



# NATURAL ENERGY LABORATORY OF HAWAII AUTHORITY

*An Authority of the State of Hawaii attached to the Department of Business, Economic Development & Tourism*



## BOARD OF DIRECTORS MEETING MINUTES

May 21, 2024  
10:00 a.m.

**DRAFT**

**An Interactive Conference Technology Meeting was held at**

**NELHA OceanView Conference Room  
Hale Iako Building  
73-970 Makako Bay Drive  
Kailua-Kona, HI 96740**

**and via Zoom Video Conferencing Software.**

### **Members/Designees in Attendance**

Cyd Miyashiro (Gov. Appointee/Chair)  
Gordon Bruce (Gov. Appointee)  
Dr. Philip Bossert (RAC Secretary)  
Mark Glick (DBEDT)  
Alan Hilton (RAC Chair)  
Dick Jones (Tenant Representative)  
Nathan Tsao (Tenant Representative)  
Russell Tsuji (DLNR)

### **Board Members Not Attending and Excused**

Noelani Kalipi (Gov. Appointee)  
Doug Adams (County of Hawaii)  
Gregory Kim (HTDC)  
Dr. Vassilis Syrmos (University of Hawaii)

### **Guests/Staff Present**

Greg Barbour (NELHA)  
Laurence Sombardier (NELHA)  
Alexander Leonard (NELHA)  
Bryan Babbitt (NELHA)  
Faustine Edge (NELHA)  
Pam Madden (NELHA)  
Rae Nguyen (NELHA)  
Jennifer Rasmussen (NELHA)  
John Cole (AG)  
Melissa DellaTorre (Pacific Hybreed)  
Roger Doyle (Moana Technologies)  
Gerald Heslinga (Indo-Pacific Sea Farms)  
Dan Jackson (Ocean Era)  
Bill Morton (Pacific Filtration Systems)  
Sherry Hanson (Blue Ocean Mariculture)  
Chris Kiser (Blue Ocean Mariculture)  
Federico Rotman (Blue Ocean Mariculture)  
Skye Waipa (Blue Ocean Barns)  
MT LLC (Member of the Public)  
James Wyban (Consultant)

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- **Item 1. Call to Order.**

The meeting was called to order by Chair Cyd Miyashiro at 10:06 a.m. and asked Executive Director (ED) Barbour for a roll call of Board members and NELHA staff. Reference to Act 220. 8 members present and 4 excused.

- **Item 2. Approval April 9, 2024, NELHA Board of Directors' Meeting Minutes.**

Chair Miyashiro entertained a motion to approve the April 9, 2024, minutes. The motion was made by Director Bruce and seconded by Director Tsuji. Chair Miyashiro asked if there are any objections. Hearing none, the minutes were approved. (8-0).

- **Item 3a. Old Business. Seawater Quality Analysis Report Presentation by Dr. Jim Wyban.**

Chair Miyashiro noted a correction to this agenda item that it is a presentation only. There will be no board action or decision at this time.

ED Barbour explained the change was because the agenda must be filed the Wednesday before the board meeting. NELHA received the draft report the Friday after the agenda was filed. ED Barbour indicated that it was important that Dr. Wyban present his findings and recommendations. ED Barbour continued that this is an important issue, and many tenants and businesses are interested in moving this along rather than waiting to present it to the Board in mid-July. ED Barbour clarified for everyone's understanding this is a draft report submitted last Friday, and that NELHA staff did not have a chance to review it. He also added an important part of the work is that Dr. Wyban would meet with the individual businesses before finalizing the report. ED Barbour again emphasized this is a draft report to provided a status to make sure we are as transparent as possible, and that NELHA understands the importance of the issue.

Dr. Wyban began that he was contracted by NELHA to study the water quality issues in the seawater affecting larval rearing at HOST Park. He will provide an overview of what he learned and his recommendations of how to address these issues.

He continued that HOST Park is a world-renowned aquaculture innovation hub. Animal reproduction is a core function in aquaculture companies at HOST Park. Starting in 2021 several tenants began experiencing significant problems in larval rearing with high mortality rates. This was happening in companies who had successfully reproduced their animals for many years. This problem led to the 2023 formation of the Keahole Point Larval Group (KPLG), a group of 12 companies with animal reproduction as their core function. They began meeting to discuss their larval rearing problems and discovered it was a shared problem across species including shellfish, shrimp, and

finfish. Their discussions and concerns reached NELHA who subsequently hired him as an outside consultant to investigate the problem.

