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

April 25, 2025

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

SUBJECT: Request Approval to Add Funding and Extend Through September 30, 2026 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 "Investigation of Estuarine Habitats."

EXECUTIVE SUMMARY

Approval is sought for Amendment No. 7 to Contract No. 67169 to add funding to the existing "Investigation of Estuarine Habitats" Project Agreement to be conducted with RCUH for an extension through September 30, 2026 in the approximate amount of $848,000.00.

Project Objectives

1. Monitor and identify trends in juvenile fish recruitment, population dynamics and growth in 21 estuaries throughout the Hawaiian Islands by: 1) sampling fish quarterly; 2) measuring underlying factors (e.g., freshwater inflow, invasive species) that may explain these trends; and 3) analyzing and interpreting data for comparison spatially and temporally to inform and improve management practices for estuaries as juvenile fish habitat.
2. Measure and compare habitat quality of estuaries as juvenile habitat using age, reproduction, and growth of population dynamics by sampling one species (Uouoa, *Neomyxus leuciscus*, sharp-nosed mullet) in two sites (Oahu and Hawaii Island) by using length-frequency analysis, gonad maturity (histology), and otoliths (ear bones) to read daily growth marks, and analyzing and interpreting data for comparison of life history traits between sites and estuary types to inform and improve management practices for estuaries as juvenile fish habitat.
3. Monitor how juvenile fishes respond to restored estuaries by sampling fish using environmental DNA (before and after restoration). Analyze and interpret data for comparison with unaltered sites (reference sites) to inform and improve management practices.
4. Using citizen science, fishers will collaborate with DAR Estuaries to collect fin clips from over 200 Hawaiian fish species. Fin clips will be sequenced, and those genetic sequences will be used to expand a publicly available DNA database, which is an essential reference for environmental DNA studies.
5. Work with contracted consultant Rapid Tek Solutions to maintain and improve DAR's centralized, geo-referenced database platform for management, access and security of aquatic ecosystems, species, fish tagging, and recreational

fisheries data for one year; train new staff on usage of DAR database; fund database upgrades, software license fees for staff, and data storage costs; provide database and GIS support; and provide grant coordination/administration and budgetary oversight.

Duration

The existing Project Agreement (Contract No. 67169, Amendment No. 6) is scheduled to run through September 30, 2025. This Amendment No. 7 will extend the project for one year from October 1, 2025 through September 30, 2026.

Funding Source

Funding to support Amendment No. 7 of this Project Agreement will be Federal funds in the amount of $848,000.00 from the U.S. Fish and Wildlife Service, Sport Fish Restoration Program ($830,000.00) and the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) Congressional Earmark ($18,000.00).

HRS Chapter 343 - Compliance with Environmental Law

Contract No. 67169, Amendment No. 7 will continue to 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 time extension for this ongoing 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

There is a need for DAR to manage and conserve sport fish populations by improving management of juvenile fish habitats within Hawaiian estuaries (*muliwai*), as well as meet the expectations of the islands' fishing community now and in the future. Estuaries play critical roles in the management and conservation of many sport fishes because this ecosystem functions as a nursery habitat. The presence of large populations of juvenile fishes in estuaries is driven by two key factors: (1) estuaries are highly productive ecosystems that provide various and abundant food sources needed for rapid growth; and (2) estuaries offer a diversity of habitat types that provide refuges from predators, thus improving survival of juveniles to reach the adult stage.

Despite the view that estuaries function as fish nursery habitats, little is understood about how estuaries support coastal fish production in Hawaii. This project continues to examine the role of estuaries in providing functional nursery habitat for coastal fish species. Resultant multiyear studies of juvenile fish habitats in a broad range of estuary types throughout the Hawaiian Islands will be produced with the goal to inform and improve Hawaii's management of this ecosystem and its resources. Findings will characterize species diversity, abundance, biomass, and size composition of both native and introduced fish species in Hawaii's estuaries.

Approval to amend and extend the existing Project Agreement (Contract No. 67169) is being requested concurrently from the Governor, through the Department of Budget and Finance. Also, Project Agreement Amendment No. 7 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 amended Project Agreement 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. 7 to Contract No. 67169 entitled "Investigation of Estuarine Habitats," with the Research Corporation of the University of Hawaii, subject to approval as to form and content by the Department of the Attorney General.

Respectfully submitted,

BRIAN J. NEILSON
Administrator

APPROVED FOR SUBMITTAL:

DAWN N.S. CHANG
Chairperson

Attachment

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

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

STATE OF HAWAIʻI | KA MOKUʻĀINA ʻO HAWAIʻI
DEPARTMENT OF LAND AND NATURAL RESOURCES
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FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

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BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

April 25, 2025

TO: Division of Aquatic Resources File

THROUGH: Dawn N. S. Chang, Chairperson

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

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 to Add Funding and Extend Through September 30, 2026 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 "Investigation of Estuarine Habitats."

