NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY (NELHA)
BOARD OF DIRECTORS
MEETING MINUTES
Tuesday, July 16, 2019
10:00 a.m.

NELHA Oceanview Conference Room
Hale Iako Building
73-970 Makako Bay Drive
Kailua-Kona Hawaii 96740

County of Hawaii - Research and Development Conference Room
25 Aupuni Street, Suite 1301
Hilo Hawaii 96720

William F. Mielcke Residence
77-6485 Kali Iki Street
Kailua-Kona, Hawaii 96740

Members
Linda Rosehill (Gov. Appointee - Chair)
Cyd Miyashiro (Gov. Appointee)
Alan Hilton (RAC-Chair)
Mike McCartney (DBEDT)
Robert Masuda (DLNR)
Dr. Gerry Cysewski (Tenant Representative)
Neil Sims (Tenant Representative)

William F. Mielcke Residence
William Mielcke (Gov Appointee – Vice-Chair)

County of Hawaii - Research and Development Conference Room
Ron Whitmore

Staff
Gregory Barbour (NELHA)
Daniel Jacobs (Deputy AG)
Stacey Burge (NELHA)
Dr. Alex Leonard (NELHA)
Jerrae Miranda (NELHA)
Keith Olson (NELHA)
Laurence Sombardier (NELHA)
Jan War (NELHA)

Guests
Randy Tanaka (DBEDT)
Janine Clifford, Clifford Planning & Architecture
Daniel Bryant, Clifford Planning & Architecture
Henry Inui, I.M. International, Inc.
Hirokazu Ishikawa, Big Island Abalone
Taishi Kurihara, Big Island Abalone
Georg Baunach, HATCH
Jacob Conroy, Kanaloa Octopus Farm

1. **Call to Order.**

   The meeting was called to order at 10:01am by Chair Rosehill.

   Chair Rosehill requested all attendees introduce themselves.

2. **Approval March 19, 2019 NELHA Board of Directors' Executive Session Meeting Minutes.**

   Chair Rosehill entertained a motion to approve the March 19, 2019 NELHA Board of Directors' Executive Session Meeting Minutes. Director Hilton made the motion, which was seconded by Director Cysewski. A vote was taken, and the motion passed unanimously, 9-0.

3. **Approval of May 28, 2019 NELHA Board of Directors' Meeting Minutes. Director Hilton made the motion, which was seconded by Director Cysewski. A vote was taken, and the motion passed unanimously, 9-0.**

4. **Financial Report.** Approval and Decision Making.

   FY 2019 Revenue vs. FY 2018 Revenue

   NELHA Executive Director (ED) Barbour presented the NELHA financial revenue report through June 2019. The fiscal year ended on June 30, 2019. ED Barbour noted the numbers he presented are preliminary. It is possible there are additional funds which may need to be posted for the final FY19 revenue totals. Currently, the total revenue reported is $4.85M for this fiscal year, up slightly at 1.5percent or $70,000 as compared with the last fiscal year. Revenue has been stable for the past three fiscal years.

   Seawater system revenue is down slightly (3percent) due to lower demand of a similar amount. Several companies have made efficiency improvements reducing their water consumption.

   Lease base rent is up by $160,000 or 13percent, mainly due to collection of $100,000 in arrears. Otherwise, rent is up slightly despite the loss of Puna site.

   For the Research Campus office rent is the same as last year with Hale Iako now near full occupancy and outside space is up slightly by $10,000.

   Percent rent is down by $30,000 due to late reporting. This is mainly due to companies that have not reported yet. The deadline is March 31st for the majority of tenants. Some tenants have until April 30th. NELHA staff will reach out to tenants who have not reported to date.

   Labor services is up by $25,000 (120 percent) with additional lab services being provided to clients. More samples are being done for the community and selling more services.

Reimbursements for electric are up by $50,000 or 10percent with an increase in rates while freshwater reimbursements lower by $30,000 (30percent) due to lower use.

Special projects revenue is down $70,000 mainly due to the large expenditure last year by UH for the hydrogen project.

FY 2019 Expenditure vs. FY 2018 Expenditures

Total expenses for this fiscal year were $4.9M or $400,000 (9percent) higher as compared to last fiscal year. We continue to very closely monitor expenditures.

It is important to note two posting anomalies regarding the electric bill last year and this year and they are essentially cancelling each other out for the April report. As reported at previous BOD meetings, the first FY 2018 electrical bill of $135,000 was posted in FY2017. This year, the April electric bill ($145,000) was paid late. This issue has been resolved.

Seawater system expenditures are up approximately 11 percent ($180,000) and much of this is due to increased electrical costs (+21percent or $217,000). Other system costs were lower.

For Tenant Utilities electrical is up 22percent or $88,000 and a decrease of approximately $50,000 for freshwater which was due to the settlement of a dispute with the Board of Water Supply over a broken water meter. The dispute was settled in July and paid in August last fiscal year.

Beach Park maintenance shows modest increase of $8,000 due to additional personnel costs for repair and maintenance.

Ground maintenance shows an increase of over $80,000 or 80percent. This is due to shifting of personnel from building maintenance (Admin cost) to grounds keeping and a $40,000 increase in security costs (year over year). However, this is a timing issue only as the security contract cost is the same as last year.

Environmental Monitoring costs increased by $28,000 or 18 percent mainly due to personnel costs. NELHA has been reporting this cost throughout the year. NELHA staff has been unable to find why this cost changed after reviewing previous years' accounting. ED Barbour believes this number may have been misquoted earlier in the reporting cycle.

