

## WAIALUA AREA DESCRIPTION

This map shows the beaches of Waialua (transects 550 - 626) and Kaiaka Bay (transects 627 - 644) on the north shore of O‘ahu. The shoreline is composed of carbonate sand and limestone. The area is exposed to winter swells from the north and west, and persistent easterly tradewind waves year-round. Located at the mouth of two large streams, Kaiaka Bay Beach is comprised of a relatively high proportion of terrigenous sand.

Shoreline change at Waialua (transects 550 - 626) is highly variable along the shore with erosion up to -0.9 ft/yr at Pu‘uiki Beach Park (see transect 552) and accretion over 2.5 ft/yr around transect 595. Adjacent erosion and accretion cells suggest that sand is transported alongshore from Pu‘uiki Beach Park. The area of accretion is adjacent to a channel in the reef, suggesting sand may also be transported up the channel to the beach.

The jetty at the east end of Kaiaka Bay Beach (transects 627 - 644) was constructed prior to 1956. Rates calculated for the modern beach configuration, 1956 - 2015, show the beach has remained approximately stable at an average -0.3 ft/yr.

Previous studies (Hwang, 1981; Sea Engineering, 1988) found net accretion to the vegetation line at east Mokuleia Beach from 1949 - 1988. Hwang (1981) found net accretion to the vegetation line at Kaiaka Bay Beach from 1958 - 1975.

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

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

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

Keywords:

O‘ahu; Waialua; Kaiaka Bay;