The HOST Park Seawater System is a marvel of engineering and innovation. It is two parallel systems, the deep seawater cold system and the surface seawater (SSW) warm system. Combined the systems are capable of pumping 42,000 gpm which is a huge amount of water. It was designed to accommodate the Ocean Thermal Energy Conversion (OTEC) projects which were the original concept of NELHA. In its early days biofouling was a major concern of the engineers designing the OTEC facility because of its impact on pumping efficiency. Biofouling is referred to repeatedly in NELHA's Environmental Impact Study (EIS) which is on their website. Over time, as OTEC has faded, and aquaculture became the one of the dominant activities at HOST Park

KPLG includes the following 12 companies with animal reproduction at HOST Park: Big Island Abalone, Blue Ocean Mariculture, EcoHarvest, Indo-Pacific Seafarms, Jamestown Seafoods, Marine Biologics, Moana Technologies, Ocean Era, Ocean Rider, Pacific Hybreed, Shrimp Improvement Systems and Taylor Shellfish. Some of NELHA's largest tenants and largest water users are members of this group.

The result of KPLG'S meetings is that there is a serious water quality problem in HOST Park. It happens in larval rearing, and it's affecting oyster, abalone, shrimp, and finfish. The most dramatic effects are in the larval stages particularly in shellfish (oysters) within 0-10 days. It is not affecting algae (micro & macro), and there is no obvious pathogen found to explain these results.

KPLG members are entrepreneurs and innovators who have been working hard to solve this problem. They have used bio-hydrox which is basically a pipe disinfectant. This has somewhat improved results, but there are side effects on animal quality from its use.

Blue Ocean Mariculture's response was the installation of a \$100,000 ozone generator. They did see some improvement in their larval rearing results in 2023. Improvement was enough that some of the KPLG companies have ordered ozone systems and are about to install them.

One of the most interesting observations to Dr. Wyban was with the shellfish at Pacific Hybreed. They had seen a severe impact in their larval rearing using the HOST Park water regardless of the type of treatment they used. Ms. DellaTorre brought water from a Hilo shellfish company, Hawaii Shellfish, to her facility and the larvae did great in that situation. She did a second experiment with water that NELHA provided directly from the ocean and from the Research Campus sump Ms. DellaTorre still had high mortality rates. This shows us there isn't a technical problem or a site-specific problem. The problem really was in the water.

Dr. Wyban presented a chart with Pacific Hybreed's larval survival. At 10 days a precipitous drop in survival takes place. With the application of bio-hydrox at 40 ppm there is a little improvement, but it still isn't a good result.

The next chart presented was Blue Ocean Mariculture larval rearing results from 2017 to 2023. This chart showed that between 2017 to 2020 the results were pretty good. But starting in 2021, survival dropped significantly until the Summer of 2023 when they installed ozone. These bars jumped up quite a bit, which is a good indication that ozone really helps.

In a following chart, Blue Ocean Mariculture shared their broodstock mortality issues which they associate with this seawater problem. There is a precipitous drop in survival in 2022 and somewhat improved in 2023.

Dr. Wyban presented another chart for another dataset that KLPG and NELHA's water lab submitted for water samples from a variety of sources to a company on the mainland, Aqua Biome. Aqua Biome does environmental DNA analysis which filtered the surface seawater to 5 microns. This does take a lot of junk out, but it does not remove vibrio which were quite abundant, with the worst and highest at 40% is vibrio coralliilyticus. ED Barbour asked Dr. Wyban for the sake of the audience what is vibrio? Dr. Wyban answered it is bacteria, potentially pathogenic bacteria. The vibrio coralliilyticus is a known documented severe pathogen for shellfish in particular but also shrimp and fish. There are published results that in 2015, vibrio coralliilyticus has been shown to cause the collapse of the oyster hatchery industry in Korea.

