

The purpose of this Major Amendment Request is to expand the current project, building on our existing Experimental Fishing Permit ([REDACTED]) to address critical data gaps in essential fishery information for brown box crab and California King Crab. We also aim to evaluate the potential for a commercial fishery for brown box crab and its design elements. An exploratory fishing program for box crab was initially approved by the California Fish and Game Commission in December 2018 and expired on April 1, 2023. This program concluded that vertical line fisheries shouldn't be expanded due to whale entanglement issues. The initial exploratory box crab fishery was a collaborative research program involving the California Department of Fish and Wildlife (CDFW), California Sea Grant, and commercial fishers, among other partners and sponsors. Research included exploratory fishing, a tag-recapture study, and laboratory studies of life history. Based on information from previous and current EFPs, brown box crab caught entirely using pop-up fishing gear seems to represent a viable new fishing opportunity in California.

There is currently a large and growing demand for box crab and king crab. Our current EFP has reignited serious interest in box crab within the consumer market. In addition to growing demand, there is fleet interest from the fishing community, with increasing curiosity around pop-up gear and lack of viable opportunity. Information gained through the research carried out under this and related EFPs can be used to establish a small fishery with conservative management measures. However, sufficient information is not yet available to enable the CDFW to make a final recommendation on whether a sustainable commercial fishery could be established, nor what management measures are needed and the supporting regulations to implement them. We propose this expansion of our EFP to continue gathering critical information that will allow CDFW to complete its assessment of management strategies for this emerging fishery. This purpose aligns with the guidance of the Marine Resources Committee of the California Fish and Game Commission given during the March 24, 2022, meeting to pursue the development of a new experimental fishing permit program for brown box crab.

Importantly, this project expansion would also allow for continued and more broad-scale testing for the feasibility of using subsea buoy retrieval systems in deep water. The results of the testing will ultimately help enable decision-making regarding the authorization of alternative gear for use in California's box crab fishery. Currently, this EFP is limited to Southern California, but this project expansion will broaden our understanding of the utility of these alternative gear types across a range of habitats, depths, sea conditions, and fishing practices.

Consistent with Fish and Game Code (FGC) Section 7050, this project expansion aims to ensure the conservation of ESA-listed marine species and allow for limited testing of a brown box crab fishery through effective collaborations and a science-based approach. Efforts included within our current EFP promote scientific research to better inform fishery management decisions that recognize the importance of commercial fisheries while conserving the health and diversity of marine ecosystems.

Expanded list of proposed project activities that are prohibited under current state fishing laws or regulations (cite the specific section number(s), if known), and the reasons to justify authorization (exemption) of those activities under the EFP.

1. Expanded List of Proposed Project Activities Prohibited Under Current State Fishing Laws or Regulations

Proposed Activities:

- 1) Applicant requests permission to include the capture of coonstriped shrimp, sablefish, Dungeness Crab, Northern Rock Crab, and other species covered under open access licenses during exploratory fishing trips that utilize subsea buoy retrieval system devices.

Current Prohibitions:

- 2) Under the current EFP, combined trips are only allowed with Spiny Lobster, Southern Rock Crab, Spot Prawn, and Groundfish.

Justification for Authorization:

- **Fuel and Expense Efficiency:** Allowing the capture of these additional species during exploratory fishing trips is intended to save on fuel and other operational expenses. Conducting mixed trips will optimize resources, reducing the financial burden on participating vessels and increasing the feasibility of the research.
- **Non-Use of On-Demand Gear for Other Species:** It is important to note that these species will not be targeted using the on-demand gear designed for box crab traps. The primary focus will remain on testing and evaluating the subsea buoy retrieval systems for box crab, while the capture of coonstriped shrimp, sablefish, Northern Rock Crab, Dungeness Crab, and other species covered under open access licenses will occur using traditional methods.

These exemptions under the EFP are essential for conducting a thorough and scientifically robust evaluation of the subsea buoy retrieval system's effectiveness and environmental impact while ensuring economic viability for participating fishers.

