



University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

RL:0550

SR 152
REQUESTING STUDY OF BEACH EROSION
ON THE NEIGHBOR ISLANDS

Statement for
Senate Committee on
Economic Development
Public Hearing, 16 April 1985

By
Doak C. Cox, Environmental Center
J.F. Campbell, Hawaii Institute of Geophysics
Ralph Moberly, Geology and Geophysics
Frans Gerritsen, Ocean Engineering

HR 421 would request that the Corps of Engineers undertake, on the neighbor islands, a study of the history of beach erosion and accretion similar to the study that was done for beaches of Oahu under the Coastal Zone Management (CZM) Program. This statement on the resolution does not reflect an institutional position of the University of Hawaii.

The study of Oahu beaches to which reference is made in SR 152 was undertaken by the Hawaii Institute of Geophysics with CZM support provided by the Department of Planning and Economic Development. The results of the study made it possible to differentiate among: 1) beaches at which, in the long term, erosion has been greater than accretion; 2) beaches at which, in the long term, accretion has been greater than erosion; and 3) beaches at which there have been moderately long term periods of erosion and accretion but no great net dominance of one process over the other.

These results provided, for the first time the basis for differentiating those beaches at which allowance should be made for future erosion in allowing the construction of houses and other structures near the shore. If full use is made of the results of the study, there will be a reduction, not only of hazard to the structures, but the risk of loss of beaches due to attempt to protect the structures by the construction of sea walls, revetments, etc.

The success of the Oahu study indicates the great desirability of conducting similar studies on the neighbor islands. We should note, however, that the Oahu study was based not only on all available aerial photographs but also all available maps and on field checks. We would suggest that comparable studies on the neighbor islands should be made under auspices resembling nearly as possible those of the Oahu study so that the same methodology will be used and comparable confidence can be placed in the results.