

KAWAIHĀPAI AREA DESCRIPTION

This map shows the Kawaihāpai section (transects 138 - 273) on the north shore of O‘ahu and includes Army Beach and Mokulē‘ia Beach Park. The shoreline is composed of carbonate sand and limestone. The area is exposed to winter swells from the north and west and persistent easterly trade wind waves year-round.

Since 1928 the beach has experienced chronic erosion at an average -0.4 ft/yr. The highest erosion rates, over -1.0 ft/yr, have occurred in front of Mokulē‘ia Beach Park (see transects 224 - 231). The sinuous shape is due to variations in the depth of the nearshore reef. Accreted forelands have evolved shoreward of shallow portions and embayments have formed shoreward of channels. The highest erosion rates are found at forelands (see transects 151, 180, and 228) indicating these former areas of accretion are not stable and present a future erosion hazard.

Previous studies (Hwang, 1981; Sea Engineering, 1988) found long-term accretion or approximately stable shorelines around Army Beach and long-term erosion at Mokulēia Beach Park from 1949 - 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; Kawaihāpai; Dillingham Airfield; Army Beach; Mokulē‘ia Beach Park