

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

May 22, 2026

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

SUBJECT: Request Approval to Add Funding and Extend Through September 30, 2027 an Existing Federally Funded Project Agreement between the Department of Land and Natural Resources (DLNR) and the Research Corporation of the University of Hawaii (RCUH) for the Division of Aquatic Resources (DAR) Research Project Entitled "Limu Aquaculture and Bio-Banking."

EXECUTIVE SUMMARY

Approval is sought for Amendment No. 1 to an existing Project Agreement between the DLNR and RCUH for a research project entitled "Limu Aquaculture and Bio-Banking." Amendment No. 1 will extend the Project Agreement through September 30, 2027 and add funding in the amount of \$102,000.00 from the National Oceanic and Atmospheric Administration (NOAA), Pacific Islands Region Office (PIRO) Congressional Earmark. Continuation of the DLNR-RCUH Project Agreement allows DAR to secure assistance from RCUH to meet project goals and objectives in a timely way.

Project Objectives

- 1) Begin modifying existing DAR Ānuenuē Fisheries Research Center (AFRC; O'ahu, Hawai'i – see attached map) tank systems to establish an indoor bio-secure research laboratory (e.g., control the environmental conditions through temperature control, filtration, UV seawater sterilization, light levels, etc.) as well as an outdoor tank system for larger scale experimentation and scalable production.
- 2) Collect limu from the field and/or gather limu from existing production facilities (Statewide if needed). Identify and document the obtained limu, initiate biosecurity protocols/quarantine process, clean and prepare limu for experiments, vegetative propagation in bioreactor, and/or flask/well-plate culture. Study limu lifecycles and refine optimal growth environments.
- 3) Collaborate with and support community partners, including limu practitioners, loko i'a (fishpond) practitioners, restorative aquaculture professionals and researchers, and community members across Hawai'i. Expand network, participate and/or lead outreach events, and enhance knowledge exchange.

Duration

The existing Project Agreement is scheduled to run from October 1, 2025 through September 30, 2026. This Amendment No. 1 will extend the project for one year from October 1, 2026 through September 30, 2027.

Funding Source

Federal funds from NOAA-PIRO will support Amendment No. 1 in the total amount of \$102,000.00.

HRS Chapter 343 - Compliance with Environmental Law

Amendment No. 1 will involve the use of state lands (submerged lands zoned in the Conservation District, Resource subzone) and use of state funds. The Department has determined that the actions to be conducted under the funding and project will have little or no significant effect on the environment and are exempt from the preparation of an environmental assessment. See the Division's proposed Determination of Exemption from the preparation of an environmental assessment (attached).

REMARKS

The mission of the Division of Aquatic Resources (DAR) is to work with the people of Hawai'i to manage, conserve, and restore the state's unique aquatic resources and ecosystems for current and future generations. Limu (edible seaweed or marine algae) has been recognized by the State of Hawai'i as an environmentally and culturally significant resource. Aquatic Biologists at DAR proposed a three-year project to improve native and endemic limu species through intensive research and husbandry, which could lead to limu stock for future out-planting and the development of a long-term limu biobank (a repository of living spore and tissue cultures). This limu program aims to support traditional and cultural practices [e.g., production for 'ai (food), lei (adornment), ho'okupu (gift or offering), and other ceremonial purposes], enhance food security (e.g., produce edible limu and/or out-plant limu that could be harvested later), and strengthen resource management efforts (e.g., removing invasive algae and out-planting native limu) across the islands.

Approval of Amendment No. 1 of the Project Agreement is being requested concurrently from the Governor through the Department of Budget and Finance. Also, the Project Agreement Amendment is being prepared for submission to the Attorney General's Office for preliminary approval as to form and content. DAR is aware implementation of this Project Agreement Amendment is dependent upon receipt of all required approvals as well as the availability of funds and that funding restrictions may occur at any time.

