

# California Fish and Game Commission Tribal Committee

## Meeting Materials



**December 12, 2023**

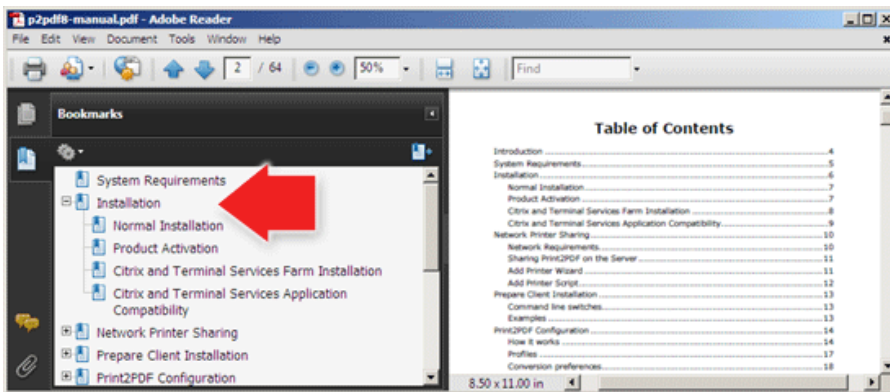
**San Diego**


## EASY GUIDE TO USING THE BINDER

1. Download and open the binder document using your Adobe Acrobat program/app.
2. If a bookmark panel does not automatically appear on either the top or left side of the screen, click/tap on the “bookmark symbol” located near the top left-hand corner.



3. To make adjustments to the view, use the Page Display option in the View tab. You should see something like:



4. We suggest leaving open the bookmark panel to help you move efficiently among the staff summaries and numerous supporting documents in the binder. It's helpful to think of these bookmarks as a table of contents that allows you to go to specific points in the binder without having to scroll through hundreds of pages.
5. You can resize the two panels by placing your cursor in the dark, vertical line  located between the panels and using a long click /tap to move in either direction.
6. You may also adjust the sizing of the documents by adjusting the sizing preferences located on the Page Display icons found in the top toolbar or in the View tab.
7. Upon locating a staff summary for an agenda item, notice that you can obtain more information by clicking/tapping on any item underlined in blue.
8. Return to the staff summary by simply clicking/tapping on the item in the bookmark panel.
9. Do not hesitate to contact staff if you have any questions or would like assistance.

## Overview of the Fish and Game Commission Tribal Committee Meeting

---

- Welcome to this meeting of the California Fish and Game Commission Tribal Committee. The Committee is comprised of up to two Commissioners who co-chair each meeting; members are assigned annually by the Commission. Currently the Tribal Committee is chaired by Commissioner Jacque Hostler-Carmesin.
- Our goal today is informed discussion to guide future decision making and we need your cooperation to ensure a lively and comprehensive dialogue.
- We are operating under Bagley-Keene Open Meeting Act, but it is important to note that the Committee chair cannot take action independent of the full Commission; instead, the chair makes recommendations to the full Commission at regularly scheduled meetings.
- These proceedings are being recorded and will be posted to our website for reference and archival purposes.
- Items may be heard in any order pursuant to the determination of the committee chair.
- Requests for regulatory change must be directed to the full Commission and submitted on the required petition form, FGC 1, available on the Commission website and from staff. However, at the Committee's discretion, it may request that staff follow up on items of potential interest to the Committee and possible recommendation to the Commission.
- Committee meetings operate informally and provide an opportunity for everyone to provide input on agenda items. If you wish to contribute to an agenda item, please follow these guidelines:
  1. Raise your hand and wait to be recognized by the Committee chair.
  2. Provide your name, affiliation (if any), and the number of people you represent.
  3. Time is limited; please keep your contribution precise to give others time to speak.
  4. If several speakers have similar ideas or concerns, please appoint a group spokesperson.
  5. If speaking during general public comment, the subject matter you present should not be related to any item on the current agenda (public input on agenda items will be taken at the time the Committee discusses each item).

# Introductions for the California Fish and Game Commission Tribal Committee Meeting

---

## Commissioners

Jacque Hostler-Carmesin	Chair
Erika Zavaleta	Visiting commissioner

## Commission Staff

Melissa Miller-Henson	Executive Director
Susan Ashcraft	Marine Advisor
Ari Cornman	Wildlife Advisor
Jenn Bacon	Analyst
David Haug	Analyst

## California Department of Fish and Wildlife

Jay Rowan	Branch Chief, Fisheries Branch and Acting Deputy Director for Wildlife and Fisheries Division
Scott Gardner	Branch Chief, Wildlife Branch
Chris Stoots	Captain, Law Enforcement Division
Craig Shuman	Regional Manager, Marine Region
Sarah Fonseca	Department Tribal Liaison, Office of Justice, Equity, Diversity and Inclusion
Steve Wertz	Senior Environmental Scientist Supervisor, Marine Protected Areas Management Project, Marine Region
Kirsten Ramey	Environmental Program Manager, State Managed Finfish and Nearshore Ecosystem Program, Marine Region



**Commissioners**  
**Eric Sklar**, President  
Saint Helena  
**Erika Zavaleta**, Vice President  
Santa Cruz  
**Jacque Hostler-Carmesin**, Member  
McKinleyville  
**Samantha Murray**, Member  
La Jolla  
**Vacant**, Member

STATE OF CALIFORNIA  
Gavin Newsom, Governor

**Melissa Miller-Henson**  
**Executive Director**  
P.O. Box 944209  
Sacramento, CA 94244-2090  
(916) 653-4899  
[fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)  
[www.fgc.ca.gov](http://www.fgc.ca.gov)

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

### Tribal Committee

Committee Chair: Commissioner Hostler-Carmesin  
Visiting commissioner: Vice President Zavaleta

### Meeting Agenda and Materials

December 12, 2023; 1:30 p.m.

#### In Person

Handlery Hotel San Diego  
950 Hotel Circle North  
San Diego, CA 92108

and

#### Webinar and Phone

*To participate in the meeting remotely, you may join the webinar directly at <https://wildlife-ca.gov.zoom.us/j/83095051825>. For complete instructions on how to join via Zoom or phone, [click here](#) or visit [fgc.ca.gov/meetings/2023](http://fgc.ca.gov/meetings/2023).*

**Note:** Please see important meeting procedures and information at the end of the agenda. Unless otherwise indicated, the California Department of Fish and Wildlife is identified as Department. All agenda items are informational and/or discussion only. The Committee develops recommendations to the Commission but does not have authority to make policy or regulatory decisions on behalf of the Commission.

Call to order

**1. Approve agenda and order of items**

**2. Annual tribal planning meeting**

Discuss updates on priorities identified at the July 20, 2022 tribal planning meeting, held annually pursuant to the Commission's Tribal Consultation Policy, and begin discussions about 2024 meeting planning.

**Exhibit 2.1:** Summary of July 20, 2022 Commission Annual Tribal Planning meeting

**Exhibit 2.2:** Commission Tribal Consultation Policy, dated Jun 2015

**3. Co-management roundtable**

Discuss tribal co-management initiatives and projects planned or underway in collaboration with public agencies and California tribes. Tribal representatives are invited to share their co-management interests and experiences.

**Exhibit 3.1:** Adopted co-management vision statement and definition, dated February 2020

**4. Marine protected areas decadal management review**

Receive and discuss the prioritized list of recommendations and the process for considering petitions to modify the network of marine protected areas. Develop any further recommendations from the Committee to the Commission.

**Exhibit 4.1:** Department prioritized list of recommendations from marine protected area (MPA) decadal management review, dated July 28, 2023

**Exhibit 4.2:** Staff announcement about petitions for changes to MPAs, sent October 12, 2023

**Exhibit 4.3:** Staff overview of process to consider potential changes to MPAs, dated October 11, 2023

**Exhibit 4.4:** Staff overview of MPA petition process presentation, presented October 25, 2023

**5. Coastal Fishing Communities Policy**

Consider the policy on coastal fishing communities presented to the Commission and develop any further recommendations from the Committee to the Commission.

**Exhibit 5.1:** Coastal fishing communities policy documents for December 13-14, 2023 Commission meeting

**6. Tribal subsistence harvest definition workgroup**

Discuss how to potentially move the tribal subsistence workgroup forward.

**7. Staff and agency updates requested by the Committee**

Receive updates from staff and other agencies, including current topics on the work plan for which the Committee has requested an update.

(A) California Natural Resources Agency

(B) California Ocean Protection Council

(C) California Department of Fish and Wildlife

I. Department Tribal Liaison

II. Law Enforcement Division

**Exhibit 7.1:** *Informational item*; marine protected areas enforcement statistics presentation to the Commission Marine Resources Committee (MRC) on November 16, 2023

III. Wildlife and Fisheries Division

a. White sturgeon recreational fishery

**Exhibit 7.2:** Presentation on white sturgeon sport fishing long-term regulation change

IV. Marine Region

a. Kelp restoration and management

**Exhibit 7.3:** Status of research and monitoring, restoration efforts and developing management strategies for kelp species, report from the Department and the California Ocean Protection Council, dated November 2023

**Exhibit 7.4:** *Informational item*; kelp restoration presentation to MRC on November 16, 2023

**Exhibit 7.5:** *Informational item*; Department overview of process to develop a statewide abalone recovery plan, dated July 20, 2023

**Exhibit 7.6:** *Informational item*; red abalone recovery plan presentation to MRC on November 16, 2023

**Exhibit 7.7:** *Informational item*; Department update on the squid fishery advisory committee, dated July 20, 2023

**Exhibit 7.8:** *Informational item*; Department update on the squid fishery advisory committee, dated November 16, 2023

(D) Commission staff

I. Wildlife Resources Committee (WRC)

**Exhibit 7.9:** WRC work plan, revised December 4, 2023

II. Marine Resources Committee

**Exhibit 7.10:** MRC work plan, revised December 4, 2023

III. Justice, equity, diversity and inclusion plan

IV. Commission policies review

**Exhibit 7.11:** Draft potential modifications to the Commission Naming Installations Policy, dated December 10, 2023

V. Commission rulemakings, petitions and other pending actions

**Exhibit 7.12:** Commission rulemaking timetable, dated November 29, 2023

**Exhibit 7.13:** December 13-14, 2023 Commission meeting agenda

**Exhibit 7.14:** Potential agenda items for February 14-15, 2024 Commission meeting, dated December 8, 2023

**8. General public comment for items not on the agenda**

Receive public comment regarding topics not included in this agenda.

Note: The Committee may not discuss or take action on any matter raised during this item, except to consider whether to recommend that the matter be added to the agenda of a future meeting [Sections 11125, 11125.7(a), Government Code].

**9. Future agenda items**

(A) Review work plan agenda topics, priorities, and timeline

**Exhibit 9.1:** TC work plan, revised December 4, 2023

(B) Potential new topics for Commission consideration

Adjourn

## California Fish and Game Commission Meeting Schedule

**Note:** As meeting dates and locations can change, visit [www.fgc.ca.gov/meetings](http://www.fgc.ca.gov/meetings) for the most current information.

Meeting Date	Commission Meeting	Committee Meeting
January 18		<b>Wildlife Resources</b> California Department of Fish and Wildlife Inland Deserts Region Field Office 3602 Inland Empire Blvd, Room C220 Ontario, CA 91764
February 14-15	California Natural Resources Headquarters Building Room 2-221A,B & C 715 P Street, 2 <sup>nd</sup> Floor Sacramento, CA 95814	
March 14		<b>Marine Resources</b> San Clemente area
April 16		<b>Tribal</b> San Jose
April 17-18	San Jose	
May 15	Teleconference In-person location	
May 16		<b>Wildlife Resources</b> Yreka
June 19-20	Mammoth Lakes	
July 18		<b>Marine Resources</b> Santa Rosa area
August 13		<b>Tribal</b> River Lodge Conference Center 1800 Riverwalk Drive Fortuna, CA 95540
August 14-15	River Lodge Conference Center 1800 Riverwalk Drive Fortuna, CA 95540	
September 12		<b>Wildlife Resources</b> San Jose area

Meeting Date	Commission Meeting	Committee Meeting
October 9-10	California Natural Resources Headquarters Building Auditorium 715 P Street, 1st Floor Sacramento, CA 95814	
November 7		<b>Marine Resources</b> California Natural Resources Headquarters Building Rooms 2-302 A,B and 2-301 715 P Street, 2ndFloor Sacramento, CA 95814
December 10		<b>Tribal</b> San Diego area
December 11-12	San Diego area	

## **Other Meetings of Interest**

### **Association of Fish and Wildlife Agencies**

- September 22-25, 2024 – Madison, WI

### **Pacific Fishery Management Council**

- March 5-11, 2024 – Fresno, CA
- April 5-11, 2024 – Seattle, WA
- June 6-13, 2024 – San Diego, CA
- September 18-24, 2024 – Spokane, WA
- November 13-19, 2024 – Costa Mesa, CA

### **Pacific Flyway Council**

- March 26, 2024 – Grand Rapids, MI
- August 2024 – Date and location TBD

### **Western Association of Fish and Wildlife Agencies**

- June 3-7, 2024 – Stevenson, Washington

### **Wildlife Conservation Board**

- February 15, 2024 – Sacramento, CA
- May 23, 2024 – Sacramento, CA
- August 22, 2024 – Sacramento, CA
- November 21, 2024 – Sacramento, CA

## Important Committee Meeting Procedures Information

Welcome to a meeting of the California Fish and Game Commission's Wildlife Resources Committee. The Committee is composed of and chaired by up to two Commissioners; these assignments are made by the Commission each year.

The goal of the Committee is to allow greater time to investigate issues before the Commission than would otherwise be possible. Committee meetings are less formal in nature and provide for additional access to the Commission. The Committee follows the noticing requirements of the Bagley-Keene Open Meeting Act. It is important to note that the Committee chairs cannot take action independent of the full Commission; instead, the chairs make recommendations to the full Commission at regularly scheduled meetings.

The Commission's goal is preserving our outdoor heritage and conserving our natural resources through informed decision-making; Committee meetings are vital in developing recommendations to help the Commission achieve that goal. In that spirit, we provide the following information to be as effective and efficient toward that end. Welcome, and please let us know if you have any questions.

### Persons with Disabilities

Persons with disabilities needing reasonable accommodation to participate in public meetings or other Commission activities are invited to contact the Department's Equal Employment Opportunity (EEO) Office at (916) 653-9089 or [EEO@wildlife.ca.gov](mailto:EEO@wildlife.ca.gov). Accommodation requests for facility and/or meeting accessibility and requests for American Sign Language (ASL) Interpreters should be submitted at least two weeks prior to the event. Requests for Real-Time Captioners should be submitted at least four weeks prior to the event. These timeframes are to help ensure that the requested accommodation is met. If a request for an accommodation has been submitted but is no longer needed, please contact the EEO Office immediately.

### Submitting Written Materials

The public is encouraged to attend Committee meetings and engage in the discussion about items on the agenda; the public is also welcome to comment on agenda items in writing. You may submit your written comments by one of the following methods (only one is necessary): **Email** to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov); **mail** to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090; or **deliver** to California Fish and Game Commission, 715 P Street, 16<sup>th</sup> floor, Sacramento, CA 95814; or **hand-deliver** to a Committee meeting.

### Comment Deadlines

The **Written Comment Deadline** for this meeting is **5:00 p.m. on Thursday, November 30, 2023**. Written comments received at the Commission office by this deadline will be made available to the chair prior to the meeting.

The **Supplemental Comment Deadline** for this meeting is **noon on Thursday, December 7, 2023**. Comments received by this deadline will be made available to the chair at the meeting.

After these deadlines, written comments may be delivered in person to the meeting; please bring **six** copies of written comments to the meeting.

*The Committee **will not** consider comments regarding proposed changes to regulations that have been noticed by the Commission. If you wish to provide comment on a noticed item,*

*please provide your comments during Commission business meetings, via email, or deliver to the Commission office.*

**Materials provided to the Committee will be available to the general public.**

### **Regulation Change Petitions**

As a general rule, requests for regulatory change must be redirected to the full Commission and submitted on the required petition form, FGC 1, *Petition to the California Fish and Game Commission for Regulation Change*. However, at the Committee's discretion, the Committee may request that staff follow up on items of potential interest to the Committee and possible recommendation to the Commission.

### **Speaking at the Meeting**

Committee meetings operate informally and provide opportunity for everyone to contribute to the dialogue. If you wish to speak on an agenda item, please follow these guidelines:

- You will be given instructions during the meeting for how to be recognized by the Committee chair to speak.
- Once recognized, please begin by giving your name and affiliation (if any) and the number of people you represent.
- Time is limited; please keep your contributions concise so that everyone has an opportunity to speak.
- If there are several speakers with the same concerns, please try to appoint a spokesperson and avoid repetition.
- If speaking during general public comment for items not on the agenda (Agenda Item 8), the subject matter you present should not be related to any item on the current agenda (contributions to agenda item discussions will take place at the time the Committee chair discusses that item). General public comment is an opportunity to bring matters to the attention of the Committee, but you may also do so via email or standard mail. At the discretion of the Committee, staff may be requested to follow up on the subject you raise.

### **Visual Presentations/Materials**

All electronic presentations must be submitted by the **Supplemental Comment Deadline** and approved by the Commission executive director before the meeting.

- Electronic presentations must be provided by email to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov) or delivered to the Commission on a USB flash drive by the deadline.
- All electronic formats must be Windows PC compatible.
- If participating in person, it is recommended that a print copy of any electronic presentation be submitted in case of technical difficulties.



**Commissioners**  
**Samantha Murray**, President  
La Jolla  
**Erika Zavaleta**, Vice President  
Santa Cruz  
**Jacque Hostler-Carmesin**, Member  
McKinleyville  
**Eric Sklar**, Member  
Saint Helena  
**Vacant**, Member

STATE OF CALIFORNIA  
Gavin Newsom, Governor

**Melissa Miller-Henson**  
**Executive Director**  
P.O. Box 944209  
Sacramento, CA 94244-2090  
(916) 653-4899  
[fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)  
[www.fgc.ca.gov](http://www.fgc.ca.gov)

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

### **ANNUAL TRIBAL PLANNING MEETING**

#### **July 20, 2022 Meeting Summary Sacramento, Webinar and Teleconference**

This document is a summary of the California Fish and Game Commission (Commission) annual tribal planning meeting, as prepared by staff.

Commissioner Jacque Hostler-Carmesin welcomed everyone to the meeting, and then introduced Tribal Advisor and Liaison Chuck Striplen and Executive Director Melissa Miller-Henson.

Commissioner Hostler-Carmesin moderated the meeting, with representatives from approximately a dozen tribes and tribal communities in attendance. In addition, the California Natural Resources Agency (CNRA) Assistant Secretary for Tribal Affairs Geneva E.B. Thompson attended the meeting in person, along with staff from the California Department of Fish and Wildlife (Department) and the California Ocean Protection Council.

#### **1. Introductions and goals**

Commissioner Hostler-Carmesin invited attendees to introduce themselves. Tribal representatives introduced themselves first, followed by Department staff, other agency staff, and then Commission staff. Chuck Striplen briefly reviewed the agenda for the meeting.

#### **2. Commission tribal consultation policy and consultation process**

Chuck Striplen reviewed the Commission's tribal consultation policy and staff's coordination with other state natural resource agencies on updating consultation policies; Geneva Thompson described her role in coordinating this effort. She hopes to have a report soon on the work.

On mention of the training element of the Commission's Tribal Consultation Policy, one tribal representative asked about available training for tribes. No formal training is currently available, but several attendees supported a range of possible trainings, including monitoring and data collection, drone surveys, the California Administrative Procedure Act, and Commission processes (e.g., petitions). Commission and DFW staff committed to follow-up with appropriate contacts and to discuss possible training opportunities internally.

Geneva E.B. Thompson noted that the Native American Heritage Commission offers [AB52 tribal consultation training](#).

### **3. Recap of 2021 annual tribal planning meeting; review of Commission tribal projects and priorities for 2022-2023**

Chuck Striplen provided a brief summary of the major discussion topics and outcomes from the 2021 annual tribal planning meeting.

Several tribal representatives made note of issues related to overharvest and DFW enforcement in and around marine protected areas. They suggested that both the public and DFW personnel would benefit from training and education pertaining to tribal rights to resources and appropriate gathering practices (potentially via permit conditions), as well as training for tribal citizens on code compliance; this could be viewed as a measure to start reflecting traditional ecological knowledge in regulatory and management processes. DFW staff expressed appreciation for the feedback and will follow up individually.

A tribal representative also suggested that the Commission should explore updating its co-management vision and definition to ensure consistency with related policy initiatives at CNRA and Governor's office. Many tribes are currently engaged in various forms of co-management, which could inform an improved definition, vision, or policy. Commissioner Hostler-Carmesin highlighted how the Commission has been a trailblazer on the subject of co-management and agreed that revisiting the topic would be appropriate in the context of Governor Newsom's policy initiative; she also requested that Geneva E.B. Thompson be part of the conversation.

### **4. Roundtable discussion about tribal priorities and issues of concern**

Commissioner Hostler-Carmesin moderated a lengthy discussion with tribal representatives who were invited to share current priorities and issues of concern, and to help identify potential opportunities for collaboration with or action by the Commission.

A representative from the Karuk Tribe described the complexity of issues facing tribes and salmonids on the Klamath River in the context of looming dam removal and recent federal court decisions affecting tribal sovereignty – highlighting the need to get thoughtful co-management agreements on track.

Representatives from Graton, Kashia, and Resighini spoke about the need for support for tribal resource management programs. Tribes are engaged more and more in monitoring everything from kelp to black bears, and rely on competitive, ephemeral funding sources to maintain program staffing and productivity. The process to craft agreements with DFW or FGC is not clear to some tribes, especially in multi-jurisdictional contexts (e.g., Point Reyes). DFW staff committed to following up on this matter.

Representatives from Dry Creek and United Auburn Indian Community spoke about challenging effects from COVID and wildfires. Dry Creek, in spite of being especially hard hit by COVID, continues to expand its creek and river restoration efforts, and Auburn is focused on building tribal capacity in traditional fire management in collaboration with other tribes. The representative from the Karuk Tribe spoke of legislation designed to recognize tribes' sovereign right to manage their ancestral lands (e.g., with fire), and the tribe's work in support of that effort (<https://karuktribeclimatechangeprojects.com/good-fire/>).

Geneva E.B. Thompson and Mike Esgro introduced opportunities for tribal consultation:

- Governor's Fifth Climate Change Assessment – an effort to integrate tribal priorities and tribal ecological knowledge into the assessment for climate change. A research grant program and tribal advisory group are being developed, and nominations for the advisory committee are currently being sought. Also see survey below.
- CNRA Outdoors for All Initiative: Tribal Roundtable Listening Sessions  
Listening Session 1: August 17, 2022, at 10:00 a.m. – 12:00 p.m.  
Listening Session 2: August 18, 2022, at 5:30 – 7:30 p.m.
- OPC's draft tribal engagement strategy is currently released for tribal review.
- [OPC survey](#) for the Fifth Climate Change Assessment – designed to gather input on California-specific research priorities that will inform the scope of climate adaptation and resilience research conducted as a part of the national assessment being led by the U.S. Global Change Research Program.

## **5. Closing thoughts and adjourn**

Based on the discussions, Commissioner Hostler-Carmesin suggested Commission and DFW staff follow up on elk management agreements, coastal gathering permit conditions, and Klamath River salmonids. Any proposed changes to the Tribal Committee work plan will be discussed internally and with the Commission.

**California Fish and Game Commission**  
**Tribal Consultation Policy**  
*Adopted June 2015*

On September 19, 2011, Governor Edmund G. Brown, Jr., issued Executive Order B-10-11, which provides, among other things, that it is the policy of the administration that every state agency and department subject to executive control implement effective government-to-government consultation with California Indian Tribes.

**Purpose of the Policy**

The mission of the California Fish and Game Commission (FGC) is, on the behalf of California citizens, to ensure the long term sustainability of California's fish and wildlife resources by setting policies, establishing appropriate rules and regulations, guiding scientific evaluation and assessments, and building partnerships to implement this mission. California Native American Tribes, whether federally recognized or not, have distinct cultural, spiritual, environmental, economic and public health interests and unique traditional knowledge about the natural resources of California.

The purpose of this policy is to create a means by which tribes and FGC can effectively work together to realize sustainably-managed natural resources of mutual interest.

**Policy Implementation**

1. Communication. Both FGC and the tribes are faced with innumerable demands on their limited time and resources. In the interest of efficiency, FGC will annually host a tribal planning meeting to coordinate the upcoming regulatory and policy activities before FGC. The meeting will provide a venue for education about process, identifying regulatory and policy needs, and developing collaborative interests; this will include inviting sister agencies to participate.
2. Collaboration. In areas or subjects of mutual interest, FGC will pursue partnerships with tribes to collaborate on solutions tailored to each tribe's unique needs and capacity. The structure of these collaborative efforts can range from informal information sharing, to a memorandum of understanding with more specific agreements regarding working relationships and desired outcomes, to co-management agreements with specific responsibilities and authorities.
3. Record-keeping. FGC will maintain a record of all comments provided by tribes and will include them in administrative records where appropriate.
4. Training. FGC will provide training to interested tribes on its processes for regulation and policy development.

**California Fish and Game Commission**  
**Co-Management Vision Statement and Definition**

*February 2020*

**Vision Statement**

The vision of tribes, the California Fish and Game Commission, and the California Department of Fish and Wildlife is to engage in a collaborative effort between sovereigns to jointly achieve and implement mutually agreed upon and compatible governance and management objectives to ensure the health and sustainable use of fish and wildlife.

**Definition**

A collaborative effort established through an agreement in which two or more sovereigns mutually negotiate, define, and allocate amongst themselves the sharing of management functions and responsibilities for a given territory, area or set of natural resources.



## Marine Protected Area Decadal Management Review Report: Prioritized Recommendations

The [first comprehensive decadal management review](#) (Review) of California's Marine Protected Area (MPA) Network and Management Program included a suite of 28 recommendations ([Table 6.1](#)) to guide adaptive management of the MPA Network. The recommendations were developed from a wide range of sources, including California Native American Tribes, core partners, the fishing community, the public, and existing reports. Following the release of the Review in January 2023, the California Department of Fish and Wildlife (CDFW) and the California Fish and Game Commission (CFGC) hosted several public meetings from March through April 20, 2023, to discuss the adaptive management recommendations included in the Review. More than 100 entities or individuals provided several hundred distinct comments over that period. The comments were carefully reviewed and linked to the 28 recommendations and their associated action items. Feedback was provided by a diverse suite of voices, including California Native American Tribes, government agencies, the fishing community, non-governmental organizations, MPA researchers, and individual members of the public.

To forge a path forward, the CFGC requested at their April meeting that CDFW review the recommendations and corresponding management actions in Table 6.1 of the Review, along with public recommendations submitted and presented, to propose near- and long-term priorities and associated tradeoffs, for discussion and guidance for next steps at the July 20 Marine Resources Committee (MRC) meeting. While all 28 recommendations in [Table 6.1](#) remain important, the tables below prioritize recommendations based on 1) identified need, 2) expected timeframe, 3) input received, and 4) level of information and resources that are available to advance recommendations. This approach will help focus the work of CDFW, CFGC, Tribes, and partners to implement the recommendations to achieve near-term, mid-term, and long-term priorities.

The MRC discussed and finalized the prioritized list of recommendations in Table 6.1 at their [July 20, meeting](#). Recommendation 25 was moved from mid-term to near-term, and CFGC requested CDFW place initial focus on developing a proposed petition review process for implementing Recommendation 4. For more information about upcoming CFGC meetings, [visit this webpage](#).

Prioritization tables in order of expected timeframe: 1) Near-term Priorities, 2) Mid-term Priorities, and 3) Long-term Priorities.

**1) Near-term Priorities (Ongoing – 2 Years)**

Cornerstone	Category	Recommendation
Governance	Tribal Coordination	01. Improve state agencies' tribal engagement and relationship building efforts
Governance	Regulatory and Review Framework	04. Apply what is learned from the first Decadal Management Review to support proposed changes to the MPA Network and Management Program
Governance	Justice, Equity, Diversity, and Inclusion	07. Expand targeted outreach and education materials and events to under-represented user groups.
Governance	MPA Statewide Leadership Team and Partner Coordination	09. Continue to coordinate and collaborate with OPC and other agencies on California's ocean and coastal priorities to enhance coastal biodiversity, climate resiliency, human access and use, and a sustainable blue economy.
Governance	MPA Statewide Leadership Team and Partner Coordination	10. Improve partnership coordination across the four pillars of the MPA Management Program.
Management Program	Research and Monitoring	11. Update the MPA Monitoring Action Plan framework to improve and sustain a cost-effective long-term monitoring program, including guidelines to ensure monitoring consistency and sustainable funding.
Management Program	Outreach and Education	16. Conduct more targeted outreach to specific audiences to connect stakeholders with coastal resources and to encourage stewardship and compliance with regulations.

Management Program	Policy and Permitting	17. Improve the application and approval process for scientific collecting permits.
Management Program	Policy and Permitting	18. Utilize OPC's Restoration and Mitigation Policy to develop a framework to evaluate and approve appropriate restoration and mitigation actions within MPAs and MMAs.
Management Program	Enforcement and Compliance	20. Increase enforcement capacity.
Management Program	Enforcement and Compliance	21. Enhance MPA citation record keeping and data management.
Network Performance	Climate Resilience and Adaptation	25. Develop and implement climate change research and monitoring priorities and metrics for California's MPA Network.
Network Performance	Fisheries Integration and Other Influencing Factors	27. Improve understanding of MPA Network effects on fisheries and fish stock sustainability and further integrate MPA monitoring data into fisheries management.

## 2) Mid-term Priorities (2 – 5 years)

Cornerstone	Category	Recommendation
Governance	Tribal Coordination	02. Create a clear pathway to tribal MPA management
Governance	Tribal Coordination	03. Build tribal capacity to participate in MPA management activities
Governance	Justice, Equity, Diversity, and Inclusion	06. Include and fund more diverse researchers and stakeholders in research and monitoring projects that directly contribute to the MPA Monitoring Program.
Governance	Justice, Equity, Diversity, and Inclusion	08. Evaluate the accessibility of MPAs to various community groups.



Management Program	Research and Monitoring	12. Invest in improving understanding of the human dimensions of MPAs and develop a human dimensions working group and research agenda.
Management Program	Research and Monitoring	13. Explore the use of innovative technologies such as remote sensing, drones, and eDNA, to enhance and streamline traditional monitoring projects.
Management Program	Research and Monitoring	14. Develop a comprehensive community science strategy for MPAs and better utilize community science to supplement core monitoring programs.
Management Program	Outreach and Education	15. Evaluate outreach needs, assess effectiveness of resources, identify, and pursue the most impactful and cost-efficient outreach tools for increasing MPA awareness and compliance.
Management Program	Enforcement and Compliance	22. Increase information gathering regarding MPA violation prosecutions and judicial outcomes.
Network Performance	MPA Network Design	23. Expand and target monitoring and research efforts to examine the design attributes of the MPA Network more effectively.
Network Performance	Climate Resilience and Adaptation	26. Consider climate change impacts from the outset of planning for monitoring MPA human dimensions.
Network Performance	Fisheries Integration and Other Influencing Factors	28. Further integrate influencing factors into ecological and human study designs and interpretations of MPA performance.

**3) Long-term Priorities (5 – 10 years)**

Cornerstone	Category	Recommendation
Governance	Regulatory and Review Framework	05. Establish targets for meeting the goals of the MLPA and how the Management Program and Network will evolve as targets are met
Management Program	Enforcement and Compliance	19. Create and implement a cohesive and actionable MPA Enforcement Plan.
Network Performance	MPA Network Design	24. Work with CFGC and partners to better incorporate marine cultural heritage into the design of the MPA Network.



**California Fish and Game Commission**  
*Wildlife Heritage and Conservation Since 1870*

**Petitions for changes to marine protected areas (MPAs) and priorities for adaptive management**

Following recommendations from its Marine Resources Committee (MRC), the California Fish and Game Commission (Commission) has provided guidance relative to [adaptive management recommendations](#) from the first comprehensive [decadal management review](#) of the MPA network and management program, and initiated a process to consider potential changes to the MPA network.

At its August 22-23, 2023 meeting, the Commission supported the California Department of Fish and Wildlife's [prioritized recommendations](#) from the MPA decadal management review report for near-, mid-, and long-term focus.

The Commission also approved moving forward with the near-term priority recommendation to *apply what is learned from the first decadal management review to support proposed changes to the MPA*

*network*. The Commission initiated a process and timeline – to begin with its December 2023 meeting – for considering potential MPA changes proposed by the public, agencies and organizations as part of this adaptive management cycle.

Information and resources intended to provide guidance for preparing and submitting an MPA regulation change petition to the Commission are available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=216577>.

Please reach out to staff at [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov) with any questions.

Sincerely,

Susan Ashcraft  
Marine Advisor  
**California Fish and Game Commission**

**Not signed up to receive our informative emails?**

**Sign Up**

Do not reply to this message. [FGC@public.govdelivery.com](mailto:FGC@public.govdelivery.com) is for outgoing messages only.

[California Fish and Game Commission](#)  
715 P Street, Sacramento, CA 95814

SUBSCRIBER SERVICES:  
[Manage Subscriptions](#) | [Help](#)

# California Fish and Game Commission Overview of Process to Consider Potential Changes to California's Marine Protected Area Network: Regulation Change Petition Process, Timeline and Historical Documents

October 11, 2023

The California Fish and Game Commission (Commission) is engaged in an adaptive management process for California's marine protected area (MPA) network and management program based on [adaptive management recommendations](#) from the first comprehensive [decadal management review](#) (DMR) of the network and management program. This document provides updates related to prioritizing adaptive management recommendations and recent Commission action to **initiate a process to receive and consider public petitions for changes to the MPA network** for this adaptive management cycle.

At its August 22-23, 2023 meeting, the Commission acted on recommendations from its Marine Resources Committee (MRC) and provided guidance relative to prioritizing the adaptive management recommendations from the DMR. The Commission approved a MRC recommendation to support the California Department of Fish and Wildlife's (Department's) [prioritized recommendations from the MPA DMR report](#) for near-, mid-, and long-term focus.

In addition, the Commission approved an MRC recommendation to move forward with the near-term priority recommendation to *apply what is learned from the first decadal management review to support proposed changes to the MPA network*. The Commission initiated a process and timeline – beginning with the December 2023 meeting – for considering proposals for MPA changes as part of this adaptive management cycle. Information in this document is intended to guide you through the process.

The process for submitting proposed changes to the MPA network includes three elements: Timeline, format, and supplemental information to consider in developing a petition.

## Timeline

All petitions received by the *December 2023 Commission meeting deadlines* will be considered during this adaptive management review cycle. This will allow review and evaluation of petitions not only individually, but also holistically in the context of the MPA network.

## Receipt of Petitions

The standard public comment deadlines specified for the December 2023 Commission meeting apply.

- a. *November 30 at 5:00 p.m. (strongly preferred)* – Written Comment Deadline. Submitting MPA petitions before this deadline is strongly encouraged; petitions will be made available to the Commission before the meeting, and posted online with meeting materials.
- b. Petitions submitted by the Supplemental Comment Deadline (*December 8 at noon*) or in person at the Commission meeting in San Diego (*December 12-13*) will be received by the Commission at the meeting, but will be processed after those received by the November 30 comment deadline and not initially posted online.

- c. *Submittals after December Commission meeting:* Petitions received after the December meeting deadlines will be received by the Commission at a subsequent meeting and will be considered, consistent with the Commission’s petitions regulations ([Section 662, Title 14, California Code of Regulations](#)). However, the Commission will determine at that time whether to include later submittals in this management review cycle or to hold them for a subsequent MPA review cycle.

### **Action on Petitions (Grant, Deny or Refer for Evaluation)**

Petitions received for the December meeting will be scheduled for initial consideration at the next regularly-scheduled business meeting (February 14-15, 2024), unless the petition is rejected under staff review, pursuant to Section 662.

The Commission will take action to grant or deny each petition, or may refer petitions to the Department to consider, evaluate and make a recommendation (individually and collectively) before the Commission takes final action. The Commission plans to schedule MRC discussion and potential recommendations when Department evaluations are ready (timing to be determined) to support final action by the Commission to grant or deny referred petitions.

### **Format: Required Petition Submittal Form**

Every person, agency or organization recommending that a regulation be added, amended, or repealed must submit a petition to the Commission using the authorized petition form:

#### **Form FGC 1 – Petition to Commission for Regulation Change**

Commission regulations require using Form FGC-1, which is available on the Commission website at <https://fgc.ca.gov/Regulations/Petition-for-Regulation-Change>; see the webpage for more information, including options for how to submit your petition.

There are four “required information” fields specified in Section 1 of the form; be sure to complete all required fields. The second required field is called “Rulemaking Authority,” which is the statutory or constitutional authority of the Commission to take the action requested. The information to add in the field is: “Sections 200, 205(c), 265, 399, 1590, 1591, 2860, 2861 and 6750, Fish and Game Code; and Sections 36725(a) and 36725(e), Public Resources Code.” The authorities listed are for the MPA regulations found at [California Code of Regulations, Section 632](#).

### **Supplemental Information to Consider in Developing a Petition (voluntary)**

Additional MPA information is available for prospective petitioners as a reference while developing petitions. The two types of information are Department-summarized “considerations” for evaluating referred MPA petitions and historical background documents from the regional MPA network planning processes.

#### **Department-Summarized “Considerations” for Evaluating Referred MPA Petitions**

Regulation change petitions submitted to the Commission are evaluated on a case-by-case basis to help inform Commission action and are commonly referred to the Department. In July 2023, MRC received input and discussed a potential framework of “considerations” *that may assist in evaluating petitions the Commission receives related to changes to the MPA network*. The Department summarized the considerations and provided them to the Commission in



August 2023. The Department and individual commissioners generally supported the considerations to help guide development of MPA-specific petitions prior to submitting them to the Commission for review and may guide subsequent evaluation by the Department. A summary document, Potential framework to assist in evaluation of petitions the Commission may receive related to changes to the MPA network and management program, is available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=216395&inline>.

- **Petitioners are encouraged (but not required)** to review the summarized considerations to assist them in preparing their petition and communicating the intent, and to highlight in the submitted materials any considerations that are relevant to the petition.

### **Historical Background Documents from the Regional MPA Network Planning Processes**

Historical documents from the regional MPA planning, design, and adoption processes are available as resources to assist in developing MPA petitions. Historical documents include the 2016 master plan for MPAs, regional planning process intent documents, and regional planning process evaluation documents.

Some historical documents are no longer posted online; however, they are available upon request. To request copies of a document, or if you need an accessible version, please submit a request to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov) or call (916) 653-4899.

- **Petitioners are encouraged (but not required)** to familiarize themselves with the history and intent of the relevant MPA planning, design, and adoption processes, and to highlight how any proposed changes might align with or strengthen the original intent or objectives of the MPA.

### **2016 Master Plan for MPAs Appendices (available online)\***

Six appendices provide documentation from the regional MPA planning and redesign processes conducted under the Marine Life Protection Act (MLPA) goals and guidelines.

- a. Appendix A: MPA planning through the MLPA Initiative.  
Includes scientific foundation for MPA and network design and planning, design guidelines, and management considerations. Key documents include:
  - MLPA goals and guidelines
  - Science guidance for MPA and network design
  - Department MPA design and feasibility guidance with criteria
- b. Appendix B: Records communication and consultation with California tribes and tribal governments during planning.
- c. Appendices C-F: One appendix for each of the four planning regions, provides regional goals and objectives, background and priorities for MPAs, and regional design considerations.

\* Appendices include footnotes with links to other historic documents; many links are “broken.” Contact Commission staff to obtain any specific document not available online.

### ***Regional Planning Process Intent Documents (available on request)***

Separate documents for each planning region with table(s) of regional MPAs developed through the planning process. Lists each MPA and its specific goals, objectives, and design

considerations for MPAs adopted in each region. Most regions also include multiple regional MPA proposals brought forth by regional stakeholder group teams, and an integrated preferred alternative recommended to the Commission. *Contact Commission staff for a link to access documents.*

*Regional Planning Process Evaluation Documents (available on request)*

Other historic documents include original evaluations conducted for regional MPAs and regional network components (MPA size, habitat spacing, habitat coverage, feasibility, socioeconomic impact, goal 3 opportunities, and more). *Contact Commission staff for more information.*





# MPA Petition Process

## Following the Decadal Management Review (DMR)

---

Presented to the MPA Statewide Leadership Team  
Susan Ashcraft, Marine Advisor  
October 25, 2023





# Outline

---

- Commission Action
- Commission Guidance
  - MPA Petition Process
- Timeline

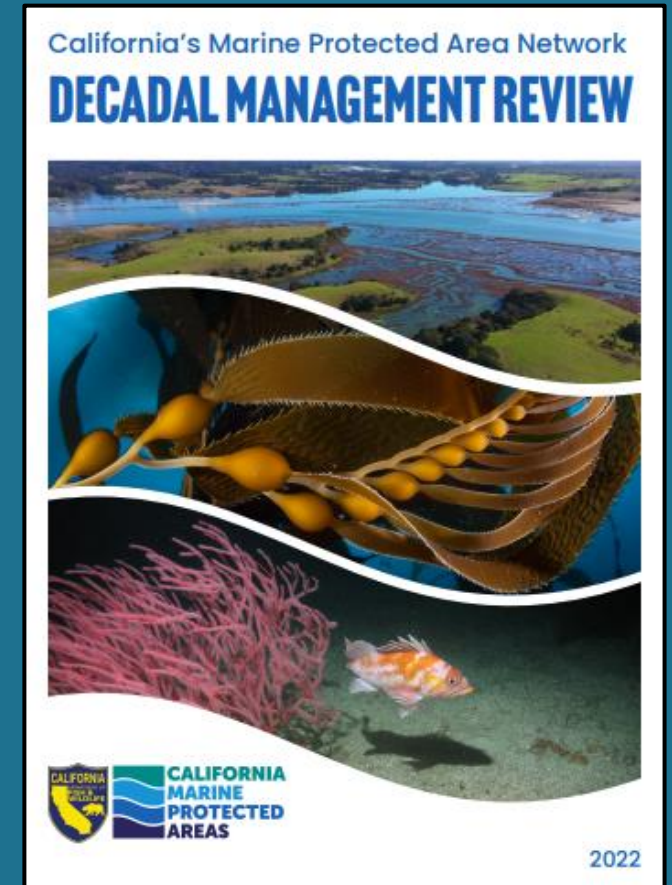




# Commission Action: August Meeting

---

- Supported CDFW-prioritized recommendations from DMR into near-, mid-, and long-term priorities
- Initiated near term recommendation 4:  
*“Apply what is learned from the first DMR to support proposed changes to the MPA network...”*

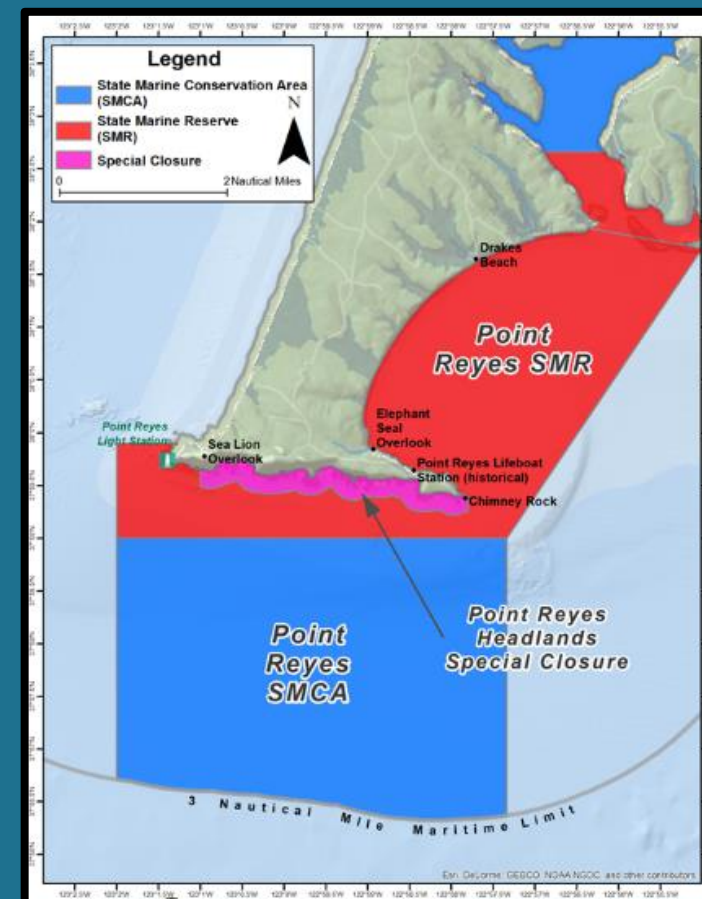






# Commission Guidance – MPA Proposals

1. Use **existing** petition process for regulation changes
2. Include **consideration** of DMR results, MLPA goals, MPA design history
3. Provide **historical documents**
4. **Evaluate** petitions collectively re: MPA network