Administrative costs are equal to the same period last year. Mainly due to a reduction in building maintenance (Hale Kaa last year = $55,000) and personnel costs for R&M at $20,000. Services on a Fee increased with costs for the Energy Storage conference last month and an appraisal of the buildings lost in Puna ($40,000). It is important to note that the appraisal funds will be reimbursed by FEMA when the grant is approved.

Services assessments for Budget and Finance were $135,000 or up 12percent ($14,000).

OHA Ceded Land Assessment is up by $30,000 (10percent) due to increased rental revenue.

Special Fund Account Summary

All data is preliminary as of June 30, 2019.

Special fund balance is $410,000 and up $20,000 from the same time last fiscal year.

Until recently, we were making progress in increasing the fund balance, however arrears have increased significantly in the past several months.

As such, the balance is essentially flat since the beginning of the fiscal year.

Current arrears are $365,000 and up about $65,000 from the same time last year. We anticipate that a majority of arrears will be paid later this month and will bring the balance over $700,000.

Customer Revenue Report

Total revenue, for this time period is up 1.5 percent, non-reimbursable revenue is up 6percent. Details are listed below:

It is important to note that the Aquaculture sector now accounts for 2/3rds of total revenue if non-reimbursables are included.

Energy sector is up due payment of arrears.

Research/Office category is higher by 5percent due to occupancy in the new building, conference room rental and rental of lab space.

Miscellaneous revenue is higher ($35,000) due funds received for the Energy Storage Conference.

Special projects revenue is down by almost $100,000 due to UH H2 project last year.

Arrears Report

As of June 30, 2019, the arrears totaled approximately $ 365,000.

Cyanotech has experienced some unforeseen and unanticipated issues and has fallen behind in their payments. We have discussed the issue with them, and they have agreed to bring their account current over the month.

Destiny Deep Sea Water also makes up a significant amount of the arrears. They continue to make payments but have been unable to make their account current. They are reviewing alternative business plans and the building is for sale.

Chair Rosehill entertained a motion to approve the Financial Report. Director McCartney made the motion which was seconded by Director Masuda. A vote was taken, and the motion passed unanimously, 9-0.

5. **Old Business.**
    a. None.

6. **New Business.**
    a. **Discussion and Decision-Making regarding nomination of Dr. Phillip Bossert to be appointed to the Research Advisory Committee (RAC).**

NELHA ED noted that Dr. Bossert has expressed interest in serving on the RAC and has a long and distinguished career in government, technology and education in Hawaii. He has previously worked with the University of Hawaii, served as a Deputy Director of DBEDT, was the Executive Director of the High Technology Development Corporation and has started several businesses. Accordingly, Dr. Bossert is very familiar with the resources and existing projects at NELHA and economic development issues in Hawaii.

As many of the proposals reviewed by the RAC are small start-up companies his background, guidance and prospective as the CEO of a small business will be very helpful for the RAC. His strong background in economic development and technology will be invaluable in reviewing proposals.

It is recommended that the NELHA Board of Directors pass a motion to approve Dr. Phillip Bossert as a new member of the Research Advisory Committee.

Chair Rosehill entertained a motion to nominate Dr. Phillip Bossert to be appointed to the NELHA Research Advisory Committee. Director McCartney made the motion which was seconded by Director Masuda. A vote was taken, and the motion passed unanimously, 9-0.

    b. **Discussion and Decision-Making regarding 15.5-acre expansion project approval for Kowa Premium Foods Hawaii Corporation (KPF Hawaii) and amending the existing Sub-Lease.**

Ms. Sombardier provided the overview of KOWA's project plan.

Sublease K-6 is the third oldest sublease still currently in use at NELHA. The sublease was assigned from Big Island Abalone Corporation (BIAC) to KOWA late 2017 when KOWA purchased all BIAC assets and took over management of the abalone operations. NELHA staff and Board strongly supported the change of ownership as it prevented BIAC from closing its doors and saved approximately 30 jobs. KOWA also expressed willingness to fund capital improvements and consider recycling the sea water as well as develop additional markets for abalone products.

KOWA is a fully owned subsidiary of Kowa Company Ltd. which is a large Japanese corporation with worldwide activities in the food, liquor, consumer products, real estate, marketing, pharmaceuticals, medical devices and service industry sectors (http://www.kowa.co.jp/eng/company/index.htm). The company's annual sales were US$1.4 billion for its fiscal year ending March 2017 according to audited financials provided

to NELHA for the BIAC assignment due diligence work. In September 2017, the Board favorably viewed KOWA's expressed desire to expand in the HOST park.

For the past 1.5 years, KOWA has worked with many consultants and carefully looked at various options to expand. Initially, they had intended to utilize the 4.5-acre HDMI facility and in fact obtained an approval in concept on May 15, 2018 for the proposal they submitted in response to RFI-18-01-NELHA. They were working on a final business plan for expansion at that facility when they decided it would be preferable to expand in land immediately adjacent to the current abalone facility. On March 12, 2019, they retracted their proposal for the 4.5-acre HDMI facility. In its place, they submitted a proposal/business plan on June 14, 2019 for expansion east and west (18.9 acres total) of their 10-acre current property.

There have been extensive discussions leading up to this proposal. As outlined in 2018, KOWA's most urgent need is for a processing facility to process abalone into a less perishable product. KOWA also desperately needs office space and a location to market their product(s) and provide better tour and tasting opportunities to the general public.

