



Staff Recommendation
September 17, 2020

Item 5

Consideration of Authorization to Disburse Funds to Develop a Statewide Aquaculture Action Plan

Paige Berube, Program Manager

RECOMMENDED ACTION: Authorization to disburse up to \$350,000 to the National Center for Ecological Synthesis and Analysis (NCEAS), based at the University of California Santa Barbara, to develop a statewide aquaculture action plan including a robust public engagement process in alignment with OPC’s Strategic Plan Target 4.2.1.

LOCATION: Statewide

STRATEGIC PLAN GOAL, OBJECTIVE & TARGET: Goal 4: Support Ocean Health Through a Sustainable Blue Economy; Objective 4.2: Promote Sustainable Aquaculture; Target 4.2.1

EXHIBITS:

Exhibit A: Letter(s) of Support

FINDINGS AND RESOLUTION:

Staff recommends that the Ocean Protection Council (OPC) adopt the following findings: “Based on the accompanying staff report and attached exhibit, OPC hereby finds that:

- 1) The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act;
- 2) The proposed project is consistent with OPC’s Proposition 84 grant program and Environmental License Plate Funding guidelines (Interim Standards and Protocols, August 2013); and
- 3) The proposed project is not a ‘legal project’ that triggers the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section, section 15378.”

Staff further recommends that OPC adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

“OPC hereby approves the disbursement of up to \$350,000 to the National Center for Ecological Synthesis and Analysis to develop a statewide aquaculture action plan

including a robust public engagement process in alignment with OPC’s Strategic Plan Target 4.2.1.

This authorization is subject to the condition that prior to disbursement of funds, the National Center for Ecological Synthesis and Analysis, based at the University of California Santa Barbara, shall submit for the review and approval of the Executive Director of the OPC a detailed work plan, schedule, staff requirements, budget, and the names of any contractors intended to be used to complete the projects, as well as discrete deliverables that can be produced in intervals to ensure the project is on target for successful completion. The project will be developed under a shared understanding of process, management and delivery.”

EXECUTIVE SUMMARY:

This project will develop a statewide aquaculture action plan that creates a comprehensive, consistent and science-based framework and policy for marine aquaculture in California. Consistent with Target 4.2.1 of the Strategic Plan,¹ the action plan will focus on marine macroalgae and shellfish in state marine waters and land-based/recirculating tank operations of marine macroalgae, shellfish, and finfish, including integrated multitrophic aquaculture.^{2,3} The action plan will: provide guidance for minimizing environmental impacts to habitat, biodiversity, and wild fisheries; evaluate socioeconomic considerations; and will include minimum project criteria for proposed aquaculture projects. This project will also include a robust public engagement process to understand and incorporate stakeholder feedback before finalizing the action plan by 2023. This action plan will establish a critical roadmap for aquaculture in California that protects ecosystem health while supporting a sustainable blue economy in the face of a changing climate.

PROJECT SUMMARY:

The Strategic Plan states that “focused support for a sustainable “blue economy” can create powerful, long-term solutions to the escalating challenges faced by human and ecological communities.” California’s ocean economy represents 2% of the state’s gross domestic product (GDP), including tourism, recreation, commercial and recreational fishing, aquaculture, shipping, and other industries. Sustainable marine aquaculture⁴ supports coastal livelihoods, provides a local food source, and has the potential to contribute to bioremediation of polluted waters, attenuate storm surges, and provide habitat that could contribute to local spatiotemporal mitigation of ocean acidification. The development of sustainable aquaculture includes addressing water quality concerns (including marine debris from gear loss); impacts on protected, native and sensitive

¹ [Strategic Plan to Protect California’s Coast & Ocean \(2020-2025\)](#)

² Integrated multitrophic aquaculture means growing fed and unfed species in close proximity for the economic and environmental improvement of the system.

³ The action plan will not include freshwater aquaculture.

⁴ The Strategic Plan defines “sustainable” aquaculture as “aquaculture that presents only *de minimus* potential impacts, if any, to marine habitats and species.”

species and habitats, including birds, mammals, and other wildlife; coastal access; conflicts with existing uses; and safe navigation, among other considerations.

The action plan will provide critical recommendations to move the state towards a more consistent, comprehensive and coordinated approach for considering and approving proposed aquaculture projects. The action plan will establish a science-based framework and policy that protects marine and coastal resources and increases regulatory transparency. This will support viable commercial aquaculture in California for a sustainable blue economy in the face of a changing climate and an increasingly globalized market. The action plan will also consider and provide guidance regarding potential impacts from aquaculture projects proposed in federal waters, such as NOAA's Aquaculture Opportunity Area proposed in southern California, to ensure protection of state marine resources.