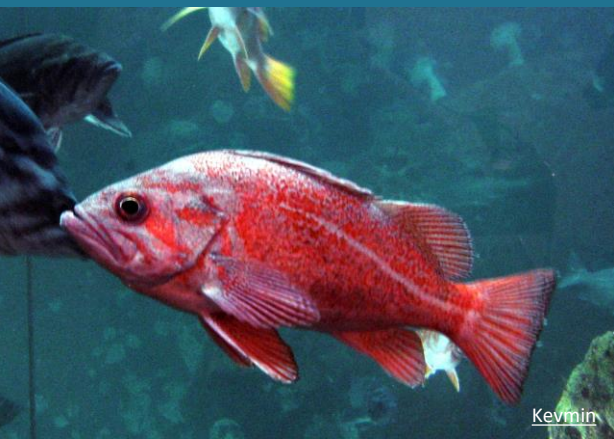




# 1. Use Existing Petition Process

---

- Process for regulation change petitions (Section 662, T14)
  - Two-meeting process
    - Receipt
    - Action (*approve, deny, or refer*)
- Required Petition Submittal Form FGC-1





# Form FGC-1

- Found on Commission website



CA.GOV Contact Us ENHANCED BY Google

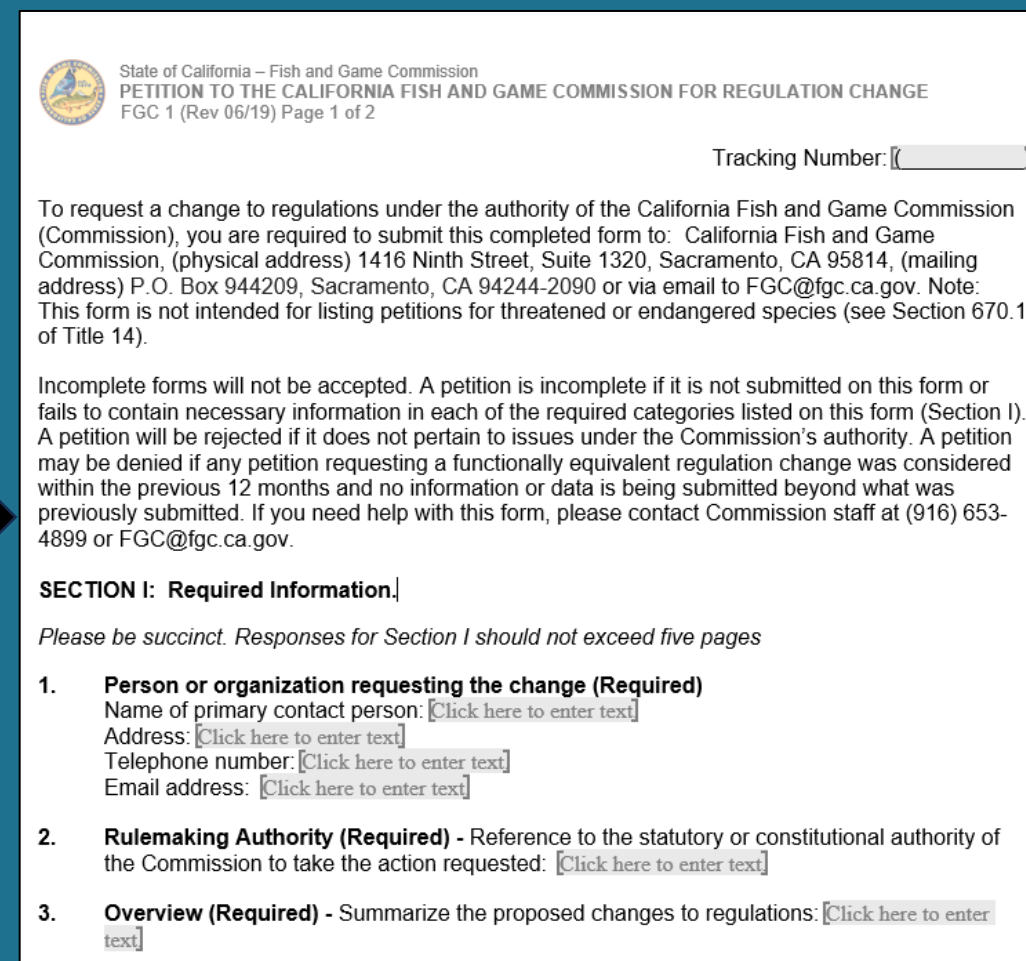
California Fish and Game Commission Home About Meetings Regulations CESA News Contact PRA Request

## Petitions for Regulation Change

### Submitting a Petition for Regulation Change

Beginning October 1, 2015, every person or agency recommending that a regulation be added, amended, or repealed must submit a petition to the commission using the authorized petition form: **FGC 1 Petition to the California Fish and Game Commission for Regulation Change** (Word).

Please complete the form and submit it to the Commission.



State of California – Fish and Game Commission  
PETITION TO THE CALIFORNIA FISH AND GAME COMMISSION FOR REGULATION CHANGE  
FGC 1 (Rev 06/19) Page 1 of 2

Tracking Number: [ ]

To request a change to regulations under the authority of the California Fish and Game Commission (Commission), you are required to submit this completed form to: California Fish and Game Commission, (physical address) 1416 Ninth Street, Suite 1320, Sacramento, CA 95814, (mailing address) P.O. Box 944209, Sacramento, CA 94244-2090 or via email to FGC@fgc.ca.gov. Note: This form is not intended for listing petitions for threatened or endangered species (see Section 670.1 of Title 14).

Incomplete forms will not be accepted. A petition is incomplete if it is not submitted on this form or fails to contain necessary information in each of the required categories listed on this form (Section I). A petition will be rejected if it does not pertain to issues under the Commission's authority. A petition may be denied if any petition requesting a functionally equivalent regulation change was considered within the previous 12 months and no information or data is being submitted beyond what was previously submitted. If you need help with this form, please contact Commission staff at (916) 653-4899 or FGC@fgc.ca.gov.

**SECTION I: Required Information.**

*Please be succinct. Responses for Section I should not exceed five pages*

- 1. Person or organization requesting the change (Required)**  
Name of primary contact person: [Click here to enter text]  
Address: [Click here to enter text]  
Telephone number: [Click here to enter text]  
Email address: [Click here to enter text]
- 2. Rulemaking Authority (Required)** - Reference to the statutory or constitutional authority of the Commission to take the action requested: [Click here to enter text]
- 3. Overview (Required)** - Summarize the proposed changes to regulations: [Click here to enter text]





## 2. Include Considerations ...

---

### Department of Fish and Wildlife: Summary of Marine Protected Area (MPA) Regulation Change Petition Framework Discussion

(07/27/23) Revised 08/10/23; Revised 8/17/23

At the California Fish and Game Commission's (CFGC) July 20, 2023 Marine Resources Committee (MRC) meeting, MRC, CFGC staff, California Department of Fish and Wildlife (CDFW) staff, and stakeholders discussed potential next steps in pursuing the MPA Decadal Management Review (DMR) report recommendations and goals. The discussion included a potential framework to assist in evaluation of petitions the CFGC may receive related to changes to the MPA network and management program. At the request of MRC, staff from CDFW summarized the input received at the July 20, 2023 MRC meeting regarding these MPA petition framework considerations.

Broadly, petitions submitted to the CFGC are evaluated on a case by case by basis. To help guide petition development and subsequent review by CDFW, the MRC received the following input for evaluating petitions related to MPAs:

- Compatible with the goals and guidelines of the Marine Life Protection Act (MLPA);
- Help advance one or more of the [six goals](#) of the MLPA;
- Garner strong community support; and/or
- Advance adaptive management recommendations under the cornerstones of MPA governance, MPA Management Program activities, and MPA Network Performance outlined in [DMR Table 6.1](#) to ensure that petitions meet MPA management priorities.

- Considerations to help guide:
  - (1) petition development and
  - (2) CDFW review
- e.g.
  - Support MLPA goal(s)
  - Advance DMR recommendations
  - Account for original design considerations



# 3. Provide Historical Documents

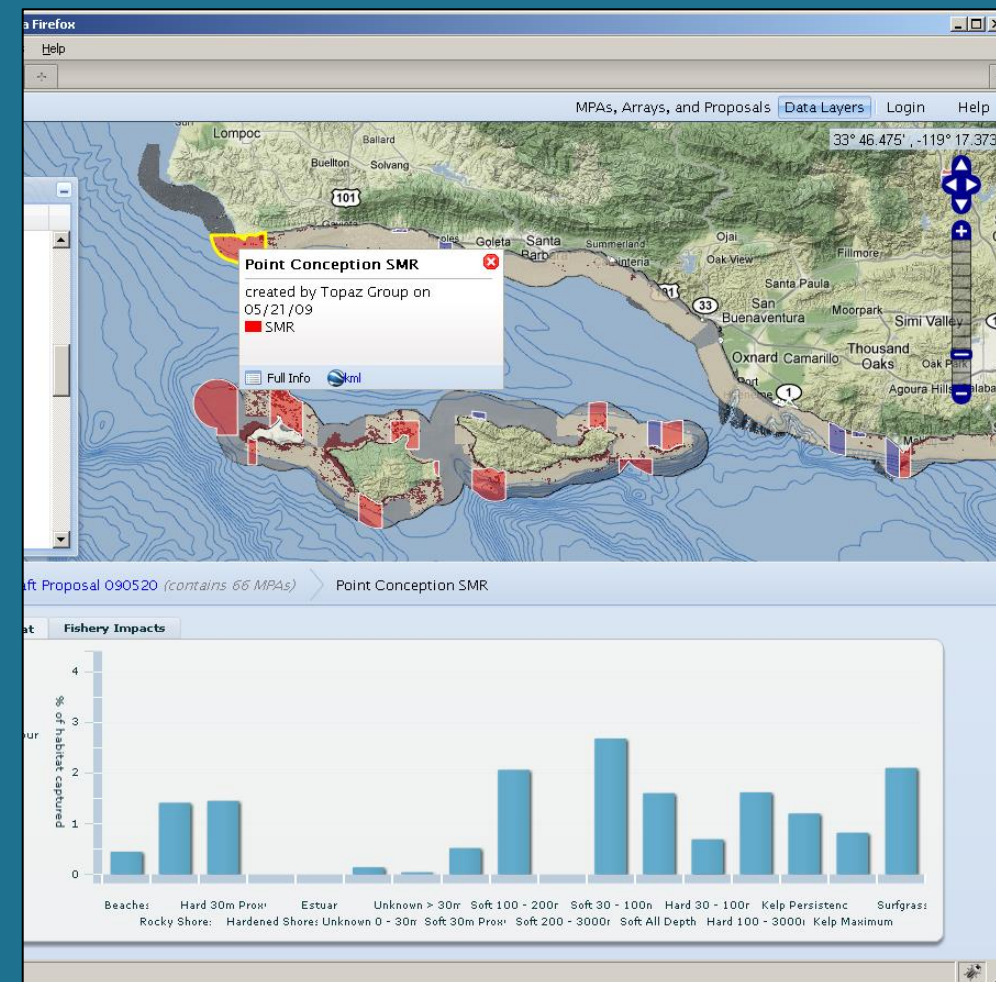
- Regional MPA planning process records

- Available upon request



NGO re-uploaded to Google Drive

- Petitioners: Highlight how proposed changes relate to MPA's original intent/objectives







# 4. Evaluate Petitions - Approach

---

- CDFW will evaluate referred petitions
  - Assisted by Considerations
  - Evaluate collectively
- CDFW recommendations discussed at Marine Resources Committee (MRC)



Wonderlane

MPA Petition Process



# Timeline for MPA Petitions

---

November 30, 2023	SUBMIT PETITIONS: Written comments deadline is *preferred* due date
December 12-13, 2023	RECEIPT at Commission meeting
February 14-15, 2024	ACTION at Commission meeting – Commission may <i>grant, deny, or refer</i> for CDFW review
March, July, and/or November 2024 (TBD)	MRC discussion when CDFW evaluations are ready
TBD	Commission receipt/action of MRC and CDFW recommendations



# Final Notes...

---

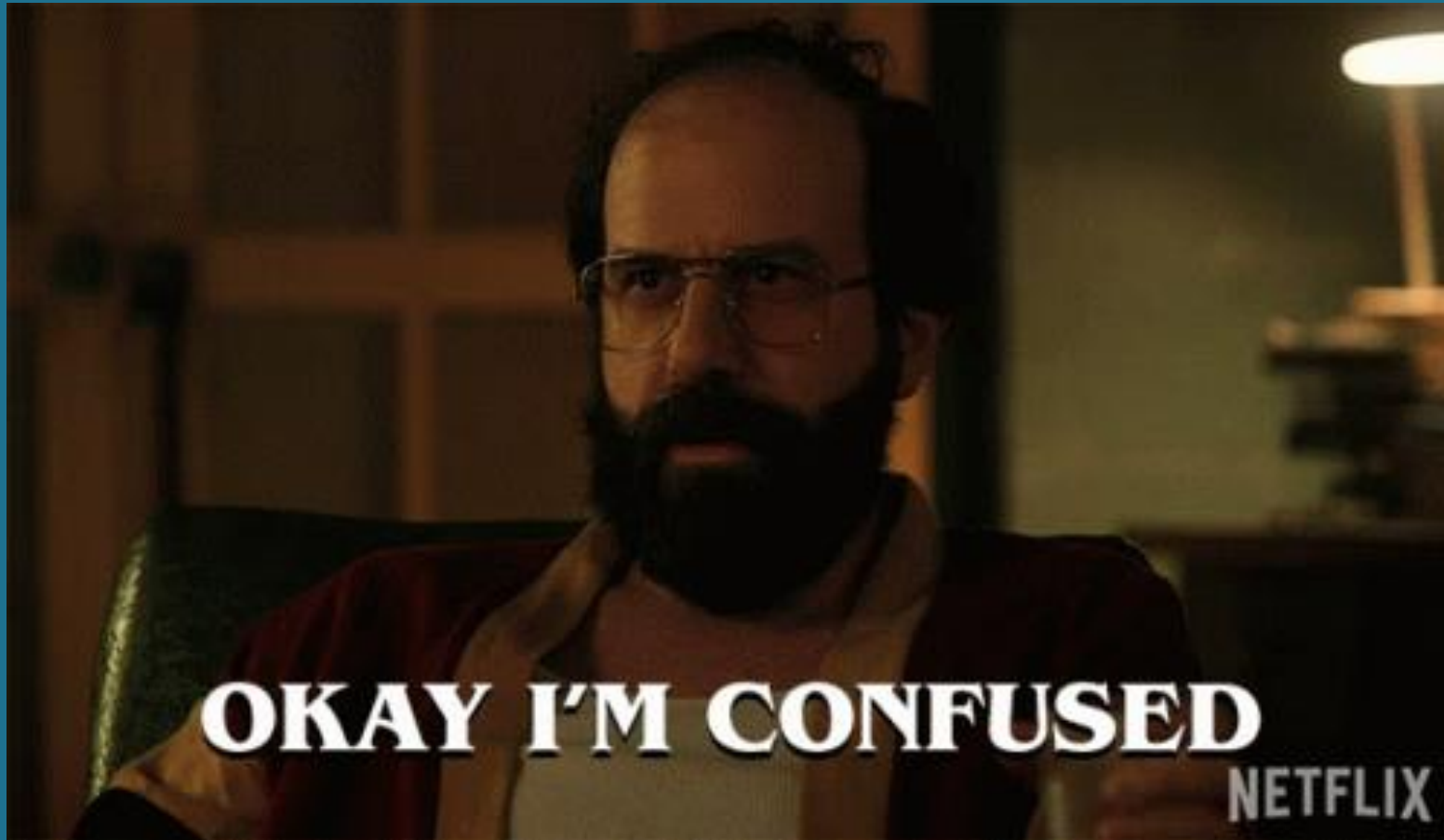


- Commission will consider all petitions received after December 2023 meeting, but timing is TBD
- Staff is exploring options for tribal outreach beyond Commission's Tribal Committee

Jen Savage



Questions??



## STAFF SUMMARY FOR DECEMBER 13-14, 2023

**21. Coastal Fishing Communities Policy****Today's Item**Information Action 

Consider and potentially adopt a new Commission policy on coastal fishing communities.

**Summary of Previous/Future Actions**

- Approved Marine Resources Committee (MRC) recommendation to develop a coastal fishing communities policy April 14, 2021
- MRC and Tribal Committee (TC) received updates on policy development and discussed draft policy versions 2021-2022; MRC
- MRC received proposed policy; recommendation to schedule and adopt proposed policy March 14 & 16, 2023; MRC
- TC received and discussed proposed policy April 18, 2023; TC
- Approved MRC recommendation to schedule discussion and potentially adopt proposed policy April 19-20, 2023
- Discussed proposed policy; re-referred to TC for additional vetting June 14-15, 2023
- Additional TC vetting of proposed policy December 12, 2023
- **Today potentially adopt proposed policy December 14, 2023**

**Background**

Since 2021, the Commission has pursued developing a coastal fishing communities policy as an initiative under the broader [Coastal Fishing Communities Project](#) through MRC. At its June 2023 meeting, the Commission considered MRC's proposed policy (Exhibit 3). A concern was raised about use of the term "subsistence harvest" in the policy, relative to the TC work on defining "tribal subsistence." The Commission referred the proposed policy to the TC for additional vetting (see exhibits 1 and 2 for more background).

Since the August 2023 TC meeting was cancelled, the December 12, 2023 TC meeting is the first time TC has had a chance to further vet the proposed policy since the Commission referred it again in June. While preparing for a discussion at the December 2023 TC meeting, Vice President Zavaleta met with staff to discuss additional concerns with specific language in the policy and to identify potential revisions to address her concerns. The resulting potential revisions to the proposed policy — and a table summarizing them — are in Exhibit 4 for Commission consideration.

Today is an opportunity for the Commission to consider any feedback or additional proposed revisions and to potentially adopt the policy.

If adopted, and with Commission direction, staff will begin working with partners, agencies, coastal fishing community members, and tribes to advance the strategies outlined within the policy, recognizing that it is a lens inherent to all of the coastal and ocean work of the Commission. Additionally, Commission staff is prepared to support MRC in exploring other

## STAFF SUMMARY FOR DECEMBER 13-14, 2023

areas for development in the Coastal Fishing Communities Project, using the policy as guidance.

### ***Proposed Policy***

The proposed Commission Coastal Fishing Communities Policy (Exhibit 3) would establish that the Commission will “...*support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities, in a manner that aligns with the primary conservation and management goals of the Commission’s and Department’s missions and mandates, and other applicable laws,*” through three policy strategies:

- Engaging meaningfully with coastal fishing communities,
- ensuring coastal fishing community interests are systematically considered in Commission decision-making, and
- contributing to the adaptive capacity and resilience of coastal fishing communities.

The policy also defines “coastal fishing communities” for use within the policy context. Staff notes that the proposed policy is also consistent with the Commission’s justice, equity, diversity and inclusion vision for inclusivity and reflects the Commission’s commitment to “invest in meaningful and long-term partnerships with communities and cultures that have relationships with activities, fish or wildlife that we regulate.”

### **Significant Public Comments (N/A)**

### **Recommendation**

***Commission staff:*** Hear outcomes from the TC meeting, discuss potential adjustments to the proposed policy language, and adopt the proposed policy with any changes discussed today.

### **Exhibits**

1. [Staff summary for Agenda Item 25, June 14-15, 2023, Commission meeting \(for background purposes only\)](#)
2. [Staff presentation on policy development process and proposed policy, presented at the March 16, 2023 MRC meeting \(for background purposes only\)](#)
3. [Proposed Commission Coastal Fishing Communities Policy, dated April 20, 2023](#)
4. [Potential revisions to the proposed Commission Coastal Fishing Communities Policy dated April 20, 2023, and table describing draft revisions, dated November 14, 2023.](#)

### **Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the Coastal Fishing Communities Policy as reflected in Exhibit 3.

**OR**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the Coastal Fishing Communities Policy as reflected in Exhibit 3 with the following revisions: \_\_\_\_\_.

**STAFF SUMMARY FOR JUNE 14-15, 2023**  
*For background purposes only*

## 25. COASTAL FISHING COMMUNITIES POLICY

### Today's Item

Information

Action

Consider and potentially adopt a new Commission policy on coastal fishing communities.

### Summary of Previous/Future Actions

- |  |                          |
|--|--------------------------|
| • Approved Marine Resources Committee (MRC) recommendation to develop a coastal fishing communities policy | April 14, 2021           |
| • MRC received updates on policy development and discussed draft policy versions                           | 2021-2022; MRC           |
| • MRC recommendation to adopt proposed policy  | March 14 & 16, 2023; MRC |
| • Received proposed policy   | April 19-20, 2023        |
| • <b>Today potentially adopt proposed policy</b>   | <b>June 14-15, 2023</b>  |

### Background

Since 2016, the Commission has been actively pursuing the Coastal Fishing Communities Project, a Commission initiative to formally recognize coastal fishing community needs and the impact that different management options for achieving conservation and use goals may have on those communities. As part of this initiative, in 2021, the Commission approved an MRC recommendation to develop a new policy for coastal fishing communities and directed staff to commence outreach efforts.

Throughout 2021 and 2022, MRC discussed policy concepts and iterative staff drafts of a potential policy. Draft policy content was shaped by stakeholder input through staff-facilitated regional roundtable discussions in 2021, followed by two public policy-drafting workshops in 2022, where staff presented and co-developed iterations of the draft policy with interested stakeholders and partners. Staff used the feedback provided at the workshops to revise and refine the draft policy, including accounting for public and partner priorities. See exhibits 1 and 2 for additional background on policy development.