KOWA has been in good standing since they took over BIAC. The last and final lease rate reopening of 1/1/2019 was addressed by letter.

KOWA proposes to expand to two lots on either side of their current property, a 10-acre lot on the mauka side and a 5.5-acre lot on the makai side. Construction of new facilities would be completed in three phases over five years. Phase I will include site preparation, water system upgrades, a new canning manufacturing facility on the mauka lot and a new office building on the makai lot which will include facilities for visitor tours and tastings (dinning and retail sales are expected). Phase II will include a new R&D building on the makai lot, site preparation for the remainder of the land, expansion of algae production areas, increased capacity in the form of additional equipment for the cannery facility. Finally, Phase III will see the construction of a bottling facility and expansion of the existing cannery facility, complete with full automation of the entire facility.

The expansion will allow KOWA to develop new abalone products and improve on current operations. The implicit goal of the expansion will be to increase revenue. Staff feels that the projected revenues are conservative compared to proven past revenues. The expansion is expected to yield significant lease rent increase to NELHA in the form of base rent.

The current lease has only 10 years remaining. KOWA has requested to extend the lease term by another twenty years. Given the investment of approx. $15million, this is a reasonable request. The term could be extended through a supplemental which would also add additional land and bring certain lease terms in line with current lease policy. In particular, lease term adjustments should include rental rates that address the split use of the land.

Approximately 5 acres of land will initially be utilized for manufacturing and retail including canning, restaurant and tour activities. KOWA is agreeable to paying the manufacturing/extractive established use rate as adjusted by the Dilmore curve. As Phases II and III come online, the proportion of manufacturing/retail use acreage versus productive

use acreage shall increase and KOWA is agreeable to adjusting the corresponding base rent as Phase II is implemented. Similarly, KOWA is agreeable to itemizing revenues according to activity and calculate/pay percentage rent of 5percent for manufacturing/retail/tour/restaurant activities while maintaining the 2percent for productive use farmgate revenues. Depending on how much acreage is determined to be extractive, the estimated total annual rent to NELHA would be between $170,000 to $280,000.

There are a few concerns with the proposed project and KOWA is willing to address them. KOWA is aware that the Department of Transportation - Airports Division and FAA will need to provide approval before a three-story office/visitor building could be constructed in direct line with the runway. KOWA's consultants, Clifford Planning & Architecture based in Honolulu, have researched the subject and believe that the building will meet FAA restrictions.

Staff has had many discussions with KOWA regarding KOWA's current waste water disposal systems and their inability to meet increased loads and compliance with future Department of Health requirements. The cannery and restaurant facilities will require new waste systems. KOWA will continue working with their consultants, State officials and NELHA staff to make sure that their project addresses concerns adequately.

KOWA currently uses large amounts of seawater. They plan to drastically curtail that usage through recycling and other system improvements. This is overall a positive development as it will help the economics of growing abalone at NELHA. Staff points out that this could have a significant impact on the 55" pump operations. Staff does feel that the decreased usage may be optimistic and is likely to happen progressively over several years as implementations of the various initiatives are adopted hopefully without adverse effect on the overall abalone production.

The proposal included a desalination and bottling facility for Phase III. This aspect of the proposal is still in the conceptual stage and KOWA can only provide minimal details at this point in time. Expectations are to produce 50 million 500ml bottles per year and to initially market in Japan. Staff has informed KOWA of the royalty program.

With the operation of a cannery manufacturing plant and restaurant, KOWA expects to increase its use of freshwater by approximately 50 percent per month. KOWA is currently a very low freshwater user at HOST Park. The proposed increase is not an issue. It is likely that NELHA's new fresh water well will be in operation before the proposed expansion will be completed. KOWA has expressed willingness to minimize use of freshwater and even utilize desalinated water once their Phase III plant is established. The expected freshwater increase is primarily due to manufacturing and is not related to growing any freshwater species.

The proposal submitted does not include any new species. Some time ago, KOWA had indicated that they were interested in different products and species such as kuruma shrimp and hirame. Should KOWA wish to explore those opportunities, they understand that they will have to come back to the Board to seek permission to modify their business

plan to include addition species and products other than abalone and the kelp feed for the abalone.

KOWA indicated their preference for an unobstructed view to the ocean from their makai lot. Staff has made clear and KOWA has acknowledged that there are two lots (the 3.4-acre lot between the booster and 55" pump stations and a 2.2-acre lot set aside for an OTEC project) which may have equipment and/or buildings that might obstruct the view towards the ocean. KOWA has been informed that NELHA cannot provide any guarantee.

The phasing of the planned expansion calls for build out of the areas immediately adjacent to Makako Bay Road. KOWA understands that adjustments to land size in the future will be difficult or impossible if NELHA cannot obtain access to land reserved for phases II and III.

The gate to the entrance of the park closes daily at 8PM. KOWA understands that their tasting/tours/restaurant activities would need to be closed by that time and all clients must exit the park by 8PM. KOWA expects their tour activities to be mostly tour bus and day time activities.

Staff recommends that the NELHA Board grant approval in concept to the proposed KOWA expansion of 15.5 acres and instruct NELHA Executive Director to work with KOWA to finalize lease terms for presentation at the next Board meeting for final approval.

KOWA is on the fast track and have asked that NELHA accelerate this project.

Mr. Henry Inui, of I.M. International, Inc. introduced himself as the Project Manager for the KOWA expansion project. He is a practicing architect in Japan and Hawaii. Mr. Inui is working with Clifford Planning and Architecture located in Honolulu, Hawaii. Mr. Inui then introduced Mr. Hirokazu Ishikawa who is with Big Island Abalone.

Mr. Ishikawa gave a brief overview of KOWA. KOWA is a Japan based company established in 1939 and employs over 500 people worldwide. KOWA holds business interests in pharmaceuticals, food and beverages, textiles, medical equipment and other enterprises. KOWA purchased Big Island Abalone in January 2018. Over the last year and a half, KOWA executives have determined there are multiple problems within the current operations. KOWA believes there is a future market for abalone and have the desire to expand abalone production for markets in Japan and Hawaii.

Ms. Janine Clifford, Clifford Planning and Architecture is the selected architect for the KOWA expansion project. Ms. Clifford initially presented the profit and loss statements from 2018 through 2022. Currently, the subsidiary, Big Island Abalone, Inc., is running in the red. KOWA executives believe that with the planned 4-5-year expansion, the company will be in the black.

Phase 1 of the project expansion has an expenditure of $7M. Phase 1 will include a new office building, new grow out tank for the existing abalone farm, a visitor center, and new parking lot. The new building will be approximately 14,000 sq. feet. There will be overhaul and renewal of the existing water system and the creation of a new NGO grow out water

tank. Phase 1 will also include a new processing and canning facility. Next to the processing facility will be a bottling facility. Phase 1 will be a total of 97,000 square feet.

Phase 2 will allow for expansion of the bottling and canning facility within the 97,000 square feet. The algae production tank will be expanded during this phase. An additional $7.5M will be invested during this phase.

Phase 3 will be automating the production sequencing. This will be an expansion of the canning facility and take into consideration additional space for food production.

Mr. Daniel Bryant, Clifford Planning & Architecture presented the new office facility. There will be a new turn-in for the expanded parking lot area. The plan calls for 45 stalls for parking and 4 -5 stalls for bus parking. In order to keep water usage to a minimum, the landscaping will be kept natural with the feel of the Kona coastline using xeriscaping materials.

During Phase 2 of the project, a research and development facility will be added and will connect to the office building via bridge or walkway.

The new building is directly adjacent to the airport runway. The FAA requires a specific elevation cone of safety requires the building envelope is under a certain height. The airport runway is above the site. The KOWA design team believes the finished grade will be approximately 25 to 27 feet. The new building will be below the FAA cone of safety of 40 feet.

Mr. Bryant presented the conceptual layout of the building. The building is 3 floors. The ground floor will be divided between a visitor center and office space.

The second level will house conference space and executive office.

The third floor will be designed for guests to experience the food with a lounge, outside deck seating, and kitchen area.

The overall look will be pre-engineered metal. KOWA has indicated they like the look of the Hale Iako building and the designers are looking at similar materials for the new building.

Ms. Clifford presented a preliminary layout for the production and canning facility. The bottling facility is in the conceptual design phase.

Director Hilton pointed out the upslope of the proposed canning and production building and asked if the building was single story. Ms. Clifford confirmed the building would be single story and the only multi-story building will be the office building.

Chair Rosehill asked about the impact to the business given the HOST gates close at 8pm. Ms. Clifford indicated most guests show up during daylight hours because they are interested in the abalone tour itself. KOWA does not expect any issues with the 8pm gate closure.

Director Masuda asked about the current production now versus the production after the new facility is opened. Mr. Ishikawa stated the current production is approximately 4M pounds of abalone per year. Target is to get larger abalone size – double size of current production during 3-year lifecycle. Larger abalone will allow for a price increase.

Chair Rosehill entertained a motion for the NELHA Board to grant approval in concept to the proposed KOWA expansion of 15.5 acres and instruct NELHA Executive Director to work with KOWA to finalize lease terms for presentation at the next Board meeting for final approval.

Director McCartney asked how many people are anticipated to visit the tour center and restaurant. Mr. Ishikawa stated the building has been designed to accommodate for 60 visitors at a time, 3 or 4 tours per day approximately 180 to 240 people per day.

Director Sims inquired why KOWA did not use the 3.4 acres on the makai side of the expansion of the KOWA property and why it was being reserved for solar panels. ED Barbour responded that there would be a major beneficial impact effect for the 55" pump station. This location was recommended for the photovoltaic panels for the microgrid project funded in part by the Korean government. ED Barbour stated that it would be approximately $1M per mile to install distribution lines and we are trying to site the PV as close to the pump station as possible to lower costs.

Chair Rosehill asked if it was possible to move the solar project to conservation land. ED Barbour stated that NELHA looked at all the sites available and the 3.4 acres is the most feasible. If the project was moved to the conservation district land, a special use permit would be required and could be a lengthy process.

Director McCartney made the motion which was seconded by Director Masuda. A vote was taken, and the motion passed unanimously, 9-0.