Dr. Wyban continued that from all the things that he learned, observed, and heard his assessment is that there are two likely causes of the water quality problem. One is biofouling inside the pipes that could release chemicals. Biofouling is very common, and the engineering and biology is well documented in literature. The other is vibrio bacteria has become much more prevalent in the system, and this vibrio also releases toxic chemicals in their environment. Dr. Wyban believes it's one or the other or a combination of the two causing this larval rearing problem.

Dr. Wyban presented a map of the Kona Coast and the area around HOST Park. HOST Park is surrounded by the Kona airport with multiple jets taking off and landing. These jets pour huge plumes of exhaust into the air, and the daily trades blow out that jet exhaust over the ocean where it settles. A few miles south of HOST Park is Kohanaiki, a new development and golf course. Golf courses are known to use lots of pesticides so there is a possibility of pesticide contamination. Further down a few miles from Kohanaiki is a Hawai'i County sewage treatment facility which has a reputation for having problems in operations. Because of the massive dilution effect of the Pacific Ocean at Keahole point, and that the water moves rapidly, Dr. Wyban considers all three to be less likely causes.

Dr. Wyban presented next his recommendations for NELHA to consider for HOST Park:

1. Implement a high-volume flushing protocol for the surface seawater system. This is standard operating procedure (SOP) in aquaculture facilities around the world, particularly hatcheries. They flush the water on a regular basis to try and push out any kind of junk that might've been accumulated in the system.
2. Conduct pipeline inspection not on the outside, but on the inside of the pipeline. This is standard operating procedure in pipeline industry, and it's done all over the world by engineering companies. They put a device with video camera and lights, and it swims its way through the pipe.
3. Develop a Pigging System. In pipeline parlance pigging is a device which is engineered to fit in the pipe. The pig is pushed through with water pressure, and it scrubs the inside of the pipe. NELHA has done this once in its history back in the 1990's under the guidance of HOST Park's former Operations Manager, Mr. Jan War. Mr. War told Dr. Wyban NELHA bought an engineered pig from a company in Houston, Texas. They installed it at the Lighthouse pumpstation, pushed it through the system to the Ka`u Pump station.
4. Reduce frequency of surface seawater interruptions. KLPG made this request because with the interruptions, the turn off and restart of the system, they see a lot of debris come into their systems.
5. HOST Park's Water Quality Lab (WQL) recommendations:
  - a) Reinststitute bacteriology testing. This was part of CEMP, but it was discontinued about 15 years ago.
  - b) Identify SSW chemical toxin. This is more challenging with surface seawater because it's like looking for a needle in haystack, but there are labs mostly at universities who have that expertise. Dr. Wyban suggests that NELHA engage with one of those labs to identify the toxin so that it can be monitored for on a regular basis.
6. Consider adapting some of the groundwater wells as a new supply to the hatcheries. In the global hatchery industry, nobody uses open ocean intake. They use wells because the well water is filtered and doesn't have living organisms like open ocean seawater.
7. Nanobubble technology is just emerging to clean pipelines all over the world. They push nanobubbles into the pipeline (in can be just air). Dr. Wyban did not know exactly how it works, but believes it is electrostatic physics.
8. Conduct a Whole Effluent Toxicity (WET) study using marine larvae with the SSW. this is the EPA approved standard for understanding whether water is contaminated or not.

**Dr. Wyban continued with his recommendations to KPLG:**

1. Use probiotics in larval rearing to enhance larval health and resilience.
2. Upgrade hatchery seawater filtration systems.

- a. At a minimum, mechanical filtration 50 um, 10 um, 5 um, 0.5 um,
  - b. Implement carbon filtration,
  - c. Use some combination of UV, chlorination or ozone to disinfect the water,
  - d. Consider ultrafiltration, a new state-of-the-art technology that will take any kind of bacteria out of the water.
3. Upgrade their hatchery water system maintenance and protocol in hatcheries to flushing, acid wash, freshwater rinse, and dry out. In many cases hatchery water supply is parallel with one active and one sitting idle cleaned and dried. Each week they rotate so the pipes are always clean when used.
  4. Strongly recommends replacing all above ground PVC which have been in place six months or longer as sunlight penetrates the PVC and stimulates the growth of filamentous algae and other junk. Once replaced the pipes should be buried and protected from sunlight.
  5. Install hatchery bypass plumbing so when there's water interruption in the HOST PARK system, they can flush their water supply past the hatchery and dump that water.