In March 2023, staff presented a proposed final policy to MRC (exhibits 3 and 4). The proposed final represents the culmination of stakeholder and partner input, as well as discussions with Department staff and fisheries policy experts in a workgroup setting. MRC advanced the proposed final policy to the Commission with a recommendation for adoption.

At its April meeting, the Commission received the proposed policy and approved the MRC recommendation to schedule potential adoption of the proposed policy, which is presented for Commission action today.

The proposed Coastal Fishing Communities Policy (Exhibit 4) would establish that the Commission will “...support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities”, through three policy strategies:

**STAFF SUMMARY FOR JUNE 14-15, 2023***For background purposes only*

- meaningful coastal fishing community engagement,
- ensure coastal fishing community interests are factored into Commission decision-making, and
- contribute to the adaptive capacity and resilience of coastal fishing communities.

The policy also provides a definition for “coastal fishing communities” in the policy context. Staff notes that the proposed policy is also consistent with the Commission’s justice, equity, diversity, and inclusion vision for inclusivity and reflects the Commission’s commitment to “invest in meaningful and long-term partnerships with communities and cultures that have relationships with activities, fish or wildlife that we regulate.”

If adopted, and with Commission direction, staff is ready to work with partners, agencies, and coastal fishing community members to advance the policy strategies outlined within the policy, recognizing that, if adopted, the policy is a lens inherent to all of the coastal and ocean work of the Commission. Additionally, Commission staff is prepared to support MRC in exploring other areas for development in the Coastal Fishing Communities Project, using the policy as guidance.

**Significant Public Comments (N/A)****Recommendation**

**Commission staff:** Adopt the proposed policy as reflected in Exhibit 4 and provide any guidance on policy implementation.

**Exhibits**

1. Staff summary for Agenda Item 6, November 17, 2022 MRC meeting (for background purposes only)
2. Staff summary for Agenda Item 4, March 14 & 16, 2023 MRC meeting (for background purposes only)
3. Commission staff presentation on policy development process and final proposed policy, presented at the March 16, 2023 MRC meeting
4. Proposed Commission Coastal Fishing Communities Policy, dated April 20, 2023

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the Coastal Fishing Communities Policy as proposed.





# Proposed Policy on Coastal Fishing Communities

---

KIMI ROGERS

California Sea Grant State Fellow

California Fish and Game Commission

Presented to the Marine Resources Committee, March 14, 2023



# A morning at Tuna Harbor Docksides Market







# Threats to Coastal Fishing Communities (CFC)

---

- Disruptions from climate change
- Inadequate port infrastructure
- Aging of the fleet
- Emerging industries
- Competition for shoreside use



# Purpose of Coastal Fishing Communities Policy



Formally recognize CFC goals and needs



Account for potential impacts to CFCs in fisheries management options and decisions





# 2022 Timeline

FEB-MAR

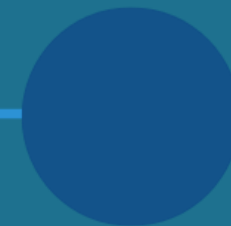
APR - JUN

JUN-JUL

AUG-SEP

OCT-NOV

DEC



Public Workshop  
and March MRC

Integrated  
feedback into  
draft policy

Postponed  
second workshop  
and July MRC

Continued  
revising

Revising draft and  
presenting outline  
to November MRC

Second workshop



# Today's Update

---

1. December 1, 2022 workshop outcomes
2. Overview of proposed policy
3. Next Steps





Fishing Boats in San Diego harbor, Kimi Rogers

# Policy Drafting Workshop #2



# December 2022 Policy Drafting Workshop



- Approximately 45 public attendees
- New connections: Agencies and CFC members
- Revised draft policy shared
- Received feedback

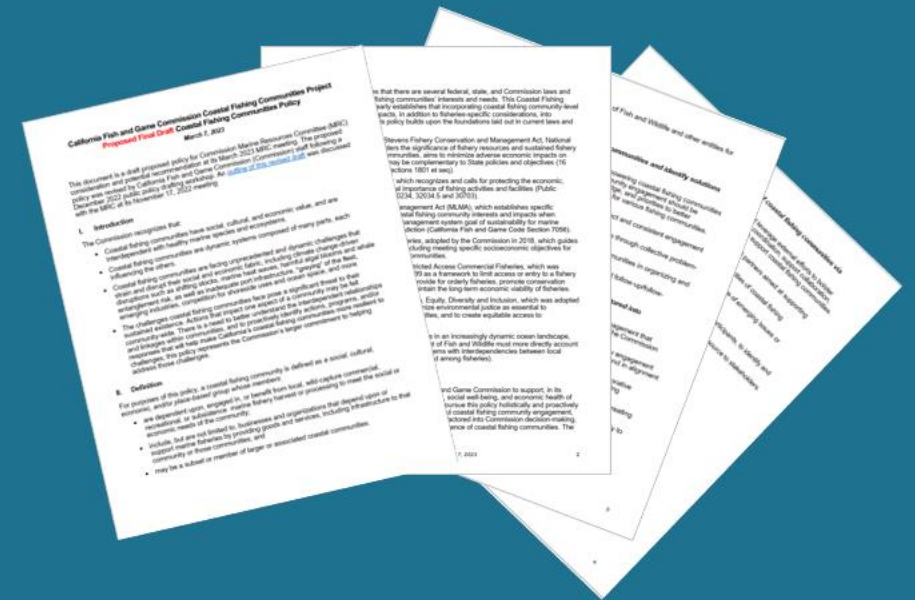






# Key Discussions and Feedback

- External threats to communities
- Support for local problem-solving, partnerships, and governance coordination
- Policy implementation questions
- Improve clarity





Fort Bragg coastline, Kimi Rogers

# Proposed Policy





# Changes to the Working Definition

*A coastal fishing community is a social, cultural, economic, and/or place-based group whose members:*

- *are fishermen dependent upon, or engaged in, **or benefit from local, wild-capture commercial, recreational, or subsistence fishing marine fishery harvest or processing** to meet the social or economic needs of the community;*
- *~~this includes~~**include**, but is **are** not limited to, businesses and organizations that depend on or support fishing **marine fisheries** by providing goods and services, including infrastructure **to that community or those communities;**  
**and***
- *~~it may be a subset or member of larger or associated coastal communities which have an interest in and/or are dependent on healthy ocean ecosystems.~~*



# Policy Outline

---

- I. Introduction
- II. Definition
- III. Policy Setting
- IV. Policy Statement
- V. Policy Strategies
  - A. *Meaningful CFCs engagement*
  - B. *Commission action*
  - C. *Support capacity-building through partnerships*







# Recommendation and Next Steps

## *Recommendation*

- Advance the proposed policy for Commission consideration

## *Next Steps*

- Implementation planning
- Community outreach, interagency discussions
- Resuming other CFC project efforts





# THANK YOU!



- ❖ Coastal fishing community members and organizations
- ❖ Non-governmental organizations and academic partners
- ❖ Agency representatives, especially California Department of Fish and Wildlife, California Ocean Protection Council, and California Ocean Science Trust
- ❖ Past Sea Grant fellows:  
Heather Benko, Leslie Hart, Maggie McCann, Rose Dodgen, and Corinna Hong

*Special thanks to Craig Shuman, Carrie Pomeroy and Huff McGonigal*



# Reach out!

---

**Kimi Rogers**

2022-2023 California Sea Grant Fellow  
California Fish and Game Commission  
[FGC@fgc.ca.gov](mailto:FGC@fgc.ca.gov)

***New Coastal Fishing Communities  
Project Lead***

**Kinsey Matthews**

2023-2024 California Sea Grant Fellow  
California Fish and Game Commission  
[Kinsey.Matthews@fgc.ca.gov](mailto:Kinsey.Matthews@fgc.ca.gov)



# California Fish and Game Commission Coastal Fishing Communities Project

## Proposed Coastal Fishing Communities Policy

April 20, 2023

### I. Introduction

The Commission recognizes that:

- Coastal fishing communities have social, cultural, and economic value, and are interdependent with healthy marine species and ecosystems.
- Coastal fishing communities are dynamic systems composed of many parts, each influencing the others.
- Coastal fishing communities are facing unprecedented and dynamic challenges that strain and disrupt their social and economic fabric, including climate change-driven disruptions such as shifting stocks, marine heat waves, harmful algal blooms and whale entanglement risk, as well as inadequate port infrastructure, “greying” of the fleet, emerging industries, competition for shoreside uses and ocean space, and more.
- The challenges coastal fishing communities face pose a significant threat to their sustained existence. Actions that impact one aspect of a community may be felt community-wide. There is a need to better understand the interdependent relationships and linkages within communities, and to proactively identify actions, programs, and/or responses that will help make California’s coastal fishing communities more resilient to challenges; this policy represents the Commission’s larger commitment to helping address those challenges.

### II. Definition

For purposes of this policy, a coastal fishing community is defined as *a social, cultural, economic, and/or place-based group whose members:*

- are dependent upon, engaged in, or benefit from local, wild-capture commercial, recreational, or subsistence marine fishery harvest or processing to meet the social or economic needs of the community;
- include, but are not limited to, businesses and organizations that depend upon or support marine fisheries by providing goods and services, including infrastructure to that community or those communities; and
- may be a subset or member of larger or associated coastal communities.



### III. Policy Setting

The Commission recognizes that there are several federal, state, and Commission laws and policies relevant to coastal fishing communities' interests and needs. This Coastal Fishing Communities policy more clearly establishes that incorporating coastal fishing community-level interests, challenges, and impacts, in addition to fisheries-specific considerations, into management is essential. This policy builds upon the foundations laid out in current laws and policies, including:

- The federal Magnuson-Stevens Fishery Conservation and Management Act, National Standard 8, which considers the significance of fishery resources and sustained fishery participation to fishing communities, aims to minimize adverse economic impacts on these communities, and may be complementary to State policies and objectives (16 U.S. Code, Chapter 38, Sections 1801 et seq).
- The California Coastal Act, which recognizes and calls for protecting the economic, commercial, and recreational importance of fishing activities and facilities (Public Resources Code sections 30234, 32034.5 and 30703).
- The California Marine Life Management Act (MLMA), which establishes specific objectives for recognizing coastal fishing community interests and impacts when pursuing the primary fishery management system goal of sustainability for marine fisheries under the state's jurisdiction (California Fish and Game Code Section 7056).
- The MLMA master plan for fisheries, adopted by the Commission in 2018, which guides implementation of the MLMA, including meeting specific socioeconomic objectives for fishery participants and fishing communities.
- The Commission's Policy on Restricted Access Commercial Fisheries, which was adopted by the Commission in 1999 as a framework to limit access or entry to a fishery to promote sustainable fisheries, provide for orderly fisheries, promote conservation among fishery participants, and maintain the long-term economic viability of fisheries.
- The Commission's Policy on Justice, Equity, Diversity and Inclusion, which was adopted by the Commission in 2022 to recognize environmental justice as essential to addressing historic and current inequities, and to create equitable access to environmental benefits.

To pursue the goals of these laws and policies in an increasingly dynamic ocean landscape, the Commission and the California Department of Fish and Wildlife must more directly account for fisheries as changing social-ecological systems with interdependencies between local communities and fisheries (as well as within and among fisheries).

#### **IV. Policy Statement**

It is the policy and practice of the California Fish and Game Commission to support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities. The Commission will pursue this policy holistically and proactively through policy strategies that (A) support meaningful coastal fishing community engagement, (B) ensure coastal fishing community interests are factored into Commission decision-making, and (C) contribute to the adaptive capacity and resilience of coastal fishing communities. The Commission relies upon the California Department of Fish and Wildlife and other entities for continued partnership to implement this policy.

#### **V. Policy Strategies**

##### ***A. Understand the issues facing coastal fishing communities and identify solutions through meaningful engagement.***

It is the intent of the Commission to contribute to empowering coastal fishing communities by pursuing proactive community engagement. Community engagement should be inclusive and reflective of community diversity, knowledge, and priorities to better understand interests, challenges, and potential impacts for various fishing communities. The Commission will:

- explore opportunities for outreach and promote direct and consistent engagement with coastal fishing communities;
- support collaboration with coastal fishing communities through collective problem-solving and utilizing local knowledge;
- encourage partners to help support coastal fishing communities in organizing and participating effectively at local and regional levels; and
- pursue mechanisms for regular, ongoing engagement and follow-up/follow-through.

##### ***B. Ensure coastal fishing community interests and needs are factored into Commission decision-making.***

The Commission is committed to supporting sustainable fisheries management that allows communities to adapt and withstand the challenges they face. The Commission will:

- advance approaches developed through coastal fishing community engagement into decision-making and regulatory processes where appropriate and in alignment with state fishery management conservation goals;
- prioritize management options, plans, and strategies, including collaborative management, that sustain social and economic stability of coastal fishing communities and minimize adverse impacts on them;

- consider implications for coastal fishing communities when updating or creating policies and regulations; and
- continue to develop and innovate systems to anticipate and respond quickly to emerging needs or disruptive changes.

**C. *Increase adaptive capacity and resilience of coastal fishing communities via external efforts.***

The Commission will seek to engage partners and leverage external efforts to bolster sustainability and adaptation, improve governance coordination, support collaboration, and identify pathways to strengthen infrastructure to support coastal fishing communities. The Commission will:

- help coordinate the efforts among agencies and partners aimed at supporting coastal fishing communities;
- support local organizational and operational capacities of coastal fishing communities;
- elevate coastal fishing community interests in the face of emerging issues or threats;
- support efforts to foster a new generation of fishermen;
- help build and leverage partnerships, including fishery participants, to identify and collect essential fishery information; and
- support efforts that can inform decision-making and be a resource to stakeholders.

# California Fish and Game Commission Coastal Fishing Communities Project

## Proposed Coastal Fishing Communities Policy

*April 20, 2023, revised November 14, 2023*

As presented to Commission April 20, 2023, with staff-proposed revisions reflected in strikeout or underscore, founded on input from Vice President Zavaleta.

### I. Introduction

The Commission recognizes that:

- Coastal fishing communities have social, cultural, and economic value, and are interdependent with sustainable fisheries management and healthy marine species and ecosystems.
- Coastal fishing communities are dynamic systems composed of many parts, each influencing the others.
- Coastal fishing communities are facing unprecedented and dynamic challenges that strain and disrupt their social and economic fabric, including climate change-driven disruptions such as shifting stocks, marine heat waves, harmful algal blooms and whale entanglement risk, as well as inadequate port infrastructure, “greying” of the fleet, emerging industries, competition for shoreside uses and ocean space, and more.
- The challenges coastal fishing communities face pose a significant threat to their sustained existence. Actions that impact one aspect of a community may be felt community-wide. There is a need to better understand the interdependent relationships and linkages within communities, and to proactively identify actions, programs, and/or responses that will help make California’s coastal fishing communities more resilient to challenges; this policy represents the Commission’s larger commitment to helping address those challenges.

### II. Definition

For purposes of this policy, a coastal fishing community is defined as *a social, cultural, economic, and/or place-based group whose members:*

- are dependent upon, engaged in, or benefit from local, wild-capture commercial, recreational, or subsistence marine fishery harvest or processing to meet the social or economic needs of the community;
- include, but are not limited to, businesses and organizations that depend upon or support marine fisheries by providing goods and services, including infrastructure to that community or those communities; and
- may be a subset or member of larger or associated coastal communities.



### III. Policy Setting

The Commission recognizes that there are several federal, state, and Commission laws and policies relevant to coastal fishing communities' interests and needs. This Coastal Fishing Communities policy more clearly establishes that incorporating coastal fishing community-level interests, challenges, and impacts, in addition to fisheries-specific considerations, into management is essential. This policy builds upon the foundations laid out in current laws and policies, including:

- The federal Magnuson-Stevens Fishery Conservation and Management Act, National Standard 8, which considers the significance of fishery resources and sustained fishery participation to fishing communities, aims to minimize adverse economic impacts on these communities, and may be complementary to State policies and objectives (16 U.S. Code, Chapter 38, Sections 1801 et seq).
- The California Coastal Act, which recognizes and calls for protecting the economic, commercial, and recreational importance of fishing activities and facilities (Public Resources Code sections 30234, 32034.5 and 30703).
- The California Marine Life Management Act (MLMA), which establishes specific objectives for recognizing coastal fishing community interests and impacts when pursuing the primary fishery management system goal of sustainability for marine fisheries under the state's jurisdiction (California Fish and Game Code Section 7056).
- The MLMA master plan for fisheries, adopted by the Commission in 2018, which guides implementation of the MLMA, including meeting specific socioeconomic objectives for fishery participants and fishing communities.
- The Commission's Policy on Restricted Access Commercial Fisheries, which was adopted by the Commission in 1999 as a framework to limit access or entry to a fishery to promote sustainable fisheries, provide for orderly fisheries, promote conservation among fishery participants, and maintain the long-term economic viability of fisheries.
- The Commission's Policy on Justice, Equity, Diversity and Inclusion, which was adopted by the Commission in 2022 to recognize environmental justice as essential to addressing historic and current inequities, and to create equitable access to environmental benefits.

To pursue the goals of these laws and policies in an increasingly dynamic ocean landscape, the Commission and the California Department of Fish and Wildlife must more directly account for fisheries as changing social-ecological systems with interdependencies between local communities and fisheries (as well as within and among fisheries).

#### IV. Policy Statement

It is the policy and practice of the California Fish and Game Commission to support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities, in a manner that aligns with the primary conservation and management goals of the Commission's and Department's missions and mandates, and other applicable laws. The Commission will pursue this policy holistically and proactively through policy strategies that (A) support meaningful coastal fishing community engagement, (B) ensure coastal fishing community interests are ~~factored~~ systematically considered in Commission decision-making, and (C) contribute to the adaptive capacity and resilience of coastal fishing communities. The Commission relies upon the California Department of Fish and Wildlife and other entities for continued partnership to implement this policy.

#### V. Policy Strategies

##### A. ***Understand the issues facing coastal fishing communities and identify solutions through meaningful engagement.***

It is the intent of the Commission to contribute to empowering coastal fishing communities by pursuing proactive community engagement. Community engagement should be inclusive and reflective of community diversity, knowledge, and priorities to better understand interests, challenges, and potential impacts for various fishing communities. The Commission will:

- explore opportunities for outreach and promote direct and consistent engagement with coastal fishing communities;
- support collaboration with coastal fishing communities through collective problem-solving and utilizing local knowledge;
- encourage partners to help support coastal fishing communities in organizing and participating effectively at local and regional levels; and
- pursue mechanisms for regular, ongoing engagement and follow-up/follow-through.

##### B. ***Ensure coastal fishing community interests and needs are ~~factored into~~ systematically considered in Commission decision-making.***

The Commission is committed to ~~supporting~~ exploring sustainable fisheries management that allow communities to adapt and withstand the challenges they face. The Commission will:

- advance approaches developed through coastal fishing community engagement into decision-making and regulatory processes where appropriate and in alignment with state fishery management conservation goals;
- ~~prioritize~~ highlight and integrate, where feasible, management options, plans, and strategies, including collaborative management, that recognize and

sustain social and economic stability of and minimize adverse impacts on coastal fishing communities; ~~them~~

- consider implications for coastal fishing communities when updating or creating policies and regulations; and
- continue to develop and innovate systems to anticipate and respond quickly to emerging needs or disruptive changes.

**C. *Increase adaptive capacity and resilience of coastal fishing communities via external efforts.***

The Commission will seek to engage partners and leverage external efforts to bolster sustainability and adaptation, improve governance coordination, support collaboration, and identify pathways to strengthen infrastructure to support coastal fishing communities. The Commission will:

- help coordinate the efforts among agencies and partners aimed at supporting coastal fishing communities;
- support local organizational and operational capacities of coastal fishing communities;
- ~~elevate~~ support coastal fishing community interests beyond Commission decision-making in the face of emerging issues or threats;
- support efforts to foster a new generation of fishermen;
- help build and leverage partnerships, including fishery participants, to identify and collect essential fishery information; and
- support efforts that can inform decision-making and be a resource to stakeholders.

# Summary of Revisions to California Fish and Game Commission’s Proposed Coastal Fishing Communities Policy

November 29, 2023

Table 1: Original proposed coastal fishing communities policy language and revisions to incorporate input from Vice President Zavaleta.

Policy Section	Language in Policy Recommended by MRC to CFGC (2023)	Input from Vice President Zavaleta	Revised Language as Option to Address Input
Introduction	Coastal fishing communities have social, cultural, and economic value, and are interdependent with healthy marine species and ecosystems.	Include language that emphasizes sustainable fisheries management.	Coastal fishing communities have social, cultural and economic value, and are interdependent with <u>sustainable fisheries management and</u> healthy marine species and ecosystems.
IV. Policy Statement	It is the policy and practice of the California Fish and Game Commission to support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities.	Include language that ensures the Commission’s primary objective is conservation and sustainable fisheries management.	It is the policy and practice of the California Fish and Game Commission to support, in its decision-making and actions, the long-term needs, social well-being, and economic health of coastal fishing communities <u>in a manner that aligns with the primary conservation and sustainable fisheries management goals of the Commission’s and Department’s missions and mandates, and other applicable laws.</u>
V.B.	Goal B: Ensure coastal fishing community interests and needs are factored into Commission decisions.	As written, Goal B could commit to favoring coastal fishing communities over all other stakeholder groups, all things being equal.	Ensure coastal fishing community interests and needs are <del>factored into</del> <u>systematically considered in Commission decisions</u> <u>decision-making.</u>
V.B.	The Commission is committed to supporting sustainable fisheries management that allows communities to adapt and withstand the challenges they face. The Commission...	As written, Goal B could commit to favoring coastal fishing communities over all other stakeholder groups, all things being equal.	The Commission is committed to <del>supporting</del> <u>exploring</u> sustainable fisheries management options that allow communities to adapt and withstand the challenges they face. The Commission...
V.B. Bullet 2	Prioritize management options, plans, and strategies, including collaborative management, that sustain social and economic stability of coastal fishing communities and minimize adverse impacts on them.	Remove the word “prioritize” to avoid prioritizing coastal fishing communities over all other stakeholders or prioritizing economic goals over sustainability goals.	<del>Prioritize</del> <u>Highlight and integrate, where feasible,</u> management options, plans and strategies, including collaborative management, that <u>recognize and</u> sustain social and economic stability of and minimize adverse impacts on <del>them</del> <u>coastal fishing communities.</u>
V.C. Bullet 3	Elevate coastal fishing community interests in the face of emerging issues or threat;	Avoid “elevating” one set of interests above others.	<del>support elevate</del> coastal fishing community interests <u>beyond Commission decision-making</u> in the face of emerging issues or threats;

MRC = Commission Marine Resources Committee

CFGC = California Fish and Game Commission



A white and grey patrol boat named 'Tussock' is anchored in a bay. The boat has a cabin and a mast with various equipment. The water is a deep green color. In the background, there are green hills with some trees and a large orange cylindrical structure on a ridge. The sky is cloudy.