Director Barbour stated that KOWA has requested to fast track the project and they would like approval in 30 days. After discussions with the chair, we are proposing a special board meeting on August 26th in conjunction with the HATCH grand opening event.

c. **Discussion and Decision-Making regarding 4.5-acre project approval for Fat Fish Farms LLC, dba Kanaloa Octopus Farm; including a tour of the existing Kanaloa Octopus Farm immediately south of Hale Iako in the NELHA Research Campus at 73-970 Makako Bay Drive.**

Ms. Sombardier provided the overview of Kanaloa's project plan

Kanaloa started a small project in NELHA's research campus in August 2015 with the intent of investigating the commercial viability of creating and operating a cephalopod aquaculture facility. The main technical challenge faced by Kanaloa was to close the life cycle of any octopus species as this had never been done previously. Kanaloa's market research indicated that there would be an important local, national and international market for octopus for the aquarium and restaurant sectors. Almost four years later,

Kanaloa has not only successfully met its goal of closing the lifecycle on the Hawaiian octopus but has also developed a thriving ecotourism facility that is reaching $500,000 annual revenues in 2018. Kanaloa has already expanded once within the research campus and is now ready to graduate out of the campus and establish a fully commercial facility in NELHA's park.

Kanaloa is the only company which submitted a very professional and well written proposal in response to RFI-19-03-NELHA which was posted online in March 2019. The RFI aimed to receive proposals for the use of a fully graded and developed 4.5-acre facility containing a 7,500 square ft building which had been returned to NELHA in 2017. After conducting an appraisal on the facility in February 2018, NELHA issued an initial RFI. The winning proposal from Kowa Premium Foods Hawaii Corporation (Kowa) was granted approval in concept by the NELHA Board on May 2018. However, in March 2019, Kowa retracted its proposal. Shortly thereafter, NELHA issued a second RFI for the property.

Kanaloa proposes to establish a commercial facility with the aim to produce and sell cephalopods and related products such as squid ink. Products will be sold to the food and aquarium markets. The facility shall also provide ecotours to educate the public about cephalopods. Revenue from the sale of products and tours will allow to continue technical research to breed various cephalopod species.

Kanaloa plans to expand on its current activities. The project in the research campus generates over $500,000/year in revenue. This revenue consists primarily of tour tickets and sale of octopus related merchandise. Kanaloa cannot meet the current demand for tours at their campus facility because the size of the facility limits the number of animals that can be held, and the campus does not adequately support large bus tour logistics. Kanaloa believes they can increase number of visitors from the current 2,000 per month to 8,000 per month.

Kanaloa plans to diversify beyond ecotourism; they have listed four promising areas (model organism for biological research, ink for food products, ornamental trade and octopus meat for local restaurants -see confidential proposal in Attachment 3) and have already started making aquaculture sales in 2018 and 2019.

Based on Kanaloa's past 4-year record, staff believes that Kanaloa has gathered the technical and business experience to attempt a successful expansion and the 4.5-acre site is the perfect size for Kanaloa.

Kanaloa has stated that it has approximately $660,000 cash on hand to be used for the expansion. This includes cash from existing operations, and financial support from Brian Conroy who is also a financial advisor and Marissa Meyer, former CEO of Yahoo as well as a $250,000 bank line of credit. The expenditure plan seems reasonable and includes $35,000 for surface sea water pipe installation (the facility is currently only plumbed for deep sea water).

Kanaloa's financial proposal to NELHA is very well written and the revenue and expenses are reasonable. Of the 4.5 acres, 2 acres will be devoted to retail activities. Therefore, Kanaloa proposed to pay a base rent of $1,800/acre/month for 2 acres and

$438.78/acre/month for 2.5 acres used for productive use of growing octopi. Since the majority of their revenue will be from tours and retail merchandise sales, Kanaloa proposes a percentage rent of 5percent. They did request a reduced rent for the transition period through end of 2020. The proposed base rent is in line with NELHA's leasing policy provided that yearly CPI adjustments be included. The lower initial base rent through Dec 2020 is acceptable as it will help the business get on its feet and will still be higher than the established productive rate. Also, Kanaloa will continue renting the lease campus space until the end of 2019. The new facility would open its doors on January 2020.

The proposal from Kanaloa did not address the 7,500 square ft building which was appraised at $2.8M in early 2018 and this is the only deal point that has not been resolved. However, Kanaloa plans to either lease the building space or purchase the building. The preliminary numbers for either option would be advantageous to NELHA and sustainable for Kanaloa provided they meet their revenue projections. The leasing option would yield total annual lease revenues to NELHA on the order of $200,000 while the purchase option would yield a needed upfront cash deposit to NELHA that would help with furthering HOST park development. Kanaloa is also making a final determination on whether it wants to purchase the RO equipment and salt drying structures that are currently located at the 4.5-acre facility.

Staff has a few minor concerns which staff believe can be addressed adequately by Kanaloa. The flow estimates seemed underestimated for the project scope. Nevertheless, NELHA does not expect any issues with accommodating the sea water needs. Tests will need to be run by Kanaloa to make sure that existing sumps can accommodate discharges.

There is a concern on whether Kanaloa will be able to procure sufficient feed for the octopus. This might limit the ability to expand on the product lines. This would be less of an issue for the ecotourism aspect as less animals would be needed for that aspect of the business.

The immediate neighbors to the facility are water desalination business's and present no concern with respect to biosecurity. The closest aquaculture facility, Moana Technologies, has been briefed on the project. Some of the Kanaloa project feed are brine shrimp which are purchased in dehydrated form and then subsequently hatched to provided live feed. Moana Technologies has no issue provided NELHA biosecurity program is adhered to by Kanaloa.

Kanaloa Octopus Farm started as a 9-month project in the research campus in 2015 and as such, was not a project that required RAC or Board approval at the time. The rental agreement was extended several times. The RAC has reviewed the attached proposal and the RAC Chair will provide a summary at the Board meeting.

Kanaloa is in good standing with NELHA.

