

Physical Performance of Beach Nourishment Projects

Baumgardner, P.F. (1984) "Charlotte Harbor Beach Nourishment", Proceedings of the Conference Dredging '84, Dredging and Dredge Material Disposal, pp. 1024-1029.

This project entailed the placement of 230,000 cubic meters of sand dredged in conjunction with channel maintenance on badly eroded beaches of Charlotte Harbor. The Corps of Engineers hopper dredge McFarland was used and was moored approximately 3 km offshore. One booster pump was required to achieve the sand placement. The operation worked 24 hours per day except for necessary delays for fueling. It is concluded that with disposal areas being moved offshore, costs may soon force the use of beach disposal areas in some areas.

Beachler, K. and T.J. Campbell (1984) "Offshore-Dredging - Is It Still Cost-Effective for Beach Restoration?", Proceedings of the Conference Dredging '84, Dredging and Dredge Material Disposal, pp. 229-236.

The various approaches to coping with beach erosion are reviewed to determine whether beach restoration using an offshore sand source is still the optimum approach. Cited are the increasing difficulty of permitting such a project and the rising costs from the earliest projects. Various sources of sand for southeast Florida including bay areas and the use of aragonite from the Bahamas is being considered. Only preliminary results were available at the time of the reporting; however, it was concluded that dredging from an offshore source was economically viable, that aragonite may become cost-competitive as the higher quality sources of sand become depleted and that inlet maintenance and bypassing should serve as an essential element of an overall beach management plan.

Hobson, R.D. (1981) "Beach Nourishment Techniques, Report 3: Typical Beach Nourishment Projects Using Offshore Sand Deposits", Geotechnical Engineering Branch, U.S. Army Coastal Engineering Research Center, Fort Belvoir, VA, 117 pages.

This report provides a summary and review for 20 Corps of Engineers beach nourishment projects. Useful data is provided including, where available, history and project description, location and bathymetry, loss rates, recession rates, grain size characteristics, presence of stabilization structures, etc.