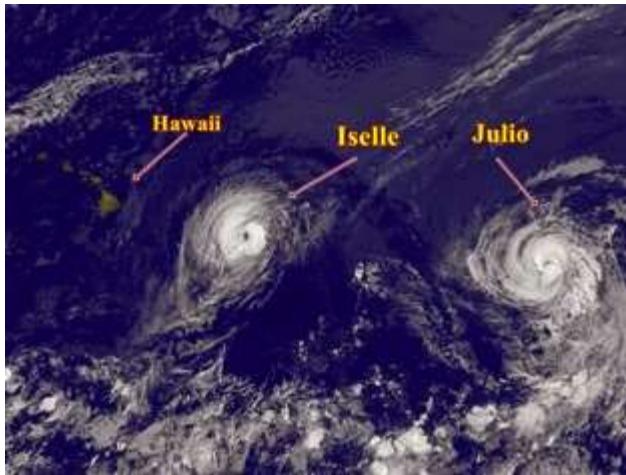


Hawaii's High-Wind Building Codes

The Hawaii Coastal Program improved and implemented local building standards to help coastal communities stand strong against the wind.



Twin hurricanes Iselle and Julio take aim for Hawaii in 2014.

In Maui's beachfront town of Lahaina, winds roar down from the mountains at more than 100 miles per hour. Once every few years, a violent outburst can demolish buildings, uproot trees, and flatten entire fields of sugarcane. Local and severe wind events are experienced throughout the Hawaiian Islands, where constant trade winds from the Pacific Ocean are funneled and distorted by peaks, hills, and valleys. Tropical storms and hurricanes present an additional threat to coastal communities—and extreme weather is predicted to become more frequent as sea levels rise.

Hawaii's unique topography makes it particularly challenging to protect against severe winds and storm surges. To help coastal communities become more prepared for these hazards, the Hawaii Coastal Management Program (HCMP) began a program to develop local hazard mitigation plans. In order for local governments to receive federal assistance in the event of a disaster,

their hazard mitigation plans must be approved by the Federal Emergency Management Agency (FEMA). By establishing a plan, the local governments commit to carry out all of their listed mitigation activities. With HCMP leadership and funding from Section 309 of the CZMA, Hawaii's first statewide and county plans were approved and adopted in 2005.

In completing the initial plans, HCMP and their local partners discovered that building codes were only designed to absorb the impact of 80-mile-per-hour wind gusts—far lower than what coastal communities have experienced under extreme conditions. To address this issue, HCMP helped create and establish upgraded building standards with high-wind designs that are tailored to Hawaii's specific needs. The new standards were adopted as part of the hazard mitigation plans. In addition, HCMP partners with the Hawaii Chapter of the American Institute of Architects, engineering associations, and county planning and public works departments to provide training workshops on the upgraded wind standards. The workshops are well attended by local engineers, architects, planners, and emergency managers.

HCMP's technical assistance generated the momentum needed to update and implement the local hazard mitigation plans. As a result, this project helped to reduce destructive wind impacts from hurricanes and tropical storms. All four counties in the state have adopted the new high-wind standards: Honolulu, Kauai, Maui, and Hawaii. "This project has and continues to provide benefits to the state and counties of Hawaii," says Leo Asuncion, Manager of the HCMP. "The technical assistance that HCMP provided regarding wind impacts laid the foundation for updates to other aspects of county building codes that may be affected by coastal hazards. Because of this project, the state, counties, and local stakeholders have stayed ahead of the curve on addressing the severe and increasing storm events that we are experiencing today—and we intend to remain ahead of future impacts."