



The Isle of Palms 2008 Beach Nourishment Project Update (27 Jan 2014)

Five years after the 2008 beach nourishment project (933,895 cubic yards-cy), approximately 40% of the new sand (~350,000 cy) remains around the east end of the island where it was placed. A small portion (~70,000 cy) of the nourishment sand has migrated to the shoreline along Dewees Inlet helping to build up the dune line along the 17th fairway of the Links Course (outside the project area). A major portion of the nourishment has migrated west (south) of 53rd Avenue adding about 325,000 cy between 31st and 53rd Avenue since March 2009.

Nourishment sand has also added ~130,000 cy from 31st avenue to Sea Cabins pier and ~80,000 cy from Sea Cabins pier to 6th Avenue since 2009. Thus, nearly all the nourishment sand can be accounted for between Dewees Inlet and Breach Inlet.

Despite the favorable accounting of the nourishment sand, several localities along the beach have sustained rapid losses. The area around the 18th green of the Links Course, Ocean Club Villas and Seascape Villas in Wild Dunes is an erosion hotspot. Emergency sand bags were recently placed along ~1,000 ft of shoreline under an emergency permit which expires 31 March.

There has also been focused erosion around Beachwood East and Dunecrest Lane (Wild Dunes) and between 2nd Avenue and Breach Inlet. No property is immediately threatened although some of these areas meet the threshold for remedial sand scraping and protection. Focused erosion in all cases is associated with shoals and channels of the inlets.

A shoal containing over 1 million cy off of Wild Dunes is migrating onshore and acting as a breakwater creating areas of buildup (near Mariners Walk) flanked by areas of erosion. The shoal is approximately 400 ft offshore and has been migrating toward the beach at ~50 ft per month. We expect portions of the shoal to be attached to the beach and walk-able at low tide by the end of this year.

CSE has recommended implementation of a ~250,000 cy scraping project as soon as the shoal is accessible to heavy equipment. Sand will be transferred by trucks under an existing permit for restoration of erosional hot spots. We estimate such remedial work will cost ~\$900,000 (i.e. ~10% of the 2008 nourishment cost). Because of permit restrictions, sand scraping from healthy accreting areas is only allowed between November and April.

CSE recently met with representatives of Ocean Club Villas to review the likely timing of shoal attachment, and discuss the full spectrum of emergency protection measures that are feasible under state coastal zone management regulations. Sand bags are considered the only practical alternative.

Presently, there is insufficient accessible sand for borrowing by land-based equipment. However, when the shoal attaches, upwards of 1 million cy will become accessible. Scraping will restore losses in the erosion hotspots while the “lost” sand will flow to other sections of the Isle of Palms.

The recent erosion trend at Breach Inlet (associated with a secondary channel) has diminished. However, CSE is continuing to monitor that area closely and providing quarterly updates to City officials.

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