NELHA aims to start companies in the research campus and grow them into innovative and viable commercial companies that provide STEM jobs utilizing the parks assets. Kanaloa is a perfect example and has all the components required to make the successful transition from small business to an expanded mid-size aquaculture business.

Staff recommends that the NELHA Board grant an approval in concept for the project described above and instruct the NELHA ED to work out the final lease terms for presentation at the next Board meeting for final approval.
Ms. Sombardier introduced Mr. Jacob Conroy, Owner and Founder of Kanaloa Octopus Farm.

Director Hilton stated the Research Advisory Committee (RAC) was requested to review the proposal submitted by Mr. Conroy and the staff recommendation. Overall, the responding members of the RAC agree with the NELHA staff recommendation to grant an approval in concept but there are a few concerns.

The first is to resolve the status of the building and the building improvements in a way that is acceptable to all parties.

The strong reliance on the financial support on the ecotourism component should be approached with caution. In the event there is another recession or natural disaster such as the recent volcano event in May 2018, projected revenues could be impacted significantly.

Biosecurity factors are minimal. All the species are endemic to Hawaii and there is low risk of contamination. The concern may be any shrimp brought in as feedstock and tour participants who may inadvertently contaminate another tenant/facility. Kanaloa could use locally produced feedstocks from other tenants to mitigate biosecurity concerns.

The RAC agrees with the NELHA staff recommendation to grant an approval in concept.

Mr. Conroy thanked the Board for their time and the opportunity to present. Kanaloa Octopus Farm started out as aquaculture research. Mr. Conroy's focus is to diversify aquaculture. Marine aquaculture is relegated to certain species and research needs to be completed with other species in order to successfully raise them.

Kanaloa has focused on three cephalopod species: Day octopus (*Octopus cyanea*), the Hawai'ian octopus, (*Octopus Hawaiiensis*), and the Hawai'ian bobtail squid, (*Euprymna scolopes.)* Of these three, the life cycle for the Hawaiian octopus and the bobtail squid have been completed.

Kanaloa is providing ecotours of their facility to the public and various schools and other organizations. The tour educates visitors on aquaculture and allows participants to view the research facilities and to learn about the octopi. Tours are at full capacity every day and they often turn people away. Kanaloa has a small gift shop selling retail items such as t-shirts and other gift items.

Kanaloa started their research in the 500 square foot lab known as the "Teahouse" on the HOST property. The purpose of this research was to see if it was possible to keep the brood stock animals alive, whether they would eat frozen food, and whether they could be conditioned to breed. Brood stock conditioning was done in 2015-2016 and upon completion of conditioning, the lifecycles of the 2 octopi species were completed mid-

2018.

Sales for ecotourism started in 2016 where is amounted to $48K. 2018 sales were over $500K in tour tickets and the gift shop which was approximately 10 percent of sales. Expected sales for 2019 is $650K and once Kanaloa moves to a new location they will increase their tours from 2 per day to 6 per day.

The tour revenue has, in part, funded the research for Kanaloa. Mr. Conroy discussed the challenges faced while rearing cephalopods. Cephalopod aquaculture is most difficult during the prelarval stage. Prelarvae are very delicate for the first 30 days. They are planktonic, free-swimming and are only enticed by a live feed. Kanaloa had to recreate an open ocean environment to support the development of the prelarvae. The lifecycle is broken into 4 stages. The prelarva stage, the "settlement" or pre-juvenile, the juvenile stage, and adult. This revenue stream has allowed Kanaloa researchers to study the lifecycle process in depth and has led to the success of with the paralarvae rearing, especially with the Hawai'ian octopus and the Hawai'ian bobtail squid.

Hawai'ian bobtail squid is the easiest of three octopus lifecycles researched and completed. The bobtail squid's lifecycle is 3 months and their prelarva is semi-planktonic. The bobtail squid's prelarva will burrow into the sand. They are less delicate than other species of octopus which makes them ideal to produce. Kanaloa has been able to produce and sell the bobtail squid. The bobtail squid is quickly becoming a new model organism for research. Similar to the fruit fly, they are fast growing and easy to reproduce. If Kanaloa starts selling them in mass, they would be the only supplier in the world.

The new facility is significantly larger and is climate controlled which is ideal for research. The current facility is not climate controlled and the heat often presents a problem for the researchers. The outside space renovation needed is minimal and will primarily consist of tank stands for algae, brood stock, and live feed. The inside of the building would be renovated for gift shop, various wet labs, and offices. In addition, the new facility has a parking lot and will be able to accommodate tour buses.

Director Masuda inquired about the time frame from the Hawaiian octopus prelarva to full grown octopus for human consumption. Mr. Conroy indicated about 18 months for the day octopus which is the type most people will consume.

Director Miyashiro asked Mr. Conroy about the 5-year projection plan and, if everything goes according to this plan, what did Mr. Conroy see as the next steps. Mr. Conroy indicated he would like to continue research and development. The current proposal is focused on cephalopods only, however if Kanaloa's growth is successful, Mr. Conroy would like to branch into other species within aquaculture research and explore other revenue centers.

Director Miyashiro followed up with an additional question regarding R&D, commercialization, ecotourism, and how will these work together within the goals. Mr. Conroy stated that the
research and tours go hand in hand. The selling point of the tours is the educational component. Most visitors in Hawaii don't see this type of research. Many companies do

not let people into their research areas and Kanaloa is different in allowing the public to see the research making it very unique. Aquaculture production is a result of the research.

