Staff Recommendation
April 24, 2023

Item 8

Action Item:
Consideration and Approval of Disbursement of Funds for a Statewide Groundfish Sampling Program

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Recommended Action: Authorization to disburse up to $450,000 to San Jose State University to develop and implement a cooperative groundfish sampling program with the California Collaborative Fisheries Research Program (CCFRP).

Location: Statewide

Strategic Plan Goals and Objectives: Goal 3: Enhance Coastal and Marine Biodiversity; Objective 3.3: Support Sustainable Marine Fisheries and Thriving Fish and Wildlife Populations, specifically actions under targets 3.3.2 and 3.3.4.

Equity and Environmental Justice Benefits: Technical training opportunities for graduate and undergraduate students from underserved communities; Increasing outreach and community understanding of the process behind collecting the baseline data needed for fisheries management decisions; Demonstrating to anglers and members of the public that management recommendations can be informed by community members and ocean users.

Exhibits:

Exhibit A: Letters 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(s), OPC hereby finds that:

1. The proposed projects are consistent with the purposes of Division 26.5 of the Public Resources Code, the California Ocean Protection Act;
2. The proposed projects are consistent with the Budget Act of 2022 which included a $50 million General Fund appropriation for grants or expenditures for resilience projects that conserve, protect, and restore marine wildlife and healthy ocean and coastal ecosystems;
3. The proposed projects are not 'legal projects' that trigger 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 $450,000 to San Jose State University to develop and implement a cooperative groundfish sampling program with the California Collaborative Fisheries Research Program (CCFRP).

This authorization is subject to the condition that prior to disbursement of funds, San Jose State University shall submit for the review and approval of the Executive Director of the OPC detailed work plans, schedules, staff requirements, budgets, 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 projects are on target for successful completion. All projects will be developed under a shared understanding of process, management and delivery."

Executive Summary:

Staff recommends that the Ocean Protection Council authorize the disbursement of up to $450,000 to San Jose State University to develop and implement a cooperative groundfish sampling program with the California Collaborative Fisheries Research Program (CCFRP). This project will develop a cooperative biological sampling program to provide the California Department of Fish and Wildlife (CDFW) and the National Oceanographic and Atmospheric Administration – National Marine Fisheries Service (NOAA - Fisheries) with biological information for California groundfish stocks needed to fill current data gaps and help improve stock assessments, sustainable harvest regulations and increase our understanding of potential long-term climate impacts. This project will build on the California Collaborative Fisheries Research Program (CCFRP), expand collaboration with the Sportfishing Association of California (SAC) and NOAA Southwest Fisheries Science Center (SWFSC) Santa Cruz, and leverage past OPC support to increase the utility of this highly successful, community-based science program. This project builds upon a 2022 pilot program, funded through NOAA cooperative fisheries research funds, and developed in partnership with SAC, where deckhands on commercial passenger fishing vessels (CPFVs) from 4 ports were trained to measure and retain groundfish samples of specific target species. The samples were then labeled, organized, preserved, and shipped to the SWFSC Santa

Cruz lab for further dissection and analysis, with results incorporated into current stock assessment efforts.

If funded, the project will support a CCRFP representative from each of the 6 participating institutions to work with the SWFSC Santa Cruz lab and CPFV fleet in their region to collect monthly samples of target species from fisheries-dependent sportfishing trips and through fisheries-independent sampling by CCFRP during their annual MPA monitoring season. The samples will be cooperatively collected from CPFVs and no new samples will be collected from MPAs. The analyzed samples will provide much-needed information to CDFW and NOAA on demographic parameters and population structure (including genomics) of multiple California groundfish stocks. This information, collected in partnership with CPFV operators/crewmembers and volunteer recreational anglers, will improve current fisheries assessments and help researchers and managers better understand long-term climate impacts to targeted fish species along the California coast. In addition to benefiting research and management efforts, the cooperative nature of this program has an added benefit – building trust in the management process within the recreational fishing community through engaging them in sample collection statewide.