2. Expanded Experimental Design and Research Plan

Research Objectives:

- **Geographic Scope:** Conduct experimental fishing for brown box crab between US/Mexico and the California/Oregon Border.
- **Data Collection:** Gather and share comprehensive data on the brown box crab, including population density, size distribution, and habitat preferences. This data will inform stock assessments and management decisions.
- **Gear Testing:** Test the efficacy and environmental impact of subsea buoy retrieval systems and other alternative gear types in various marine environments and conditions.

3. Expansion of Proposed Catch Limits

The proposed catch limits are designed to balance economic viability with conservation goals, ensuring the sustainable development of the fishery. An expanded list of target species expected to be harvested as samples or for compensation under the EFP, including anticipated amounts (weight or number) per vessel and proposed use (e.g., bait, sell, personal use, or other (e.g., research or tag and release)).

Target Species and Catch Limits:

- **Brown Box Crab (minimum 5 ¾" Carapace):** Each authorized agent will be allowed to harvest up to 50,000 lbs. of brown box crab. The catch will be used for commercial sale, tag-and-release studies, and scientific research.
- **California Spiny King Crab (minimum 5" Carapace):** Each authorized agent will be allowed to harvest up to 50,000 lbs. of California spiny king crab. The catch will be used for commercial sale, tag-and-release studies, and scientific research.
- **Scarlet King Crab (minimum 4" Carapace):** Each authorized agent will be allowed to harvest up to 50,000 lbs. of scarlet king crab. The catch will be used for commercial sale, tag-and-release studies, and scientific research.

Proposed Uses:

Commercial Sale: The harvested species will be sold to cover operational costs and provide economic incentives for participating vessels.

Tag-and-Release Studies: A portion of the catch will be tagged and released to gather data on migration patterns, growth rates, and population dynamics.

Research: Samples will be used for laboratory studies on life history, reproductive biology, and ecological interactions.

Species Name	Weight	Proposed Use
Brown Box Crab (minimum 5 ¾" Carapace)	50,000 lbs.	Retain and sell; tag and release; research
California Spiny King Crab (minimum 5" Carapace)	50,000 lbs.	Retain and sell; tag and release; research
Scarlet King Crab (minimum 4" Carapace)	50,000 lbs.	Retain and sell; tag and release; research



Figure 1. Target species including (left) Brown Box Crab (*Lopholithodes foraminatus*), (center) California Spiny King Crab (*Paralithodes spp.*), and (right) Scarlet King Crab (*Lithodes couesi*).

Expanded list of species

Those species expected to be taken incidental to fishing conducted under the EFP, including anticipated amounts (weight or number), proposed use (e.g., bait, sell, personal use, discard, or other (e.g., research or tag and release), and a description of any measures that will be used to reduce incidental catch mortality.

Species Name	Individual Crabs	Proposed Use
Brown Box Crab	7,000	Release females and shorts/tag
California Spiny King Crab	7,000	Release females and shorts/tag
Scarlet King Crab	7,000	Release females and shorts/tag
Dungeness Crab	Up to 5,000	Release females and shorts

Some sublegal-sized box and king crab may be tagged and released as listed above; all other incidental catch not included in requested concurrent species, will be immediately returned to the water. Based on the available data from the previous box crab EFP, most of the catch will be comprised of box crab with some Dungeness. Bycatch of other invertebrates and finfish has been relatively low relative to target catch. Information about the amount and composition of non-target species caught in box crab traps can be found in the DFW Report: Update on the Box Crab Experimental Fishing Permit Program prepared for the March 24, 2022 MRC meeting (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=199373&inline>). These primarily include urchin, rock crab, other non-cancer crabs, and lingcod. However, the species identities and catch rates vary by region and method of sampling. Given that we are proposing to use the same types of traps, it is anticipated there will be similar amounts of bycatch.

