What can Hawaiʻi expect from the winter king tides?

Hawaiʻi will once again be experiencing “king tides,” the highest predicted astronomical tides of the year, in November, December, and January.

The University of Hawaiʻi Sea Grant Center for Coastal and Climate Science and Resilience, the University of Hawaiʻi Sea Level Center, and the Pacific Islands Ocean Observing System continue to monitor unusually high ocean water levels in our region of the Pacific. Present conditions indicate that water levels around the November king tide will be about five inches above what we typically experience during the highest tides of the year. Localized effects on beaches will depend largely on wave conditions. Surf forecasts are available from the National Weather Service Honolulu Forecast Office. Water levels on top of the astronomical king tides in December and January are less certain.

Over the summer the water levels peaked at more than ten inches above the anticipated level which, combined with waves, ocean eddies, and sea-level rise, among other factors, caused coastal erosion and temporary flooding in certain low-lying coastal areas.

Currently the king tides and flooding associated with the higher water level occur just a few times per year. It is estimated that sea-level rise will more than double the frequency of extreme water level events in Hawaiʻi within a few decades. The high tides we experienced this summer provided a snapshot of the future when extreme water level events become commonplace.

This winter, the peak astronomical tides will occur in the first full week of November and again in the first weeks of December and January. Hawaiʻi Sea Grant is spearheading the Hawaiʻi and Pacific Islands King Tides citizen science project and once again will be asking the community to help capture photos of the shoreline during the king tides events. Over the summer more than 2,400 photographs were submitted by citizen scientists through the project’s free mobile application. These photo records are an invaluable resource for researchers and decision makers as they attempt to better understand and prepare our state for the impacts of sea-level rise.

**Mark your calendars!**
Since the winter king tides occur very early in the morning, the best dates to capture the highest high tides are **November 7 – 8** and **December 6 – 7** prior to 8:00 a.m.

To view king tide photos submitted by citizen scientists and learn more about the project visit [PacificIslandsKingTides.org](http://PacificIslandsKingTides.org).

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*The University of Hawai‘i Sea Grant College Program is part of the University of Hawai‘i at Mānoa’s prestigious School of Ocean and Earth Science and Technology. It supports an innovative program of research, education and extension services directed to the improved understanding and stewardship of coastal and marine resources of the state, region and nation. Science serving Hawai‘i and the Pacific since 1968.*