



Pacific American Foundation
Kāneʻohe, Oʻahu, Hawaiʻi
www.thepaf.org

Testimony to the U. S. House of Representatives
Committee on Natural Resources
House Subcommittee for Indigenous Peoples of the United States
Oversight hearing entitled: "Environmental Justice in Indigenous Communities"
May 13, 2021, 10 am (EDT)

To: The Honorable Raul M. Grijalva, Chairman and Members of the Committee

Fr: Herb Lee, Jr., President and & CEO, Pacific American Foundation

Aloha and good morning!

Thank you for this opportunity to testify and share my thoughts today from the islands of Hawaii.

My name is Herb Lee Jr. and I am Native Hawaiian and Chinese, born and raised in Hawaii. I am the President and CEO of the Pacific American Foundation (PAF) which is a national 501(c)(3) nonprofit, tax-exempt organization established in 1993 with the mission to “improve the lives of Pacific Americans through service with dignity, courage, humility, and competence.” Pacific Americans are defined as encompassing citizens of the United States who can trace their ancestry to the indigenous settlers of the State of Hawaii, Territory of American Samoa, Territory of Guam, and Commonwealth of the Northern Marianas Islands, Fiji, New Zealand, Tahiti, and Tonga.

PAF is currently located in Kāneʻohe, Oʻahu, Hawaiʻi, in close proximity to Waikalua Loko Iʻa, a 400- year ancient Hawaiian fishpond that it has been restoring since 1995. In 2015, PAF acquired the fishpond and surrounding property (17.133 acres) in the southern part of Kāneʻohe Bay.

Waikalua Fishpond has become the “piko” or center of all of PAF’s mission related activities including, education (grades P-20), research, employment, career planning and development and community partnerships.

“Looking to the past to chart our way forward”

A wise kupuna (elder) told us that we were walking in the footsteps of our ancestors...



Waikalua Fishpond
Kāneʻohe, Oʻahu,
Hawaii (circa 2019)

In the history of Hawaiʻi, there were 488 fishponds (Loko Iʻa) built across the Hawaiian Islands dating back over 800 years ago. In the 21st Century approximately 15% remain with the islands of Hawaiʻi, Molokai and Oʻahu having a majority of what has survived.

In 1995, the restoration of Waikalua Loko Iʻa, a four-hundred-year-old fishpond began. The initial intent was to restore and preserve what was once a jewel of Hawaiian engineering and sustenance. While that still remains today, Akua (spiritual) has led us on a path that has wonderfully evolved to include innovation in education, research, training of teachers and ultimately as a steppingstone for career opportunities to better serve the community. Curricula was developed, community collaborations formed and in 2013, recognizing the importance of the fishpond, a U. S. Housing and Urban Development (HUD) grant was awarded to secure ownership of the pond. Workdays and education programs have attracted over 110,000 students, families and members of the community; 6,000 teachers have been trained statewide; and over 200 partnerships formed reaching across the ocean to seek and share wisdom and aloha. The first 25 years have now passed and Waikalua Loko Iʻa has returned to the community after being bought and sold six times since 1995. In 2011, a local publication called it the most endangered historic site in Hawaii.

Challenges abounded, but with it came a deeper understanding of “Aloha” that was transformative, looking back to go forward, making connections to self, community and the

spiritual. New pathways were formed that were purposeful and intentional. It became clearer that we were being guided for a higher purpose.

The significance of the Loko I'a in modern times go beyond its historic ability to provide food. Through our experiences we have become a "bridge" to bring indigenous wisdom and contemporary knowledge together in meaningful and innovative ways to solve problems within our own community. That pathway has led us to a preferred Native Hawaiian cultural approach embracing the powers of observation, interpretation and application (OIA) as we prepare and empower generations now and in the future.

Why Education? In the 21st century, education attainment continues to be the great societal equalizer that is directly proportional to good health, career advancement, employability, and stewardship of both individual and collective resources (community) in the places we choose to live. Further, Hawaii's unique and isolated geographic condition have provided the native and indigenous Hawaiian people of the islands with a rich cultural and sustainable method of living that is unmatched throughout the world. Thus, the merging of traditional knowledge that is still practiced today with 21st century skills has catalyzed a new and rediscovered formula for how we teach children in the modern age.

PAF has also been proactive in developing these partnerships so that students have a "community classroom" experience outside of the traditional school campus to learn, apply knowledge and help solve real world problems starting in their own communities.

