

FACT SHEET #3

Nags Head Emergency Nourishment Project

Q. Have other communities undertaken locally funded nourishment projects while applying for a federal project?

A. Yes, examples include Town of Emerald Isle (NC), City of Myrtle Beach (SC), Town of Pawleys Island (SC), Town of Pine Knoll Shores (NC), and Town of Edisto Beach (SC) among many others.

Myrtle Beach was one of the first communities in the U.S. to pursue both a federal project and a local (interim) project. The following chronology describes the outcome. (Note: Coastal Science & Engineering has been the city's principal consultant for beach nourishment design and monitoring since the early 1980s.)

1977	US Congress authorizes erosion and hurricane protection study of Myrtle Beach.	funds. By comparison, only 20 percent of the shoreline qualified for emergency dune reconstruction funds.
1981	Nearly half of Myrtle Beach had no dry beach at low tide, and numerous seawalls were under construction.	1991 The bonds for the locally funded project were paid in full.
1983	US Army Corps of Engineers recommends "50-year" nourishment project.	1993 Federal design for the 50-year project complete.
1984	CSE prepares a design for an interim "locally funded" nourishment project.	1995 Over 30 percent of all nourishment volumes placed between 1985 and 1990 remained on the visible beach in the project area (locally and FEMA-funded nourishment).
1985– 1987	City of Myrtle Beach spends (~)\$4.5 million of local funds to add ~850,000 cubic yards (cy) along ~8 miles of beach (~20 cubic yards per foot nourishment). Numerous citizens opposed the project thinking it would not outlast the debt payments.	1997 The 50-year federal project was constructed along Myrtle Beach after 20 years of planning. The initial federal nourishment involved ~2,200,000 cy. There has been no requirement for renourishment since 1997.
1989	Hurricane <i>Hugo</i> eroded about 40 percent of the nourishment volume in the locally funded project.	2006 Myrtle Beach's seawalls and bulkheads from the early 1980s are largely buried and now fronted by a 40-ft strip of dunes and a wide dry-sand beach. There is presently more sand on Myrtle Beach than existed between 1960 and 1985.
1989– 1990	FEMA provided ~\$2.9 million to Myrtle Beach to replace the sand losses due to the hurricane (~375,000 cy). 100 percent of the project area qualified for FEMA restoration	

The cost of Myrtle Beach's nourishment and maintenance projects since 1981 has averaged about \$20 per foot per year (equal to \$22.5 million in actual outlays, unadjusted for inflation).

In 1984, CSE predicted the locally funded nourishment project would erode at an average of 2 cubic yards per foot per year (cy/ft/yr). The actual rate of loss from 1986 to 1995 was 1.6 cy/ft/yr (measured along the recreational beach to low-tide wading depth).