

Isle of Palms Beach Restoration Project Post Project Monitoring Report – Year 1

December 2007

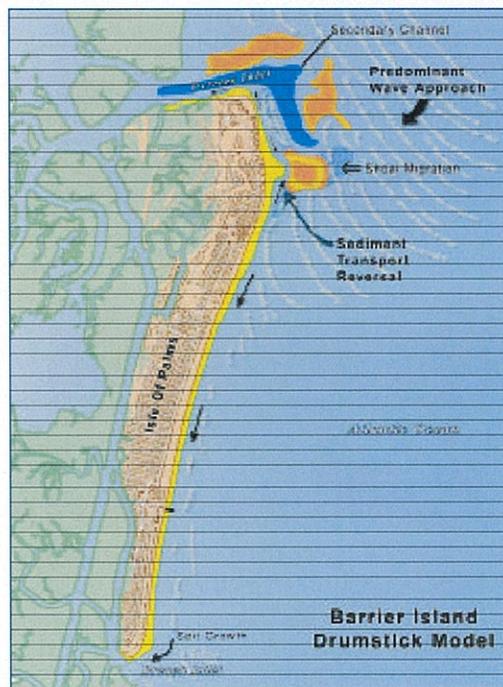


June 2008



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Sediment Transport at the Isle of Palms



Shoal Bypassing at Isle of Palms



1996

1997

1998



2008 Isle of Palms Beach Restoration Project



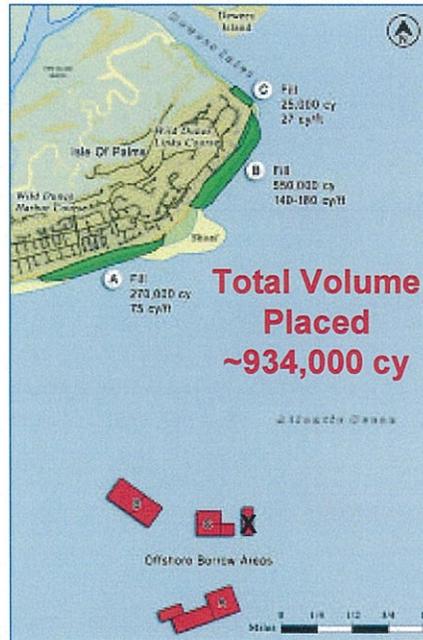
December 2007



May 2008



2008 Isle of Palms Beach Restoration Project



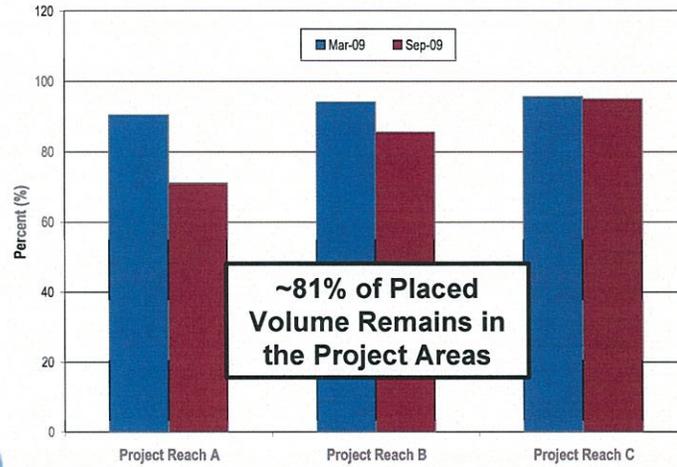
2008 Isle of Palms Beach Restoration Project

- Pumping between May 24th and June 25th 2008
- ~ 934,000 cy of sand added to ~10,200 linear ft of beach
- Fill volumes ranged from 27 cy/ft to ~180 cy/ft
- Removal of ~9,400 large sand bags and ~5,400 cy of small bags
- Contractor – Weeks Marine Dredging Company



