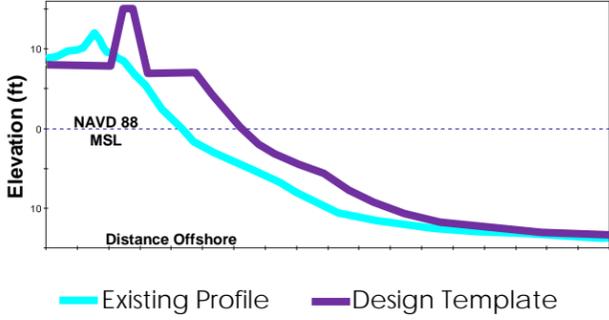
Protects the island's quality of life

# Recommended Plan – Alternative 4

## Atlantic Reach North

- **Dune:** 15 feet above MSL, 15 feet wide
- **Berm:** 7 feet above MSL, 75 feet wide
- **Length:** 7,740 feet, tapering into State Park Reach
- **Groins:** 14 lengthened a total of 930 feet

### Representative Profile



### Definition of Key Terms

**Dune:** elevated section of the beach profile that serves to protect structures from increased water levels during storm events.  
**Berm:** the flat region of the beach between the dune and shoreline.  
**Groin:** rock structures constructed perpendicular to the beach extending out into the ocean, installed to capture and retain sediment to slow erosion.

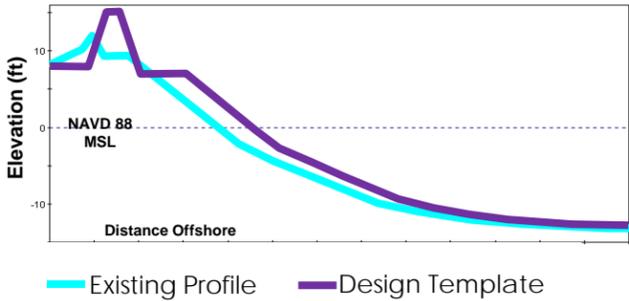
Jeremy Inlet

Edisto Beach State Park

## Atlantic Reach South

- **Dune:** 15 feet above MSL, 15 feet wide
- **Berm:** 7 feet above MSL, 50 feet wide
- **Length:** 8,790 feet
- **Groins:** 9 lengthened a total of 200 feet

### Representative Profile

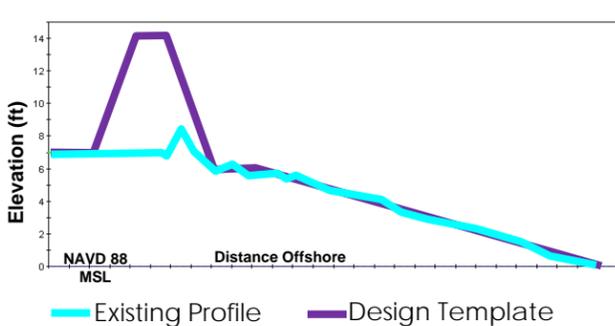


Edisto Island

## Inlet Reach

- **Dune:** 14 feet above MSL, 15 feet wide
- **Length:** 5,290 feet

### Representative Profile



Town of Edisto Beach

Atlantic Ocean

South Edisto River

1.5 Miles

Borrow Site

### Legend

- Red line: Groins-Proposed for Lengthening
- Black line: Groins- No Lengthening
- Green line: Project Footprint
- MSL: Mean Sea Level

**EDISTO BEACH COASTAL STORM DAMAGE REDUCTION PROJECT**  
**COLLETON COUNTY, SOUTH CAROLINA**  
*Investing in our coastal communities*