Dr. Wyban concluded his summary with an outlook for HOST Park.

- HOST Park has a world class reputation in ocean science innovation.
- Solving the current hatchery problem will build on this legacy and further elevate HOST Park's brand.

Chair Miyashiro thanked Dr. Wyban for his summary and commented that though there is no board action on the report, she understands it's top of mind for a lot of tenants, an important issue to a lot of people, and for NELHA. She opened the floor for discussion from tenants, board members and members of the public.

Mr. Heslinga with Indo-Pacific Sea Farms and chairman of KLPG started by asking Dr. Wyban, to put into context and perspective, if it is possible to put a price tag on the problem to date considering things like the loss of productivity, potential company failures and mitigation methods planned or in progress. Mr. Heslinga continued that he did a rough calculation, and he thinks it's into the millions potentially \$3-5 million, and asked if that is reasonable.

Dr. Wyban answered that he hasn't calculated what the financial impact has been, so he cannot answer at this point. Mr. Heslinga thinks it is important to consider and pointed out that Blue Ocean Mariculture is planning mitigation methods including moving to a recirculating system for the hatchery, putting over \$1 million into the research system, and they are planning another \$1.5 million in solar panels for generation. Mr. Heslinga continued that in the last year-and-a-half, NELHA has lost six companies of which four were hatchery companies which had the common denominator which is failure to produce larvae. So those companies are essentially gone as are their expertise and institutional memory. The other aspect is just the lost productivity. KPLG has been meeting now for

about a year-and-a-half, at first monthly for about nine months and then as needed. Every time they do that it takes time effort and energy away from their hatcheries and their customers. Mr. Heslinga believes all of these must be considered and it is no exaggeration to say it is a multi-million-dollar problem. This needs to be emphasized because it's going to cost money to do pipe inspections, pipe pigging, seawater analysis and so forth. Dr. Wyban answered that with the example of Blue Ocean Mariculture switching to a recirculating aquaculture system (RAS), their water use will drop a lot, and if that becomes a trend the economics of the NELHA system as a seawater utility changes considerably. This is serious issue and though he doesn't have a number, the Board needs to understand some of the members of KPLG are NELHA's biggest tenants in terms of water use (Big Island Abalone, Moana Technologies, Blue Ocean Mariculture). Mr. Heslinga commented that it would be interesting to do a poll of the other KPLG members asking for an estimate of losses due to water quality issues. Dr. Wyban agreed it is a good idea and he can get it into the final report because we are in a draft.

Chair Miyashiro asked if we could get the impact to the system as well as impact by tenants? ED Barbour answered yes. Chair Miyashiro asked then if it's possible for that to be reflected across all tenants. ED Barbour responded they will try.

Mr. Rothman with Blue Ocean Mariculture commented he appreciated Dr. Wyban presented their data on broodstock, and he wanted to emphasize that the word larval comes up a lot and that is one of Blue Ocean Mariculture's primary issues but certainly other life stages of all organisms can be affected. It may not cause direct mortality, but it could cause reduced growth, feed conversion ratios (FCRs) or other issues. Dr. Wyban agreed though it is most acute in this larval stage.

Chair Miyashiro asked if there were cost estimates on the recommendations. ED Barbour answered, not yet, and it wasn't part of the scope of work, but we will work on that.

Mr. Roger Doyle a consultant with Moana Technologies commented they have detailed records of the episodic nature of the issue. There was a lot of mortality in 2021 and 2023 causing a genetic bottleneck which is when the broodstock population gets quite small. This results in an increase in inbreeding and a loss of diversity, and neither can be reversed. The raw material is the basis for long term genetic gain. Moana has been selecting for fast growth rate and survival, and they had been making good progress. They are now reputed to have one of the best populations in the world, and they want to maintain its ability for new prices and for improving. Mr. Doyle stated he can put a cost based on present value and future loss of genetic gain for Dr. Wyban or anyone who asks. He further commented what's happening now in terms of water supply can have a large cost.

