Request to the Master Planning and Space Allocation Committee
To Use the Area Makai of Hale Uluwehi for an Outdoor Aquaculture Facility

1) Name of the individual or group that is requesting the space
   
   **David Krupp**

2) Contact Person’s name, email, and telephone number
   
   **David Krupp, krupp@hawaii.edu, 236-9121**

3) Type of space that is needed
   
   *Primarily outdoor space (some covered, but not enclosed) to construct and use aquaculture tanks and aquaponics for instruction.*

4) Building or space in question
   
   *The area below and makai of Hale Uluwehi and the agriculture shadehouse.*

5) How the space is currently being used
   
   *The space is currently not being used for anything and is overgrown by jungle-like vegetation.*

6) Desired start date (and end date, if applicable)
   
   *To start modestly during Fall 2010, followed by expansion as resources provide.*

7) Description of how the space will be used
   
   *Aquaculture tanks, both above ground and below ground, will be constructed to support class instruction (e.g., AQUA 106, Small Scale Aquaculture, and AQUA 201, The Hawaiian Fishpond). These tanks will be designed using the latest technologies (e.g., recirculating systems, aquaponics, renewable energy generation) to promote efficiency and sustainability.*

8) Description of how it may contribute to the learning environment and interests of WCC students
   
   • There is a need to move the WCC aquaculture facility 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) AQUA 201/201L (The Hawaiian Fishpond) and need a facility for continued instruction.
   
   • Use of these facilities for instruction would support implementing a sustainability curriculum involving biotechnology, freshwater aquaculture, mariculture, and aquaponics.
• 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.

9) Other alternatives that were considered and why those alternatives don't seem to work

Would entertain other possible sites for this facility. However, the proposed location is preferred for the following reasons.

• The College’s original Master Plan intended for the aquaculture ponds to be moved to the area below the location of the current Hale Uluwehi and agriculture shadehouse.

• The College’s original Master Plan included Building P which was to include an aquaculture facility. Building P also included instructional classrooms and laboratories. This building was to be constructed where Hale Uluwehi exists today. Thus the Master Plan envisioned that this end of our campus would support agriculture and aquaculture education. [Note a separate independent initiative will be developed to have Building P constructed where Hale Uluwehi currently exists, as prescribed by the Master Plan. The construction of Building P is not required for implementation of this proposal to move the aquaculture ponds.]

• The proposed location is consistent and compatible with other related functions in the area (e.g., science facilities, agriculture shadehouse, and the Bioprocessing Medicinal Garden Complex).

10) What other resources may be needed

The area proposed would need to be cleared and graded (minimal as we would try to work with existing contours. There would be a need to erect a storage shed and covered area. The area would need a source of water and electricity (would work to use renewable energy sources, such as photovoltaics and wind generators). Finally, tanks, pumps, pipes and other materials would need to be purchased to build the tanks. We would use students enrolled in the AQUA classes to construct the tanks as part of the training program.

We are seeking extramural funds to provide the needed material resources. Thus implementation of this request is contingent upon receiving external support. However, the initial expenditure is expected to be relatively low since we would begin modestly and grow the facility as additional resources become available.
As stated above, the College’s Master Plan originally intended for the aquaculture facilities to be moved to the proposed site as part of an agriculture-aquaculture complex.

Consistent with the WCC Strategic Action Outcomes (November 2008), the aquaculture facility would be expected to enhance the College’s instructional program and boost enrollment.

The WCC Strategic Plan Action Outcomes (Nov 2008) specifies the following:

- **IV. Planning Context D. Planning Assumptions External 2: “There will be an increase in the number of students enrolling at WCC due to the publicity of the college’s offerings, the quality educational experience offered, ...”**
- **IV. Planning Context D. Planning Assumptions External 2: “New students will be attracted to the College due to improved facilities, such as ... the science building, ...”**
- **IV. Planning Context D. Planning Assumptions Internal: “WCC will be a leader in ... the sciences.”**
- **WCC Action Outcomes 4.1 states: “Contribute to the development of a high-skilled, high-wage workforce ... that leads to employment in emerging fields (...life sciences, ... ocean and marine science, earth and space sciences, ... diversified agriculture, ...)”**
- **WCC Action Outcomes 4.5 states: “Promote the knowledge, skills, and opportunities that support current and emerging STEM fields and careers by increasing credit and noncredit STEM course enrollments ...”**
- **WCC Action Outcomes 4.8 states: “Increase the number of degrees and certificates awarded in Science, Technology, Engineering, and Math (STEM) fields. (includes both credit and noncredit) by 3% per year.”**
- **WCC Action Outcomes 5.4 states: “Renovate, repair, and maintain all College facilities to meet or surpass established standards for ... energy-efficient climate control and lighting, functionality ...”**

Finally, it should be noted that a proposal to move and enhance the WCC aquaculture facilities has been posted on the New Initiatives Forum since October 2009. The only expressed concern related to whether or not the proposal fit into the College’s Master Plan. Clearly this request is not only consistent with this Master Plan, but its implementation helps to bring us nearer to completing the Master Plan. Please visit the following website to view supporting documents: