

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

March 9, 2018

Board of Land  
and Natural Resources  
Honolulu, Hawaii

**SUBJECT:** Request Approval for a FY19 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.”

Submitted herewith for your consideration is a request to enter into a new Project Agreement between the DLNR and RCUH. The Project Agreement entitled “Investigation of Estuarine Habitats” is scheduled to run from July 1, 2018 through June 30, 2019. The Project Agreement provides \$596,500 in Federal funds from U.S. Fish and Wildlife Service Sport Fish Restoration Program. The State match component is comprised of funds from DAR in-kind match, and community-based volunteer services as available. The DLNR/RCUH Project Agreement allows DAR to secure assistance from RCUH to meet project goals and objectives in a timely way.

There is a need for DAR to manage and conserve sport fish populations by improving management of juvenile fish habitats within Hawaiian estuaries, 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 these ecosystems function as nursery habitats. 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 are comprised of a diversity of habitat types that provide refuges from predators thus improving survival of species to adult.

Despite the view that estuaries function as fish nursery habitats, very little is understood about the role and dynamics of this habitat to coastal fish production in Hawaii. This project continues to examine the role of estuaries (*muliwai*) in providing functional nursery habitat for coastal fish species. A resultant comprehensive 5-year study 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 the seasonality, species, and size composition of both native and introduced fish species in Hawaii’s estuaries.

Key project objectives in FY19 include the following: 1) monitor and identify trends in juvenile fish recruitment, population dynamics and growth in estuaries throughout the Hawaii Islands by sampling fish quarterly, measuring underlying factors (i.e., freshwater inflow, invasive species) that may explain these trends, and analyzing data for comparison among years; 2) measure and

compare habitat quality of estuaries as juvenile habitat using age and growth of population dynamics by using length-frequency analysis and otoliths (ear bones) to read daily growth marks; and 3) monitor how juvenile fishes respond to restored or reconstructed estuarine marshes as invasive species (mangroves and grasses) are replaced with native plants, such as sedges, by sampling fish quarterly, measuring changes in aquatic plant cover and water quality quarterly; and analyzing data to understand changes over time. In addition, the project includes updating the inventory of Hawaii's estuaries using a contemporary classification scheme; expanding the DAR database, including making improvements to procedures for data entry and for accessibility of archived data; providing GIS support; grant coordination/administration and budgetary oversight.

Approval to enter into the Project Agreement is being requested concurrently from the Governor, through the Department of Budget and Finance. Also, the Project Agreement is being prepared for submission to the Attorney General's Office for preliminary approval as to form. DAR is aware implementation of this 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.

#### Chapter 343 - Compliance with Environmental Law:

The Project Agreement involves 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 undertaken by this project will have little or no significant effect on the environment and are exempt from the preparation of an environmental assessment. See Agency's Determination of Exemption (attached) from preparation of an environmental assessment.

#### RECOMMENDATION:

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

1. That the Board, based on the attached proposed declaration of exemption prepared by the department after consultation with and advice of those having jurisdiction and expertise for the proposed actions under the Project Agreement, declare that the actions which are anticipated to be undertaken under this Project Agreement will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.
2. Upon the finding and adoption of the department's analysis by the Board, that the Board delegate and authorize the Chairperson to sign the declaration of exemption for purposes of recordkeeping requirements of Chapter 343, HRS, and Chapter 11-200, HAR.
3. Subject to necessary approvals as indicated above, that the Board authorizes the Chairperson to negotiate and approve the Division of Aquatic Resources Project Agreement entitled "Investigation of Estuarine Habitats," with the Research Corporation of the University of Hawaii.


4. That the Board further authorize the Chairperson to amend the aforesaid Project Agreement, including any extensions, as necessary.

Respectfully submitted,



BRUCE S. ANDERSON, Ph.D.  
Administrator

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE  
Chairperson

Attachment