Mr. Heslinga commented that on behalf of the individuals who work for the companies that went out of business just in the last year-and-a-half and the four because in large part because of hatchery failures. He met with them monthly, saw the stress that they were

under and then eventually saw them leave the island. Mr. Heslinga continued they had to pack up, sell their stuff, and head off to an uncertain life someplace else. His point is there is a human cost when companies struggle and when companies fail, and he wanted to make sure that is not ignored by NELHA, the State or anybody. Mr. Heslinga continued that we're dealing with people's lives and NELHA is selling a product, which is seawater, and it behooves NELHA to know a) what's in the water, b) what's in the pipes, and c) is the water likely to kill marine larvae. Right now, NELHA does not know the answer to those three questions, and he regards it as imperative that NELHA develop capabilities to answer those questions.

ED Barbour asked Mr. Heslinga what four companies he is referring to, because he mentioned six earlier. Mr. Heslinga clarified that six companies had departed in the last year-and-a-half are Kohanakai Aquaculture, Kanaloa Octopus, EcoHarvest, Pacific Hybreed (which is shut down), Dear Ocean and Forever Oceans.

ED Barbour asked Mr. Heslinga if he thought Kanaloa Octopus left because of this larval issue. Mr. Heslinga confirmed that is what he believed, that Kanaloa Octopus Farm the company wasn't successful in raising larvae. He continued that all the companies had the common denominator of being unable to produce larvae on a consistent basis.

ED Barbour didn't think Mr. Heslinga's statement was correct, as Kanaloa Octopus Farm left for other reasons, in particular because NELHA didn't extend their lease. Mr. Heslinga answered from his experience at NELHA as a tenant and as a company owner going back 29.5 years, he hadn't seen this rate of company failures over the three decades. He believes it is accelerating. Mr. Heslinga repeated his earlier comments regarding the six companies he believes were impacted by the water issue to emphasize his point is this is a very serious problem. It has taken them about 16 months to get to this point from when the initial complaints were made by Jamestown Whitney and Blue Ocean Mariculture at the end of 2022 in a meeting involving Mr. Rothman, Director Tsao, and DD Sombardier which resulted with formation of KPLG.

Director Tsao in his capacity as General Manager of Jamestown Point Whitney Ventures added the survival of their hatchery site at NELHA over the past two years has largely been due to the fact that they were able to buy larvae from outside sources, and they hired three people at their mainland hatchery to include oyster production. They were lucky they had that option; without it they would not have survived. He continued that from what he knows from Taylor Shellfish (no representative from Taylor Shellfish attended this meeting) they had a similar situation, and they are core tenant of NELHA. If Taylor's mainland hatcheries weren't operating, they would've been in a heavily distressed situation in Kona. ED Barbour answered Director Tsao that when Mr. Bill Dewey, Taylor Shellfish's Director of Public Affairs was at NELHA, he mentioned that they were having the same problems in their hatcheries on the mainland, and they were having to buy from another source as well. It wasn't just related to their Hawaii hatchery. Director Tsao explained that was a slightly



different issue, their mainland hatcheries go through large water quality changes through the seasons: winter, summer, spring, fall and they have intermittent episodic hatchery failures, not chronic like what we are experiencing.

Director Tsao added this industry is small across the nation and everyone knows each other through aquaculture events. This problem is out there, and it would behoove NELHA and its reputation to get in front of this problem before it potentially gets worse. ED Barbour responded that is why we hired Dr. Wyban and believes he's worked very hard and quickly since he started in January. Director Tsao acknowledge Dr. Wyban's work expressed his appreciation and communication with KLPG.

Director Jones mentioned in last board meeting they can quantify the amount of water used that would be reduced if they switched to RAS. They will share this financial implication if they are forced to go down this road. Director Jones agreed with Mr. Heslinga that we are in a timebound situation, and time is critical. In the past 18 months they have lost two cohorts at a valuation of \$4 to 6 million in revenue each. Plus, they have low survival in several others so they cannot afford to wait until July for a final report release and must make some pretty significant decisions.