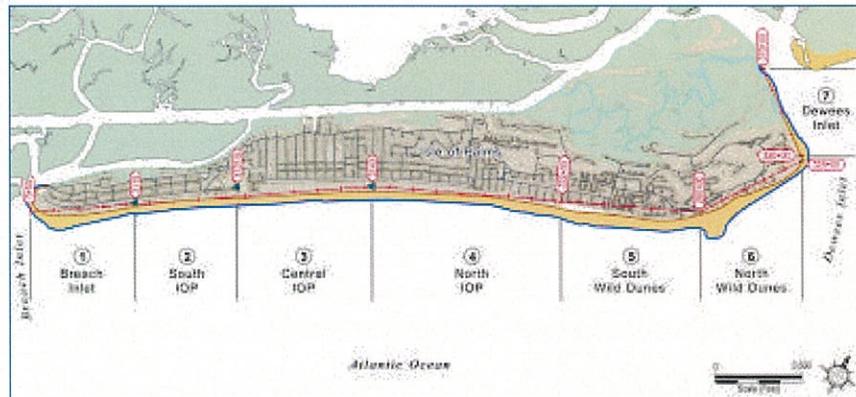
2008 Isle of Palms Beach Restoration Project Post-Project Monitoring

Isle of Palms - Percent of Nourishment Volume Remaining In Project Reaches



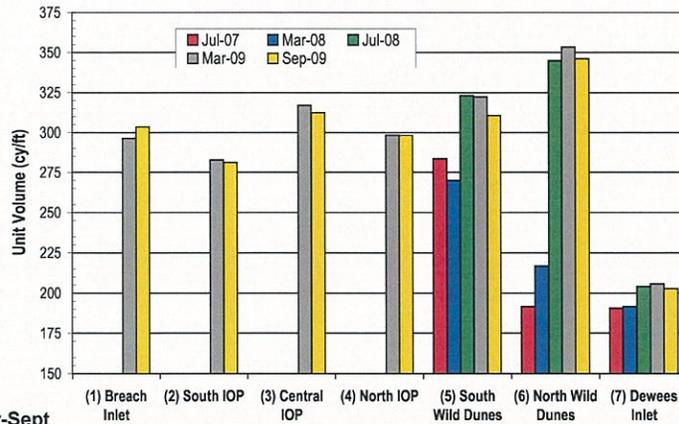
2008 Isle of Palms Beach Restoration Project Post-Project Monitoring

- 7 Monitoring Reaches over ~7 miles of shoreline
- Over 120 monitoring stations and 220 miles of survey lines



2008 Isle of Palms Beach Restoration Project Post-Project Monitoring

Isle of Palms Reach Unit Volumes (cy/ft)



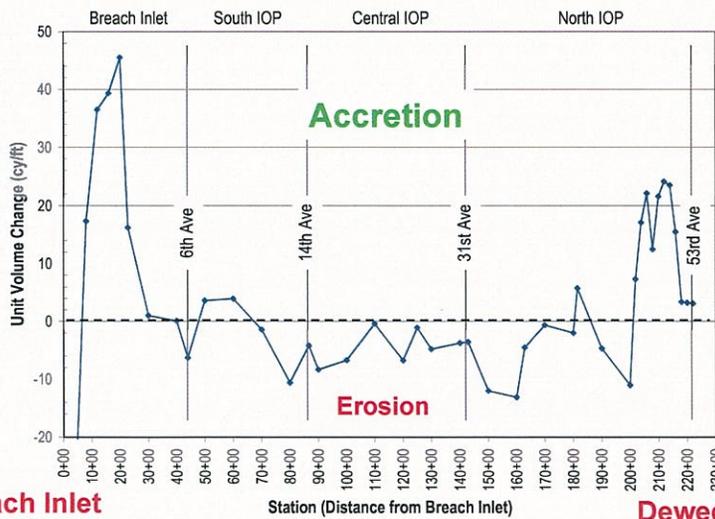
**Mar-Sept
2009**

Vol Change (cy)	31,978	-6,870	-25,608	-1,861	-70,355	-36,296	-11,901
Unit Vol Change (cy/ft)	7.28	-1.61	-4.56	-0.24	-11.73	-7.41	-2.98