As a community serving entity, we have prided ourselves in creating small successes built on firm foundations. These foundations in education, earning trust and respect from the community and expanding our kuleana (responsibility) have created huge opportunities to reach and inspire more children, youth and families.

Walking in the footsteps of our ancestors have compelled us to look across the generations to determine how we can best navigate and make decisions over a horizon of seven generations, past, present and future. The stones have been reset. Waikalua Loko I'a is our "piko" or center and continues to inspire us to love (aloha 'āina) and care (mālama 'āina) for this precious place called home.

As part of the 27-year restoration effort, PAF has formed over 200 community partnerships locally, nationally and internationally to develop award winning culturally relevant curricula for all grade levels. This in turn has greatly enhanced the value of our 'āina (land and sea) as both a place to grow food and as a 24/7 "community classroom/school" to learn, live and teach the values passed down to us over the generations. Since 2017 we set a goal to work with the next 100,000 community participants to help continue the stewardship of the fishpond while utilizing more than 21 titles of curricula ranging from aquaculture, agriculture, STEM education, bio-cultural restoration, climate change, environmental stewardship, restoration of Kaho'olawe island and more, building upon 6,000 teachers that have been trained statewide.

A Case for Community Schools

Full-Services Community Schools is an evidence-based strategy where the school becomes the hub of the community to support the whole child. While the full effects of COVID-19 are still unknown, the pandemic has exacerbated existing stressors on youth and families in our communities, and we are already seeing the growing need for services and support for our most vulnerable children and families. Community schools with partnered resources create the right learning conditions to help children and youth learn and thrive by addressing their health, social and emotional well-being. The coordination of relationships and resources are needed, now more than ever, to help students recover from the pandemic and accelerate equitable outcomes in health, education and employment.

There are four pillars of community schools to effectively support students and families:

1. **Collaborative Leadership and Practices** - Families, students, teachers, principals, and community partners build a culture of professional learning, collective trust, and shared responsibility.
2. **Integrated Student Supports** - Mental and physical health services support student success.
3. **Expanded and Enriched Learning** - Afterschool, weekend, and summer programs provide academic instruction and individualized support. Enrichment activities emphasize real-world learning and community problem solving.
4. **Active Family and Community Engagement** - Schools function as neighborhood hubs. There are educational opportunities for adults, and family members can share their stories and serve as equal partners in promoting student success.

21st Century Community Learning Centers (U.S. Department of Education)

In 2018, PAF was successful in developing its first culture-based after school program for nine Title 1 schools from K-12. Its purpose was to further build upon relationships within the schools and community to provide learning experiences that exceeded the ability of schools to conduct within the normal school day. PAF also leveraged its community-based partnerships with other non-profits and private sector relationships in an effort to support schools utilizing the resources of the community to enhance the learning for all grade levels.

Mālama Ko'olaupoko, Mālama Honua, a 21st Century Community Learning Center program is now beginning its 4th year. It translates, "if you learn to care for your community, you can apply that knowledge to care for the planet."

During the pandemic, this program became even more vital as an additional support mechanism for schools, students and families that were struggling to adjust. We were able to coalesce partners, schools and families together in unprecedented ways to nurture (mālama) all of us during this challenging time. Two videos were produced by the PAF and its partners called

“Silver Linings” which were produced by ‘Ōlelo Community Media (www.Olelo.org) and broadcast statewide to bring a message of hope and discovery from those families and partners that went through it together.

PAF re-cast its community partner strategy to bring cultural and natural resource sites to students via “virtual expeditions” that when combined with subsequent in person visits to these sites, exceeded our expectations for engagement, inspiration and learning. We created our own ROKU channel so that students and families could access our enrichment content on their television versus just the exclusive format of a computer, tablet or phone. (see www.thepaf.org) (ROKU keyword: mālama)



Building Bridges between Indigenous wisdom (traditional ecological knowledge – TEK) And 21st Century knowledge

Since beginning the restoration process in 1995, the number of practitioners of ancient fishponds were scarce. Hawaiian fishponds were on the verge of vanishing from the landscape. As a graduate of the University of Hawaii at Mānoa in both undergraduate and graduate schools, I studied and reached out to colleagues for help. Dr. Clyde Tamaru, an aquaculture specialist with the UH Sea Grant and Dr. Floyd McCoy, Geologist and Oceanographer from nearby UH Windward became by “partners in arms” as the years passed.