RECOMMENDATIONS

Based on the above discussion, the Division of Aquatic Resources requests:

1. That the Board, based on the attached proposed Declaration of Exemption prepared after consultation with and on advice of those having similar expertise in exemption determinations for the proposed actions under the Project Agreement

Amendment, declare that the actions which are anticipated to be undertaken under this Project Agreement Amendment will have little or no significant effect on the environment and are therefore exempt from the preparation of an environmental assessment;

2. That the Board authorize the Chairperson to approve and execute the Division of Aquatic Resources Project Agreement Amendment No. 1 entitled "Limu Aquaculture and Bio-Banking," with the Research Corporation of the University of Hawaii, subject to approval as to form and content by the Department of the Attorney General; and
3. That the Board delegate to the Chairperson the authority to:
 - a. Approve and execute all future Division of Aquatic Resources Project Agreements and forthcoming amendments with the Research Corporation of the University of Hawaii, subject to approval as to form and content by the Department of the Attorney General; and
 - b. When appropriate, declare that actions that are anticipated to be undertaken under these Project Agreements will have little or no significant effect on the environment and are therefore exempt from the preparation of an environmental assessment.

Respectfully submitted,



BRIAN J. NEILSON
Administrator

APPROVED FOR SUBMITTAL:



RYAN K.P. KANAKA'OLE
Acting Chairperson

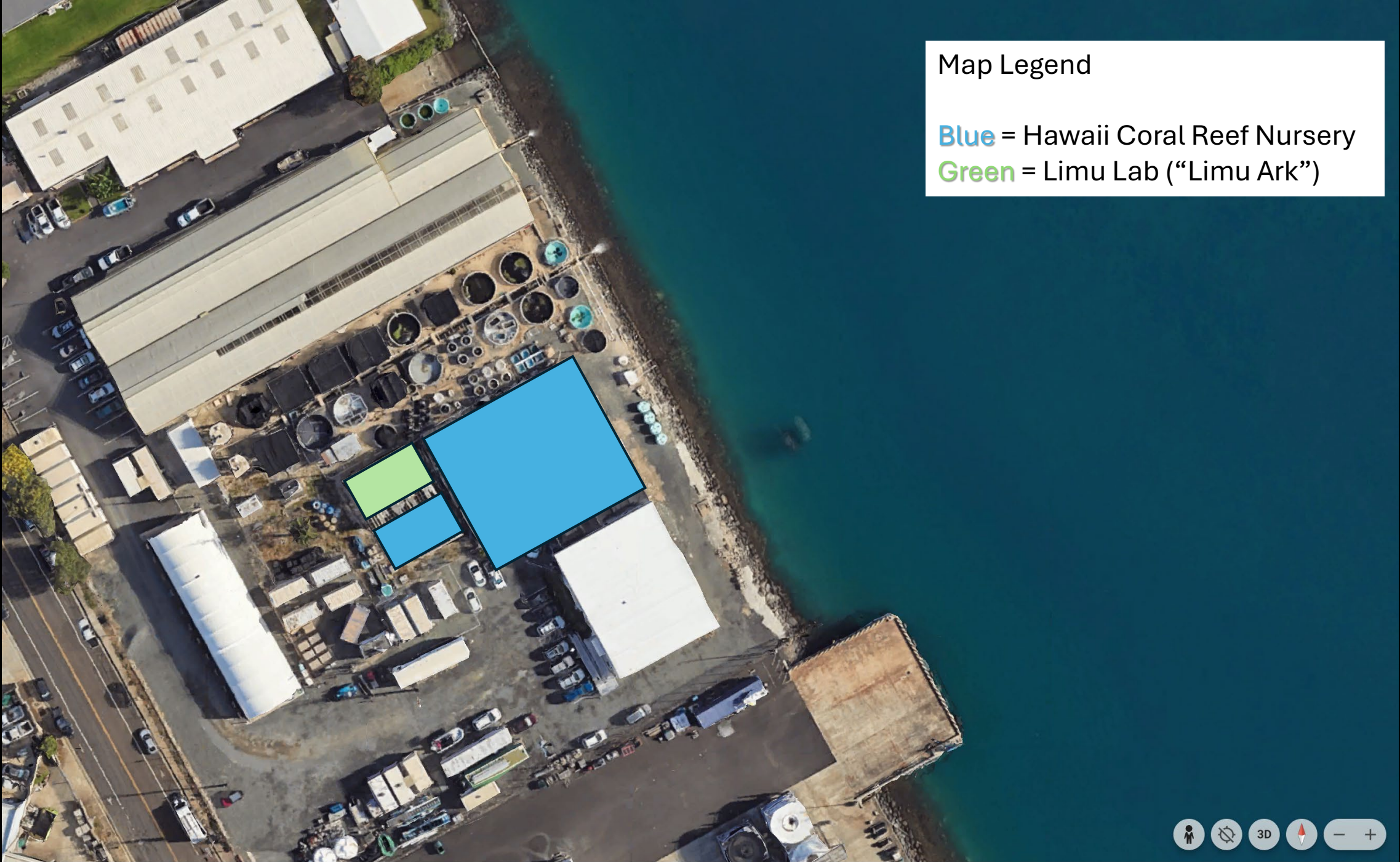
Attachment

Map of DAR's Ānuenuue Fisheries Research Center Limu Project Site
Declaration of Exemption – Limu Aquaculture and Bio-Banking

Map Legend

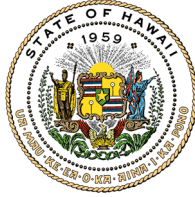
Blue = Hawaii Coral Reef Nursery

Green = Limu Lab (“Limu Ark”)



JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

P.O. BOX 621
HONOLULU, HAWAII 96809

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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

May 22, 2026

TO: Division of Aquatic Resources File

THROUGH: Ryan K. P. Kanaka'ole, Acting Chairperson

FROM: Brian J. Neilson, Administrator
Division of Aquatic Resources

Handwritten signature of Ryan K. P. Kanaka'ole.

Handwritten signature of Brian J. Neilson.

SUBJECT: Declaration of Exemption from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS, and Chapter 11-200.1, HAR, for a Request for Approval to Add Funding and Extend Through September 30, 2027 an Existing Federally Funded Project Agreement between the Department of Land and Natural Resources (DLNR) and the Research Corporation of the University of Hawaii (RCUH) for the Division of Aquatic Resources (DAR) Research Project Entitled "Limu Aquaculture and Bio-Banking."

