

Stauble, D.K. and W.G. Nelson (1984) "Biological and Physical Monitoring of Beach Erosion Control Project: Indialantic/Melbourne Beach, Florida", Department of Oceanography and Ocean Engineering, Florida Institute of Technology, Melbourne, FL.

Combined biological and physical monitoring was carried out to document the impacts and performance of the 1980-1981 beach nourishment project at Indialantic and Melbourne Beach, Florida. The project entailed placement by truck of 195,100 cubic meters along 3.4 km of beach. Project construction commenced in October 1980 and was completed in January 1981. Five sampling profiles were established, one on either side of the project as control and three profiles within the project limits. Beach profiles were surveyed out to depths of approximately 3 m and sediment and biological samples were collected along the profiles. Sampling was conducted before the project and quarterly after placement.

It was found that due to extratropical storms during the 1980-1981 winter season, the profiles adjusted rapidly. With the milder 1981 summer weather, the profiles tended to stabilize. Although the control profiles exhibited considerable erosion and dune scarping, the dunes within the project area were not eroded.

The biological monitoring results were found to show little difference either in number of individuals or number of species between the project and the control areas. Observed seasonal variability was much greater than differences between the control and project sites. It was concluded that the lack of adverse biological impact was due to the good match between the placed and native sands and possibly due to the tendency for the species Donax to migrate offshore during the winter which corresponded to project construction.

Stern, E.M. and W.B. Stickle (1978) "Effects of Turbidity and Suspended Material in Aquatic Environments, Literature Review", Technical Report D-78-21 Dredged Material Research Program, prepared for Office Chief of Engineers, U.S. Army, Washington, D.C., 117 pages.

Definitions, characteristics and various measures of turbidity are reviewed. The causes of turbidity can be natural or due to human activity such as dredging. Suspended material can have beneficial or detrimental effects depending on the organisms present. It is noted that many filter feeders can lessen turbidity