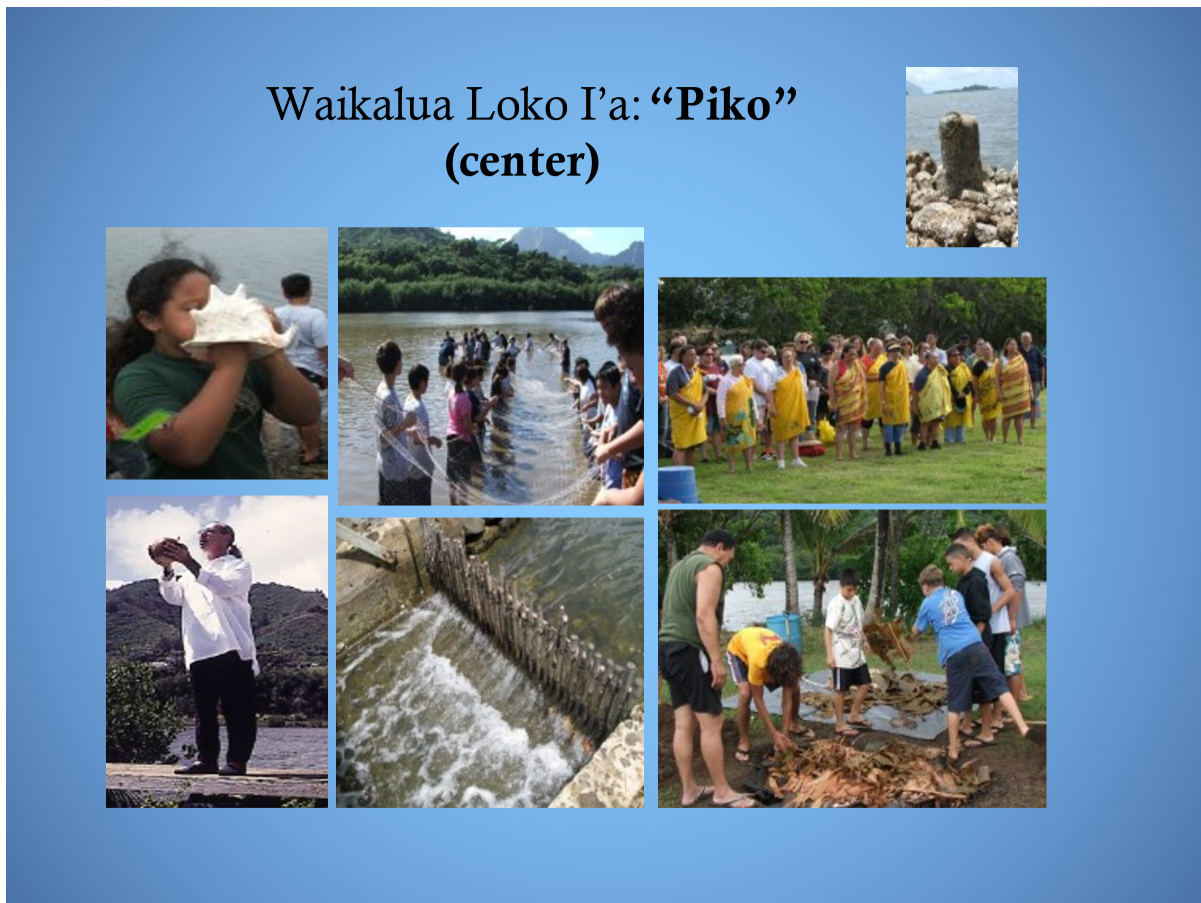
We became competitive in receiving U.S. Department of Education grants under the Native Hawaiian Education Act (NHEA) and was able to assemble a “dream team” of native Hawaiian practitioners, cultural specialist, Hawaiian language experts, Native Hawaiian artist, Scientist, curriculum specialist, researchers, Master teachers and trainers to develop 20 plus years of curricula covering not only ancient Hawaiian fishponds but all of the things that connected to it! We took the curricula and training opportunities to every island focusing in on the remotest of areas, earned trust and respect, and assisted communities to adapt our lessons to more closely fit their geographical and cultural histories. The results were astounding. We created a small series

of successes and built from foundations to explore culturally relevant curricula, that were standards based in all core academic areas.

Many other cultural practitioners and scientist have joined in the journey since then and continue to explore and innovate with us. In 2012, PAF formed the “Hawaii Institute of Knowledge and Innovation (HIKI)” to begin to focus its educational programs in a more deliberate way working with public, private and charter schools.

