

**Squid Fishery Advisory Committee Meeting 8**  
**January 26, 2024, 10am-4pm**  
**1515 Clay Street, Oakland, CA**

**KEY OUTCOMES MEMORANDUM**

**OVERVIEW**

The Squid Fishery Advisory Committee (SFAC or Committee) held its eighth meeting on January 26, 2024. The goals of the meeting were to:

- Present available data to inform SFAC goals for gear, bycatch, wildlife interactions and habitat and discuss next steps.
- Continue the discussion of small-scale fishery access.
- Review assessment techniques (egg escapement and Empirical Dynamic Modelling EDM) and directions for final SFAC meetings.

**PARTICIPANTS**

The following SFAC members attended: Richie Ashley, Ryan Augello, Nick Jurlin (alternate for John Barry), Joe Cappuccio, David Crabbe, Mark Fina, Russell Galipeau, Corbin Hanson, Greg Helms, Tom Noto, Brian Susi-Blair, Anthony Vuoso, and Dan Yoakum. Susan Ashcraft, California Fish and Game Commission (Commission) Marine Advisor, and Kinsey Matthews, Sea Grant State Fellow with the Commission, participated as observers.

Caitlin Allen-Akselrud, Ken Bates, Porter McHenry, Ken Towsley and Joe Villareal were absent. John Ugoretz announced that Anna Weinstein resigned from the SFAC.

Katie Grady, Briana Brady and John Ugoretz with the California Department of Fish and Wildlife (CDFW) convening team participated. Scott McCreary and Debbie Schechter with CONCUR served as neutral facilitators.

**KEY OUTCOMES**

Below is a summary of the main topics discussed during the SFAC meeting. This summary provides an overview of the main topics, primary points and options raised in discussions, and next steps. It is neither a detailed transcript nor a decision document.

**1. Welcome, Agenda Review**

Katie Grady welcomed SFAC members and shared the schedule of SFAC meeting dates and topics. Scott McCreary reviewed the agenda. Katie

reminded the SFAC of its charge to review and advise CDFW on potential changes to California market squid fishery management.

Katie reviewed the table of SFAC goals that was developed based on the question of “what changes would you like to see in squid fishery management?”. At Meeting 7, we learned about on the water experiences with gear and habitat. One idea that was generated from that meeting was to develop a best practices guide.

## **2. Expand Briefly on Monitoring Evaluations and Wrap Up Specifics for Gear/Habitat**

Katie reminded the SFAC of their previous discussions regarding potential changes in squid fishery management related to gear and habitat. She identified the following three areas of follow-up from Meeting 7 regarding gear, habitat and bycatch:

- Progress on lighting best practices
- Is there a relationship between fishing depth and day/night?
- Co-occurrence of egg cases and benthic species bycatch
- Specifics of gear configuration as a tool to mitigate potential spawning habitat impacts

Katie presented information on each of these areas followed by SFAC discussion.

**Lighting best practices:** Katie explained that SFAC members from the fishing fleet drafted a best practices document regarding lighting. The following key points were shared from the document:

- Forward-facing lighting: Forward-facing lighting should not be used for squid fishing. It should be used primarily to improve safety. Lights should be kept directed away from the shoreline, especially in marine protected areas and national parks.
- Squid lights: The operator should inspect lights for compliance at the start of season. Ensure lights are not illuminating the shoreline and turn them off when fishing is not permitted.

Katie shared an example of a best practices guide for crab trap fisheries and noted that CDFW could create something similar for lighting that is clear and concise. CDFW sees development of a best practice guide as responsive to the ideas discussed by the SFAC and as a streamlined and a less burdensome alternative to a regulation change. If stakeholder outreach and engagement regarding best practices is effective, it can increase the likelihood of

cooperation and implementation of guidance may be more feasible than a regulation change.

Katie presented some strategies, based on recent research, for minimizing adverse effects of light. CDFW also did a review of research on lighting strategies and found this advice for minimizing adverse effects of light:

- Research on shielding and illuminating downward and parallel to deck (as required by regulation) show that these approaches are still valid. The squid FMP is seen as a successful example of mitigating effects of lights.
- Additional research summarized by Dr. Travis Longcore, UCLA, indicates that the following strategies minimize the adverse effects of lights: light only when and where necessary, avoid extraneous lights near sensitive habitat/wildlife areas, turn off lights when not in use, use only as much light as you need, use the lowest correlated color temperature, and bright light does not always improve vision.