Director Masuda inquired about the octopus as a food for the local population. Octopus has more protein than beef or chicken and it is a sustainable food source. Mr. Conroy stated Kanaloa would be interested in scaling for food production, however their concentration for growth is currently on ornamental for aquariums.

Director Sims commended Mr. Conroy's work over the last several years. Director Sims complimented the Kanaloa team and the research they have done leading to their growth at NELHA.
Director Sims inquired of Ms. Sombardier regarding the feed concerns and biosecurity. Ms. Sombardier responded that much of what Kanaloa uses for feed is desiccated brine shrimp. However, the cephalopods can be fairly particular about what they eat which may require Kanaloa to bring in other varieties of feed. As far as biosecurity, NELHA staff checked with Moana Technologies and they had no concerns with Kanaloa using brine shrimp.

Director McCartney asked if Kanaloa looked at the demographics of the tour guests. Mr. Conroy stated the majority of their visitors looking to tour the facility are through an online search and book directly through the Kanaloa website. Most of the referrals come through Trip Advisor or Yelp. Most guests are visiting from Canada, the mid-west and west coast. Average group is 2 people and it's a broad range of ages. The ticket price is $33.00 per adult and $16.00 per child. Currently Kanaloa is #4 on Trip Advisor for things to do on the Big Island.

Director Sims inquired of Mr. Conroy regarding biosecurity between the facilities providing tours to the public. Mr. Conroy responded that Ms. Carol Cozzi-Schmarr, owner of Ocean Rider Sea Horse Farm has a rule that visitors to the Kanaloa cannot visit Ocean Rider immediately afterwards. The new Kanaloa facility will be designed with biosecurity in mind. The renovated facility will separate algae, live feeds, and hatchery from the general public. The only people allowed in these areas will be research staff.

Chair Rosehill asked if each tenant has their own biosecurity plan. Executive Director Barbour answered that NELHA has an overall biosecurity plan in place which includes an extensive chapter for specific pathogen free shrimp production. In terms of people visiting from one operation to the next, tenants are self-regulating.

Chair Rosehill entertained a motion for the NELHA Board to grant approval in concept to the proposed 4.5-acre project approval for Fat Fish Farms LLC, dba Kanaloa Octopus Farm and to instruct NELHA Executive Director to work with Fat Fish Farms, LLC to finalize lease terms for presentation at the next Board meeting for final approval.

Director McCartney made the motion which was seconded by Director Masuda. A vote was taken, and the motion passed unanimously, 9-0.

At 11:31am, the meeting was adjourned for 30 minutes in order for the meeting attendees to tour Kanaloa Octopus Farm.

The meeting reconvened at 12:05pm.

d. **Discussion and Decision Making regarding the NELHA for Fiscal Year 2020 Budget.**

ED Barbour presented the FY2020 Budget.

Overall Summary

The FY 2020 budget being proposed includes in revenue and expenditures for all budget categories. This includes the 1) Special Fund; 2) CIP Appropriations; 3) General Funds; and, 4) Grant Funds. Total expenditures will be in the $11.7 million range in FY 2020. Of note are the following:

Special Fund: Revenue is projected at approximately $6.5 million and proposed expenditures are approximately $6.2 million. This would result in an increase of $300,000 in our special fund bring to approximately $1 million.

CIP – Expenditures are proposed at $3.3M. This includes $750,000 for the two design studies for removal of the offshore pipelines and the regional seawater air conditioning project. In addition, we are proposing an expenditure of $2,500,000 in CIP funds for improvements the Sea Water System (SWS) from the $4.9M in reimbursable GO bonds that were appropriated during the 2018 Legislative session. The majority will be expended in conjunction with a matching grant from the Korean government for renewable energy systems for the SWS and is further described below. An additional $700,000 will be used for various repairs and upgrades to the SWS.

General Fund appropriations were $675,000 from 2018 Legislative session were received for the Aquaculture Initiative and a Grant in Aid for the Friends of NELHA. These were encumbered before the end of FY2019 and none of these funds lapsed. We did not request any general funds for FY2020.

Federal Grant Funds – We received $1,928,238 in Federal Funds from the US Department of Energy in FY 2019 for the solar desalination project. We issued a notice to proceed to one of the key contractors earlier several weeks ago and this is a 30-month project. HSDC also transferred the $275,000 grant from EDA for the aquaculture accelerator to NELHA in late June. We could potentially receive funds from FEMA in FY2020 for reconstruction of the three buildings destroyed last year in Puna. The receipt of recovery funds from FEMA is very complex vis-à-vis insurance funds.

Other Grant Funds – We were awarded $1,730,000 in funds from the Government of Korea via the KETEP in FY 2019 for renewable energy systems for the SWS. We continue to work with Encored Technologies Inc. to develop a contract for the installation of 600kW of PV and 587kWh of energy storage. These funds are being matched by $1.85M from NELHA.

FY 2019 Revenue and FY 2020 Projected Revenue

Total revenue was $4.85M for the last fiscal year is projected to increase by approximately

35 percent in FY 2020 to $6.54M. Much of this increase ($1.0M) assumes the sale of the HDMI building and a partial payment.

Other categories of note include lease base rent which is projected to increase by approximately $500,000. This assumes much of the current arrears would be collected ($300,000) and additional revenue from the two new leases just discussed. An increase of $50,000 in percent rent due to increase in sales and clients bringing accounts current.

