

WAIMĀNALO AREA DESCRIPTION

Waimānalo Beach (transects 218 - 363) is the southern half of a nearly continuous 4-mile-long beach extending from Wailea Point through Bellows Air Force Station and Waimanalo to Kaiona Beach Park. The coast in this area is exposed to consistent easterly tradewind waves year-round and refracted northerly swell during the winter months. The inner shelf and shoreline are protected from the full energy of open ocean waves by a wide fringing reef platform form.

Overall, Waimānalo Beach is characterized by accretion in the northern two-thirds (transects 218 – 309, averaging 0.1 ft/yr) and erosion in the southern one-third (transect 310 – 363, averaging -0.3 ft/yr). The highest accretion rates are found at Waimanalo Beach Park (transect 278, 0.6 ft/yr). The highest erosion rates are found at Kaiona Beach Park (transect 339, -0.9 ft/yr). The beach has disappeared intermittently between transects 323 - 327 and the base of the highway has been armored with stone revetments to prevent further erosion. Seawalls line the shoreline from Kaiona Beach Park to the south.

Previous studies (Hwang, 1981; Sea Engineering, 1988) generally agree with the results of this study, finding accretion in the north of Waimānalo Beach and erosion in much of the south.

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; Waimānalo; Wailea Point; Bellows Air Force Station; Kaiona Beach Park