These strategies overlap with SFAC recommendations and could help to inform the best practices guide. The initial focus of a best practices guide is lighting though the overall document may go beyond lighting and into other fishing-related topics.

Katie presented data on fishing depth during the day and at night and found that there is not a clear relationship between fishing depth and the timing of fishing. On average, boats fish deeper in the north during the daytime, but there is likely a lot of local variation between fishing grounds. The SFAC did not discuss this further because there was not a clear relationship.

Key points from the SFAC discussion of lighting are as follows:

- SFAC members support best practices that include strong language about what to do and what not to do, e.g., the term "avoid" may not be strong enough. It is important to generate support for best practices and for fishermen to use peer pressure.
- While an observer program or electronic monitoring could be considered to assess the impacts of and compliance with lighting requirements and best practices, such programs and technology are costly and require significant effort to implement. An alternative to observers on squid boats could be observation from the shoreline/islands via cameras or remote sensing, or boat-based observers from Department vessels could be considered.
- Lights can impact vocalizations and therefore breeding and nesting behavior for nocturnal seabirds such as storm petrels. Research on this will

be shared with CDFW. Breeding occurs March-October and August-October is the most critical period. Nesting occurs between 10pm and 2am. The green light portion of the spectrum is considered to be the worst for seabirds, but need to consult current literature as to which light spectrums are most detrimental to seabirds. Best practices could address seasonality. SFAC members discussed that fishing around the Channel Islands typically occurs from October – February and does not overlap directly with these nesting and breeding windows.

- Ensuring compliance with shielding requirements is important.
- SFAC members expressed different views about the effectiveness of underwater lights as an alternative to typical squid lights.

CDFW expressed that they will work on draft best practices guidance to share with the SFAC for input and comment.

**Co-occurrence of egg cases and benthic species bycatch:** In response to an inquiry from SFAC members, Katie presented data on the percent frequency of observing both squid eggs and benthic species bycatch during the offloading process. On average, the frequency is higher in the north and average fishing depth is shallower in the north than in the south. Recent data show that incorporating a ribline reduces the percentage of eggs and benthic bycatch, particularly in the northern region of the fishery. Because this is presence/absence data, we don't know the quantity of squid eggs or benthic bycatch in each load. The ribline data are limited temporally because data are based on one set of interviews from 2020. Regular monitoring of net configurations could help improve the understanding of this issue.

**Specifics of ribline configuration to mitigate spawning habitat impacts:** SFAC members shared information on the mechanics of how a ribline works to reduce bottom impacts: it prevents the lead line from scraping the seafloor and can reduce benthic bycatch. In terms of enforceability, SFAC members explained that the presence of ribline is observable when squid loads are pulled in (e.g., by Law Enforcement Division Officers).

For context, Katie summarized recent regulations adopted by the Oregon Department of Fish and Wildlife for purse seine nets used for commercial squid fishing. She noted that the Oregon squid fishery is a developing fishery with interactions with other fisheries and operations that may differ from those in the California market squid fishery.

CDFW data show that nets can interact with the sea floor when seining for squid and CDFW's goal is to reduce potential impacts to the sea floor (e.g., squid spawning habitat). Given this goal, Katie asked SFAC members to identify what

components of a potential regulation regarding gear/ribline are important and feasible to implement. She noted that effectiveness and enforceability are key criteria that CDFW will consider.

Key points from the SFAC's discussion of important components of a regulation were as follows:

- Some SFAC members questioned whether bottom interaction was a detriment to the fishery. CDFW responded that the Marine Life Management Act requires considerations for potential habitat impacts.
- Distance between the lead line and the ribline could be measured and enforced by a warden.
- Steel cable purse line is more impactful to the bottom without a ribline than with a ribline. A synthetic purse line is less impactful than cable.
- Putting in a ribline is expensive and time consuming. Based on SFAC member experience, it could cost \$35,000 or more and take a month or more to install. Subsidies would help make this more feasible for members of the squid fishing fleet. A portion of the fleet has already converted to riblines.
- Nets can last 40 to 50 years if well maintained and fishermen would not want to have to replace them sooner than necessary.
- Other net specifications in Oregon (net length, net depth, mesh size and chaffing strip) are more about avoiding interactions with other fisheries, don't impact the California market squid fishery and are challenging to enforce.
- Salmon balls are used to help nets sink faster and purse faster. They are typically not used in shallow water. They are thought to rarely be used in the squid fishery.
- A requirement for a rib line at a certain depth could help address bottom contact but may be ambiguous and difficult to enforce due to bottom variability and currents and wind that impact seiners.

