

## HANAUMA BAY AREA DESCRIPTION

Hanauma Bay is located on the southeastern coast of O‘ahu. The crescent-shaped beach (1,640 ft) lies at the back of the bay created when waves breached the seaward wall of a volcanic crater at Kohelepelepe (Koko Head). The beach is sheltered from the rough waves of the Kaiwi Channel by Palea and Pai‘olu‘olu Points and a fringing reef with a shallow crest extending 400 ft from shore.

The City and County of Honolulu has managed Hanauma Bay as part of Koko Head District Park since 1928. The bay was designated as a Marine Life Conservation District in 1967. Several important alterations have been made to the reef and beach that influence the position of the shoreline:

1950 Three large swimming holes are dredged near the beach.

1956 200-ft-wide channel dredged through the center of the fringing reef to accommodate the first transpacific telephone cable.

1970 In response to erosion, gap in the reef is closed using boulders; beach is replenished with 4,100 yd<sup>3</sup> of imported sand.

1987 Due to erosion, beach replenished with 3,500 yd<sup>3</sup> of imported sand.

Aerial photographs show erosion to the central Hanauma shoreline following the opening of the channel in 1956. The shoreline recovered and maintained a position nearer its 'pre-channel' position following closure of the channel in 1970. Long-term shoreline change rates (1928 - 2015) indicate accretion of 0.2 ft/yr, averaged along the length of the beach. However, these rates may be influenced by alterations to the beach and reef. The greatest accretion is at the north end of the beach (up to 0.8 ft/yr at transect 26). The central and southern portions for the beach are approximately stable over the long-term.

A previous study finds seaward advance of the Hanauma shoreline for the years 1971-1975 (Hwang, 1981).

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.

Keywords:

O‘ahu; Hanauma Bay; Kaiwi Channel; Palea Point; Paioluolu Point