Program Summary

Academic Year – 2012-2013

Objectives addressed: 1.1 - 1.2; 2.1 – 2.4; 2.7

The Akeakamai I Ka La Hiki Ola Mitigation Initiative was a collaborated effort between the National Science Foundation, Institute for Astronomy, Native Hawaiian community, and the University of Hawaii Maui College. Clyde Sakamoto was chancellor during the initial three years of the program and brought me on board May 1st, 2012 to begin implementing the initiative. Due to the delay in bringing me on board Clyde was sure that I understood that they were already behind schedule almost a year and needed to begin implementing things ASAP. Without clear direction, except the objectives highlighted in the approved mitigation initiative, I began to touch base with various personnel on campus to learn campus processes and procedures so that I could move forward with addressing the needs of the grant.

Beginning May 1st, 2012 my primary task was to develop a foundation for the mitigation initiative by creating a platform at UHMC. After working with various individuals from the community and campus I was able to establish the Ka Hikina O Ka La Program. Due to my late arrival on campus and impending summer break, I was also concurrently working on the annual National Science Foundation report and summer bridge program (Objective 2.1 - Initiating a Ke Alahaka STEM summer bridge program, targeting a minimum of 40 high school junior and senior students each year). With the assistance of Kahele Dukelow we were able to successfully establish the 4-week course (Marine Science; Electronic and Computer Engineering; Sustainable Energy and Technology, and Hawaiian Studies), and recruit faculty/lecturers, secure the various classrooms, acquire the necessary equipment and supplies, and complete all of the travel, students, and HR paperwork by the start of Summer Bridge 2012 (June 12).

To support the summer program and provide additional academic learning experiences we were able to recruit eight (8) mentors/interns from UHMC and fifty-eight (58) student participants from local high schools throughout Maui County. Mentors and interns were selected based on the progress in their major and faculty recommendations, and served as role models, teaching assistants, and counselors during the summer program. Interns gained career-related work experience and were responsible for the peer-to-peer interactions and instruction during the summer program. High school participants were selected using a variety of criteria, including but not limited to GPA, year in school, and academic interests.

With the core foundation of the program now established and the summer bridge program complete my main focus was to now address the collegiate side of the mitigation (Objective 2.2 – Developing student recruitment for a target of 40
Ho’okuleana students for each STEM cohort, including a minimum of 25 STEM majors and 15 other potential STEM majors from Liberal Arts and Unclassified students (enrolled in at least one math/science course per semester)) by creating overall program guidelines (selection criteria, application, benefits, timeline, etc.). Per Clyde’s guidance we were to focus on Maui County students only, particularly those who were on Maui and who lived on Haleakala. Moreover, emphasize and target students that are pursuing UHMC BAS programs and/or prerequisites. During Fall 2012 UHMC data showed that Native Hawaiians represented 33% (1,279) of the student body, less than 2% (77) are enrolled in STEM or STEM-related fields, and less than 75% of Native Hawaiians pursuing a STEM degree are achieving GPA’s above 2.5 (minimum criteria for our Ka Hikina O Ka Lā program). Regardless of these constraints and limited student pool our efforts resulted in the successful recruitment of our initial collegiate cohort of 34 students (Fall 2012) and 11 students (Spring 2013). In order to provide additional support for our new cohort we began to support the Ho’okahua Lab and build partnerships with STEM faculty to mentor and maintain communication with our program as a pro-active effort to address any academic challenges our students may incur (Objective 2.3 – Supporting a STEM lab and 2.4 – Leveraging existing UHMC faculty and staff resources and affiliations to support the program goals).

Upon successful completion of the initial summer program and collegiate cohort, my next objective was to address the needs of the DOE community (Objectives 1.1- Strengthening Hawaiian and English, STEM secondary school teacher preparation to promote student success in Maui County and 1.2 - Contracting a curriculum development group, such as the UH College of Education Curriculum Development and Research Group, with proven expertise in introducing curricula to State of Hawaii DOE schools to apply the Faulkes Telescope educational resources). I began to work with various state, federal, and DOE personnel to create the community connections and develop the various lesson plans/course materials. Per Clyde’s guidance we were to work with Steve Pompea (PhD), Head of the Education and Public Outreach Department, at the National Solar Observatory to create curriculum based on celestial studies. Our goal was to create a STEM Teacher Workshop that would be administered during Spring Break 2013. After creating the preliminary curriculum I was in the process of finalizing our schedule and venue for Spring 2013, when I began to have difficulty contacting our main DOE contact/venue (Kula Elementary). It was not until January 2013 when I found out that the principal at Kula was replaced mid semester for reasons unknown. This caused us to postpone the workshop until Fall 2013, which allowed us to refine our curriculum and create an online component.