### **3. Continue Discussions on Small-Scale Fishery Access**

Katie reminded the SFAC that the discussion of small-scale fishery access began in November at Meeting 7. Follow-up items from that meeting were:

- Review the number of nontransferable and unused restricted access permits
- Discuss socioeconomic goals and objectives
- Discuss feasibility of increasing small-scale access to the fishery and next steps

Katie reviewed the data on the number of vessel, brail, and light boat permits over time in the market squid fishery as well as the capacity goals described in the FMP. There has been a steady decline in vessel and light boat permits and an increase in brail permits. She also presented data on the number of landings by gear type. Seine landings are significantly higher, while brail, incidental and lampara landings are all low, with the exception of an increase in brail landings from 2011-2013.

Katie also presented data on permit activity in 2023. In 2023, 59 market squid vessel permits had landings and eight were inactive. Ten brail permits had landings (some had very few) and 37 were inactive. Many of these brail boats were operating as light boats but some may be latent. There were 27 lightboats. In addition, there were two non-transferable vessel permits and three non-transferable lightboat permits. These non-transferable permits will eventually be retired.

In response to questions, Katie noted that CDFW could check logbooks to see if there are any latent lightboat permits. Logbooks could also be checked to see if brail boats are lighting. CDFW's summary of permit activity was in response to SFAC inquiries about restricted access permit use. Unused permits are not at risk of being lost.

Katie reviewed the SFAC goals for small-scale access that were identified in previous SFAC meetings:

- Improve small-scale access
- Make permit process and transfers more transparent
- Allow jigging for commercial purposes

The data previously shown summarized permit status. Due to confidentiality laws in California (e.g. Fish and Game Code 8022), CDFW cannot provide information on individual permits and transfers, but CDFW will continue to provide information on summarized permit activity where applicable.

The discussion at this meeting will focus on the two remaining SFAC goals about improving small-scale access and jigging. Katie posed a series of four questions to guide the discussion of small-scale access:

- How do we define small-scale access for this fishery?
- What barriers to access currently exist?
- Are there opportunities to improve small-scale fishing access?
- What are the socioeconomic benefits and/or unintended consequences associated with improved access?

Katie noted that both the Marine Life Management Act (MLMA) and the Market Squid FMP include language related to socioeconomic goals. The SFAC discussed these questions.

### ***How do we define small-scale for this fishery?***

SFAC members had differing perspectives on the definition of small-scale. Ideas presented included:

- A viable fishery; enough to keep ports and harbors functioning. There would be a limit of 10 tons per day (on top of the 118,000 ton catch limit) and an overall limit of 10,000 tons. This would allow people to fish what's in their community.
- A fishery that would meet a specific objective, e.g., live bait for party boats, and would support harbors. There could be a ceiling of volume or value.
- Some criteria for a small-scale fishery could be a fishery that:
  - Doesn't undermine or compete with the limited access fishery.
  - Is distinguishable from the limited access fishery based on different boats or gear, scale of operation on and off the water, product form and different markets.
  - Is small enough that people who want to get in can do so
- Concerns were expressed about defining small-scale based on geography because the fleet is mobile. Instead, it was suggested that small-scale should be adaptable and definable to every port.
- Small-scale, that is not part of the existing export market, requires a low volume, high value fishery—squid may not fit this model.
- The facilitation team mentioned that perhaps some of these ideas are not mutually exclusive.

### ***What barriers to access currently exist?***

This question was not discussed explicitly, but was addressed throughout the dialogue in Meetings 7 and 8. The major barrier mentioned is the fact that the fishery is a limited access fishery with little opportunity to acquire a permit except at very high cost.

