

MAUNALUA AREA DESCRIPTION

Maunalua is located on the south coast of O‘ahu at the east end of Maunalua Bay. A shallow fringing reef and Kawaihoa Point (Koko Head) protect the shoreline from the full energy of seasonal southerly swells and tradewind waves year-round, which commonly affect this side of the island.

The Maunalua shoreline is largely man-made. The area was developed by Henry J. Kaiser and the Kaiser-Aetna Corporation beginning in 1959. Kuapā fishpond was transformed into Hawaii Kai Marina through extensive dredging of the shallow pond and reef and filling of the marshy shoreline. The shorelines at Kuli‘ou‘ou Beach Park and Maunalua Bay Beach Park were extended seaward by landfill (100ft and 330ft, resp.). These alterations can be seen in the seaward movement of the shoreline between 1928 and 1967.

Due to extensive shoreline reconstruction, only historical shorelines from the modern configuration of each beach (1967- 2015) are used to calculate change rates. Kuli‘ou‘ou Beach Park (transects 0 - 15) is approximately stable with rates ranging from -0.1 to 0.1 ft/yr. Rates are not calculated for the shoreline between transects 15 and 16 as it is mostly rock and mud with little or no sand beach. Maunalua Bay Beach Park (transects 34 -56) is eroding at an average of -0.2 ft/yr. Portlock Beach (transects 26 - 56) is eroding along most of its length (up to -0.8 ft/yr, from transects 38 through 56). The remainder of the Portlock shoreline has no beach with waves breaking against seawalls at high tide.

A previous study found shoreline accretion at Portlock Beach, except near the marina entrance, which experienced erosion (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; Hawai‘i Kai; Maunalua Bay; Kawaihoa Point; Koko Head; Kuapā fishpond; Kuliouou Beach Park