In order to move forward with the program I needed to hire additional staff for our students and to address administrative issues. Additional positions, including a financial assistant, additional counselors, and an administrative assistant were on hold pending legal updates regarding the construction of the Advanced Technology Solar Telescope moving forward. By October 2012 I was able to successfully recruit Kristi Ishikawa as our Program Counselor and Tracie Takatani
as our Project Administrator. Tracie was the mitigation’s interim Project Manager and was recommended by Clyde. Their initial tasks were to begin to provide student support services (counseling, etc.) and work with the FAO to develop stipend processes. In addition, I worked with my staff to ramp up marketing efforts (outreach, printed material, media, audio) to increase student applicants for Spring 2013 and begin to create community collaborations for summer internships.

Beginning in Spring 2013 we began to support other programs (TRIO) and events on campus that provided cultural and STEM related activities. Our first event was the Panina Makahiki, which involved collaborative efforts between out program, the Native Hawaiian faculty, and other Native Hawaiian student support programs (Objective 2.7 – Applying ongoing institutional grants to synergize, support, and expand program outcomes).

During the Spring 2013 semester we conducted our first Oral Communication Workshop (program participant requirement), which provided activities and lessons on resume building, interviews, and general speech and presentation skills. In order to leverage UHMC faculty resources we were able to work with Sarah Ruppenthal and Whitney Hashimoto (Communication lecturers) to administer the workshop. The event was a huge success receiving praise from all students involved. In addition to program requirements we were also able to provide a few selected students for the annual Manoa Experience Conference on Oahu. The event provided the students with Q&A sessions and a variety of students information for UH Manoa, UH West Oahu, and Chaminade.

To increase program awareness we needed to create a presence/image beyond the traditional marketing efforts that we had already started. After working with Aunty Holt (MACC) and Wailani Artates (Artistry8) we were able to successfully create the KHOKL logo, which represents everything our program and the mitigation are about or “makawalu”.

**Academic Year – 2013-2014**

**Objectives addressed: 1.1 - 1.3; 2.1 - 2.4; 2.7; 3.1; 4.2**

Beginning our 2nd year as a program we continued to focus on Clyde’s priorities of increasing STEM students at UHMC particular those who are interested in pursuing the BAS degrees (Goal #1 – Increase the number of Maui County and other high school Native Hawaiian graduates who successfully complete STEM college-preparatory courses and are admitted to UHMC; Goal #2 – Increase the number of UHMC Native Hawaiian students in the STEM classes, as well as graduates in the AA/AS and BA/BS degrees for STEM and STEM-related programs).

In order to once again move forward with the program I needed to hire additional staff for our students and to address administrative issues. After discussing it with Clyde and NSF I was given the go ahead to pursue additional
positions (financial assistant, counselor, administrative assistant). Unfortunately, all of the positions were denied by ORS. This is pure speculation but I heard that Clyde was able to push things through in the past due to his relationship with the VP of Research (person who ultimately approves positions). However, ORS recently hired a new VP of Research who was denying almost every position that came to him from our campus. I verified this with RDP and other programs. This of course resulted in the inability to provide sufficient staffing to meet program needs. Clyde was unable to provide any assistance in the matter so I requested casual hires to help us through until I could gain approval for the much needed positions.

With the beginning of the summer break I was once again working on the annual National Science Foundation report and working with my staff to administer the summer bridge program (Objective 2.1 - Initiating a Ke Alahaka STEM summer bridge program, targeting a minimum of 40 high school junior and senior students each year) scheduled for June 10. During the summer bridge program we were able to provide additional academic learning experiences for (12) mentors/interns from UHMC and forty-four (44) student participants from local high schools throughout Maui County. In addition to our high school efforts we were also able to work with off-campus collaborators to provide 5 paid summer internships for our collegiate cohort and 3 additional external internships (Objective 3.1 – Creating mentoring partnerships among faculty, researchers and other members of the Hawaiian community to focus on students conducting internships and applied research). Per Clyde’s request we began to collaborate with Career Link to handle our internships and created a student support position.

As we move forward into the next academic year we wanted to increase not only our marketing efforts for student applicants, but also our transparency to build relationships with the Hawaiian community (Objective 1.3 – Updating and broadening the program semiannually to include an expanding cross-section of the Native Hawaiian community leadership). We were able to do so by working with numerous external organizations, to include Hui o Wa’a Kaulua (cultural specialist), Office of Hawaiian Affairs (OHA), Waiehu Kou Associations, and Kamehameha Schools to name a few.

Over the past year we continuously developed the Ka Hikina O Ka La Program (Objective 2.2 – Developing student recruitment for a target of 40 Ho’okuleana students for each STEM cohort, including a minimum of 25 STEM majors and 15 other potential STEM majors from Liberal Arts and Unclassified students (enrolled in at least one math/science course per semester)) accepting 21 (Fall 2013) and 12 (Spring 2014) new students into the program. Moreover, we were able to successfully secure additional funds through the Perkins Foundation to support 4 additional non-native Hawaiian students to act as tutors and mentors for our program participants (Objective 2.7 – Applying ongoing institutional grants to synergize, support, and expand program outcomes). Moreover, we continued to support the Ho’okahua Lab and build partnerships with STEM faculty to mentor and maintain communication with our program as a pro-active effort to address any
academic challenges our students may incur (Objective 2.3 – Supporting a STEM lab and 2.4 – Leveraging existing UHMC faculty and staff resources and affiliations to support the program goals).

