establishment of the Coastal Construction Control Line and in the consideration of various applications for coastal construction permits.

VIII. OTHER APPLICATIONS AND PUBLICATIONS

In addition to the above comprehensive contributions by Moore (1982) and Kriebel (1982), a number of publications and applications have resulted from this project.

The design of beach nourishment projects has been discussed by Maurmeyer and Dean (1980) with specific reference to the placement of sand to minimize overtopping by waves. In addition, an examination was carried out of the effect of sand size on the usable width of beach after reconfiguring of the profile by waves of different heights. Methods were presented for calculating the wave overtopping as a function of volumes and types (sizes) of beach sand placed. Figure 29 presents, for various sediment characteristics, the required nourishment volumes to advance the shoreline seaward a distance of 300 ft.

The effect of wave steepness and fall velocity parameter on volume of material stored in the offshore bar was examined by Dean (1982). A series of systematic wave tank experiments by Coxe (1978) was employed to develop a dimensionless relationship for the bar volume. Figure 30 presents the bar volume as a function of the square of the excess wave height above that required for incipient bar formation.

A number of laboratory and field experiments had been carried out by various investigators to quantify the immersed sediment transport rate, I_ℓ, in terms of the so-called longshore energy flux at breaking, $P_{\ell s}$, i.e.

$$I_\ell = K'P_{\ell s} \tag{22}$$

It was found that the laboratory derived values of K' were significantly lower than the field values and this was taken as grounds that serious scale effects were present in the modeling of longshore sediment transport. Examination of the model versus field conditions demonstrated a scale ratio of approximately 1:10 for the waves, but a scale ratio of approximately 1:3 to 1:1 for the model sediment. Thus