Project Summary:

Background:

The 2018 MLMA Master Plan for Fisheries specifically recommends prioritizing additional environmental and fisheries monitoring to increase climate resiliency. Biological sampling of targeted fishes is critical to understanding the effects of environmental change and the corresponding impacts on managed fisheries and can provide the baseline data needed to manage a fishery for increased ecological resiliency. In addition to increasing climate resiliency, monitoring and sampling life-history characteristics of targeted species is necessary for adaptive management, where knowing how specific age/size classes within a fishery are being impacted is the first step in developing management strategies that guard against over-exploitation.

While CDFW currently surveys the landings and length distributions of rockfishes encountered by the recreational fishing fleet as part of the California Recreational Fisheries Survey (CRFS), CRFS does not currently collect otoliths (used to determine a fish's age and growth rate), fin clips (for genetic analyses), or any other biological information only available from examining the internal organs of a fish, i.e., sex, maturity status, fecundity, and overall condition. This lack of sampling means that some management decisions are currently being made with incomplete or insufficient data, leading to uncertainty in the assessments. Additionally, the lack of sampling leads to a lack of information about the spatial scale of how targeted species are reacting to both fishing pressure and climate change. Specifically, resource managers lack information on how life history traits may be changing in response to marine heatwaves and other localized climate change effects. This is

particularly important for reef-associated, non-migratory, nearshore fishes, as they occupy habitats likely to be impacted most by changing ocean conditions.

Increasing sampling coverage and capacity is especially critical this year, as CDFW instituted new groundfish regulations that took effect on April 1. These new regulations opened deeper waters to recreational fishing while shortening the current fishing season by one month. As a result, many areas that were previously closed and have not been fished in many years are now open to fishing. These areas are likely harbor older, larger, rockfish which are known to contribute disproportionately to successful recruitment and have an outsized impact on subsequent generations, population growth, and inherent genetic resiliency. Additionally, the California Fish and Game Commission has continued to extend emergency regulations that severely reduced the recreational bag limit for Copper, Quillback and Vermillion rockfish species. These emergency regulations were enacted as a result of the Pacific Fisheries Management Council (PFMC) declaring these species at risk for overfishing in late 2021 based on assessments conducted with limited available data (and classified as "data-poor" or "data-moderate").

The California Collaborative Fisheries Research Program

CCRFP is a diverse partnership of volunteer fishermen, boat captains, scientists, nongovernmental organizations, and charter companies interested in promoting sustainable fisheries. Since the establishment of the MPA Network, CCFRP has worked to develop a long-term coordinated, collaborative, and standardized statewide monitoring program that involves recreational anglers in hook-and-line surveys inside and outside MPAs. Incorporating an interdisciplinary approach, CCFRP has worked closely with state and federal partners since the program's creation in 2006. Over the past decade, CCFRP has produced reliable estimates of relative abundance, size frequency distributions, and fish movements across 16 MPAs and associated reference sites statewide. It has also generated highly useful long-term trends in catch and biomass for central coast fishes, published peer-reviewed papers in scientific literature, and deployed two socioeconomic surveys to assess angler perception of MPAs and compliance with MPA regulations. CCFRP's approach includes not only scientifically rigorous data collection and analysis, but also meaningful outreach and engagement with fishermen, scientists, resource managers, and the general public.

Project Summary:

If funded, CCFRP staff and collaborators at NOAA SWFSC will work with SAC and the recreational fishing fleet to identify vessels to participate in the expanded sampling program. The sampling effort for each CCFRP partner university will be based on recent landings by the CPFV fleet in the vicinity to each university as well as stocks identified as high priority by the PFMC and CDFW. Depending on the sample type, samples will be processed and analyzed collaboratively between each CCFRP institution and NOAA's SWFSC.

The data collected through the cooperative sampling program will be used by NOAA SWFSC staff and the PFMC to increase the effectiveness and reliability of groundfish stock assessments. Results of these assessments, in turn, inform management decisions that impact all facets of California fisheries. In collaboration with the NOAA SWFSC Santa Cruz lab, this project will accomplish the following objectives:

1. Work collaboratively with the sportfishing industry and the fishing community to collect biological samples of multiple nearshore groundfish species on sportfishing trips and CCFRP sampling trips.
2. Provide information to CDFW and NOAA that fills current gaps in life history/demographic parameters and population genetic structure of groundfish stocks needed to improve stock assessments, sustainable harvest, and better understand long-term climate impacts along the California coast.
3. Build a robust collection of groundfish biological samples from throughout the state – these samples will facilitate further research into potential climate effects including phenological changes, range shifts and biological resiliency/risk.