In 2014, PAF was asked to participate with a new project initiative of the Smithsonian Institute with J. Emmett Duffy, Director of the Tennenbaum Marine Observatories Network. Marine Global Earth Observatories (GEO) sites were selected across the planet including three in the Pacific region, Kāne’ohe Bay being one of them. Their purpose was to help global scientists collect data from these Marine GEO sites over a 30-year period to help inform them about the cause and effect of global climate change. The beauty of this partnership was that our Hawaii students were learning and participating alongside these scientists while still in middle and high school!

PAF’s “Piko” (Cultural Indigenous Center)



Changes to Waikalua Loko I'a overtime ...

” Indigenous wisdom passed through generations”

From the old stone walls of the Waikalua Loko fishpond to the verdant walls of the magnificent pali (cliffs) the Kāne’ohe ahupua’a (land division) holds clues to a rich cultural and natural heritage. As educators and stewards of this awe-inspiring place, we have opportunities to help students and their families discover and embrace that heritage and carry forward the practices that will help us to live more in harmony with the land and sea today.

In the days of old Hawai’i, this ahupua’a flourished with productive lo’i kalo (taro patches) fed by the waters of Kawa and Kāne’ohe streams. The waters flowed from the streams through ‘auwai (ditches) into the lo’i and into the loko I’a (fishponds). At Waikalua Loko today we discover the ingenuity of Hawaiians who engineered these extensive irrigation and aquaculture systems.

Waikalua Loko Fishpond is a loko kuapā—a type of fishpond that is unique to these Islands. The fishpond we see today is very different from the pond that was constructed by Hawaiians approximately 400 years ago. The original pond received fresh water from both Kāne’ohe and Kawa streams. Grates once controlled the flow of water from these streams into the pond so that pond managers could control the salinity of the water. The original locations of the mākāhā (sluice grates) on the makai (ocean) side and the dimensions of the pond walls are not known, but more research could probably shed light on this information.

- 1650 Waikalua Loko constructed by Hawaiians. (This approximate date is determined from a core sampling of the rock wall of the pond; (Eugene Dashiell et al, 1995)
- 1887 An 1887 map of the area shows extensive lo’i kalo mauka (upland) of the pond. A photograph of the area also shows a small interior pond where mullet fry was probably grown.
- 1900 The pond was in commercial operation with an area of 13.4 acres (today it is approximately 11.6 acres).
- 1926 An aerial photograph of the pond from 1928 (next page) shows a large break in the makai pond wall.
- 1930 The pond walls were reconstructed with the three openings we see today. These mākāhā were constructed of reinforced concrete. The wall, which is 9 to 12 feet wide may have been widened for access by equipment. The original walls had stone faces and were filled with cobbles and coral.
- 1940 Water quality and the marine environment were affected by human activities. More than 11 million cubic yards of coral was dredged in Kāne’ohe Bay and sugar and pineapple cultivation led to extensive soil erosion and siltation of the bay.