During the previous box crab EFP, fishers found that fishing over sand or at a rock-sand interface resulted in a higher ratio of catch of crab and lower catch of fish compared to reef habitat. Therefore, these soft-bottom habitats will be targeted. In addition, it was determined that cutting a hole of least 4 inches wide in traps allowed more sublegal-sized crab to escape, which both reduces bycatch and increases fishing efficiency; these openings will be made in traps under this EFP.

4. Characterization of Additional Area to be added

Box and king crab habitats are relatively deep compared to most other trap fisheries in northern California at typical depths of 400 – 800 feet. The potential for conflicts with other fisheries is low at these depths; other crabs are targeted at shallower depths, while sablefish is fished deeper and outside of the proposed range we are requesting.

The additional fishers listed in this major amendment request will primarily be utilizing the Sub Sea Sonics AR4RT and DAR4RT (acoustic releases with a 99.6% reliability factor), Guardian Trawl Groundline Sled (line management system), Trap Timer gear marking app, and Sub Sea Sonics Regulatory Portal and Gear Vault online dashboards. For Electronic Monitoring, these additional vessels will utilize either Pelagic Systems solar loggers, ZebraTech Loggers, or Archipelago LIME units.

The dashboard platforms that LED and CDFW Marine Region will be able to access integrates information collected in Sub Sea Sonics Trap Timer gear-marking application which is then submitted to the rmwHub interoperable virtual gear marking system and will allow only authorized CDFW staff to see where SBRS gear is deployed.

Expanded area: The additional area proposed to be added in this major amendment are any state and federal waters north of Point Conception and south of the Oregon/California Border from 50 to 200 fathoms in depth, except for any Marine Protected Areas and Essential Fish Habitat closures for bottom contact gear.

5. New Gear Configurations Requested

A maximum of 20 trawls will be allowed per user and trawls will not exceed a maximum of 20 traps. Traps will be serviced within 168 hours, weather permitting.

6. Expanded Mixed Trip request and combination of quotas for authorized vessels:

We request authorization to fish other permits held by the authorized agents (s) including coon-striped shrimp, Northern Rock Crab, sablefish, Dungeness Crab, and other species covered under open access license during fishing trips under this EFP as long as the operator holds the required permits. We also request to stack up to two authorized agent's quotas on authorized vessels.

7. Vessel and Operator Information

We are requesting 15 additional authorized vessels and *up to* 40 authorized agents (providing for second captains). All vessels and operators currently listed on the EFP will remain in place.

Additional Vessel Information:

Proposed Additional Operators and Vessel Information as follows.

Authorized Agent 1

Name: Leandro Amadeo Patricelli

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 1

Vessel Name: St. Gino

Vessel FG: [REDACTED]

Vessel Owner GOID: [REDACTED]

Vessel Owner: Mckenzie Amos

Owner Address: [REDACTED]

Authorized Agent 2

Name: Brand D. Little

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 2

Vessel Name: F/V Pale Horse

Vessel GOID: [REDACTED]

Vessel FG: [REDACTED]

Vessel Owner: Brand D. Little/ SPOTON Fishing Inc

Vessel Owner GOID: [REDACTED]

Owner Address: [REDACTED]

Authorized Agent 3

Name: Stephen F. Melz

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 3

Vessel Name: F/V Jaqueline L

Vessel GOID: [REDACTED]

Vessel FG: [REDACTED]

Vessel Owner: S&J Fisheries

Vessel Owner GOID: [REDACTED]

Owner Address: [REDACTED]

Authorized Agent 4

Name: Jacob Emerling

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 4

Vessel Name: F/V Sara Brent

Vessel FG: [REDACTED]

Vessel Owner: J&S Fisheries

Owner Address: [REDACTED]

Authorized Agent 5

Name: Michael Cohen

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 5

Vessel Name: F/V Eagle

Vessel GOID: [REDACTED]

Vessel FG: [REDACTED]

Vessel Owner: Michael Cohen

Owner Address: [REDACTED]

Authorized Agent 6

Name: Daniel Fugere

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 6

Vessel Name: F/V Pamela Sue

Vessel CF: [REDACTED]

