

Pullen, E.J. and R.M. Yancey (1979) "Beach Nourishment: Its Effect on Coastal Ecology", Proceedings 23rd Annual Meeting of the Florida Shore and Beach Preservation Association, Florida Sea Grant Marine Advisory Program, p. 51-64.

The beach and nearshore environment is divided into three zones: beach, surf and offshore. These zone are defined and the animals inhabiting them described. The results of CERC's research in each of these three zones are presented. The three major physical effects of beach nourishment are: covering of existing beach sediments, modifications of the beach interface and increasing water turbidity. Nearshore benthic communities are well adapted to substantial changes due to the dynamic nature of this area; thus these communities recover well following a nourishment project. However, offshore communities, especially those requiring low turbidity are less able to adapt. Motile animals appeared to fare well by departing the area during undesirable conditions, such as high turbidity. Corals, especially the hard corals, are sensitive and care should be taken to avoid direct covering or deposition by suspended sediment. Prolonged periods of high turbidity are to be avoided. It was noted that in borrow areas of low transport activity, the borrow pits may tend to fill with fine sediments; thus where possible it is preferable to utilize sands from dynamic transport areas and/or to minimize cut depths. The importance of using high quality material was noted. A turtle egg relocation program should be developed if nourishment is carried out during the nesting season in an area frequented by nesting turtles. It is concluded that water quality changes related to beach nourishment are usually of short duration due to energetic mixing in the nearshore environment.

Pullen, E.J., R.M. Yancey, P.L. Knutson and A.K. Hurme (1980) "An Annotated Bibliography of CERC Coastal Ecology Research", U.S. Army Corps of Engineers Coastal Engineering Research Center, Miscellaneous Report No. 80-5.

A total of 61 references is listed with a brief review of the contents of each. Of the 61 references, 12 relate directly or indirectly to the subject of the present report.