The following Project Agreement activities are found to be exempted from the preparation of an environmental assessment under the authority of Chapter 343, Hawaii Revised Statutes (HRS), and Chapter 11-200.1, Hawaii Administrative Rules (HAR):

Project Title: Limu Aquaculture and Bio-Banking

Project Description:

The mission of the Division of Aquatic Resources (DAR) is to work with the people of Hawai'i to manage, conserve, and restore the state's unique aquatic resources and ecosystems for current and future generations. Limu (edible seaweed or marine algae) has been recognized by the State of Hawai'i as an environmentally and culturally significant resource. Aquatic Biologists at DAR proposed a three-year project to improve native and endemic limu species through intensive research and husbandry, which could lead to limu stock for future out-planting and the development of a long-term limu biobank (a repository of living spore and tissue cultures). This limu program aims to support traditional and cultural practices [e.g., production for 'ai (food), lei (adornment), ho'okupu (gift or offering), and other ceremonial purposes], enhance food security (e.g., produce edible limu and/or out-plant limu that could be harvested later), and strengthen resource management efforts (e.g., removing invasive algae and out-planting native limu) across the islands.

Key project objectives during the grant period include the following:

- 1) Begin modifying existing DAR Ānuenuue Fisheries Research Center (AFRC; O‘ahu, Hawai‘i) tank systems to establish an indoor bio-secure research laboratory (e.g., control the environmental conditions through temperature control, filtration, UV seawater sterilization, light levels, etc.) as well as an outdoor tank system for larger scale experimentation and scalable production.
- 2) Collect limu from the field and/or gather limu from existing production facilities (Statewide if needed). Identify and document the obtained limu, initiate biosecurity protocols/quarantine process, clean and prepare limu for experiments, vegetative propagation in bioreactor, and/or flask/well-plate culture. Study limu lifecycles and refine optimal growth environments.
- 3) Collaborate with and support community partners, including limu practitioners, loko i‘a (fishpond) practitioners, restorative aquaculture professionals and researchers, and community members across Hawai‘i. Expand network, participate and/or lead outreach events, and enhance knowledge exchange.