# MPA Enforcement Report

July 2023

Assistant Chief Eric Kord  
Marine Enforcement District

MPA  
Enforcement  
Stats  
2022 Totals

2022

- Patrol Hours – 15,143 Hrs.
- Contacts – 25,845
- Warnings Given – 889
- Citations issued- 612
- MPA Citations Issued – 602
- Total MPA violations – 825
- Title 14 section 632 violations – 422
- ***Change to RMS in tracking all MPA citations and violation***



# MPA Enforcement Stats 2022 and 2021 Totals in Comparison

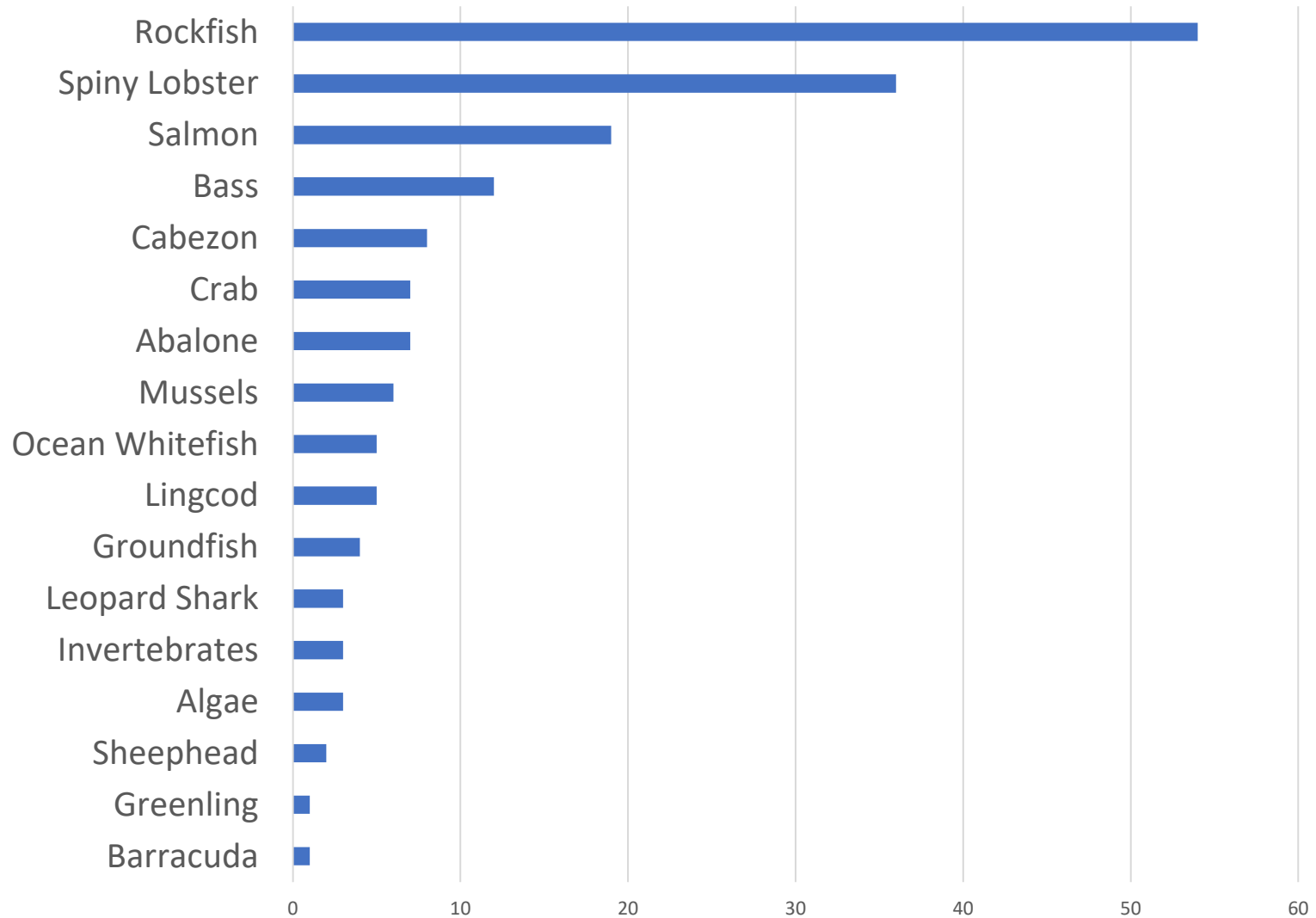
## 2022 (post RMS change)

- Patrol Hours – 15,143 Hrs.
- Contacts – 25,845
- Warnings Given – 889
- Citations issued- **612**
- MPA Citations Issued – **602**
- Total MPA violations – **825**
- Title 14 section 632 violations – **422**

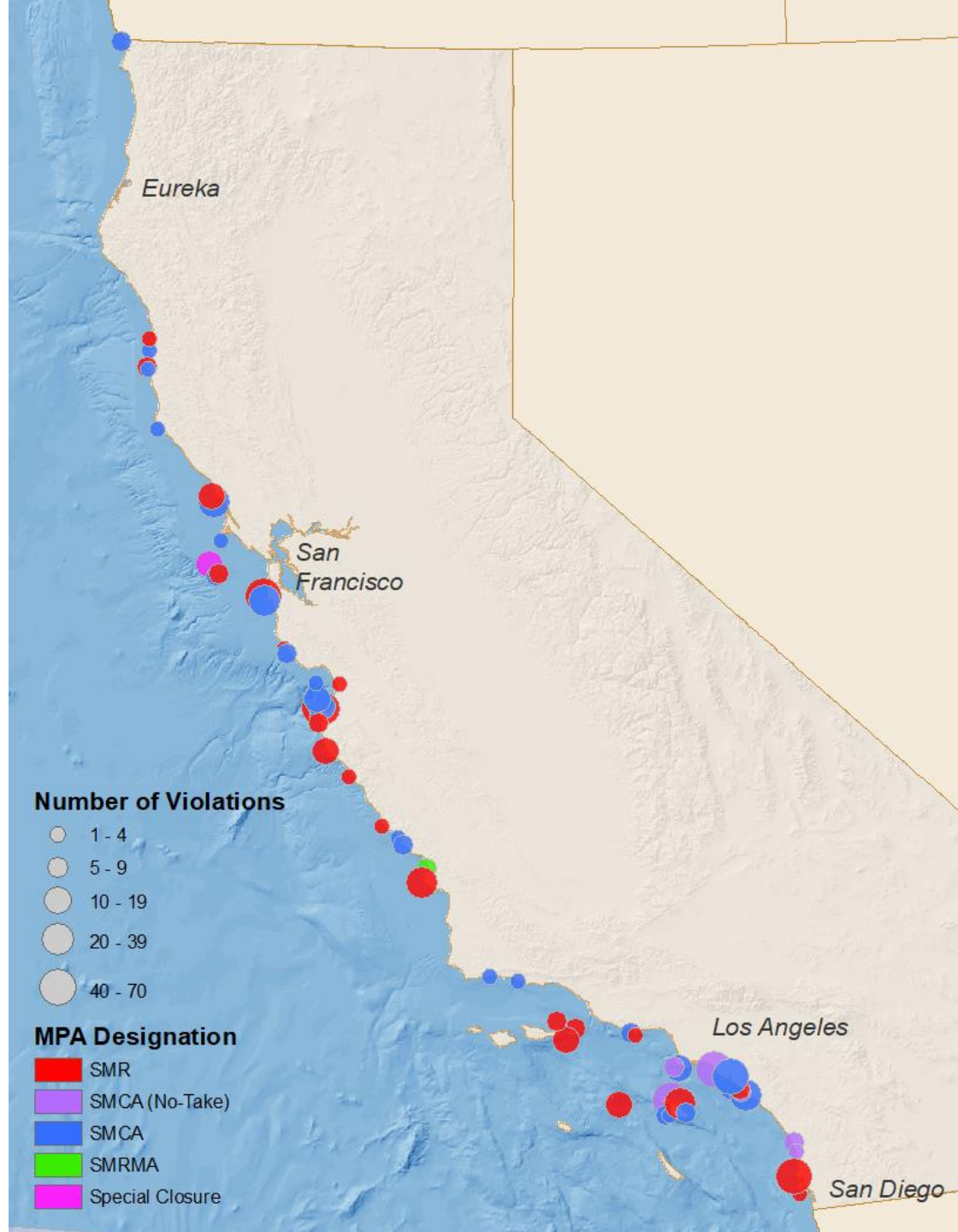
## 2021 (pre RMS change)

- Patrol Hours – 16,363 Hrs.
- Contacts – 32,441
- Warnings Given – 1,366
- Citations Issued – **665**
- MPA Title 14 632 violations- **271**

# Violations by Species and Species Groupings in MPAs

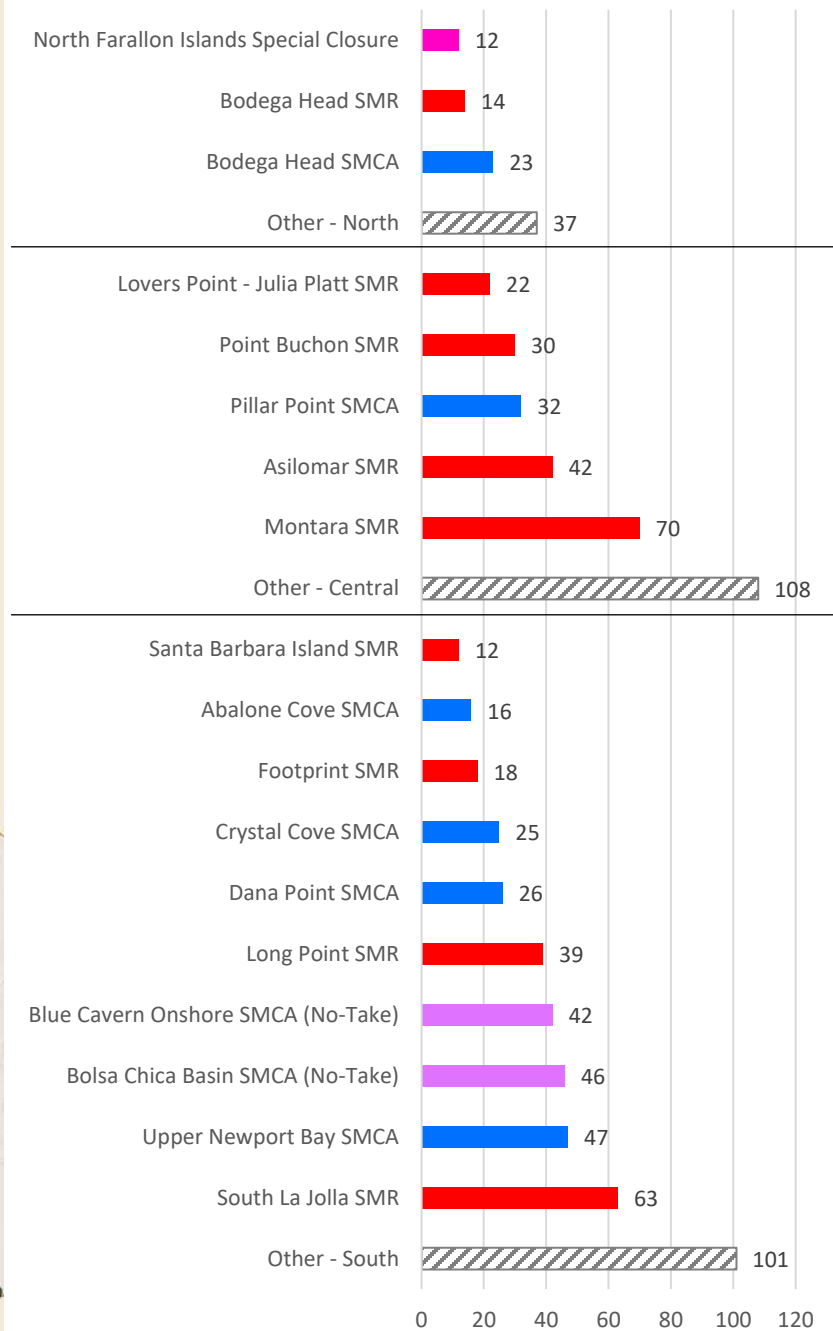




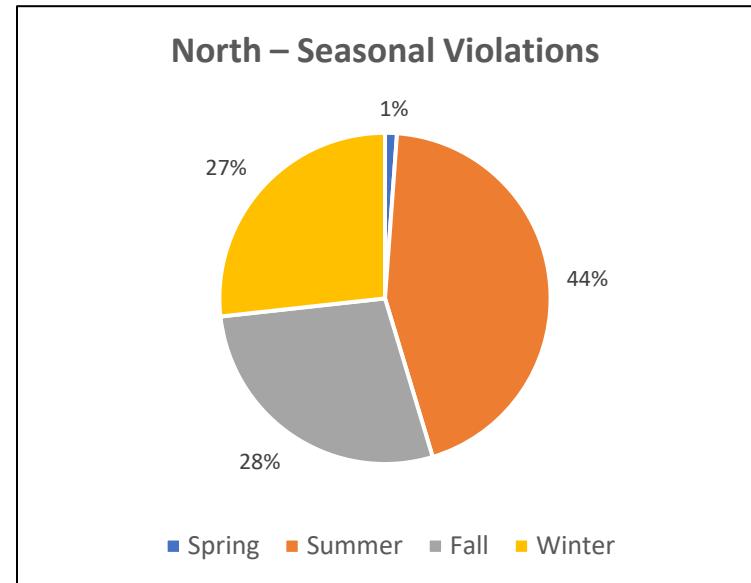
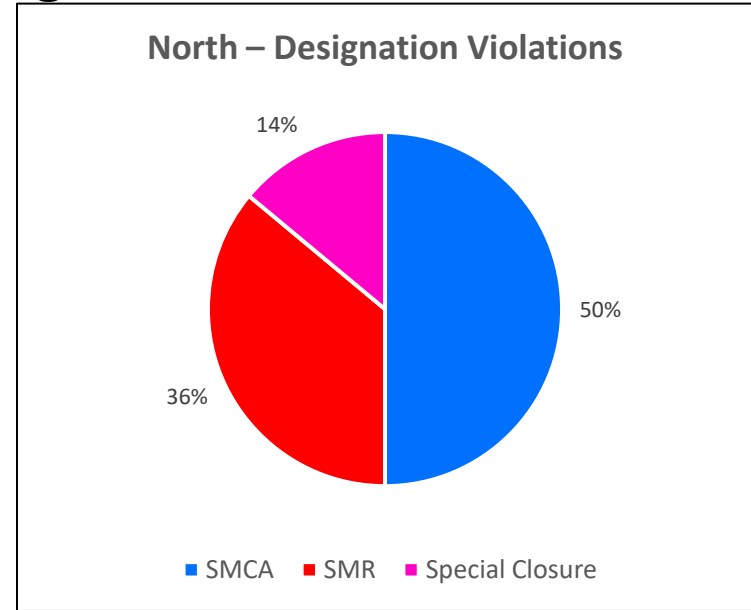
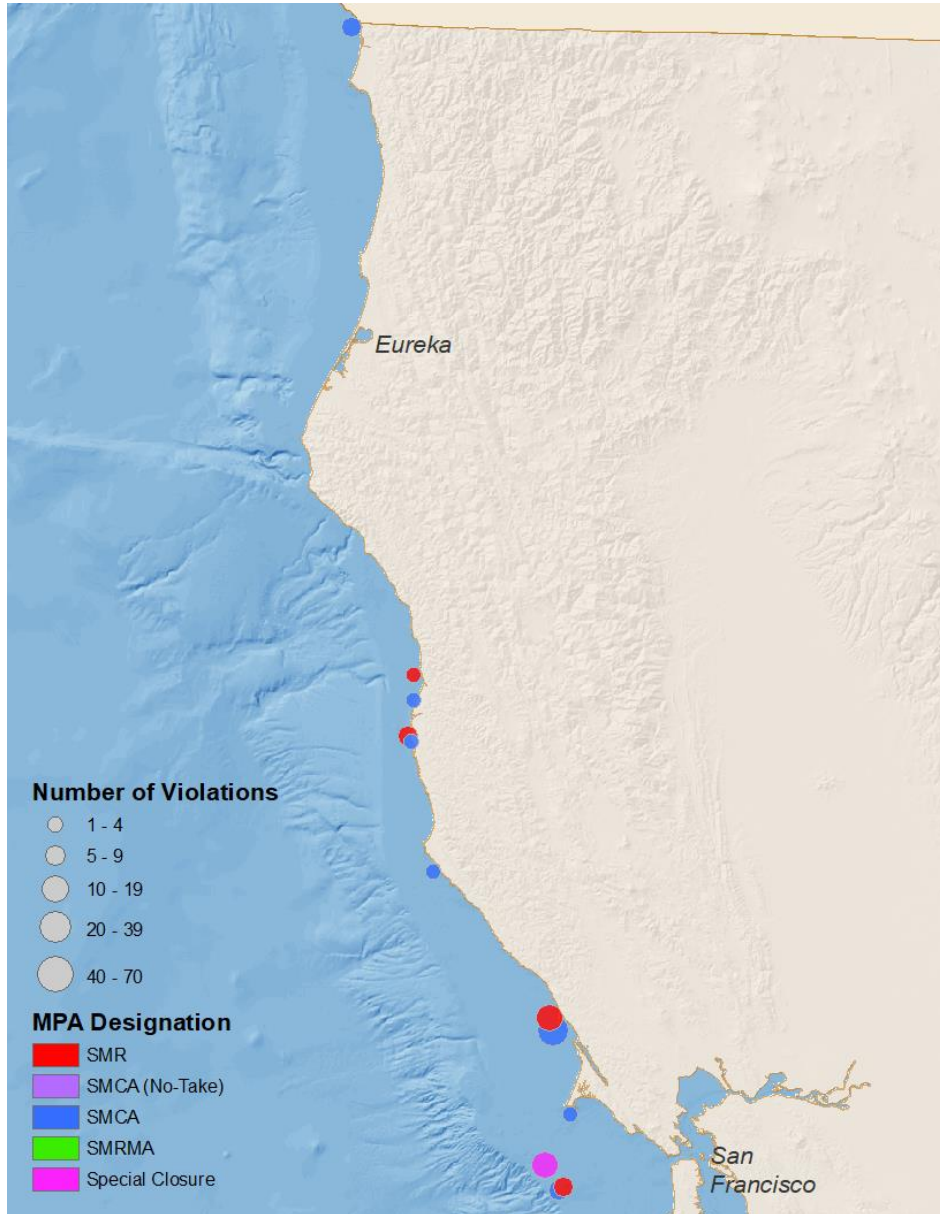