FY 2019 Actual Expenditures vs. FY 2020 Proposed Expenditures:

Total expenses for the last fiscal year were $4.9M and are proposed to increase by 25 percent or $1.3 million in FY 2020 to $6.2M.

A significant portion of NELHA annual expenditures are recurring day-to-day expenditures and have been generally increased by an inflation factor of 3 percent. Electricity is increased by 6.6 percent. Non-recurring items and new expenditure items are highlighted in green on Schedule 2. Personnel shows a 7 percent increase due to an increase in charges for fringe benefits and anticipated salary increase in association with union negotiations.

It is important to note that several items will not be initiated until it becomes clearer if the HDMI will be sold or leased and identified further in Schedule 3.

Non-Recurring Expenditures

This schedule represents all new non-recurring budget items of $25,000 for FY 2020. Budget items are as follows:

$190K for repairs for the backhoe and offshore underwater repairs. NELHA has included $35K for stocked items in the event of an emergency. NELHA staff believes it is prudent to prepare in advance for emergency repairs in order any interruptions in service.

$80K for a new WQL Nutrient Analyzer. NELHA's current equipment is approximately 10 years old. This was budgeted last year, and we were unable to purchase it. The purchase of a high-quality analyzer with a larger capacity will allow the lab to offer additional services to the community and increase lab revenue.

The following 3 items are contingent on the sale of the HDMI building.

- Consultant to assist with the RFP for the Ocean Centerpiece is approximately $300K. Executive Director Barbour stressed the point that NELHA cannot move ahead with the development of the 80-acre Ocean Centerpiece, which will help NELHA's financial situation, until NELHA is able to employ consultant. This is a critical economic driver for the lab.

- RC Security Upgrades is $100K

- AC Handler for the administration building is $65K.

Over the last several years, NELHA has focused on getting grants, repairing and installing new infrastructure, and increasing renewable energy to reduce electrical costs. An initiative for FY2020 is to attract new tenants to the HOST Park. A budget of $25K for marketing and promotion is included in the FY2020 budget request.

Chair Rosehill entertained a motion for the NELHA Board to approve the NELHA Fiscal Year 2020 Budget.

Director Sims made the motion which was seconded by Director McCartney.

Director Sims asked that the marketing and promotion budget be moved into the recurring budget. Chair Rosehill commented that the budget was rather small for marketing and promotion. ED Barbour stated NELHA wants to update their marketing plan and hopes to do so within the next few months. Depending upon the course of action, it is possible NELHA will request additional funding for marketing.

Chair Rosehill asked that NELHA staff put together a collective summary of how many tourists visit the individual entities, how much money is spent, and anything "tourism" related. This information could be used to justify additional marketing funding from other departments. It is possible to create an ecotourism around marine energy, but the justification needs to be put together.

A vote was taken, and the motion passed unanimously, 9-0.

7. **Hawaii Strategic Development Corp. (HSDC) Informational Status Report.**

   No report. HSDC was abolished on June 30, 2019.

8. **Executive Director's Informational Status Report on ongoing projects including: new leases; seawater system maintenance; new potable water supply update; aquaculture accelerator and investment fund initiative; renewable distributed energy resources initiative including grant applications for microgrids, energy storage, and solar desalination; analysis HOST Park energy system; and, the grant application to the US government for damage to building in Kapoho, Hawaii. ***

Maintain 99.99% Uptime and Increase Efficiency of Seawater System is an on-going goal which NELHA continues to meet.

Secure Offshore (nearshore) pipes. This project will take place soon, preferably prior to the winter surf.

SCADA System Development including upgrade instruments in WQL. Improvements are continuing.

Upgrade Renewable Energy and Storage for SWS. This is the KETEP project for the microgrid. The preliminary design is complete. The KETEP team will be in the week of July 22, 2019. Once the design is complete the budget can be completed, and a contract will be executed.

Regional SWAC Planning/Design. NELHA is in final negotiations with the selected contractor. The project is slated to begin soon.

DOE SunShot Solar Desalination Project. The contract has been signed with Trevi. This is a 30-month project.

Chair Rosehill asked when the project would be to the point of show. ED Barbour answered it will be 18 months before water is produced. Mr. Leonard answered the project is in 3 phases. The first phase is the design and refurbishment of the building which will take approximately 6 months. The second phase is to install the new equipment which will take 12 months. The third phase is water production for a period of 12 months.

Chair Rosehill inquired about the commercial side of the project. ED Barbour stated that this has not been discussed as it is a demonstration project regarding the new technology.

World Aquaculture Meeting 2020 at the Hawaii Convention Center. There will be approximately 2,000 people attending this meeting. NELHA will have a presence at this meeting. ED Barbour will send out calendar reminders to the NELHA Board.

Potable water supply – exploratory phase. NELHA continues to make progress. Discussions are ongoing with the administration.

New lease prospects for underutilized assets to increase revenue. NELHA staff are focused on generating new revenue and new business.

Robotic competition – Mars/Lunar landers scheduled to be in held summer of 2020. PISCES is managing the competition which will take place at NELHA. The competitors will come from international universities. Caterpillar is the major sponsor.

Secure reconstruction funds for Puna Buildings continues to be complicated with the insurers.

Annual Reports are in progress.

2020 Legislature.

9. Announcements.

None.

10. Adjournment.

There being no further business, Chair Rosehill entertained a motion to adjourn the meeting. Director Masuda made the motion which was seconded by Director McCartney. The motion passed unanimously, 9-0, and the meeting was adjourned at 12:40pm.