

WAI‘ALEA AREA DESCRIPTION

The Waialaeiki shoreline study area (transects 158 - 248) is located on the south coast of O‘ahu in Maunalua Bay, bounded to the west by Wai‘alae Stream and to the east by Wailupe Peninsula. The shoreline is divided into several segments by rock groins and a stream mouth. The eastern half (transects 158 - 212) is lined with seawalls. A shallow fringing reef provides shelter from southern hemisphere swells and tradewind swells, which commonly affect this side of the island.

The east and central portion of Wai‘alae Beach (transects 158 - 224) is approximately stable to accreting with rates as high as 0.5 ft/yr (around transect 180 and 188). The Kāhala Resort and its beach were built in 1963 (transects 225 - 248). Construction included dredging of a beachfront swimming area, installation of a stone jetty peninsula, a small island, and filling of the beach with 18,000 cubic yards of sand (Clark 2005). Due to the alterations to the shoreline, analysis of Kāhala Resort beach includes shorelines from 1967 - 2015 only. The eastern end of the beach (transects 225 - 230) is approximately stable to accreting. The remainder of the beach is experiencing moderate to high rates of erosion (up to -1 ft/yr, around transect 237).

Previous studies found beaches in this area to be stable or accreting (Hwang, 1981; Sea Engineering, 1988).

For more information see: <http://www.soest.hawaii.edu/asp/coasts/oahu/index.asp>

¹ Hwang, D. (1981) "Beach changes on O‘ahu as revealed by aerial photographs", State of Hawaii, Department of Planning and Economic Development.

² Sea Engineering, Inc. (1988) "O‘ahu shoreline study", City and County of Honolulu, Department of Land Utilization.

Keywords:

O‘ahu; Waialaeiki; Wai‘alae; Maunalua Bay; Wailupe Peninsula; Kahala Resort