The National Center for Ecological Analysis and Synthesis (NCEAS) will lead development of a scientific framework that includes, but is not limited to: developing minimum project criteria and best practices for proposed aquaculture projects; developing guidance for aquaculture projects proposed near marine protected areas (MPAs); guidance for reducing spread of non-native/introduced species; scientific information regarding the viability of "conservation aquaculture" and its applications for storm surge attenuation or other restorative/multi-benefit purposes; and scientific information regarding siting analysis for aquaculture in state marine waters that minimizes environmental impacts and evaluates socioeconomic considerations.

Key state agency partners identified in the Strategic Plan who will be integral in informing the development of the statewide aquaculture action plan are the California Coastal Commission (Coastal Commission), California Department of Fish and Wildlife (CDFW), California Fish and Game Commission (FGC), and California State Lands Commission (SLC). OPC staff will also coordinate with the California Department of Food and Agriculture (CDFA), California Department of Public Health (CDPH), State Coastal Conservancy (SCC) and State Water Resources Control Board (SCWRB). Executive leadership from these agencies will be meeting on September 14 to begin discussions on draft aquaculture principles that will guide near-term efforts to protect public trust resources and support viable commercial aquaculture until the action plan is finalized.

OPC staff will coordinate closely with these state agencies and NCEAS in developing the action plan. Additionally, NCEAS will work closely with OPC staff to support a robust public engagement process and understand and incorporate stakeholder feedback prior to finalizing the action plan by 2023. This engagement process will include outreach to Tribes and Tribal communities, current aquaculture leaseholders and the aquaculture community (including the Aquaculture Development Committee), non-governmental organizations, ports and harbor districts, commercial and recreational fishermen and fishing communities, and the greater public, among others. This engagement will also include the continued collaboration and coordination among state and federal agency partners.

The principal investigators on this proposed project from NCEAS are Dr. Ben Halpern and Dr. Halley E. Froehlich, both of whom are co-founders of the Conservation Aquaculture Research Team (CART) at NCEAS, which uses interdisciplinary synthesis science to explore the interactions and conservation implications of marine aquaculture, climate change, and larger food systems. Dr. Halpern and Dr. Froehlich have extensive solutions-oriented scientific expertise regarding sustainable marine aquaculture, food systems, and stakeholder engagement. Dr. Halpern and Dr. Froehlich plan to partner with Dr. Luke Gardner of California Sea Grant at University of California, San Diego Extension Specialist, based at Moss Landing Marine Labs, to support the development of the action plan and robust public engagement process. Dr. Gardner has extensive expertise in the intersection of marine aquaculture with California’s environment, economy and communities.

Background

State law through Fish and Game Code Chapter 1, Section 17 defines aquaculture as “a form of agriculture devoted to the propagation, cultivation, maintenance, and harvesting of aquatic plants and animals in marine, brackish, and freshwater. Aquaculture does not include species of ornamental marine or freshwater plants and animals not utilized for human consumption or bait purposes that are maintained in closed systems for personal, pet industry, or hobby purposes,” as these species are regulated under Chapter 2 of Fish and Game Code.⁵ State law through the California Public Resources Code (PRC) Division 1, Chapter 4, Section 828 defines aquaculture as the “culture and husbandry of aquatic organisms, including, but not limited to, fish, shellfish, mollusks, crustaceans, kelp, and algae.”⁶

A thorough overview of existing state commercial marine aquaculture operations is included in the California Department of Fish and Wildlife’s (CDFW) Aquaculture Information Report from June 2020.⁷ The California Coastal Commission (Coastal Commission) is developing *Coastal Development Permit Application Guidance for Aquaculture and Marine Restoration Projects* in alignment with Senate Bill 262 (McGuire, 2019); a draft was made available for public comment in July and aims to be finalized by the end of 2020.⁸

The CDFW Aquaculture Information Report focuses on the status of current commercial marine aquaculture operations in California and describes cultivated species, cultivation methods, habitats and interactions with aquaculture, and management context for aquaculture in California.