1950 A sewage outfall that was constructed near Waikalua Loko had a major impact on water quality.



1928

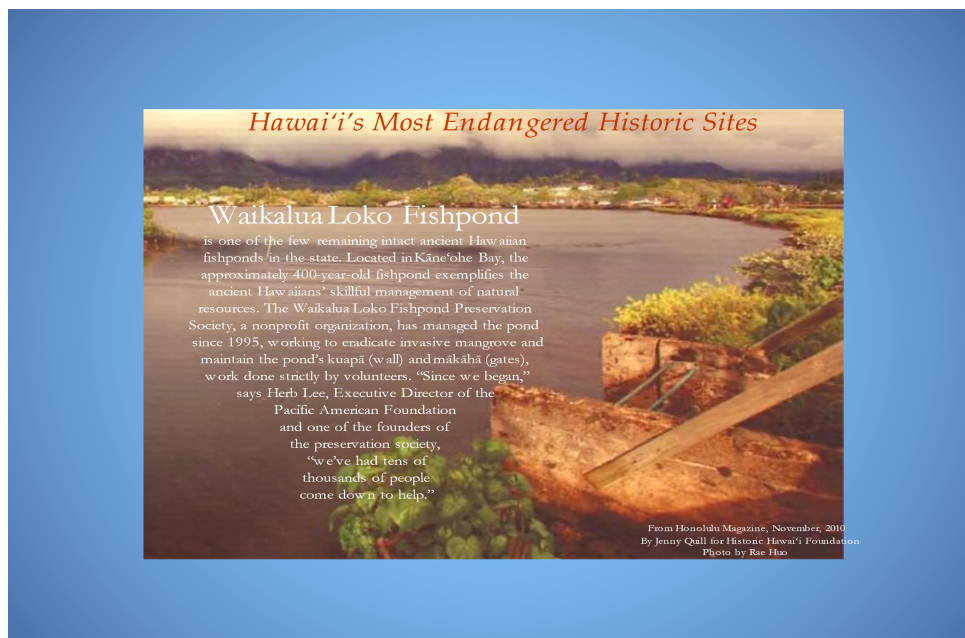


June 13, 2000

- 1967 An aerial photo shows a channelized Kawa Stream that flows directly into the bay. Today the mouth of this stream is covered in silt and mangrove. This same photo shows a ditch next to the pond and the sewage treatment plant that appears to connect both streams. Ongoing development in the uplands of the Kāne’ohe ahupua’a created serious soil erosion into the bay. Introduced mangrove plants became a major management challenge at the pond. Mr. Koyama, the pond operator in the 1960s, reported a mullet harvest of 100 pounds per month (not a commercially viable yield).
- 1970 Pond operation stopped. Flood control efforts led to channelization of Kāne’ohe Stream, which was dammed at Ho’omaluhia Park. Portions of Kawa Stream were lined with concrete and the stream was further channelized. Sewage discharge to Kāne’ohe Bay was stopped and diverted to Mōkapu Point.
- 1995 The Waikalua Loko Fishpond Preservation Society (Founder, Herb Lee, Jr.) was formed to help mālama the pond for cultural preservation and use as an educational site.
- 1998 Castle High School Science Teacher, Sheila Cyboron, brings first group of students (grade 11 and 12) to study science in the context of the fishpond; The transformation in student motivation and learning inspires a new level of culture-based curriculum development.
- 2000 WLFPS partners with the Pacific American Foundation (PAF), the Hawaii Department of Education and the University of Hawaii Sea Grant program and receives its first

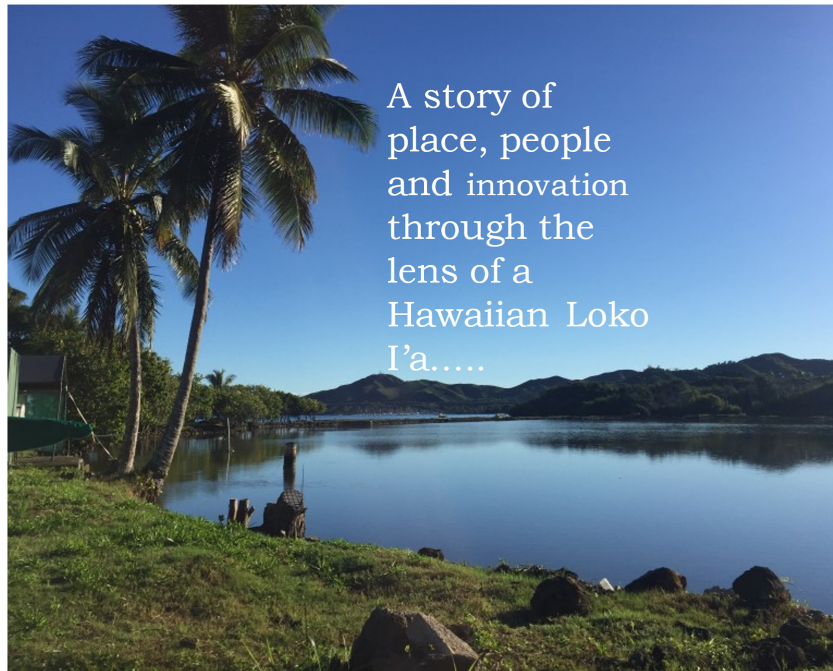
major curriculum development grant award from the U. S. Department of Education entitled “Kāhea Loko, the Call of the pond.”