Equity and Environmental Justice Benefits:

The recreational anglers who are CPFV patrons are one of the most diverse groups of California ocean users besides beachgoers. By leveraging CPFV anglers and crewmembers and CCRFP volunteers to help collect biological samples, this project helps advance equity and environmental justice through several ways: (1) by providing technical training opportunities for graduate and undergraduate students from underserved communities; (2) though increasing outreach and community understanding of the process behind collecting the baseline data needed for fisheries management decisions; and (3) by demonstrating to anglers and members of the public that management recommendations can be informed by community members and ocean users. These benefits are consistent with several of the goals of OPC's Equity Plan, specifically Goal 1.2: "Expand and enhance outreach, education, external communications, and knowledge sharing opportunities through inclusive language and targeted, culturally-responsive engagement with communities and tribes" and Goal 4.2: "Collaborate with California Native American tribes, environmental justice communities, and community partners such as: community-based organizations, colleges and universities, research organizations, including community science groups, and local stakeholders, to include Traditional Ecological Knowledges, tribal expertise, local knowledge, social science, historical context, and lived experiences into ocean and coastal science, and research."

About the Grantee:

CCFRP, based at Moss Landing Marine Laboratories (San Jose State University), is a collaborative effort among researchers from six California universities, the captains and crew of 36 commercial

passenger fishing vessels, and more than 2,000 volunteer anglers spanning the entire California coast. CCFRP Principal Investigators (PIs) have a proven track record working with NOAA to provide data used in stock assessments, with CCFRP data being using in 7 stock assessments of groundfishes to date, as well as familiarity with existing data streams, rigorous theoretical grounding in quantitative approaches for MPA evaluation, and proven success in building broad, collaborative partnerships.

Project Timeline:

If funded, this project will commence sampling in early summer 2023 and run for 3 years through the beginning of the 2026 recreational rockfish season, providing for 3 sampling seasons. Throughout the project, samples will be continuously processed so that data will be available for as soon as possible for maximum use by managers in both CDFW and the PFMC. Data and associated metadata will be delivered to OPC, CDFW, and NOAA SWFSC as part of the completion of the project. Project leaders will be responsible for preparing and submitting project data and metadata to RecFIN with a copy to DataONE, the formal vehicle for delivery of all data and metadata associated with funded projects.

Project Financing:

Staff recommends that the Ocean Protection Council (OPC) authorize encumbrance of up to $450,000 to San Jose State University to task the California Collaborative Fisheries Research Program (CCFRP) with developing and implementing a cooperative groundfish sampling program.

California Ocean Protection Council	$450,000
NOAA Cooperative Fisheries Research funding ($200,000 per year x 3 years)	$600,000
TOTAL	$1,050,000

The anticipated source of funding will be from the FY2022-2023 Resiliency General Fund appropriation, which included a $50 million General Fund appropriation for grants or expenditures for resilience projects that conserve, protect, and restore marine wildlife and healthy ocean and coastal ecosystems. This project's goals of filling existing data gaps to facilitate accurate and more responsive management are consistent with this appropriation and will help increase the resiliency of California's marine fisheries.

Consistency with California Ocean Protection Act:

The proposed project is consistent with the Ocean Protection Act, Division 26.5 of the Public Resources Code, because it is consistent with trust-fund allowable projects, defined in Public Resources Code Section 35650(b)(2) as projects which:

- Improve the management of fisheries and/or foster sustainable fisheries.
- Allow for increased public access to, and enjoyment of, ocean and coastal resources, consistent with sustainable, long-term protection and conservation of those resources.
- Improve management, conservation, and protection of coastal waters and ocean ecosystems.
- Provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources.
- Protect, conserve, and restore coastal waters and ocean ecosystems.
- Provide funding for adaptive management, planning coordination, monitoring, research, and other necessary activities to minimize the adverse impacts of climate change on California's ocean ecosystem.

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 involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource.