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HB 2401
RELATING TO BEACHES

Statement for
House Committee on
Ocean and Marine Resources
February 9, 1990

By
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Ralph Moberly, Geology and Geophysics
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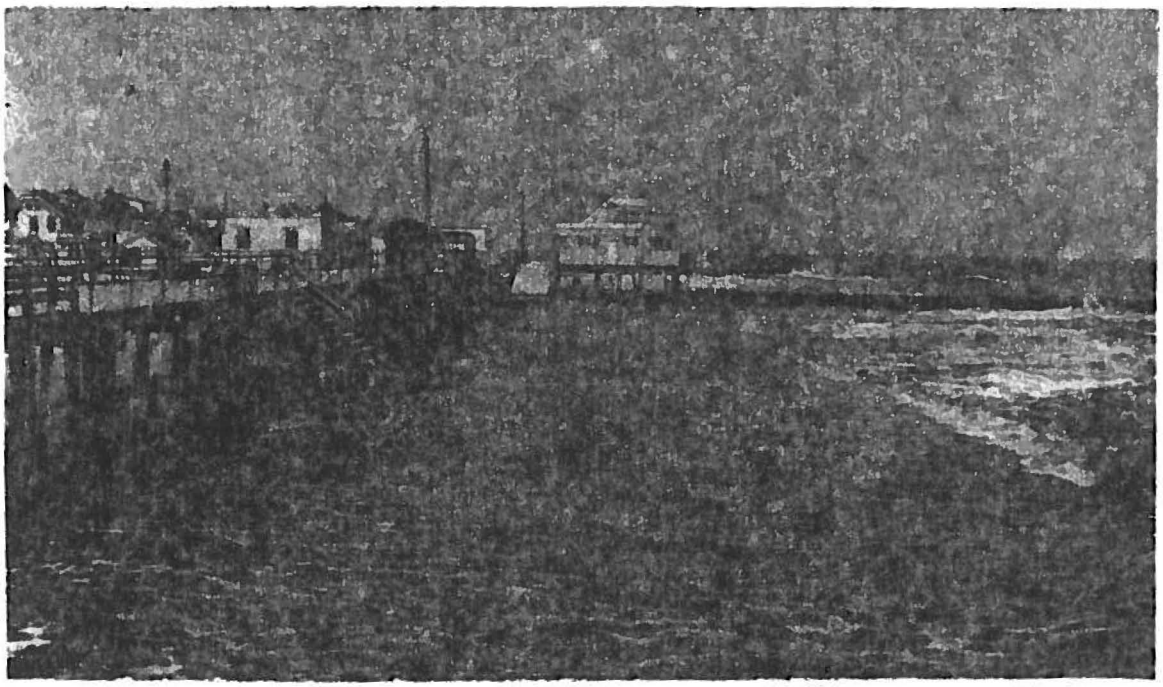
This bill would provide funds to the Department of Land and Natural Resources for the planning and execution of offshore sand recovery to widen eroded public beaches in Hawaii. Eroded portions of Waikiki and Ala Moana beaches would be used as the initial sites for replenishment and serve as demonstration projects.

Our statement on this bill does not represent an institutional position of the University of Hawaii.

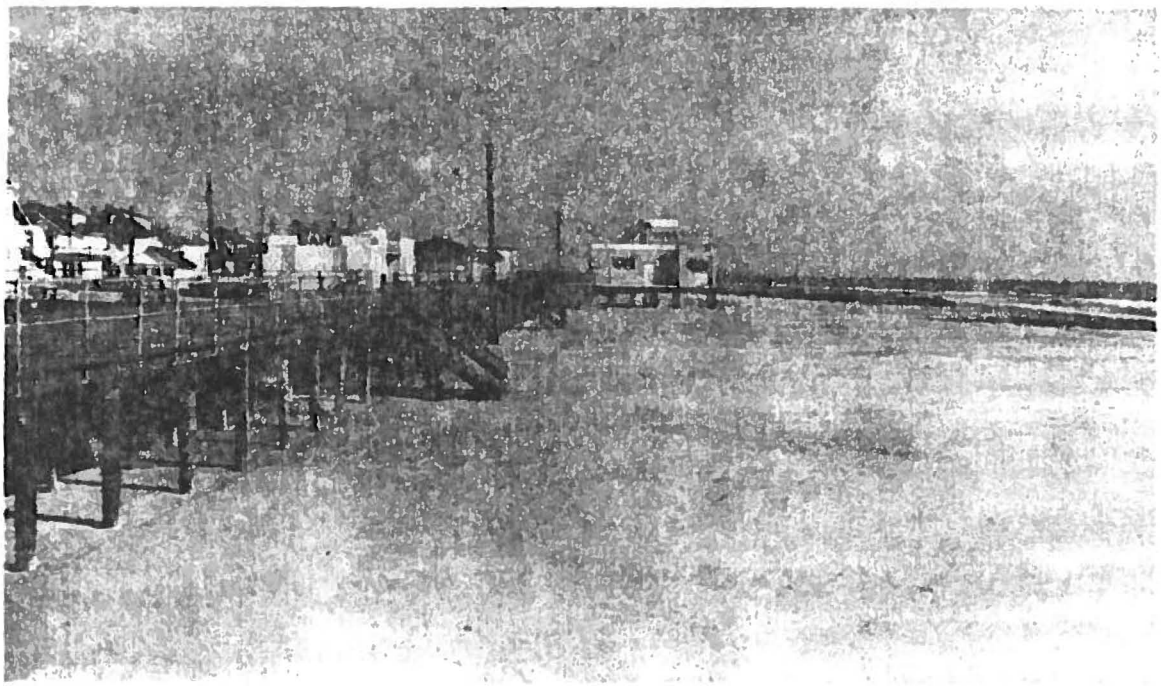
Offshore sand recovery is a viable and cost effective method of obtaining sand for eroded beaches and we strongly support the intent of this bill. Reuse of offshore sand deposits that would otherwise never be returned to the beach system, is an environmentally responsible beach and coastal resource management practice. The practice is quite analogous to the recovery and reuse of top soils captured in silt traps or low lands and their mechanical transport back to the agricultural fields from whence they came.

The sand pumping systems that have been developed in Hawaii by cooperative efforts between the Department of Ocean Engineering at the University of Hawaii and the private sector were successfully field tested several years ago at Keauhou on the Big Island. The basic technology is proven. I might add that similar sand pumping systems have been regularly used on the mainland for at least the past 30 years and throughout Europe for beach replenishment. I have attached photographs taken from the Shore Protection Manual of the U.S. Army Coastal Engineering Research Center showing the before and after examples of pumped sand beach restoration projects on the mainland.

Pumping sand ashore is environmentally far more benign that conventional dredging, eliminates truck hauling traffic to the beach area, eliminates the use and loss of land based sand resources from our finite island environment, reduces the need for heavy equipment on the beach itself and is significantly less costly. We fully concur with the intent of HB 2401.



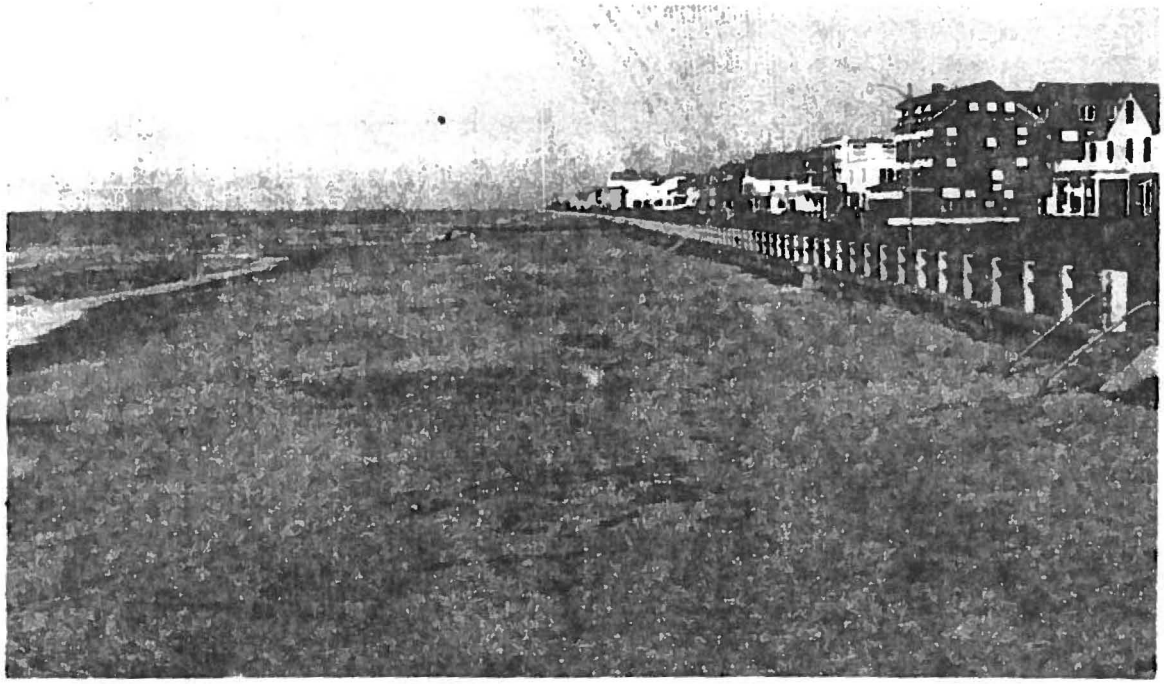
Before Restoration (1951)



