



## AMERICAN PLANNING ASSOCIATION HAWAII CHAPTER



Celebrating 50 Years  
**1962 - 2012**

### Natural Hazard Mitigation: Lessons from Hilo



Map of tsunami inundation events



Kamehameha Avenue from the Waiakea side of Ponahawai Intersection after the May 1960, tsunami

The City of Hilo is vulnerable to tsunami inundations generated by seismic activity more than 2,500 miles away in a rim extending from Japan around northern Pacific south to the Chile coast. Wave speeds approaching Hilo have been 450 to 490 mph, reaching heights of 30 feet or more. The two most devastating tsunami events to hit Hilo in modern times occurred in 1946 and 1960. In 1960, waves took 14.8 hours to reach Hilo, but there was no early warning system or time to clear the inundation area. The catastrophe took the lives of 61 people and caused \$50 million in property damage, in the low lying area from beyond Keaukaha to the Wailuku River mouth. Post-disaster, the Corps of Engineers proposed a plan proposing an early warning system and special structural requirements for the County's building code, as well as extensive and expensive construction projects consisting of levees, seawalls, and higher breakwaters. The County, however, working with Jim Bell of a local planning consulting firm Belt Collins, envisioned an alternative opportunity to approach hazard mitigation from a bold land use planning approach. The resulting 1961 plan proposed land acquisition and assembly to create a huge open space along Hilo Bay and inland to the maximum run up and elevation reached in 1946 and 1960 tsunami. In addition, there would be restrictions on land uses in this area and heavy planting with suitable trees. This plan was a pioneering effort that serves as a model for other areas that are particularly vulnerable to tsunami hazards.



The open space area proposed in the 1961 plan was developed as the Kaiko'o Park in 1971, offering to this day scenic beauty and recreational amenities as well as hazard protection. A key to the implementation of the plan was the availability of Federal urban renewal funds. The park project boundary left out some non-conforming buildings, such as the hotels on State land. Certain uses that survived the tsunami (e.g., service stations) were allowed to remain in the open "Open Area" as temporary non-conforming uses. The 1961 also designated an "Elevated Area" to be created for future civic center and commercial uses.