Testimony Presented Before the Senate Committees on Water and Land, and Public Safety, Intergovernmental and Military Affairs Friday, February 13, 2015 at 3:15 pm By Robert Bley-Vroman, Chancellor

Charles Fletcher, Associate Dean and Professor of Geology and Geophysics University of Hawai'i at Mānoa

## SB 501 - RELATING TO COASTAL ZONE MANAGEMENT

Chairs Thielen and Espero, Vice Chairs Galuteria and Baker, and members of the committees:

We support this bill provided that its passage does not replace or adversely impact priorities as indicated in our BOR Approved Budget for the University of Hawai'i.

This bill alters chapter 205A by taking several strong steps in recognition of the impacts of future sea level rise. It would transition counties to a calculation of long-term historical shoreline change as a means of establishing the construction setback. The bill establishes a minimum setback of 60 ft for all new development. The bill requires a covenant for homeowners with a setback exemption or waiver preventing coastal armoring – essentially a "build at your own risk" clause. It also prohibits development in areas exposed to projected sea level rise.

The latest published research (Kopp et al., 2014) concludes that projected future heights of sea level for Honolulu will reach a mean of 1 ft by 2050 and 2.8 ft by 2100, and potentially a maximum of over 4.5 ft by end of the century.

In recognition of the threat of sea level rise, the Obama Administration has recently set a requirement that federal agencies plan for rising seas. Executive Order 11988 is now amended that all projects using federal funding must met a federal flood risk standard that either:

- 1) Use data and methods "informed by best-available, actionable climate science";
- 2) Build 2 ft above the 100-year flood elevation for standard projects, and 3 ft above for critical buildings (hospitals and evacuation centers); or
- 3) Build to the 500-year flood elevation.

The action proposed in this bill is consistent with these important steps and will result in significant savings and hazard reduction for the State of Hawai'i if implemented.

Kopp, R.E., et al., 2014 Probabilistic 21st and 22nd century sea-level projections at a global network of tide gauge sites. Earths Future. DOI:10.1002/201/4EF000239