**2009-10 Action Plan Details and Justifications**

**New Action Plan Item: Establish an Integrated Aquatics Education and Research Center**

**Description/Justification:**

Several issues have come together for the establishment of an integrated outdoor/indoor facility to support education and research in aquatics biology and technology:

- There is a need to move the WCC aquaculture from its current location on state hospital property as the hospital is moving to recover the property. This facility has been in operation by the College since the late 1970’s.
- The current facility supports our aquaculture class, Marine Option Program, and a $1 million 5-year research project.
- We have recently started teaching the AQUA 106/106L (Small Scale Aquaculture) and need a facility for continued instruction. During the Spring 2010, we will also be teaching AQUA 201/201L (The Hawaiian Fishpond).
- The College’s original Master Plan intended for the aquaculture ponds to be moved to the area below the location of the current Agriculture greenhouse.
- The College’s original Master Plan included Building P which was to include an aquaculture facility. Building P also included an instructional classroom and laboratory. Revisions of the details for Building P in 1992 included expansions of these functions. This building was to be constructed where Hale Uluwehi exists today.
- Use of these facilities for instruction would support implementing a sustainability curriculum involving biotechnology, freshwater aquaculture, mariculture, and hydroponics.
- In partnership with the Pacific American Foundation and the Hawai‘i Institute of Marine Biology, WCC recently received a HUD grant for $800,000 to purchase Waikalu loko, a traditional Hawaiian fishpond located at the mouths of Kane‘ohe and Kawa Streams. We will be building Natural Science curriculum around this pond that integrates traditional resource management with modern technology. Our on-campus facility would enhance the work done at Waikalua loko.
- We have an opportunity to secure substantial funds by partnering with the Hawai‘i Institute of Marine Biology to construct an aquatic quarantine facility. Such a facility is needed to study diseases in aquatic organisms, especially coral and marine fishes. There is also a need to study disease in freshwater cultured species. This facility, which is really an expansion of Building P, would include an instructional lab and classroom dedicated to instruction in microbiology, cell and molecular biology, and biotechnology.
- The State of Hawai‘i Aquaculture Development Program (ADP) is looking for a site to facilitate its support of commercial aquaculture farmers. Our facility could support this application in ways that would help our students understand
and engage in practical application. ADP hopes to use such a site as a revenue-generating facility. So it could be self-supporting.

- Supporting documents for this request may be found at http://krupp.wcc.hawaii.edu/WCCMP/Aquaculture_Documents.htm.

**Dollar Request:**

It is difficult at this time estimate the specific cost for construction of such a facility. It could be $1M - $2M. A significant portion of these funds may come in through the HIMB-WCC quarantine facility partnership. Other resources may involve the ADP partnership.

**WCC Strategic Plan Reference:**

*Need to determine these*

**Criteria for Measuring Success:**

Facility is constructed and being used.

**Implementation Date:**

Fall 2010