The purpose of the Coastal Commission’s *Coastal Development Permit Application Guidance for Aquaculture and Marine Restoration Projects*, in alignment with Senate Bill

⁵ [Fish and Game Code: Division 0.5, Chapter 1, Section 17](#)

⁶ [Public Resources Code: Division 1, Chapter 4, Section 828](#)

⁷ [CDFW Aquaculture Information Report \(June 2020\)](#)

⁸ [Draft California Coastal Commission Coastal Development Permit Application Guidance for Aquaculture and Marine Restoration Projects \(July, 2020\)](#)

262, is to: “1) reduce duplicative or overlapping information requirements during coastal development permit (CDP) application filing, 2) increase state and federal agency coordination, 3) increase regulatory certainty, and 4) reduce the time and cost associated with securing a CDP, to the extent possible.” The draft CDP application guidance document also provides specific information on types of Coastal Commission authorization, common areas of Coastal Act analysis, CDP application project description elements, projected permit approval times, references to previously approved CDP documents, and other considerations, in further alignment with Senate Bill 262 (McGuire, 2019).

The statewide aquaculture action plan will build on the CDFW’s Aquaculture Information Report and ensure there is coordination to incorporate any specific information from the Coastal Commission’s CDP application guidance document.

Developing a statewide aquaculture action plan will advance a sustainable, inclusive blue economy that also supports and protects thriving ocean and coastal ecosystems.

About the Grantee

The National Center for Ecological Analysis and Synthesis (NCEAS) is an independent research affiliate of the University of California Santa Barbara, whose mission is to accelerate scientific discoveries that enhance understanding of the world and benefit people and nature, as well as transform the scientific culture to be more open, efficient, and collaborative. NCEAS applies a solutions-oriented approach through synthesizing existing data sources, facilitating scientific collaborations among researchers with diverse expertise, and advancing transparent science that is accessible to both the scientific community and the greater public. Based at NCEAS, the Conservation Aquaculture Research Team (CART) is a team of experts and analysts in ocean conservation, fisheries and aquaculture sciences who are working to address scientific questions related to marine aquaculture to ensure co-equal goals of sustainable food from marine aquaculture and conservation of marine and coastal ecosystems. CART’s research areas include the intersections of conservation aquaculture, food systems, climate change, and policy and people.

NCEAS plans to partner with Dr. Luke Gardner, a California Sea Grant at University of California, San Diego Extension Specialist, based at Moss Landing Marine Labs. Dr. Gardner’s work focuses on leading and supporting aquaculture research, extension activities, including support for the development of sustainable aquaculture activities, community-supported solutions, and protection of state resources.

Project Timeline

October 2020 – June 2023

PROJECT FINANCING:

Staff recommends that OPC authorize encumbrance of up to \$350,000 to the National Center for Ecological Synthesis and Analysis (NCEAS), based at the University of California Santa Barbara, to develop a statewide aquaculture action plan including a robust public engagement process in alignment with OPC’s Strategic Plan Target 4.2.1.

Entity	Project Amount
Ocean Protection Council	\$350,000
OCEAN PROTECTION COUNCIL TOTAL	\$350,000

The anticipated source of funds will be from the Ocean Protection Council’s Fiscal Year 2018/2019 appropriation of California Environmental License Plate Funds (ELPF). Using these funds to support this project is consistent with the California Ocean Protection Act, Section 35650(b), as well as OPC’s Strategic Plan and Grant Program Funding Guidelines as described in the following sections.

Leverage of OPC Funds

OPC staff will be pursuing a partnership with California Sea Grant at University of California, San Diego to augment stakeholder outreach and engagement efforts.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

The proposed project is consistent with the California Ocean Protection Act (COPA), Division 26.5 of the Public Resources Code as it will provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources. Further consistent with COPA, the proposed project will improve management, conservation, and protection of coastal waters and ocean ecosystems.

CONSISTENCY WITH THE OPC'S STRATEGIC PLAN:

This project implements Goal 4: Support Ocean Health Through a Sustainable Blue Economy; Objective 4.2: Promote Sustainable Aquaculture; Target 4.2.1, which states, “[w]ith the California Department of Fish and Wildlife and others, develop a statewide aquaculture action plan focused on marine algae and shellfish and landbased/recirculating tank operations of marine algae, shellfish, and finfish by 2023. The plan should identify areas of opportunity and avoidance to minimize impacts to habitat, biodiversity, and wild fisheries and should include minimum project criteria, including best practices for eliminating detrimental environmental impacts.”

COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The proposed project is categorically exempt from review under the California Environmental Quality Act (“CEQA”) pursuant to 14 Cal. Code of Regulations Section 15306 because the project will not result in a serious or major disturbance to an environmental resource.