

The second phase consists of two options, both of which involve the placement of offshore sills parallel to shoreline. The first option consists of placing a sill between the two groins constructed in phase one (see Fig. 5.5). The elevation of the sill would be set at -0.5 m so that it is always below the waterline. The sill would serve to reduce the wave energy reaching the beach and to retain sand while still allowing for mixing and water exchange between the beach area and the inlet. The second option for this phase involves constructing a series of sills running offshore from the west end of the Dubois Park beach up to site H (see Fig. 5.6). As in option one the elevation of the sills would be set at -0.5 m so that they are always below the waterline and serve to attenuate wave energy and retain sand. Sills of various lengths and spacing were proposed for testing (see Fig. 5.6) so as to determine the optimum design for this option. These tests were also expected to provide an indication of the effect that the sills would have on the longshore sediment transport in this region.

Site H encompasses the basin area on the north side of the promontory between the marina and the inlet. Problems in this area consist of shoaling in the eastern portion of the basin and erosion on the north side of the westward end of the promontory. Shoaling of the basin is believed to be due to the transport of sediment into this region by both flood and ebb tidal currents. Flow velocities in this basin are very low (0.1-0.2 m/s) such that any sediment transport into this basin will settle there. The erosion of the promontory is believed to be a result of scour induced by high velocity currents passing this region as well as by both refracted waves and boat wakes striking this area.