

KĀHALA AREA DESCRIPTION

The Kāhala shoreline study area (transects 250 - 346) is located on the southern coast of O‘ahu at the western end of Maunalua Bay and is bounded by Wai‘alae Stream to the east and by Black Point to the west. Much of the shoreline is lined with seawalls. Waves are typically small (< 1 ft) along all portions of this shoreline. A shallow fringing reef shelters the shoreline from southern hemisphere swells and tradewind swells, which commonly affect this side of the island.

The eastern one-quarter of Kāhala Beach (transects 250 - 275) is approximately stable to accreting with rates up to 0.9 ft/yr (around transect 261). The remainder of Kāhala Beach is eroding. The western half of Kāhala Beach (transects 304 - 346) was mostly lost to erosion between 1975 and 1996; except for small pockets of sand around transects 318-319, 328-330, 332-334, 338-341, and 345-346. For areas where the beach has been lost, rates are calculated up to and including the first shoreline with no beach (1996) and show the speed at which the beach disappeared.

Hwang (1981) found stable shorelines or net accretion along most of the Kāhala shoreline from 1949 - 1975. Sea Engineering (1988) found accretion near the east end of Kāhala Beach and erosion or stable shorelines along the rest of Kāhala from 1975-1988. These studies used the vegetation line as a shoreline proxy and, therefore, found little or no change when the vegetation line was fixed with a seawall.

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; Kāhala Beach; Maunalua Bay; Wai‘alae Stream; Black Point