After Restoration (1952)

Figure 6-15. Protective Beach (Ocean City, New Jersey)

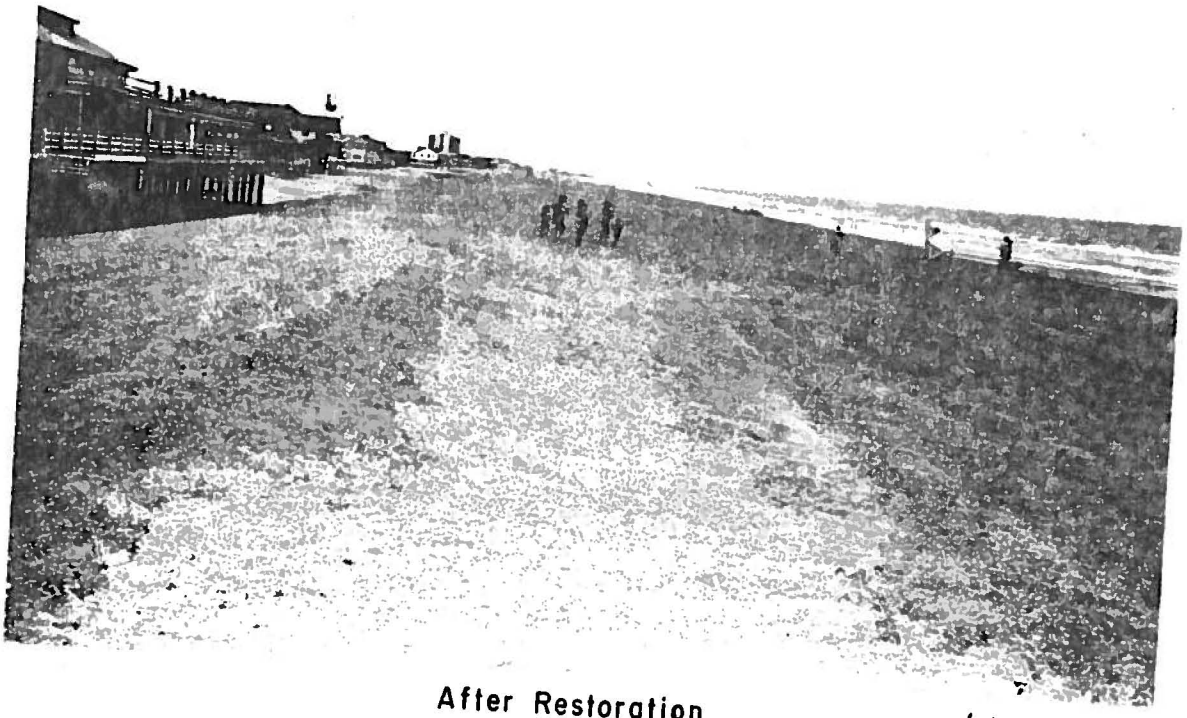
Before Restoration (1951)



After Restoration (1960)

Figure 6-17. Protective Beach (Virginia Beach, Virginia)

Before Restoration (February 1965)