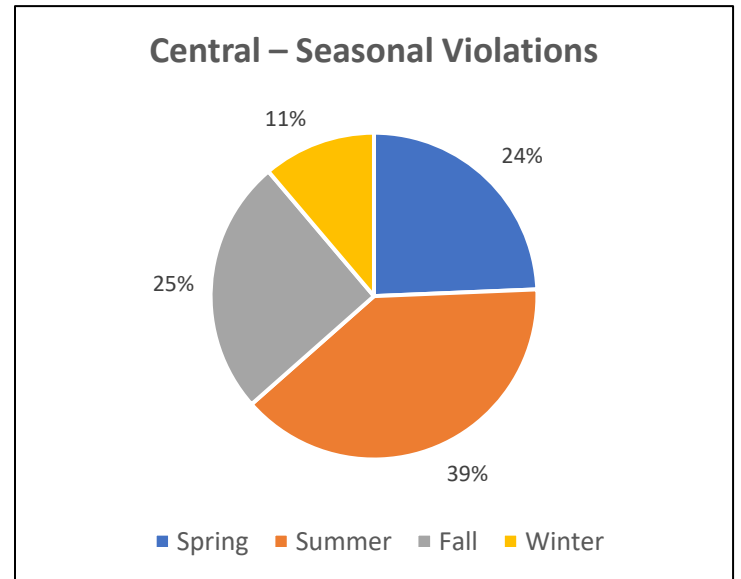
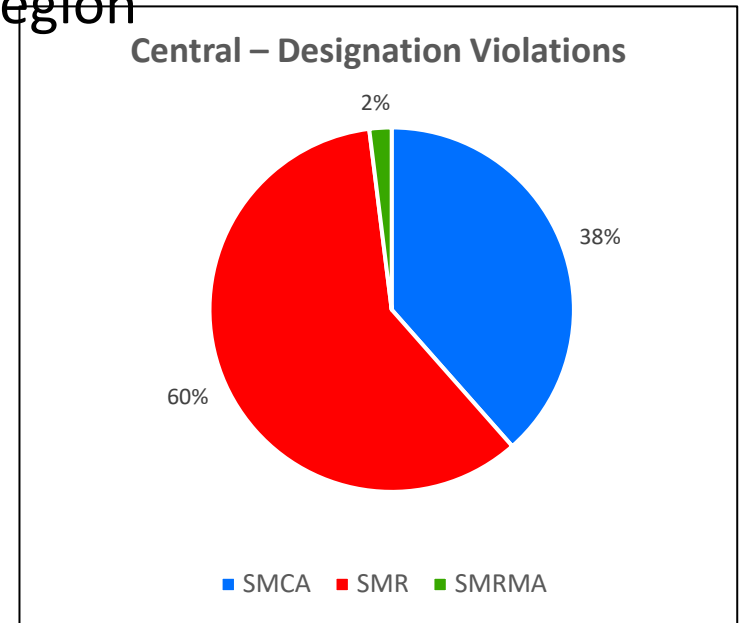
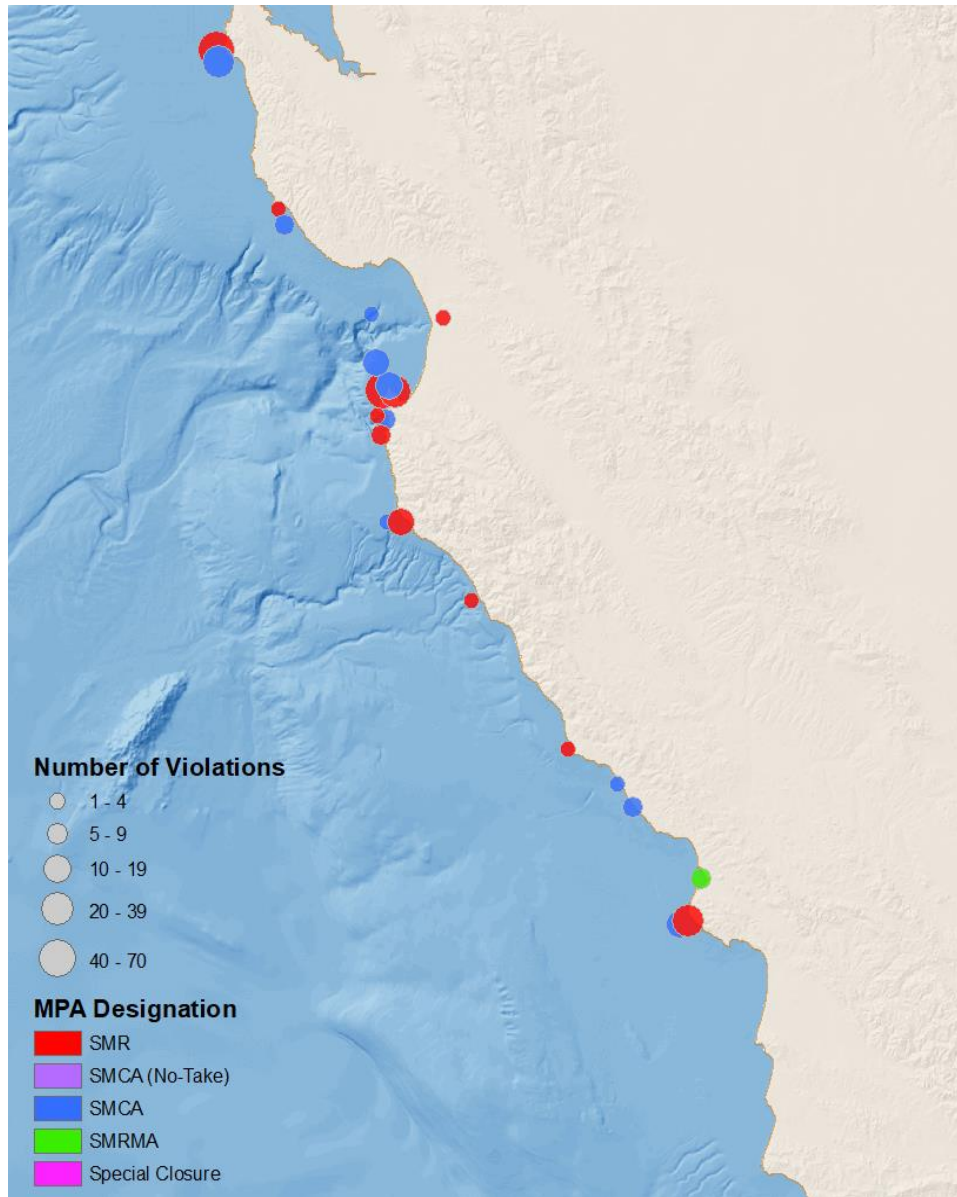
## Most violations by MPA per bioregion



# North Coast Bioregion

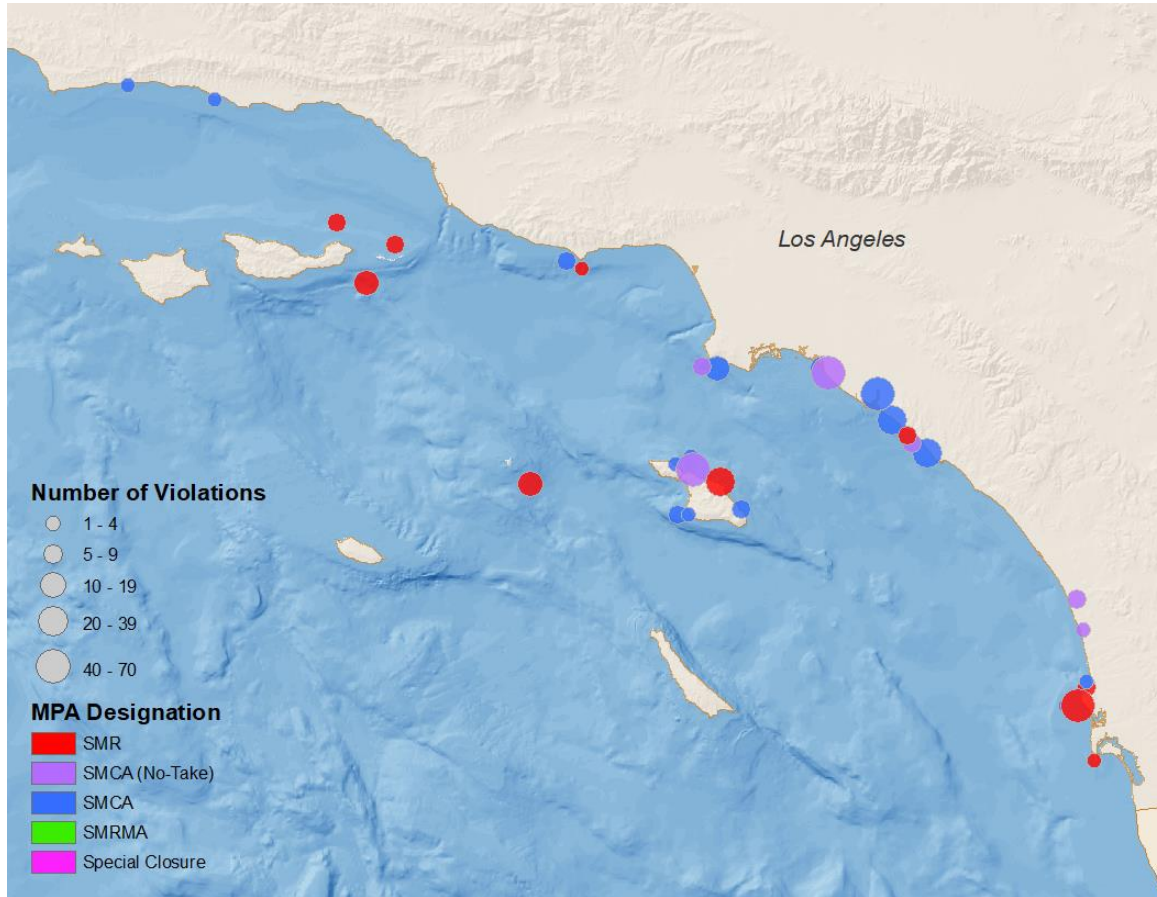


# Central Coast Bioregion

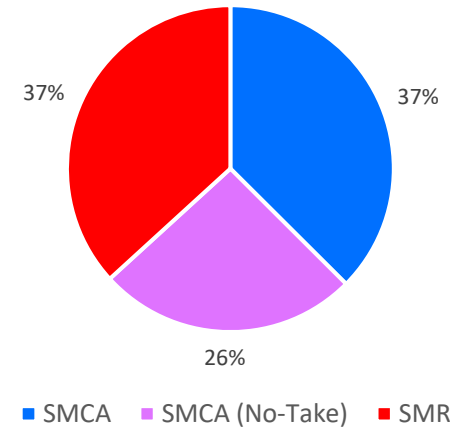




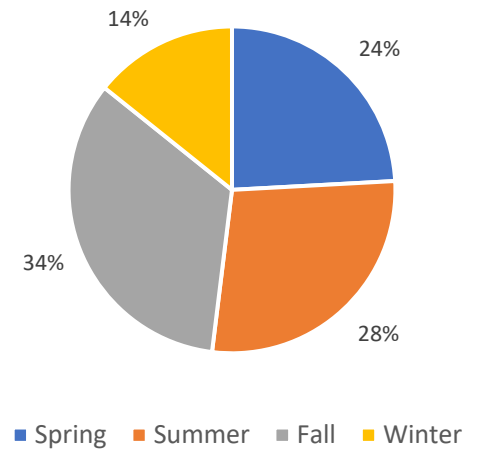
# South Coast Bioregion



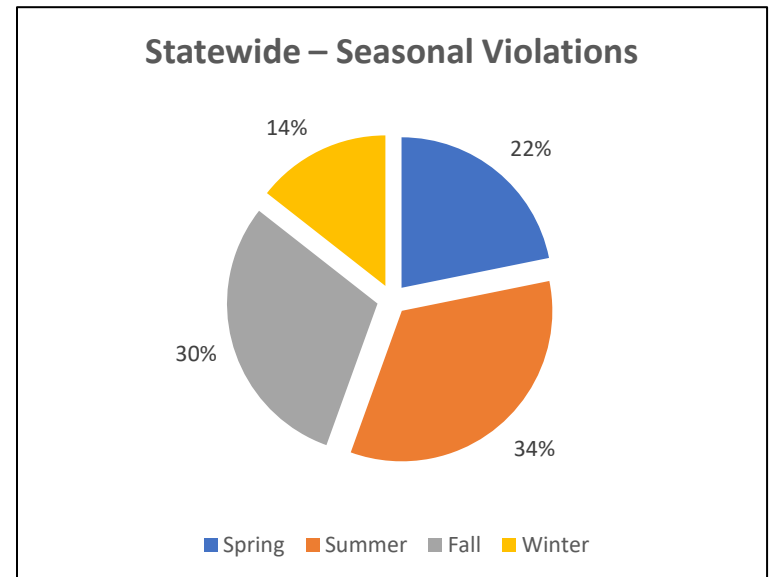
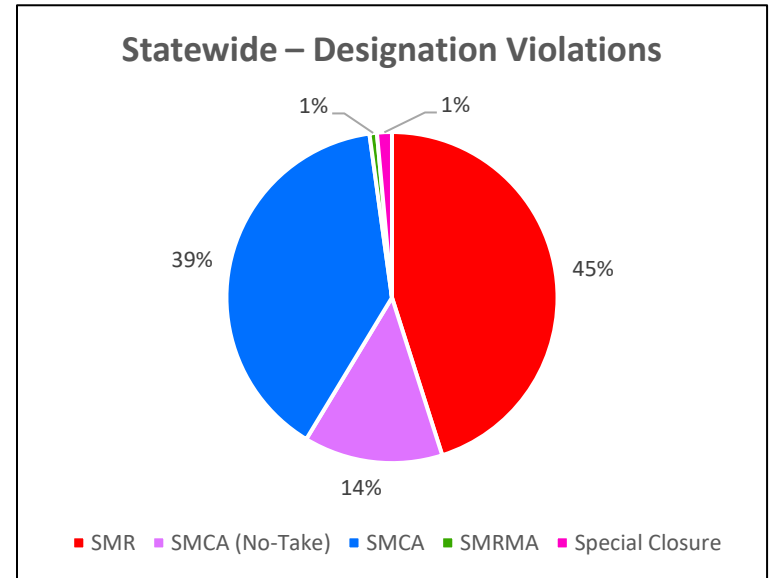
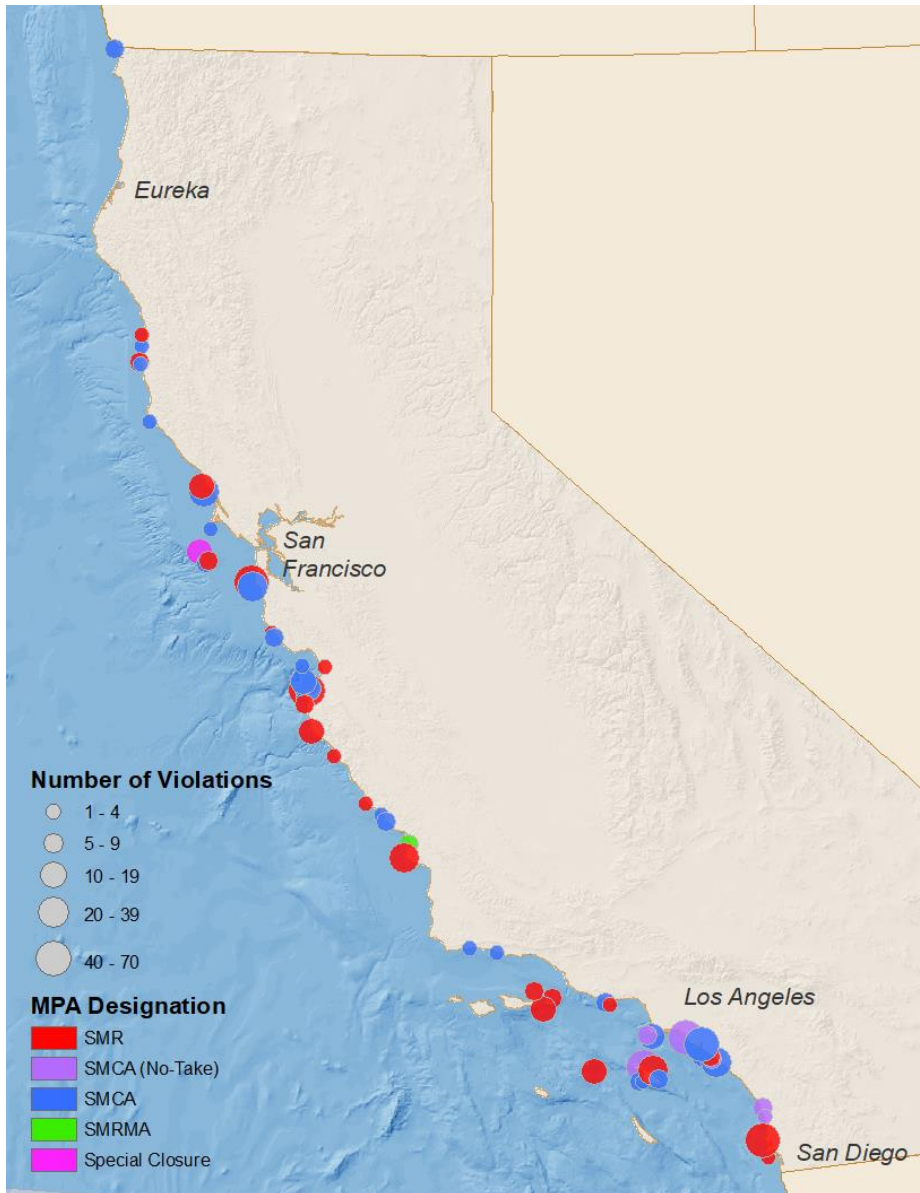
## South – Designation Violations



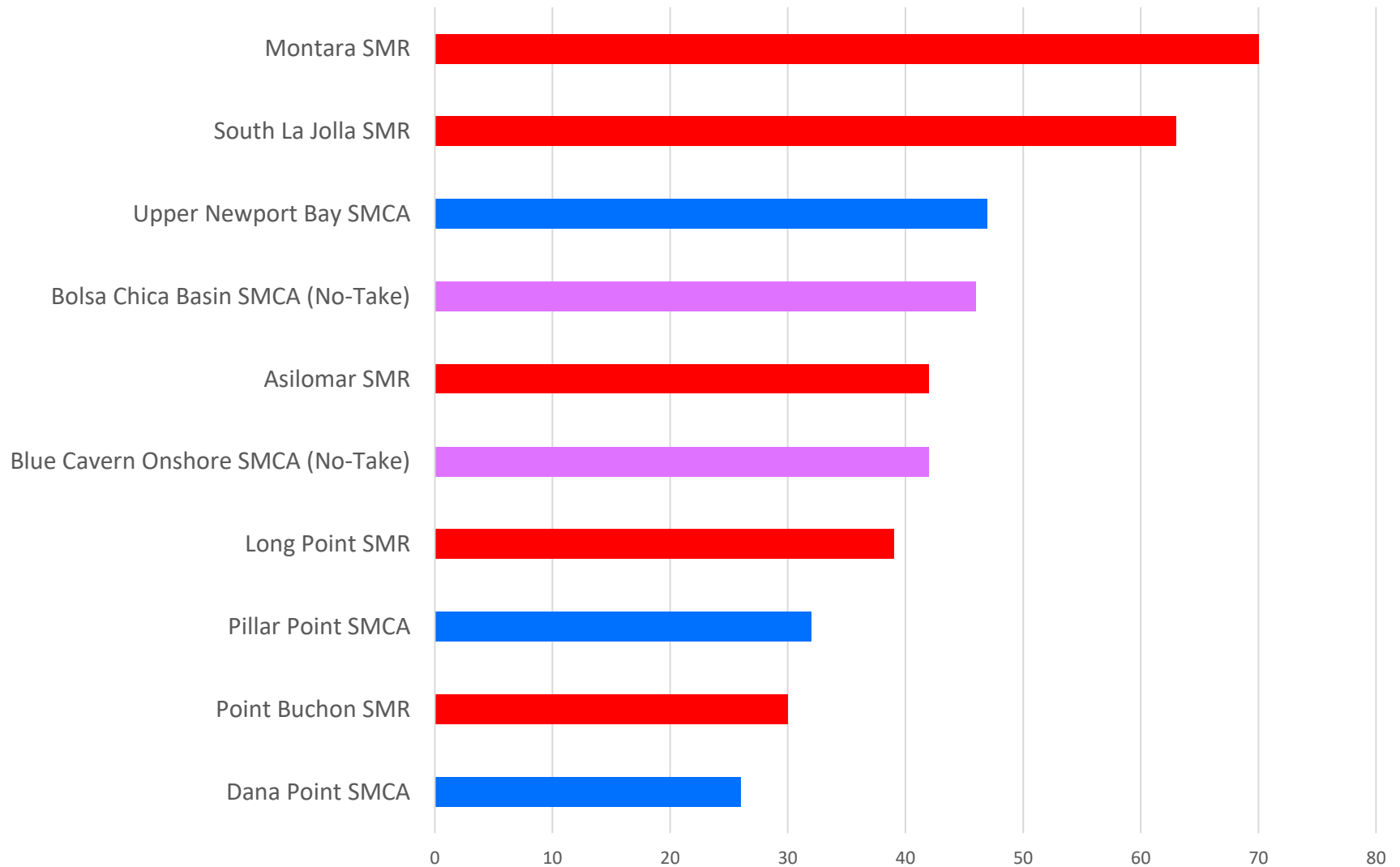
## South – Seasonal Violations



# Statewide Summary, 2022

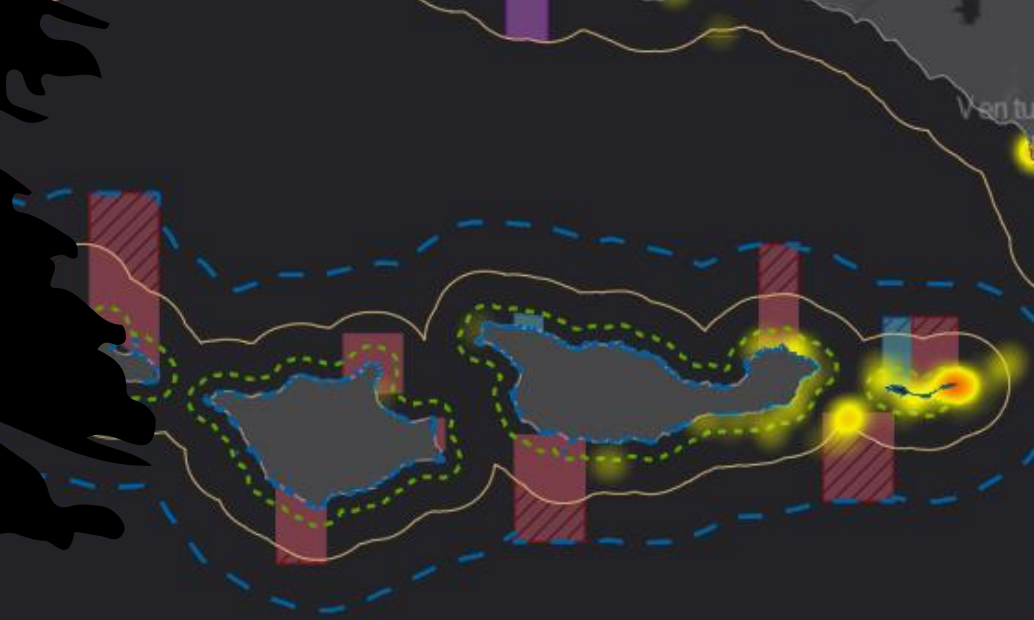


# Top 10 MPAs for Violations in 2022



# Improvements to RMS for 2023

- For 2023, RMS has been modified to track all ocean related violations in addition to MPA violations and violations.
- Will be able to look at percentage of MPA violations in relation to all ocean violations
- LED is committed to using technology for predictive policing. This may include increased use or expansion of other technologies.







Questions?