The following Project Agreement activities are found to be exempted from 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: Investigation of Estuarine Habitats

Project Description: There is a need for DAR to manage and conserve sport fish populations by improving management of juvenile fish habitats within Hawaiian estuaries (*muliwai*) as well as meet expectations of the islands' fishing community now and in the future. Despite the view that estuaries function as fish nursery habitats, little is understood about how estuaries support coastal fish production in Hawaii. This project continues to examine the role of estuaries in providing functional nursery habitat for coastal fish species. Multiyear studies of juvenile fish habitats in a broad range of estuary types throughout the Hawaiian Islands will be produced with the goal to inform and improve Hawaii's management of this ecosystem and its resources. Findings will characterize species diversity, abundance, biomass, and size composition of both native and introduced fish species occurring in Hawaii's estuaries.

Key project objectives during the grant period include the following:

1) Monitor and identify trends in juvenile fish recruitment, population dynamics and growth in 21 estuaries throughout the Hawaiian Islands by: 1) sampling fish quarterly; 2) measuring underlying factors (e.g., freshwater inflow, invasive species) that may explain these trends; and 3) analyzing and interpreting data for comparison spatially and temporally to inform and improve management practices for estuaries as juvenile fish habitat.
2) Measure and compare habitat quality of estuaries as juvenile habitat using age, reproduction, and growth of population dynamics by sampling one species (Uouoa, *Neomyxus leuciscus*, sharp-nosed mullet) in two sites (Oahu and Hawaii Island) by using length-frequency analysis, gonad maturity (histology), and otoliths (ear bones) to read daily growth marks, and analyzing and interpreting data for comparison of life history traits between sites and estuary types to inform and improve management practices for estuaries as juvenile fish habitat.
3) Monitor how juvenile fishes respond to restored estuaries by sampling fish using environmental DNA (before and after restoration). Analyze and interpret data for comparison with unaltered sites (reference sites) to inform and improve management practices.
4) Using citizen science, fishers will collaborate with DAR Estuaries to collect fin clips from over 200 Hawaiian fish species. Fin clips will be sequenced, and those genetic sequences will be used to expand a publicly available DNA database, which is an essential reference for environmental DNA studies.
5) Work with contracted consultant Rapid Tek Solutions to maintain and improve DAR's centralized, geo-referenced database platform for management, access and security of aquatic ecosystems, species, fish tagging, and recreational fisheries data for one year; train new staff on usage of DAR database; fund database upgrades, software license fees for staff, and data storage costs; provide database and GIS support; and provide grant coordination/administration and budgetary oversight.

The project biologists implement the following measures during sampling to minimize cumulative impact:

<u>Sampling</u>
All nets used to sample fishes are always attended by biologists. Fish removed from sampling nets are placed in buckets with aerated water, identified, measured, and returned to aerated buckets. Typically, each fish is handled for less than 10 seconds; this is the time required to identify and measure the length of each specimen. Depending on the number of fish sampled in a net, as well as the size of the fish sampled, multiple buckets will be utilized to divide a sample, thereby minimizing stress from crowding and poor water quality. Also, for sites where large numbers of fish are typically sampled, an extra fisheries technician will join the sampling team to reduce stress on the fish and return them to the estuary in a timely manner. The number of fish sampled varies greatly by site and by season.

<u>Baited Remote Underwater Video (BRUV)</u>
Baited Remote Underwater Video is one of the additional methods utilized to monitor species assemblage, numbers, and size and can also be used to monitor habitat use. The bait used

in the BRUV (a mixture of canned mackerel mixed with bread) is designed to be dispersed in the water column that travels about 20 meters down current, thereby minimizing the duration and area in which sampling locations are concentrated with bait.

Consulted parties: U.S. Fish & Wildlife Service, Sport Fish Restoration Program

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 Project Agreement involves activities that are precedent to a later planned activity, i.e., the monitoring and collection of data and 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 the data collection, research and resource evaluation activities related to estuarine habitats, 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 #1, #2, #13, #14 and #15, respectively, which includes "conduct surveys or collect data on existing environmental conditions", "non-destructive data collection and inventory, including field, aerial and satellite surveying and mapping", "research that the Department declares is designed specifically to monitor, conserve, or enhance native species or native species' habitat", "…placing remote monitoring devices (to determine animal movement), cameras, equipment and feeders", and "aquatic life surveys, inventory studies, new transect lines, photographing, recording, sampling, collection, culture, and captive propagation".[1]

   As discussed below, no significant disturbance to any environmental resource is anticipated. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

[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

3. 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 the potentially sensitive environment of the project area will not be significantly affected. 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 are anticipated, the categorical exemptions identified above should remain applicable.

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 No. 7 of Contract No. 67169 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.