alter the circulation pattern at the mouth of the lagoon. As a result some of the sediment eroded from problem site D may continue to be transported into the lagoon by the combined effects of this circulation pattern and the flow into the lagoon during storm conditions. It appears that this circulation pattern at the lagoon mouth is of a permanent nature and that the only means to significantly reduce transport of sediment into the lagoon (and thereby attenuate the shoaling problems at sites E and F) is to cut off the supply from site D. This may best be accomplished by implementing the second phase of the solution scheme for this site as shown in Fig. 5.3 and again in Fig. 6.14.

6.4.2.4 Problem Site G

The erosion problems at the Dubois Park beach (problem site G) are believed to be due to the combination of 1) wave attack, 2) suspension and transport of sediment by current eddies, and 3) transport of sediment along the shoreline by tidal currents. Current velocities during flood tide corresponding to a range of 0.2 to 0.3 m/sec near shore (5 to 10 m from beach) and 0.3 to 0.7 m/sec further offshore (25 to 35 m from the beach) along with maximum wave heights of 0.3 m were measured at this location resulting in P values of 1 to 3 and 0 to 7.5, respectively. Negative P values were calculated for points near shore during ebb tide indicating deposition there, while positive P values ranging from 2 to 10 were calculated for all points at site G during a 1.5 m storm surge indicating erosion for this condition. In addition, Fig. 6.15 indicates the existence of a large circulation pattern immediately offshore of the beach during a flood tide. This pattern also was observed during both ebb and storm tides.