Moving forward with our efforts from Spring semester we continued to address Goal #1 (Objectives 1.1 - Strengthening Hawaiian and English, STEM secondary school teacher preparation to promote student success in Maui County and 1.2 - Contracting a curriculum development group, such as the UH College of Education Curriculum Development and Research Group, with proven expertise in introducing curricula to State of Hawai‘i DOE schools to apply the Faulkes Telescope educational resources) by working with Steven Pompea from NSO, Maggie Prevenas (NASA Heliophysics Ambassador), Alakaina Foundation, and Makamae Murray (MACC) to develop curriculum for our STEM Teacher Workshop. The workshop was successfully administered at Pukalani Elementary in Fall 2013 receiving high remarks from all teachers in attendance. The word spread quickly as we received numerous email requests from multiple schools for additional workshops.

Continuing to support other programs and events we partnered with the Muo A‘e program at UHMC allowing our student participants to take advantage of the technological resources available at the Kaiao Students Success Center and provide financial support for their summer math program (Objective 2.7 – Applying ongoing institutional grants to synergize, support, and expand program outcomes). In order to expand our academic reach to the lower Pre-K – 8th grades we partnered with Edventure to offer STEM short-courses during the summer (Objective 1.2 - Contracting a curriculum development group, such as the UH College of Education Curriculum Development and Research Group, with proven expertise in introducing curricula to State of Hawaii DOE schools to apply the Faulkes Telescope educational resources). To strengthen our support and diversify our overall perspectives and understanding of the Native Hawaiian culture and STEM, we partnered with 2 native Hawaiian scholars, both of which currently hold faculty positions at UHMC and participate in our advisory committee.

Following the completion of the academic year we were in the process of creating a collaboration between EOC and KHOKL by sharing a staff member located on Molokai. This partnership allowed our program to continue to expand our reach for applicants in Maui County (Objective 2.7 – Applying ongoing institutional grants to synergize, support, and expand program outcomes). Lastly, we were able to assist 5 recently graduated students with securing FT employment (Maui Memorial, VA Clinic, Pacific Defense Solutions, Maui County) (Objective 4.2 – Coordinating, training, education, internship, and placement requirements).

Academic Year – 2014-2015

Objectives addressed: 2.1-2.2; 3.1
With the new academic year and recent news of Clyde’s retirement the program continued to focus on the goals previously set in the years prior. Since Clyde was adamant that he was going to remain PI he continued to have us focus on the main objectives from the prior two years. In addition to addressing Clyde’s priorities, I was also trying to push forward large procurement purchases (planetarium, work stations) and develop RFP’s for marketing material (Sense of Place video) and contract work (DOE programs, curriculum). Due to the high administrative side of the program and lack of staffing it was difficult to target these new tasks in a timely and efficient manner.

Since I was desperate need of staffing and could not rely on Clyde’s assistance due to his travels, I attempted to contact the VP of Research directly to plead my case. After receiving a few calls from IfA and RCUH I was eventually informed that they would ask the VP of Research to approve my positions. With great relief all of my positions were finally approved by winter break. Without waiting for a new PI to be announced I continued to have my staff focus on providing student support services and catching up on all administrative duties.

With the beginning of the summer 2014 I was once again working on the annual National Science Foundation report and working with my staff to administer the summer bridge program (Objective 2.1 - Initiating a Ke Alahaka STEM summer bridge program, targeting a minimum of 40 high school junior and senior students each year) scheduled for June 10. During the summer bridge program we were able to provide additional academic learning experiences for (12) mentors/interns from UHMC and forty-six (46) student participants from local high schools throughout Maui County. In addition to our high school efforts we were also able to work with off-campus collaborators to provide 17 paid summer internships for our collegiate cohort (Objective 3.1 – Creating mentoring partnerships among faculty, researchers and other members of the Hawaiian community to focus on students conducting internships and applied research).

Over the past 2 years we have continuously developed the Ka Hikina O Ka La Program, however, we have been finding it difficult to recruit 40 new students/year to meet mitigation expectations (Objective 2.2 – Developing student recruitment for a target of 40 Ho'okuleana students for each STEM cohort, including a minimum of 25 STEM majors and 15 other potential STEM majors from Liberal Arts and Unclassified students (enrolled in at least one math/science course per semester) accepting 22 new students into the program. Although we had anticipated moving towards an annual application process, due to the lack of applicants we will once again be opening up applications for spring semester. It has become increasingly difficult to find current students who meet the programs criteria, therefore, we have been ramping up efforts to grab newly enrolled students directly matriculating from high school. The main challenge we continuously face is the STEM focus and GPA requirement, particularly for Native Hawaiians.