Director Hilton, Chair of the Research Advisory Committee (RAC) commented it is obvious this is a critical SSW issue for the tenants using it for their operations. Groundwater wells were mentioned as a possible source for some tenants and there are some options to switch to groundwater or wells. Director Hilton asked if there are current tenants that use deep water either in part or in whole in their aquaculture operations, and if there is any impact to deep water usage that's similar to what's going on with SSW. Ms. DellaTorre answered Pacific Hybreed did an experiment with heating up the deep seawater and it did not work for larval growth. Director Hilton asked if it is because SSW is loaded with good stuff in addition to bad stuff when it comes to being the medium for rearing larvae. Ms. DellaTorre answered they have been measuring all the qualities of the seawater that they can, and they can account for changes in nutrients and algae, but they haven't been able to determine why deep seawater didn't work.

Mr. Heslinga suggested to Dr. Wyban that he adds one more point to the recommendations for HOST Park, to work toward improvement of communications between NELHA's Water Quality Laboratory and KLPG. There are deficiencies in outreach and reporting that have been ongoing now for at least a year. His example is the last Coastal Environmental Report which is produced by the Water Quality Lab came out in December 2023, but the one before that came out in June of 2020, a 3.5-year lapse. NELHA's own policies and procedures manual last updated in 2018 states this report is to be published on an annual basis, and the data generated in the Water Quality Laboratory are to be made available to interested parties. ED Barbour commented this is irrelevant to the water quality report. Mr. Heslinga disagreed and believed it is relevant because there is discussion about measurement of effluent that's going into the groundwater from the various companies.

ED Barbour again disagreed with Mr. Heslinga's repeated comments about the reasons companies left NELHA in the past year and described that Mr. Heslinga's statements are his opinions. Mr. Heslinga agreed that he is present today to express his opinions.

Chair Miyashiro stated she would like the Board to understand what are near-, mid- or longer term recommendations. Also, ongoing maintenance costs and figures of what are one-time recommendations and what are ongoing actions. Dr. Wyban answered that flushing, pigging and bacteriology would become ongoing activities which would have cost associate budget implications.

Chair Miyashiro asked if with the mitigation recommendations especially pigging, are there any environmental concerns or potential roadblocks that would have to be addressed before the mitigations were implemented. ED Barbour answered that we would have to get a permit to dispose of water in the ocean so that's a long-term recommendation.

Chair Miyashiro asked from a process standpoint what are the next steps for the report.

ED Barbour answered that NELHA will review the report and Dr. Wyban will meet with the businesses for their input. He acknowledged Director Jones' indication that July is too late. Dr. Wyban offered to have a revision completed in a few days after he collects the edits and comments from NELHA and the businesses. Chair Miyashiro stated, if needed, they can call for an emergency meeting of the Board to action the report. Chair Miyashiro confirmed the Board understands the urgency and asked Dr. Wyban to include with the final report the timing and prioritization of the recommendations.

- **Item 4a. New Business. Election of NELHA Board of Directors' Officers.**

Chair Miyashiro introduced the next agenda item, The Election of NELHA Board of Directors for the fiscal year 2025 beginning July 1, 2024, thru June 30, 2025. Chair Miyashiro nominated Director Noelani Kalipi for Chair and herself as Vice Chair. She explained typically the Chair and Vice Chair are Governor appointees. Director Kalipi is not present, but Chair Miyashiro did speak with her, and she is supportive of the nomination. Given Director Bruce is in the first year of his first term, Chair Miyashiro is willing to serve as Vice Chair if it is the pleasure of this board and referenced that she terms out in 2026. Director Kalipi terms out in year 2028 and believes Director Bruce terms out for his first term 2027 with a potential second term.

Chair Miyashiro asked if there are any other nominees for the positions of Chair and Vice Chair. Hearing none she asked for any discussion or comments from the board or the public.

Director Bossert moved to approve the officers, and Director Tsuji seconded. There were no objections, and the NELHA Board of Directors Officers for the fiscal year 2025 beginning July 1, 2024, to June 30, 2025 was approved (8-0).

Chair Miyashiro thanked the Board Directors with additional appreciation to Director Kalipi for willingly volunteering to serve as Chair.

- **Item 5. Financial Report: Approval and Decision Making.**

Chair Miyashiro asked ED Barbour to present this agenda item.

ED Barbour presented an overview for July 2023 through April 2024.