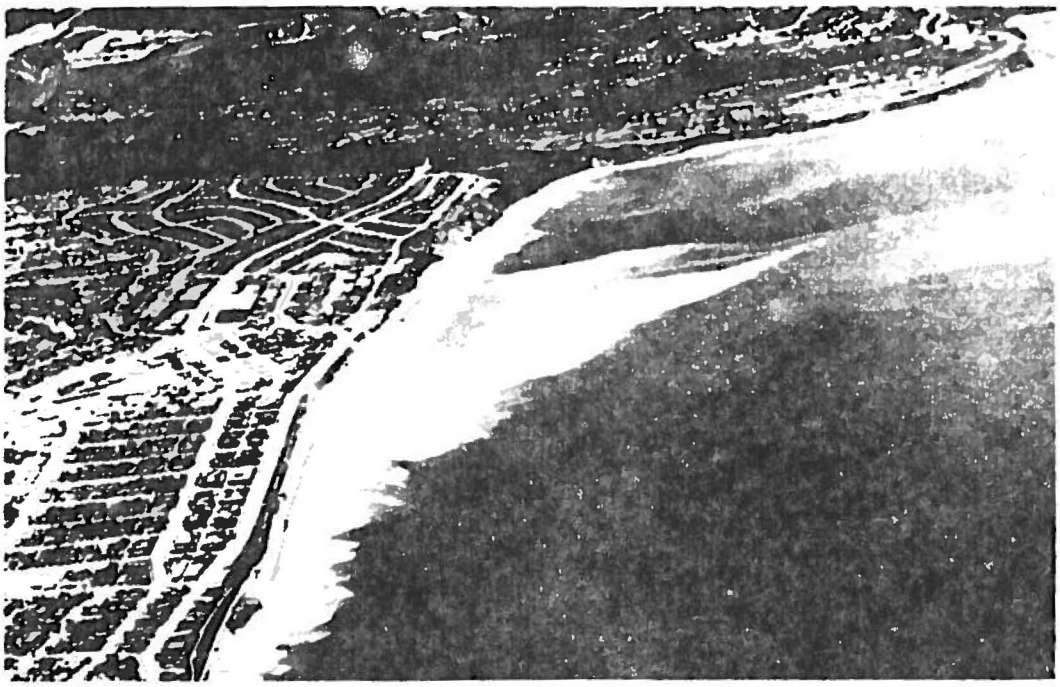
After Restoration (June 1965)

Figure 6-19. Protective Beach (Wrightsville Beach, North Carolina)

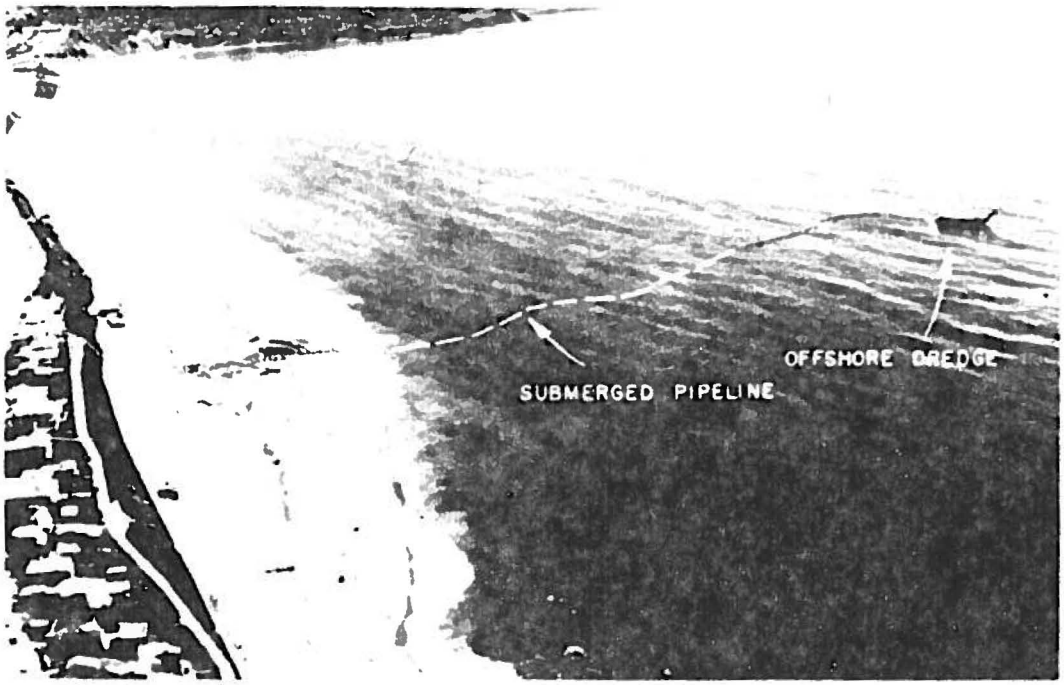
Before Restoration (1964)

After Restoration (1965)

Figure 6-21. Protective Beach (Carolina Beach, North Carolina)



Before Restoration (April 1962)



After Restoration (September 1968)

Photographs Courtesy of Shellmaker Corporation

Figure 6-27. Protective Beach (Redondo Beach, California)