# WHITE STURGEON SPORT FISHING LONG-TERM REGULATION CHANGE

*Tribal Committee Update*

**PRESENTATION TO THE CALIFORNIA FGC TRIBAL COMMITTEE**

December 12, 2023 | Dr. John Kelly

Fisheries Branch



# White Sturgeon (*Acipenser transmontanus*)

- 20+ ft, 1800 lbs, 100+ years
- Estuary and freshwater oriented
  - Infrequent ocean movements
- Spawns in large Central Valley rivers
  - January – May
- Late maturity: 50% at 14 yrs, 100% at 19 yrs
- Spawn every 2-6 years
- Successful recruitment every 6-7 years
  - Correlated with “wet” water years
- **CA Species of Special Concern**





# CDFW goals and objectives

---

- Continue to provide angling opportunities while avoiding overfishing
- Declines in abundance and high levels of exploitation require updated regulations to manage harvest

## **Current status**

- Number of harvest tags sold is ~4x the abundance of legal sized fish
- Current harvest system does not allow us to achieve goals
- Emergency regulations implemented November 16, 2023
- Other White Sturgeon fisheries have success using different approaches to manage exploitation. Department needs to develop different management approach



# Fishery Regulations: prior to emergency ruling

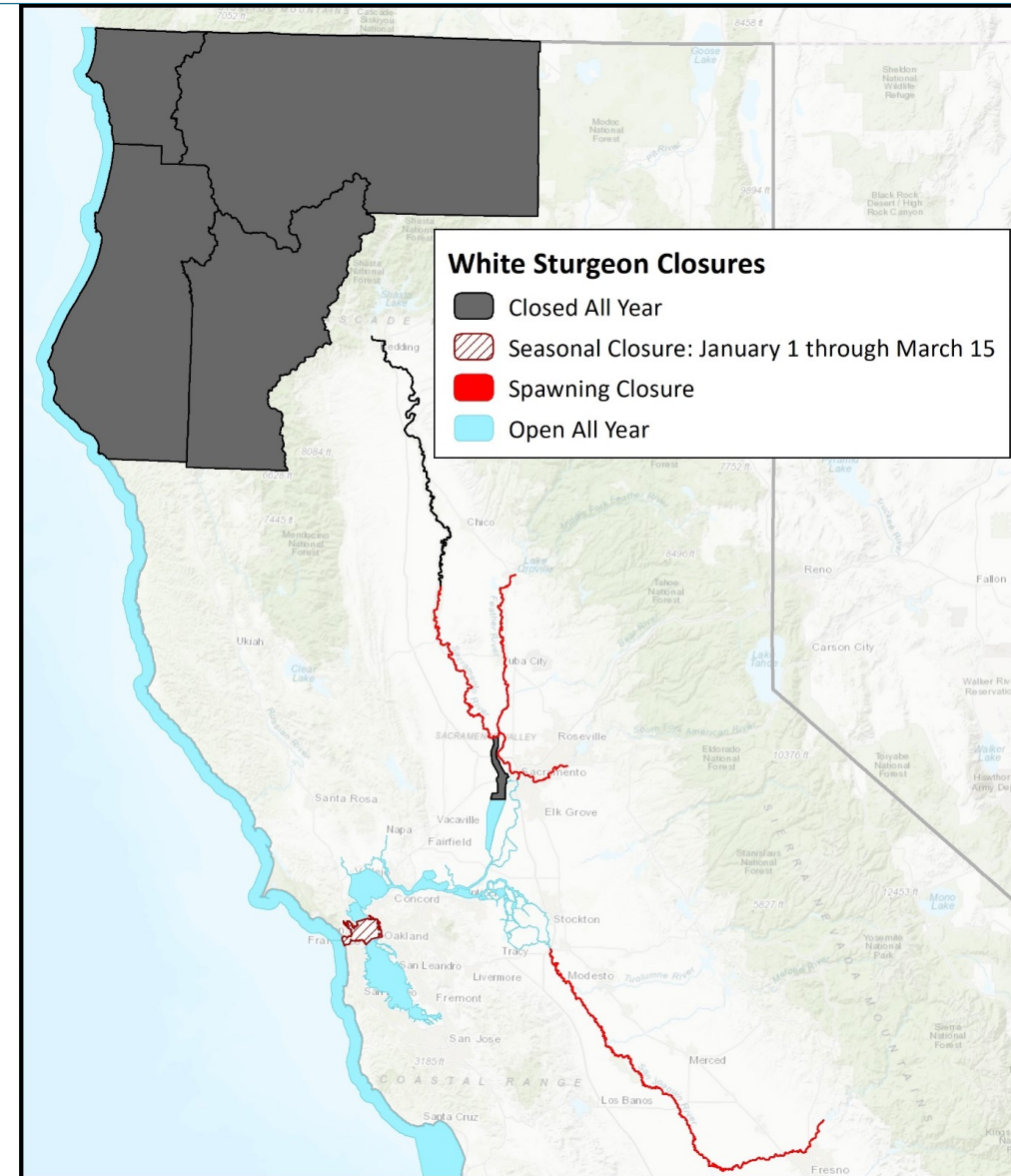
- Report Card required
  - One per angler, no limit to annual sales
- Season open all year\*
- 1 fish per day, 3 per year
- 40–60 inch Fork Length slot limit (approximately 9–17 years old)

*\*existing Green Sturgeon closures:  
Sacramento River above Butte City (all year), central San Francisco Bay (Jan 1 to Mar 15)*



# Emergency Fishery Regulations (Nov 2023-2024)

- Report Card required (one per angler)
- Season open all year except:
  - Existing Green Sturgeon closures
  - Upstream of the Hwy 50 bridge on the Sacramento River and I-5 bridge on the San Joaquin River: *Closed January 1 – May 31 to protect spawning*
- 1 per year, catch and release after
- 42–48 inch Fork Length slot limit (approximately 9.8–12 years old)
- Vessel maximum harvest limit: 2 fish per day



# Sturgeon Report Card Data

## Report Cards sold:

- ~45,500/year (average 2013-present)

## Total caught:

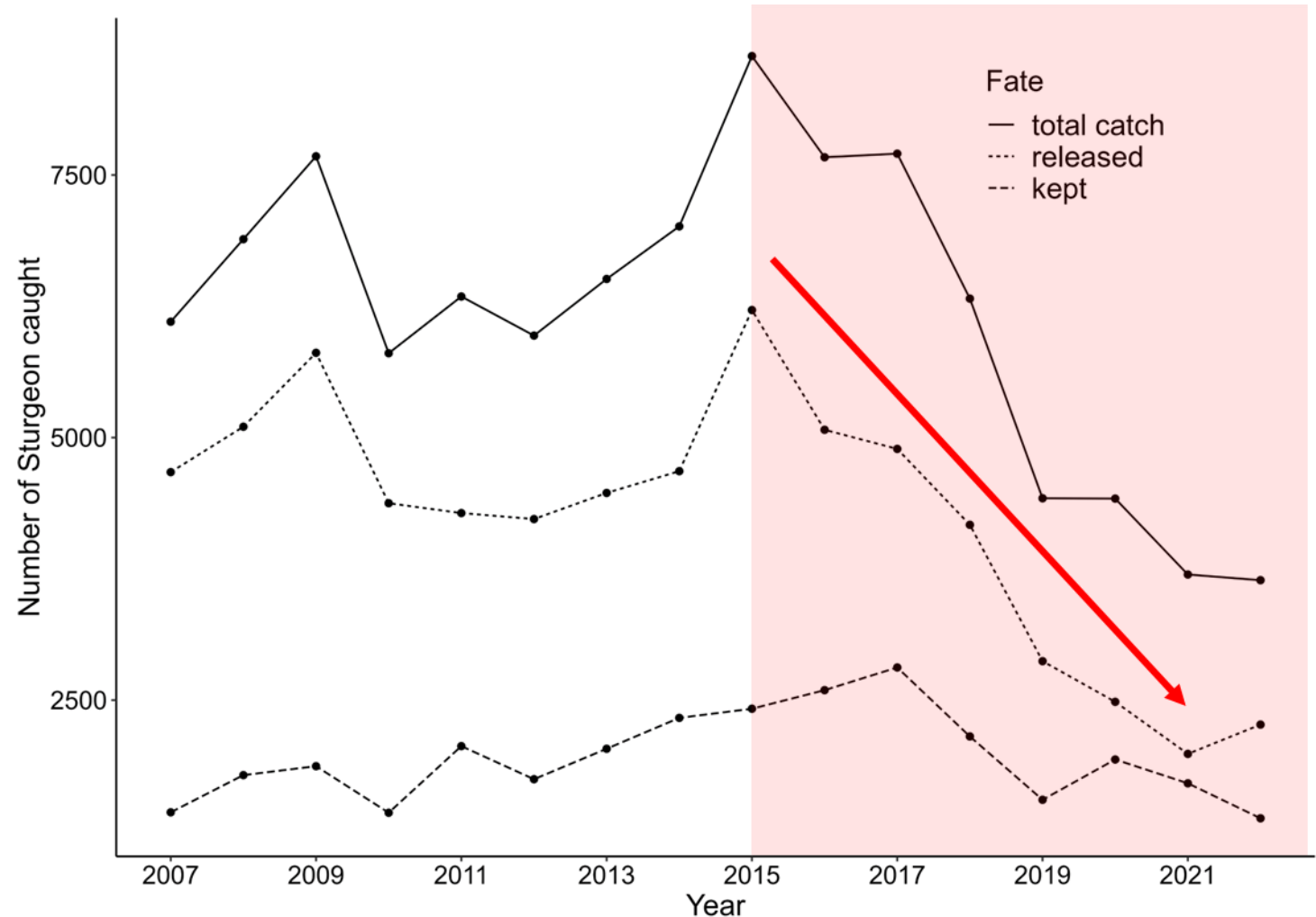
- Max: ~ 8,600 in 2015
- Min: ~ 3,600 in 2022

## Released Fish:

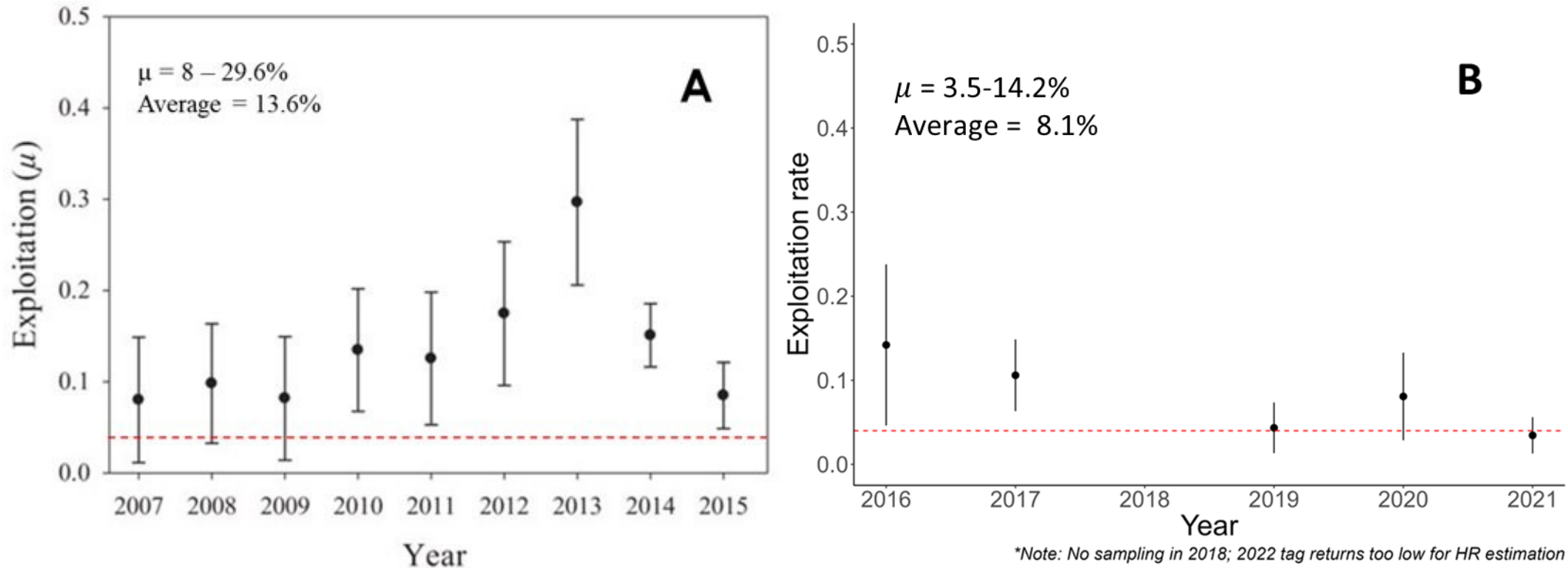
- Max: ~ 6,200 in 2015
- Min: ~ 2,000 in 2021

## Kept Fish:

- Max: ~ 2,800 in 2017
- Min: ~ 1,300 in 2022



# Exploitation (Harvest) Rate

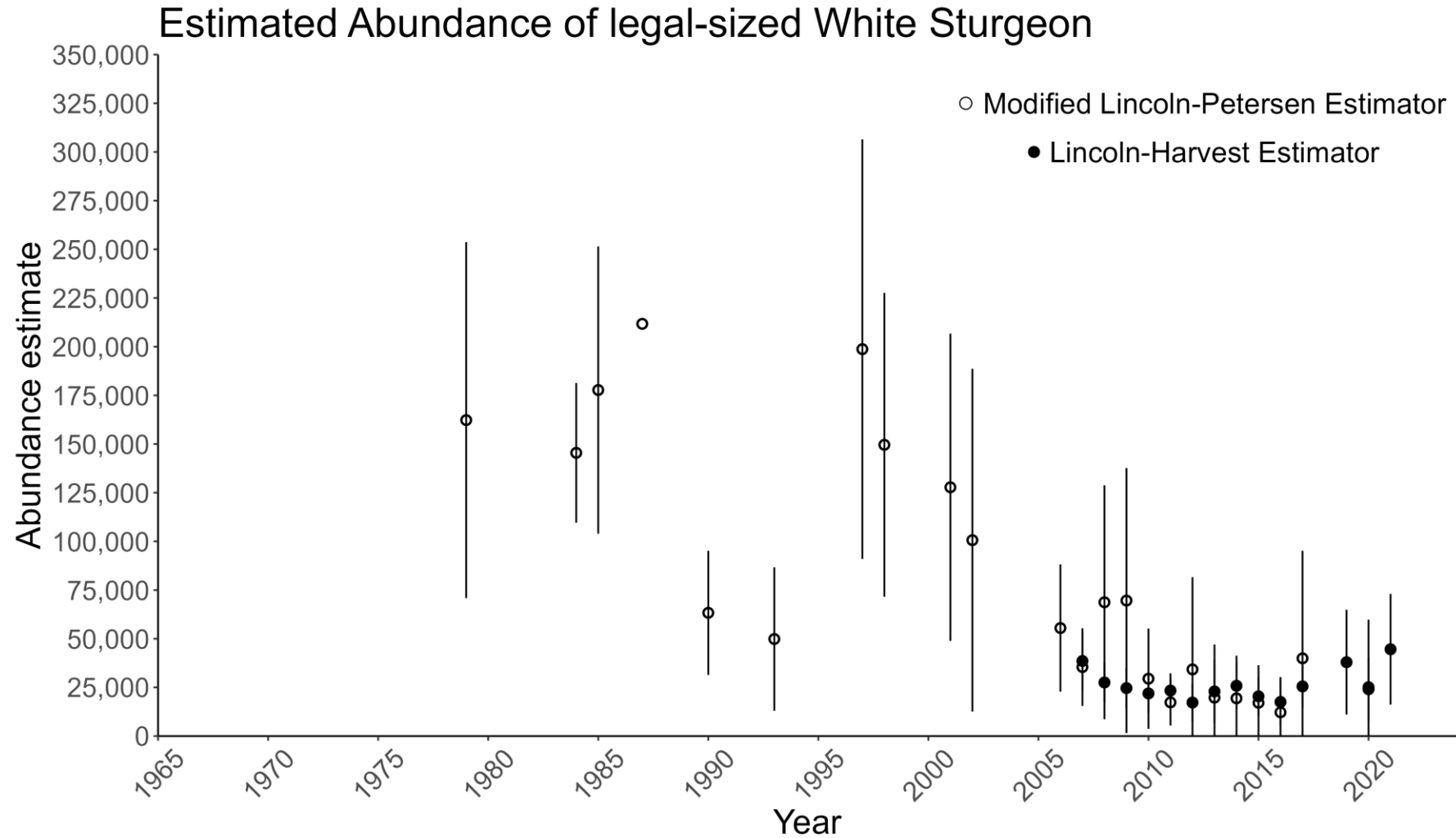


**Figure A:** Blackburn et al. 2019; **Figure B:** CDFW Fisheries Branch analysis. Red dashed line indicates 4% exploitation rate for reference.

- Harvest of sturgeon should not exceed 5–10% (Beamesderfer & Farr 1997)
- WA and OR: 3.8% maximum harvest rate target, 44–50 inch FL population segment



# Abundance estimates

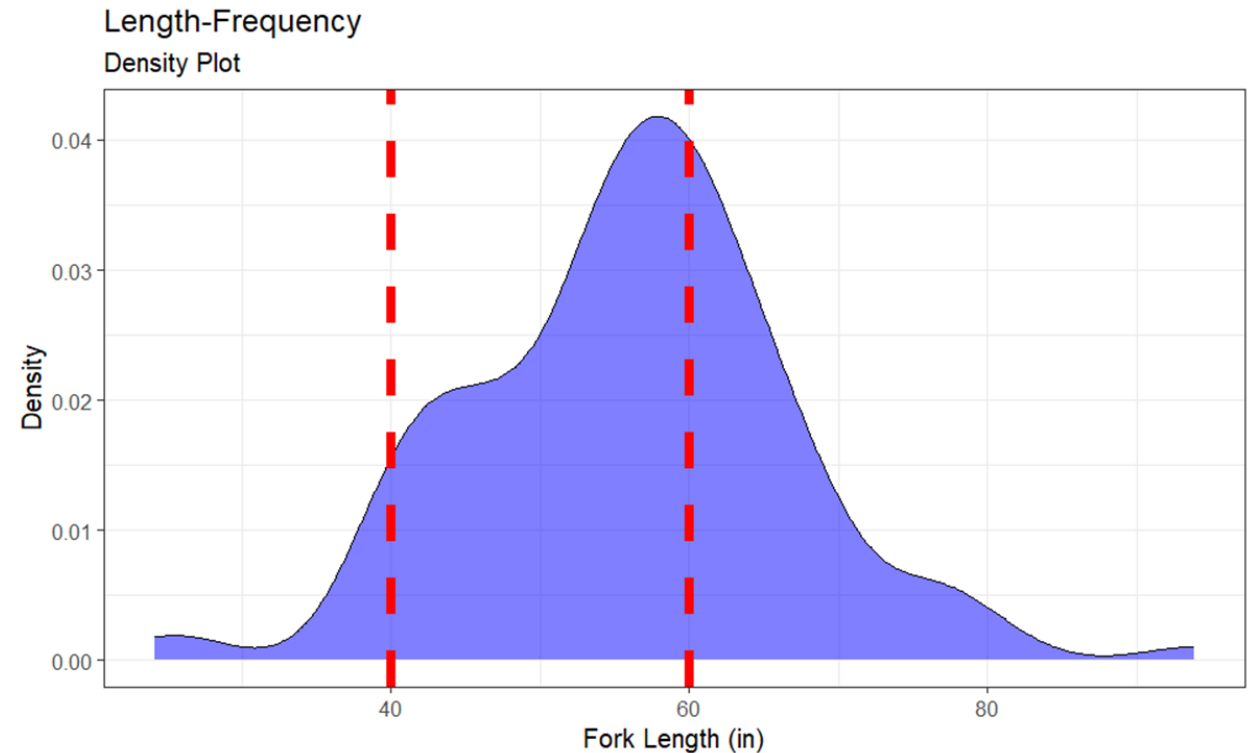


Current 5-year average: ~33,000 legal-sized fish

# 2022 Harmful Algal Bloom: mortality

Carcasses observed:

- 864 Sturgeon (total)
  - 195 White Sturgeon
  - 17 Green Sturgeon
  - 652 (species unknown)
- 86% larger than the minimum legal size
- 30% larger than the maximum legal size
- Represents 62% of 2022 reported harvest



2023 HAB mortality: 15 White Sturgeon, 1 Green Sturgeon

# Changes under consideration for 2025

- Year-round opportunity for Catch-and-Release
- Limited entry harvest quota system to maintain a sustainable population
- Seasonal and Geographic closures and harvest seasons to protect spawning adults
- Slot limit change to be more protective of mature adults



# Counties of interest

Alameda

Butte

Colusa

Contra Costa

Glenn

Madera

Marin

Mariposa

Merced

Napa

Sacramento

San Joaquin

San Mateo

Santa Clara

Shasta

Solano

Sonoma,

Stanislaus

Sutter

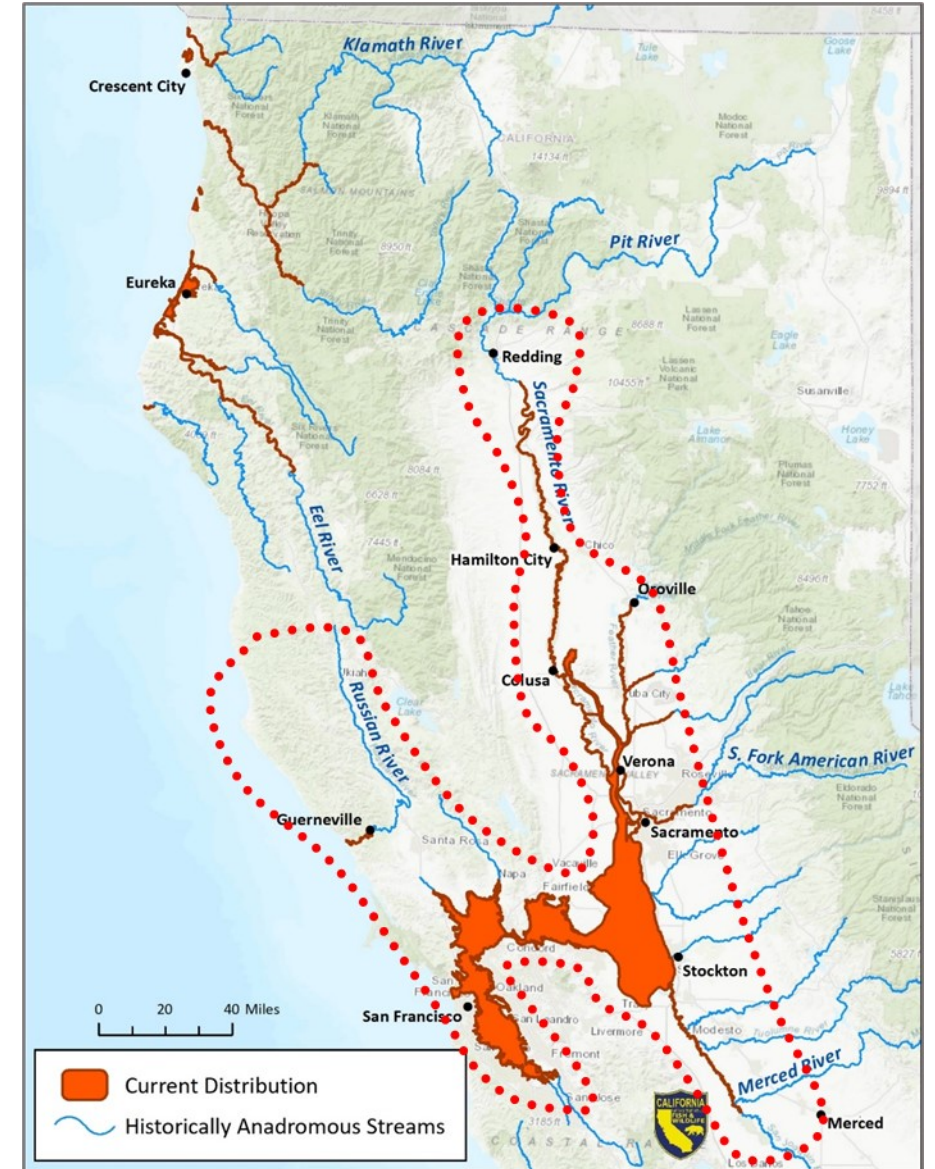
Tehama

Tuolumne

Yolo

Yuba

Del Norte, Humboldt, and Siskiyou counties have been excluded because recreational sturgeon fishing is already prohibited.





