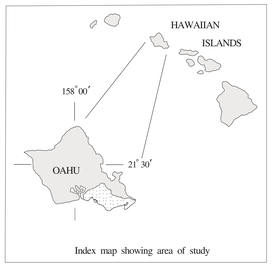
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN FILE REPORT
93-213

PREPARED IN COOPERATION WITH THE CITY AND COUNTY OF HONOLULU



Index map showing area of study

157°54′00″
21°22′30″
21°22′30″
157°46′30″
21°15′00″
157°46′30″

EXPLANATION

Debris-flow hazard from hillslopes

- High
- Moderate
- Low
- Possible under rare conditions
- Increased hazard — Areas where windblown deposits probably increase hazard over that shown
- No hazard within study area — Gray areas may be hazardous only under very rare conditions
- Not evaluated — These and adjacent areas may be affected by debris flows originating in areas underlain by Honolulu Volcanics (Stearns, 1939; Langenheim and Clague, 1987). See inset map

Debris-flow hazard along drainages

- Drainage from hillslopes; may carry debris flows and water-borne debris
- Drainage from headwaters; may carry large debris flows and abundant water-borne debris
- **Historical debris-flow travel path (Peterson and others, 1993)**
- **Boundary of study area**

Base prepared digitally from U.S. Geological Survey 1:24,000-scale quadrangles: Honolulu 1983, Kaneohe 1983, Koko Head 1983, Pearl Harbor 1983. Projection Universal Transverse Mercator, zone 4, Old Hawaiian Datum. Shaded relief from 10-m-square grid of elevations prepared from digital line graphs of hypsography.

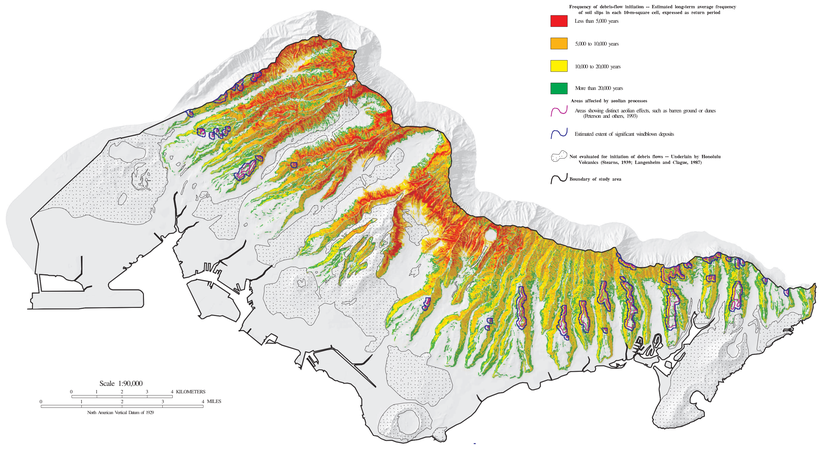
Scale 1:30,000

1 1/2 0 1 MILE

1 1/2 0 1 KILOMETER

North American Vertical Datum of 1929

MAP SHOWING FREQUENCY OF DEBRIS-FLOW INITIATION AND AREAS OF AEOLIAN EFFECTS



MAP OF DEBRIS-FLOW HAZARD IN THE HONOLULU DISTRICT OF OAHU, HAWAII

BY
STEPHEN D. ELLEN, ROBERT K. MARK,
SUSAN H. CANNON, AND DONNA L. KNIFONG

1993

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.