- 2003 Kāhea Loko program (grades 4-12) is welcomed by teachers; statewide workshops are scheduled and over 330 teachers sign up for training in the standards-based curriculum exceeding grant metrics by over 300%!
- 2004 Pacific American Foundation, the Society, the Hawaii DOE partner again and receive its second major grant award (grades 3-12) called “Aloha ‘Āina.” It focuses on the Kāne’ohe ahupua’a (mountain to the sea).
- 2007 Aloha ‘Āina is also a very welcome addition to schools’ curricula and the project trains nearly 380 teachers; both Kāhea Loko and Aloha ‘Āina receive a “Partners in Education” award from the Hawaii Department of Education.
- 2009 In partnership with the University of Hawaii at Windward and the Hawaii Institute of Marine Biology, the Society and PAF, the U. S. Housing and Urban Development (HUD) awards the group a grant to purchase the Waikalua Loko Fishpond and grant title to PAF.
- 2011 The Historic Hawai’i Foundation selects the Waikalua Loko Fishpond and the Society with its highest honor for exemplary preservation of a cultural resource; Honolulu Magazine determines that *Waikalua Loko one of the most endangered cultural sites in Hawaii.*



- 2013 PAF finally acquires Waikalua Loko (17 plus acres) from current landowner utilizing HUD funds. First ancient Hawaiian fishpond to return to Hawaiian hands since the great mahele in 1848.
- 2014 President Obama and the White House recognizes the work of the community by honoring PAF Executive Director Herb Lee, Jr. as one of 10 in country to be recognized as a Cezar Chavez, “Champion of Change.” PAF invited to partner with the UH Manoa/HIMB and the Smithsonian Institute in the new Marine Global Earth Observatory (GEO) for Kāne’ohe Bay.
- 2015 Hawaii State Legislature awards \$1.5 million to PAF Hawaii Inc. to develop much needed infrastructure to support educational and stewardship of the Waikalua Loko Fishpond. PAF Hawaii Inc. succeeds the WLFPS as the new non-profit entity.
- 2016 PAF receives award from Hawaii Community Foundation for its Kahuliau Native Limu propagation project to pilot the growth and restoration of native limu in the pond and Kāne’ohe bay. July 3, 2016 high tide overtops the wall by 6 inches for the first time in recorded history; invasive garcilaria salicornia (gorilla ogo) virtually vanishes from pond in the summer likely due to temperature rise; 2016 is hottest year in history. PAF begins discussions with the City & County of Honolulu for the acquisition of the decommissioned Kaneohe Sewage Treatment Facility adjacent to the Waikalua Loko to conduct an “adaptive re-use” of the site into Hawaii’s largest fresh water aquaculture facility by 2020.
- 2017 Community participation exceeds the 100,000 mark since restoration began in 1995. Kuapa (wall) reconstruction begins on east end for a period of 4 years.
- 2019 City approves final subdivision approval of pond (now separate from golf course) and final deed is given to PAF Hawaii in July 2019. Hawaii State Legislature approves additional funding of \$500,000 to complete Interpretive/Auxiliary Center at pond site.
- 2020 PAF adjust to the closure of schools and re-develops its website www.thepaf.org and brings the learning and experience of the pond and surrounding areas to include a virtual experience utilizing the latest technology.
- Today Since 2000, over 6,000 teachers have been trained in the various curricula developed by PAF (see Ulukau.org; Search: Hawaiian curriculum materials) Approximately 3 to 5,000 students, families and community members visit the pond every year to learn about this special place. Community members regularly come to care for the pond (Lā Hana) --to remove invasive mangrove, seaweed, pick up marine debris, and repair walls. The work of students, community groups, and the Waikalua Loko Fishpond Preservation Society has breathed new life back into Waikalua Loko. As each stone is put back on the wall and each native plant takes root, we build the foundation for a healthier future that honors the rich cultural and natural heritage of the Kāne’ohe ahupua’a.

Conclusion



In 2021, The Pacific American Foundation has set a new 25-year goal that will focus on developing and propagating aquacultural resources in contributing to the broader community goal of food sustainability. Hawaii currently is nearly 90% dependent on out of state sources of food to sustain itself.

PAF will continue to work with all Hawaii schools to support the transformation of education that builds upon *relationships* between self, each other and community, *relevance* of knowledge and how it is applied, and setting *rigorous* standards of achievement that is celebrated.

Aquaculture in Hawaii is a proven economic model seen on O‘ahu and the neighbor islands that contributes to the long- term economic diversity to our state’s industrial base.

PAF intends to combine its experience as the steward of the Waikalua Loko Fish Pond with the social and economic benefit of a modern aquaculture facility. The enterprise portion of the Aquaculture facility is intended to be economically self-sustaining and will produce commercial quantities of fish, limu and other products for the greater community. Feed production ties in with local farm waste and farms in turn can utilize aquaculture waste as fertilizer to mitigate the operational costs of both facilities.

“ ‘A‘ohe hana nui ke alu ia, No task is too great when all pull together”