

## WAIALE‘E AREA DESCRIPTION

The beaches of Waiale‘e and west Kawela (transects 270 - 352) are located on the north shore of O‘ahu. The shoreline is composed of carbonate sand and limestone. The area is exposed to north and west swells during winter months and easterly tradewind waves year-round. A shallow fringing reef protects the shoreline from the full energy of large winter swell.

Long-term (1928 - 2015) shoreline change rates are low (< 0.2 ft/yr) for Waiale‘e and west Kawela beaches. Short-term erosion may be a significant hazard to beach-front homes, especially in winter with run-up from large waves. Homes were destroyed in this area by a massive swell in 1969 and during a 1946 tsunami.

Previous studies by Hwang (1981) and Sea Engineering (1988) found little change or seaward growth to the vegetation line in this area (1949 -1988), except at the east end of Waiale‘e Beach (near transect 323) where the vegetation line eroded.

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; Waiale‘e; West Kawela