Consulted parties: National Oceanic and Atmospheric Administration (NOAA)

Exemption Determination: After reviewing §11-200.1-15, HAR, including the criteria used to determine significance under §§11-200.1-13, HAR, DLNR has concluded that the activities under this Project Agreement would have no significant effect on the environment and that approval of the Project Agreement is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this Project Agreement have been evaluated as a single action. Since this research Project Agreement involves activities that are precedent to a later planned activity, i.e., the modification of existing tank systems for limu research coupled with the collection and monitoring of limu involved in the research, the categorical exemption determination here will treat all planned activities as a single action under §11-200.1-10, HAR.
2. The General Exemption Type #5 for Basic Data Collection and Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. §11-200.1-15(c)(5), HAR, exempts the class of actions that involve “basic data collection, research, experimental management, and resource and infrastructure testing and evaluation activities that do not result in a serious or major disturbance to an environmental resource.” This exemption class has been interpreted to include data collection, research, and resource evaluation activities related to Hawaii, Maui, Molokai, Lanai, Oahu, and Kauai marine resources, such as those being proposed.

The proposed activities here appear to fall squarely under the exemption class identified under §11-200.1-15(c)(5), HAR, and as described under the revised 2020 DLNR Exemption List (Concurred on by the Environmental Council on November 10, 2020) under the General Exemption Type #5 (Part 1), items #2 and #13, respectively, which includes “non-destructive data collection and inventory, including field, aerial and satellite

surveying and mapping” and “research that the Department declares is designed specifically to monitor, conserve, or enhance native species or native species' habitat”.¹

3. The General Exemption Type #1 for Operations, Repairs, or Maintenance of Existing Facilities or Structures Appears to Apply. § 11-200.1-15(c)(3), HAR, exempts the class of actions that involve “construction and location of single new, small facilities or structures and the alteration and modification of the facilities or structures and installation of new, small equipment and facilities and the modification of the equipment or facilities....” This exemption class has been interpreted to include the construction and replacement of holding tanks for the Limu Aquaculture and Bio-Banking project.

The proposed activities here appear to fall squarely under the exemption class identified under § 11-200.1-15(c)(3), HAR, and as described under the revised 2020 DLNR Exemption List (Concurred on by the Environmental Council on November 10, 2020) under General Exemption Type 1 (Part 1), items #8, #10, #12, #13, and #18 respectively, which include “operation, repair and maintenance of existing nurseries, arboreta, and captive propagation facilities; repair and maintenance of existing bollards, walls, gates, fences, lighting, and other similar items necessary for the security or continued operation of a facility or structure; repair and maintenance of existing utilities and drainage systems; and repair and maintenance of existing water tanks, water catchment basins, water units, pumps and controls, pipes, channels, dikes, and moats.”²

4. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not Be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if “the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” §11-200.1-15(d), HAR. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. §11-200.1-13, HAR.

Significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that any limu collected from a potentially sensitive area will not significantly affect the environment. All activities will be conducted in a manner that will not diminish the quality of marine resources or their ecological integrity, and the proposed activities will not have any indirect, secondary, cultural, or cumulative effects.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area located at AFRC are anticipated, the categorical exemptions identified above should remain applicable.

¹ Exemption list for DLNR, approved on November 10, 2020. See Office of Environmental Quality Control (OEQC) website: http://oeqc2.doh.hawaii.gov/Agency_Exemption_Lists/State-Department-of-Land-and-Natural-Resources-Exemption-List-2020-11-10.pdf

4. Overall Impacts will Probably have No Significant Effect on the Environment. Any foreseeable impacts from the proposed activity will be further mitigated by general and specific conditions attached to the Project Agreement. Specifically, all research activities covered by this Project Agreement will be carried out with strict safeguards for the natural, historic, and cultural resources, other applicable laws and agency policies, and standard operating procedures.

Conclusion. Upon consideration of the Project Agreement Amendment to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS, and Chapter 11-200.1 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.