HB 1132
RELATING TO ARTIFICIAL REEFS

House Committee on
Ocean and Marine Resources

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HB 1132 would amend Chapter 187 A, HRS to prohibit installation of an artificial reef in Mamala Bay.

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

This measure appears to have originated out of concern over redistribution of artificial reef material off of Waikiki following Hurricane Iniki. Other objections to artificial reefs are based on the fear that such structures attract sharks which may pose a threat to humans using coastal waters recreationally.

Storm wave disruption of coastal seafloors is well documented. It is important to recognize that natural as well as introduced materials are broken, dislodged, and transported shoreward by big waves. During typhoons which I weathered at the Mid Pacific Research Laboratory in the Marshall Islands in the early 80’s, blocks of consolidated reef material the size of automobiles were washed from offshore reefs inland, coming to rest alongside a laboratory building over 100 yards from the shoreline. Expanses of coral heads ten feet or more in diameter at depths of 60 to 80 feet were reduced to scattered rubble fragments, where no single remaining piece was larger than my fist. The natural forces unleashed in such an event are truly frightening. However, the frequency of relatively small storms, much less Category 5 events such as this in Hawaii is very low, and the costs of response to remove, repair and reconstruct dislodged structures must be balanced against the benefits of their continued presence.
In Florida, which bears the brunt of hurricanes far more frequently than Hawaii, there are more than 200 established artificial reefs, ranging from nearshore waters to more than 40 miles offshore. The Florida artificial reef program started in 1918, and it has produced an enormous wealth of information on the biology and ecology of reef organisms, not to mention a substantial return in the form of tourist attraction and tax revenue. One well established benefit of artificial reefs is that they create habitat which provides shelter for juvenile reef fish, serving as nursery areas in an otherwise barren sand expanse. Such nursery areas replenish both scenic and subsistence resources, benefiting residents and visitors alike. Because of the known value of these structures in enhancing nearshore fish stocks, substantial research has been conducted and is ongoing, much of it in the area addressed by this bill. Should this measure be enacted, research at the the Look Laboratory Test Range off of the Kakaako waterfront would abruptly cease, and future knowledge to be gained from that work would be lost.

There are some who suggest that enhanced biomass in artificial reefs serves to draw in oceanic predators such as sharks. The detailed studies in Florida have not shown that sharks are attracted to artificial reefs any more preferentially than they are drawn to other structural bottom features. In Hawaii, there have been no shark attacks in the hundreds of man hours spent in the water conducting research at the 5 permitted artificial reef sites. In fact, in all the fish census transect work performed on these reefs, there are no shark listings. By contrast, fish transects on natural areas occasionally have recorded shark species.

We believe that this proposal ultimately is motivated by a specific objection to the Atlantis artificial reef. We find the concerted effort undertaken by the Atlantis operation to retrieve and remove debris from their structures praiseworthy. We further note that no such effort has been undertaken to remove the many tons of construction debris dumped in the waters off Honolulu Harbor during the decades when that was common practice.

Artificial reefs offer proven benefits which can offset decades of ocean resource depletion. If substantive arguments other than those we have noted are raised against such structures, we would hope such objections also would be judged on their merits and evaluated unemotionally.