### ***Are there opportunities to improve small-scale fishing access?***

Katie reviewed recent proposals received by CDFW. Recent proposals were received from Ken Bates and from the San Diego Fisherman's Working Group. Both were focused on fresh and local bait markets and were limited to one ton and one trip per day. Neither would expand the 118,000 ton catch limit. Ken's

proposal adds hand jigging, up to eight lines per vessel, and SDFWG's would only allow vessels under 65 feet.

Some SFAC members expressed concerns about these proposals including:

- The proposals would add too many boats to the fleet if anyone with a commercial fishing license can fish squid.
- Enforcement and lack of ability to enforce a one-ton limit.
- This opens the door to open access to the squid fishery.

The following additional ideas for improving small-scale fishing access were discussed:

- *Purchase or lease an existing brail permit:* Some SFAC members expressed support for this idea as a way to access the fishery at lower cost. There are some inactive permits that could be leased. CDFW explained that the permit is tied to the vessel so new regulations may be required to allow a temporary transfer to another vessel and operator for a lease term. Some concern was expressed about a very active leasing market. This idea could be broadened to leasing a seine permit.
- *Test feasibility of developing local markets through the Experimental Fishing Permit (EFP) program:* Under the EFP, an individual could apply for a permit to do a certain type of fishing in a specific area for a limited time for a specific purpose. They would report to CDFW, and CDFW would review the outcomes and make a recommendation on whether to proceed within the Commission process at the end of the experimental period. The EFP could be bounded based on location (e.g., deliver only to one specific port). An EFP could be developed and approved for more than one person. Some SFAC members expressed support for an EFP as a way to learn about limited small-scale access.
- *Add a fourth permit type or allow for open access small-scale:* This idea was not discussed in detail. Some SFAC members did not support open access for small-scale fishing.
- *Use a buyback strategy:* A two-for-one small-scale seine permit would get rid of two existing permits to create a small-scale seine permit. This would require funding to pay for it. This effectively shrinks the number of participants in the fleet, thus increases the value of the permit. A broad cross section of SFAC members expressed support for this idea.



### **What are the socioeconomic benefits and/or unintended consequences associated with improved access?**

Fairness was a key issue identified by some SFAC members. Some noted that the limited entry fishery exists for a reason, and expressed concern about how allowing small-scale or open access would impact existing permit holders. They also noted that depending on how small-scale access is allowed, it could encourage cheating (fishing more than limits allow) and could undermine the stability of the fishery. Similarly, it was noted that squid are sometimes found in the north coast and sometimes are not; and this could create a reliance on a benefit that may not materialize.

#### **4. Review Assessment Techniques and Directions in Preparation for Final SFAC Meetings**

This topic was not covered due to time constraints.

#### **5. Public Comment**

A member of the public commented that the limited entry fishery should be respected. Due to the money invested and the variables involved, others should not be allowed to join. A reduction in the number of boats would be acceptable.

#### **SUMMARY, NEXT MEETING, NEXT STEPS**

Susan Ashcraft explained that the Marine Resource Committee of the Commission will meet on March 19<sup>th</sup> in San Clemente and will discuss the SFAC progress. CDFW staff will present what the SFAC has accomplished so far, where the process is going and will receive feedback from the Committee.

The next SFAC meeting is scheduled for March 21, 2024 in Santa Barbara. The meeting goal is to review the four topics of fishing efforts and fishery dynamics, monitoring, gear/habitat and small-scale access, wrap up discussions, and focus in on decision points. There will also be an update on EDM analysis results.

The final SFAC meeting is scheduled for May 1-2, 2024 in Long Beach. At this meeting, the SFAC will provide final recommendations for the market squid fishery management review (CDFW will subsequently provide the results of the review to the Commission).

#### **SFAC Members:**

- Each SFAC member is asked to review the draft meeting summary after it is distributed and propose bounded edits to address key misstatements or omissions.

- Check in with your constituencies on SFAC progress and any input

**Facilitation Team/Conveners:**

- Prepare and distribute draft meeting summary for review by SFAC members.
- Determine whether a remote meeting option for SFAC members is feasible for the March 21<sup>st</sup> meeting in Santa Barbara.

For questions regarding this meeting summary, please contact:

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