Vessel Owner: Daniel Fugere

Owner Address: [REDACTED]

Authorized Agent 7

Name: Michael J. Phillips

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Fisher L Number: [REDACTED]

Authorized Vessel 7

Vessel Name: F/V Miss Alison

Vessel GOID: [REDACTED]

Vessel FG: [REDACTED]

Vessel Owner: Michael J. Phillips & James C. Phillips

Owner Address: [REDACTED]

Authorized Agent 8

Name: Andrew Cresalia

Address: [REDACTED]

Phone: [REDACTED]

Email Address: [REDACTED]

Fisher GOID: [REDACTED]

Authorized Vessel 8

Vessel Name: Southside

Vessel FG: [REDACTED]

Vessel Owner: Andrew Cresalia

Owner Address: [REDACTED]

Additional information requested by CDFW, received via email on 6/2/2025

Request for additional information from SMEs (Inverts/MED):

Applicant Response**1. Gear****a. Why requesting such a substantial increase in # traps?**

Per fisher request. The central California box crab grounds are a long way away from the harbor and there is a huge expense that has to be covered. The increase allows for us to cover that expense. Also, the expected limited participation will make it hard to collect substantial samples for biological assessment without greatly increasing the number of traps.

Additional response on 6/18/2025: From a Southern California perspective, increasing the trap limit is critical to making the box crab fishery viable for a broader range of participants. Smaller vessels fishing inshore are currently limited to 75 traps, which restricts their ability to generate meaningful income—especially given the cost of fuel, gear, and labor. Increasing the trap limit would allow these operators to fish more efficiently and sustainably.

At the same time, larger vessels fishing farther offshore require longer strings and higher trap counts to justify the operational costs of deepwater trips. Without those adjustments, participation from these vessels is not economically viable.

Compounding the issue, the majority of king crab landed to date has been unsellable due to parasitic contamination. This affects both inshore and offshore operators and has effectively made box crab the sole commercially viable species in this fishery. Without increased trap limits, the fishery remains economically constrained for nearly everyone involved.

b. How did you land at 400 trap max?

Per fisher request. 400 traps was chosen to be more inline with the existing d crab EFP and the expected box crab participants. This allows them to simply use the preconfigured gear profiles that they have already invested in for pop up crab.

c. Increase in max # traps requested for central/northern CA only, or statewide?

Per fisher request; all of CA

2. Mixed-fishery trips:**a. All catch in EFP traps other than box and king crab cannot be retained. Please clarify if the request is for other species caught during participation in other fisheries to be retained, or to also expand the species that may be retained from EFP traps?**

To expand the species that may be retained from EFP traps, but not past that which is allowed with other fisheries.

3. Fishing depths:

- a. Asking for decrease in minimum fishing depth statewide (60 to 50 fm), or in central/northern CA only?

All of CA

4. Quotas:

- a. Why is an increase in quotas for box and king crab requested?

Per fisher request, economic in nature.

It is unknown what kind of biomass we expect to run into. The size of the biomass will dictate the actual harvest amounts. Increasing quotas will not be relevant if there is not a substantial biomass on the grounds.

- b. Why scarlet king crab, and in such large quantities? Is there knowledge of large numbers in similar habitats as box/king crab?

Per fisher request, economic in nature.

It was put on there because we have seen them incidentally. We are not anticipating any significant harvest, but their biomass is really an unknown until we get out and start fishing.

- c. What is the justification for the proposed size limit of scarlet king crab – how was this derived?

Per fisher request, economic in nature.

- d. Please clarify the request to stack quotas; the maximum allowable pounds are already per-vessel.

We want this to be a permit that follows the fisher and not a vessel. There is a significant data gap from fishers who assisted authorized agents in the past who “split” landings. Landings not tied to the vessel but to the fishers and their individual buyers.

5. Concurrent fisheries:

- a. What are you considering open access? “Open access” is a federal groundfish term.

General Trap Permit

Additional response on 6/18/2025: For species for the Southern participants, I would request to keep spider crab.