Revenue

- Total revenue was \$4.3 million for the ten months of the 2024 fiscal year, and this represents a decrease of \$215,000 or 5 percent for the same period last year. Of notice for FY24 are the following:
  - Overall seawater system revenue is down by \$220,000 or 15 percent. This is mainly due to a 15 percent drop (\$80,000) in surface seawater revenue combined with lower electricity rates decreasing the electrical surcharge by \$110,000 or 35 percent over the same period last year.
  - Overall lease rent is up by \$65,000 (3 percent) for fiscal year 2024. More specifically, this is due to an increase in Land Base Rent up approximately \$75,000 or 5 percent and Research Campus office rental revenue was flat. Outside research campus rental was down by \$15,000 or 7 percent.
  - Labor services are up a healthy \$50,000 or 95% over the same period last year.
  - Reimbursements for electric are down by \$115,000 or 25 percent and due to lower electrical costs, which peaked a year ago. Freshwater revenue includes a double payment and is up \$75,000 or 65 percent and will eventually even out.
  - Interest Income/Investments is down by \$65,000 due to the income distribution from the venture fund last year.

ED Barbour asked if there were any comments or questions. Hearing none he continued to expenditures.

Expenditures

- Total for the first ten months of fiscal year 2024 were approximately \$4.2M or down by \$90,000 or 2 percent. This decrease is mainly due the cost of electricity which peaked last summer. We continue to monitor expenditures very closely. Of note are the following:
  - Seawater system expenditures were down by \$500,000 with lower surcharge electrical rate as well as the new microgrid coming online last July. In addition, parts for R&M and services on a fee were lower.
  - Tenant utilities are down slightly flat with a decrease in of \$15,000 due in electrical

reimbursement offset by a like increase in freshwater reimbursements.

- NELHA utilities are up by \$85,000 with accounting change showing costs of PPA only which will align with power consumption after power meter is corrected.
- HOST Park Environmental Monitoring increased by 30 percent with the encumbrance of the annual biota monitoring MOU earlier than last year.
- Beach Park Maintenance increased by \$15,000 with the renovation of the bathrooms and opening for public use.
- Administrative expenses are up by \$230,000 (20%) due to shifting of personnel, insurance premium bill increase of \$70,000, economic impact survey and purchase of new microcomputers.

#### Special Fund and Arrears

- Special fund balance is \$1,065,000 and up by \$55,000 (8 percent) in the past ten months.
- As of April 30, 2024, the arrears are very low and totaled approximately \$25,000 of which Apparent accounts for 70 percent.

ED Barbour closed his Financial Report. Chair Miyashiro opened for discussion and asked if there were any questions or comments from the board and public. Hearing none. Director Hilton moved to approve the Financial Report, and Director Tsuji seconded, and the Financial Report was approved (8-0).

#### **Director Bossert exited the meeting at 11:19 a.m.**

- **Item 6. Executive Director's Informational Status Report on ongoing projects including: new leases; seawater system maintenance; offshore deep seawater pipe removal planning and design; regional seawater air conditioning planning and design; new potable water supply update; aquaculture accelerator and investment fund initiative; design of expansion of research campus and visitor center; renewable distributed energy resources initiative for microgrid; and, solar desalination.\***

Chair Miyashiro asked ED Barbour to present this agenda item.

Sea Dragon, the seawater to jet fuel project, will be here in the next couple of weeks. They are working on their environmental assessment.

The County has received a significant amount of funding, \$28 million, for a hydrogen maintenance, fueling, storage, production facility which will serve public transportation in

West Hawaii. We have been discussing with them a possible location up near Koyo USA.

Regarding the Microgrid project at the 55" pumpstation we are still awaiting approval from Underwriters Laboratory regarding the container housing the batteries. When we obtain that approval, expected shortly, we will submit for final approval.

Seawater rate analysis has been delayed pending the data from the 55" pumpstation microgrid.

Onshore EIS, we are in discussions with a potential contractor, and we anticipate that the contract will be fully executed next month.

- **Item 8. Announcements.**

Chair Miyashiro noted that our next meeting is scheduled for July 16, 2024, at 10:00 a.m.

- **Item 9. Adjournment.**

Chair Miyashiro adjourned the meeting at 11:24 a.m.

###