2008 Isle of Palms Beach Restoration Project Post-Project Monitoring – Isle of Palms Reaches

Isle of Palms
March 2009 - September 2009 Unit Volume Change

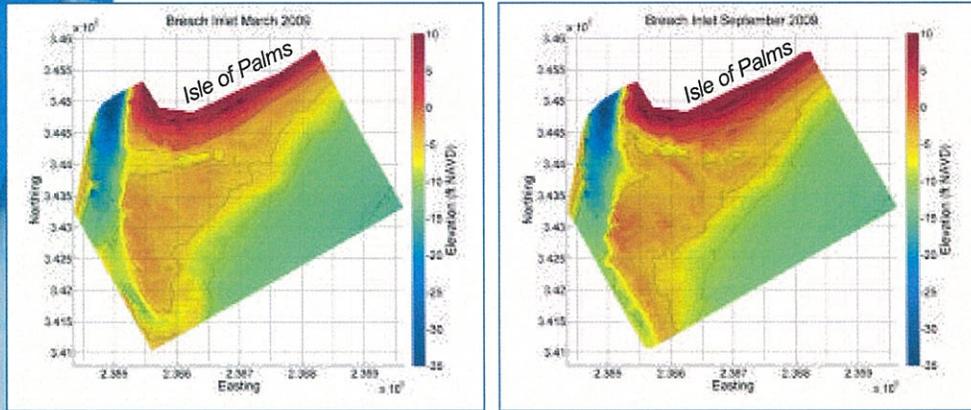


Breach Inlet

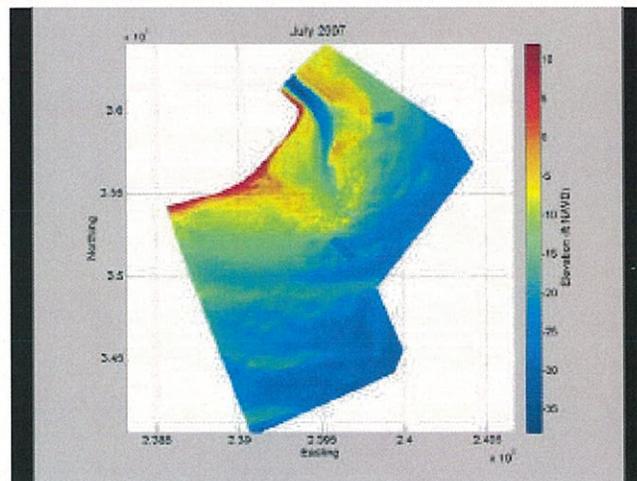
Dewees Inlet



2008 Isle of Palms Beach Restoration Project Post-Project Monitoring – Breach Inlet

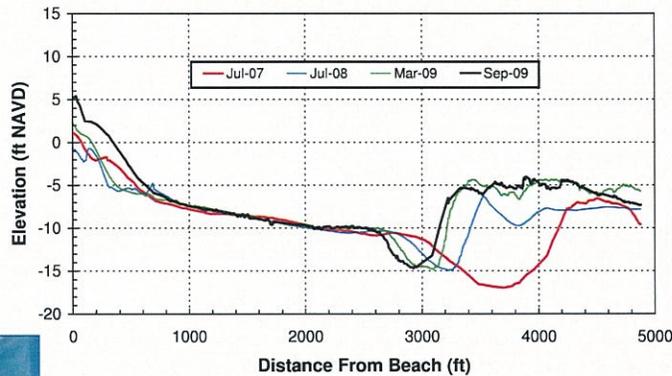


2008 Isle of Palms Beach Restoration Project Post-Project Monitoring – Dewees Inlet



2008 Isle of Palms Beach Restoration Project Post-Project Monitoring – Dewees Inlet

Dewees Inlet Main Channel Cross Section



2008 Isle of Palms Beach Restoration Project Summary of Results

- A shoal bypass event containing 330,000 cy of sand occurred in 2008-2009, fully attaching to the beach around April 2009.
- The shoal attached near the Wild Dunes Property Owners Beach House, and caused significant erosion to adjacent areas.
- Erosion of the nourishment sand was initially rapid (July 2008-March 2009) but slowed in most areas (March – September 2009).
- Sand is moving away from the project area.
- 81% of the nourishment sand remains within the fill boundaries.
- The majority of the central IOP shoreline was erosional.
- Overall, IOP lost ~120,000 cy between March and September 2009.
- Significant changes are present in the positions of the outer shoals of Dewees Inlet, suggesting the main channel may be relocating. This may have major effects on the shoreline at the northeast end.