# Seeking Tribal Input on Sport Fish Regulation

- Reaching out to tribes by formal process using NAHC-provided contacts
- Will host virtual Tribal Listening Sessions
  - 12/18/23 1:00 PM – 2:00 PM
    - <https://wildlife-ca-gov.zoom.us/j/87535065644>
  - 12/19/23 5:30 PM – 6:30 PM
    - <https://wildlife-ca-gov.zoom.us/j/81973347931>
- Please contact CDFW Tribal Liaison with questions or for meeting links:
  - [Tribal.Liasion@wildlife.ca.gov](mailto:Tribal.Liasion@wildlife.ca.gov)
  - [Sturgeon@wildlife.ca.gov](mailto:Sturgeon@wildlife.ca.gov)



*Image from Vecsei & Peterson 2004*

# Credits | Questions | Contact



## Contributors:

John Kelly, Colby Hause, Lanette Richardson, Dan Kratville, Jonathan Nelson (Fisheries Branch)

Dylan Stompe, Jim Hobbs (Bay Delta Region)

[Sturgeon@wildlife.ca.gov](mailto:Sturgeon@wildlife.ca.gov)





# Status of Research and Monitoring, Restoration Efforts, and Developing Management Strategies for Kelp Canopy Forming Species in California



(Photo Credit: CDFW)

California Department of Fish and Wildlife, Marine Region and  
California Ocean Protection Council

November 2023



Citation: California Department of Fish and Wildlife (CDFW) and California Ocean Protection Council (OPC). 2023. Status of Research and Monitoring, Restoration Efforts, and Developing Management Strategies for Kelp Canopy Forming Species in California.

Contributors: Shelby Kawana (CDFW), Pike Spector (OPC), Dr. Kristen Elsmore (CDFW), Adam Frimodig (CDFW), and Kirsten Ramey (CDFW).



# TABLE OF CONTENTS

LIST OF ACRONYMS .....	iii
LIST OF FIGURES .....	v
LIST OF TABLES .....	vi
LIST OF APPENDICES.....	vii
1. BACKGROUND .....	1
2. KELP RESTORATION AND MANAGEMENT PLAN DEVELOPMENT .....	3
2.1. Kelp Recovery and Management Plan Development Process.....	3
2.2. Kelp Recovery and Management Plan Timeline .....	4
2.2.1. Community Working Group.....	4
2.2.2. Science Advisory Committee .....	5
2.2.3. Tribal Engagement .....	5
3. OVERVIEW OF GIANT AND BULL KELP STATUS .....	6
3.1. Monitoring of the Resource.....	6
3.1.1. Kelp Canopy Fishery-Independent Monitoring Data .....	6
3.1.2. Subtidal Fishery-Independent Data.....	10
3.1.3. Commercial Kelp Harvest Fishery-Dependent Data.....	12
3.2. Monitoring Next Steps .....	12
4. REGULATORY ACTION .....	13
4.1. Commercial Bull Kelp .....	13
4.2. Recreational Purple Urchin .....	13
5. ADVANCING KELP RESEARCH.....	15
5.1. Kelp Research and Recovery Program .....	15
5.2. 2024 Kelp Research and Restoration Program Request for Proposals .....	16
5.3. Non-State Funded Research .....	16
6. EFFORTS INFORMING THE DEVELOPMENT OF THE KELP RESTORATION AND MANAGEMENT PLAN .....	17
6.1. Building a Science-based Kelp Restoration Toolkit.....	17
6.2. Current and Ongoing Restoration Projects .....	18
6.2.1. Noyo Bay, Mendocino County: <i>Coordinated Grazer Suppression via Commercial Hand Harvest of Purple Urchin to Support Kelp Recovery</i> .....	18

6.2.2.	Caspar Cove, Mendocino County: Evaluating Efficacy of Recreational Diver Participation in Kelp Recovery .....	19
6.2.3.	Albion Cove, Mendocino County: <i>Identifying Scalable Kelp Enhancement Techniques Alongside Urchin Suppression via Commercial Hand Harvest</i> 21	
6.2.4.	Fort Ross and Timber Cove, Sonoma County: <i>Implementing Urchin Suppression via Commercial Hand Harvest of Purple Urchin Supplemented with Kelp Outplanting Techniques</i> .....	23
6.2.5.	Drakes Bay, Marin County: <i>Investigating (Non-diver) Bull Kelp Enhancement Techniques to Support Natural Recovery of Kelp Forest Habitat</i> .....	24
6.2.6.	Tanker Reef, Monterey County: <i>Evaluating Recreationally-led Urchin Suppression to Aid in Kelp Recovery</i> .....	25
6.2.7.	Palos Verdes, Los Angeles County: <i>Systematic Urchin Suppression via Commercial Diver Culling Results in Minimal Maintenance of Restoration Sites</i> .....	28
6.2.8.	Urchin Trapping: <i>A Non-diving Opportunity for Urchin Suppression</i> ...	29
6.2.9.	Sunflower Star: <i>Restoring Ecosystem Balance Following the Loss of an Apex Predator</i> .....	31
7.	LOOKING AHEAD.....	32
	ACKNOWLEDGEMENTS.....	33
	LITERATURE CITED .....	34
	APPENDIX 1: Kelp Canopy Data by County .....	A-1

## LIST OF ACRONYMS

CCR	California Code of Regulations
CSUMB	California State University Monterey Bay
CWG	Community Working Group
EBM	Ecosystem Based Management
ESR	Enhanced Status Report
FGC	Fish and Game Commission
FMP	Fishery Management Plan
F/V	Fishing Vessel
GFA	Greater Farallones Association
GFNMS	Greater Farallones National Marine Sanctuary
KRMP	Kelp Restoration and Management Plan
ILTER	Long Term Ecological Research
MHW	Marine Heat Wave
MLML	Moss Landing Marine Laboratories
MPA	Marine Protected Area
NGO	Non-Government Organization
QAQC	Quality Assurance Quality Control
OPC	Ocean Protection Council
NOAA	National Oceanic and Atmospheric Administration
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
SAC	Scientific Advisory Committee
SSU	Sonoma State University

SSWD      Sea Star Wasting Disease

TNC        The Nature Conservancy

UC         University of California



# LIST OF FIGURES

Figure 1. Landsat derived regional canopy data from 1984 through the end of 2022 (Q4)..... 9

Figure 2. Percent change in mean canopy cover by county (listed north to south) from 1984-2013 (pre-MHW) and 2014-2022 (post-MHW).....10

Figure 3: Giant kelp stipe counts (A), bull kelp counts (B), understory stipitate kelp counts (C), sunflower seastar counts (D), purple urchin density counts (E), and red urchin density counts (F).....11

Figure 4. [Left-Photo] Commercial urchin diver hand harvesting purple urchins at the Noyo Bay restoration site. [Right-Photo] Bull kelp stipes observed at the Noyo Bay restoration site following purple urchin removals. Photo Credit: Tristin McHugh (TNC). .....19

Figure 5. Map of Caspar Cove restoration site including the regulation boundary, site zones, and one-acre Targeted Restoration and Monitoring Area (inside site zone A). .....21

Figure 6. [Left-Photo] Researcher surveying bull kelp recruits on lines at the Albion Cove restoration site. [Right-Photo] Close-up of bull kelp growing on suspended seeded lines in Albion Cove. Photo Credit: Abbey Dias (SSU). .....23

Figure 7: [Left-Photo] Researchers prepare reproductive bull kelp samples for “reef duster” kelp enhancement method. [Right-Photo] Researchers carefully wrap inoculated twine around clay bricks to be deployed at the Drakes Bay restoration site. Photo Credit: Rietta Hohman (GFA-GFNMS; NOAA Affiliate). .....25

Figure 8. Purple urchin (top) and red urchin (bottom) density (urchin/m<sup>2</sup>) during each subtidal survey timepoint (2021-2023).....27

Figure 9. Giant kelp individual (top) and giant kelp stipe (bottom) density (per/m<sup>2</sup>) during each subtidal survey timepoint (2021-2023).....28

Figure 10: [Left-Photo] Before and after [Right-Photo] systematic commercial culling at TBF restoration site in Palos Verdes. ....29

Figure 11. Non-exhaustive list of entities engaged in current kelp monitoring, research and recovery efforts in California. ....33

## LIST OF TABLES

Table 1: Spatial and temporal resolution of different remote sensing tools used to assess kelp canopy data.....	7
---	---

## LIST OF APPENDICES

APPENDIX 1: Kelp Canopy Data by County .....	1
--	---

# 1. BACKGROUND

Two canopy forming kelp species, bull kelp (*Nereocystis luetkeana*) and giant kelp (*Macrocystis pyrifera*), occur in California and are regionally divided across the state. Bull kelp dominates the cooler waters of northern California, while giant kelp dominates southern California's nearshore waters. Central California provides a unique transitional environment where both species comprise a kelp forest ecosystem. In recent years, California has experienced climate-driven kelp declines along its coastline, with some regions and localized areas exhibiting severe and persistent loss that has led to significant negative impacts to biodiversity, coastal communities, and culturally and economically important fisheries.

Bull kelp forests in northern California, specifically in Sonoma and Mendocino counties, have been severely impacted by the North Pacific Marine Heat Wave (MHW) that emerged in 2014 and compounded with a strong El Niño in 2015, and an unprecedented increase in sea surface temperatures through 2016. Subsequent synergistic environmental stressors, including the loss of the predatory sunflower sea stars (*Pycnopodia helianthoides*) due to Sea Star Wasting Disease (SSWD) (Harvell et al. 2019) and increased densities of purple urchin (*Strongylocentrotus purpuratus*) of up to 60 times historical abundances (Rogers-Bennett and Catton, 2019), have led to a regime shift from kelp forest-dominated to urchin barrens over approximately 100 miles of the northern California coastline. For example, over 90% loss of observed bull kelp canopy has been documented in Sonoma and Mendocino counties, with little signs of recovery since 2014, which has had significant negative impacts to northern California's nearshore ecosystems resulting in the collapse of the commercial red urchin (*Mesocentrotus franciscanus*) fishery due to urchin starvation and lack of quality roe product forcing declaration for federal disaster regarding the fishery in 2015 and the closure of the iconic recreational red abalone (*Haliotis rufescens*) fishery in 2018 following extensive population declines.

In contrast to the region-wide devastation observed on the north coast, patterns in kelp canopy on California's central coast (San Francisco Bay to Point Conception) and south coast (Point Conception to U.S./Mexico border) are more complex. At the local scale in both of these regions, there are kelp beds exhibiting both long-term increases and decreases in kelp canopy. Kelp cover along the central coast region of the state has remained relatively stable, though localized areas along the Monterey Bay Peninsula have experienced significant declines since the 2014-16 MHW. While giant kelp and bull kelp co-occur in the central coast region, the Monterey Bay Peninsula has been predominantly composed of giant kelp. The giant kelp-dominated south coast region has also experienced declines since 2014, though not to the degree of loss observed on the north coast. The specific areas of concern



include Orange County, San Diego County, and San Miguel Island in the northern Channel Islands.

In an effort to address the catastrophic loss of kelp in key regions across the state, and to adaptively manage these vital marine ecosystems, the California Department of Fish and Wildlife (Department) and the California Ocean Protection Council (OPC) have prioritized the development of a Kelp Restoration and Management Plan (KRMP). The goal of the KRMP is to develop a robust, adaptive, climate-ready approach to managing, protecting, and restoring giant and bull kelp forest ecosystems statewide for consideration and adoption by the California Fish and Game Commission (FGC).

The state has also invested in the protection and restoration of kelp forest ecosystems, and the communities they support through grant funding opportunities aimed to fill critical knowledge gaps to advance the understanding of kelp restoration and research. As anthropogenic climate change is predicted to increase disturbances such as MHWs, and exacerbate stochastic events like El Niño Southern Oscillation, these research efforts provide a frontline defense for the protection and proliferation of these vital marine ecosystems and the associated fisheries they support.

This update consists of KRMP development, an overview of bull kelp and giant kelp status and monitoring data, and research projects across the state exploring kelp restoration techniques.

## 2. KELP RESTORATION AND MANAGEMENT PLAN DEVELOPMENT

### 2.1. Kelp Recovery and Management Plan Development Process

The Department, in partnership with OPC, is developing a statewide, ecosystem-based, adaptive KRMP for giant kelp and bull kelp. The Department and OPC are using a [multi-pronged approach](#), consisting of a Community Working Group, Science Advisory Committee, and Tribal Engagement to ensure the development of the KRMP is informed by the best available science and community perspectives across the state of California. The KRMP will include a cohesive kelp management strategy which consists of three core components: 1) a harvest management framework and other Fishery Management Plan (FMP) elements required by the Marine Life Management Act (MLMA); 2) an innovative framework for ecosystem-based management (EBM) of kelp forests; and 3) a Restoration Toolkit. The integration of EBM approaches and a Restoration Toolkit into the traditional FMP framework will facilitate a robust, adaptive, climate-ready approach to managing the State's kelp forest ecosystems in the face of changing ocean conditions. The KRMP development process is anticipated to occur over the course of three to five years. The KRMP will also reference and build off several guidance documents that have been developed for kelp recovery throughout the state including the Sonoma-Mendocino Bull Kelp Recovery Plan (2019), OPC Interim Kelp Action Plan (2021), and the Department's Giant Kelp and Bull Kelp Enhanced Status Report (2021).

The **Community Working Group (CWG)** is an informal advisory body composed of California Native American tribes, stakeholders, and interested members of the public established to help inform the design and development of the KRMP. The goals of the CWG are to advise on and inform the development of the core components of the KRMP. CWG members are tasked with sharing information about the KRMP development with their broader community networks, as well as gathering and sharing their communities' perspectives, interests, and feedback.

The **Science Advisory Committee (SAC)** is an independent body tasked with providing scientific expertise on all aspects of the KRMP to ensure the best available and most current science is directly integrated into the KRMP. The SAC is composed of experts in natural and social sciences, economics, and local and traditional knowledge, spanning a broad scope of disciplines and geographic areas.

Pathways for **Tribal Engagement** throughout the development of the KRMP include Tribal Roundtable Listening Sessions, government-to-government consultation, representation on the CWG and SAC. Additional pathways for engagement may be identified as the KRMP development process unfolds. A top priority for the State of

California is to provide California Native American tribes the opportunity to inform the design and development of the KRMP's process and outcomes, including co-management pathways, if this is identified as a priority by California Native American tribes.

## **2.2. Kelp Recovery and Management Plan Timeline**

The KRMP development process is anticipated to occur over the course of three to five years. The early stages of KRMP planning began in 2022 and in 2023, the Department and OPC staff assembled the SAC and the CWG.

### **2022**

- [Fish and Game Commission Marine Resources Committee update](#) (March)
- Notification of interested parties and stakeholders (ongoing)
- [Funding secured to support development of KRMP](#) (October)
- FGC Tribal Committee update (August)
- Project Management Team contracted to support development of the KRMP (December)

### **2023**

- Fish and Game Commission Marine Resources Committee update (March)
- Solicitation and establishment of CWG (ongoing)
- Tribal notification (May) and consultation (ongoing)
- Tribal Roundtable Listening Sessions (June)
- CWG meeting (July)
- Establishment of SAC (ongoing)
- SAC meeting (September)

#### **2.2.1. Community Working Group**

To facilitate and bolster community and stakeholder engagement throughout the development of the KMRP, OPC has contracted Strategic Earth LLC. to work with OPC and the Department to coordinate and administer the CWG. The CWG, was

established in 2023 and is composed of 24 individual members spanning California's coast and representing non-governmental organizations (NGOs), local businesses, commercial harvesters, and tribal governments. The CWG is expected to hold eight virtual meetings and two 1.5 day hybrid meetings throughout the initial development of the KMRP (2023-2025).

### **2.2.2. Science Advisory Committee**

In collaboration with the Department and OPC, California Sea Grant (CASG) is tasked with convening, administering, and facilitating the KRMP SAC. Composed of 11 professional scientists with representation from academia, agency, non-profit, and tribal governments, the SAC will provide expertise and perspectives for the KRMP's science needs assessment. The SAC is expected to meet quarterly for the initial development of the KRMP (2023-2025) virtually (three meetings per year) and in-person (two half day meetings per year). The SAC convened for the first time in Fall 2023 for a virtual orientation session and will meet again in December 2023 for a two-day in-person workshop.

### **2.2.3. Tribal Engagement**

In June 2023, the Department and OPC, in collaboration with Strategic Earth LLC., held two virtual Tribal Roundtable Listening Sessions that were open to elected officials and representatives of California's native tribes. The purpose of these sessions was to solicit early feedback from tribal governments regarding their priorities for protecting, conserving, restoring, and managing kelp forest ecosystems, as well as pathways for effective and meaningful engagement with tribal governments. Representatives from several California tribal nations also sit on the CWG and SAC.



### **3. OVERVIEW OF GIANT AND BULL KELP STATUS**

#### **3.1. Monitoring of the Resource**

Kelp is very dynamic and variable by nature therefore the availability of long-term data is fundamental for monitoring the resource and identifying trends and patterns of concern. The Department uses several monitoring sources to assess and inform kelp status throughout the state, these include data from remote sensing imagery, subtidal surveys, and the commercial kelp fishery.

##### **3.1.1. *Kelp Canopy Fishery-Independent Monitoring Data***

Emerging technologies have provided additional sources of kelp canopy data at greater temporal and finer spatial scales, that the Department, OPC, and others use to understand and assess kelp canopy dynamics.

Landsat is a remote sensing satellite imagery tool that provides kelp canopy data at 30-meter resolution, dating back to 1984. These data provide the longest continuous time series of kelp canopy information statewide, are publicly available, sourced from the Santa Barbara Coastal Long-Term Ecological Research (SBCLTER) data portal, and can also be viewed on KelpWatch through an interactive mapping tool. The Department currently uses Landsat canopy data to assess broad region (Figure 1) and county (Appendix 1) spatial scales throughout the state.

OPC recently invested in a partnership among the Department and researchers at University of California Los Angeles to advance kelp canopy mapping techniques with PlanetScope imagery, including automation of image processing and production of high-resolution statewide kelp canopy maps (3-meter resolution). This will provide the State with the ability to analyze trends and variability in kelp canopy dynamics, with elevated focus on areas of special concern (e.g., the Mendocino and Sonoma Coasts). Project partners will use PlanetScope classification to document spatial patterns of recovery and identify potential drivers of resilience, including factors such as habitat quality, marine protected area (MPA) protection status, sea temperature, and nutrients, urchin dynamics, and kelp dispersal. This will allow for the characterization of the connectivity between refugia (i.e., areas where kelp canopy persisted from 2014-2020) and unoccupied habitat, with close examination of the relationship between connectivity and probability of recovery.




Kelp canopy data sourcing to date				
Survey Type		Primary Data Source	Spatial Resolution	Timeframe
	Piloted Aerial Survey	CDFW	2-meter	1989; 1999-2016
	Satellite Remote Sensing	PlanetScope	3-meter	2016-present
		*Landsat	30-meter	1984-present
	Unoccupied Aerial Systems (drones)	Variable	centimeters	Sporadic; Project-specific

Table 1: Spatial and temporal resolution of different remote sensing tools used to assess kelp canopy data. Highlighted row indicates the primary data source the Department is using to assess kelp canopy on relatively broad spatial scales. \*Santa Barbara Coastal Long-term Ecological Research.

### 3.1.1.1. *Regional Trends (North to South)*

This report provides updates for canopy data through the end of 2022. The current timeline for quality assurance and quality control (QAQC) and processing remote sensing and satellite imagery data offsets the ability to report and update figures by approximately one to three quarters each year.

The north coast (Oregon-California border to San Francisco Bay) regional data (Figure 1; top panel) shows severe and persistent declines in kelp canopy following the 2014 MHW and associated cascading events. Sonoma and Mendocino County show the most severe declines (Appendix 1), with more than 95% and 90% loss in average kelp canopy cover in Sonoma and Mendocino counties respectively, since the 2014 MHW (Figure 2).

The central coast (San Francisco Bay to Point Conception) regional data (Figure 1; middle panel) shows trends within the normal variability of historical canopy cover. Looking at the county spatial scale, Monterey County also shows some indication of decline post-MHW, though trends look to be within normal range of historical coverage (Figure 2; Appendix 1). This pattern is largely driven by declines along the Monterey Peninsula. It is important to note that much of the coastline that makes up Monterey County is encompassed by Big Sur, which has maintained strong canopy cover through the post-MHW time period. Other areas in the central coast region,

such as San Mateo and Santa Cruz counties have increased kelp canopy cover since the 2014 MHW (Figure 2; Appendix 1).

The south coast (Point Conception to USA-Mexico border including the Channel Islands) shows some regional declines since the 2014 MHW. San Diego and Orange counties have both shown kelp canopy declines post-MHW (Appendix 1). However, kelp canopy cover in Santa Barbara County (Appendix 1) has exhibited some increases since the 2014 MHW (Figure 2). The Channel Islands have also experienced losses in kelp canopy since 2014 (Figure 2) with the most significant declines at San Miguel Island and Santa Rosa Islands (Appendix 1).

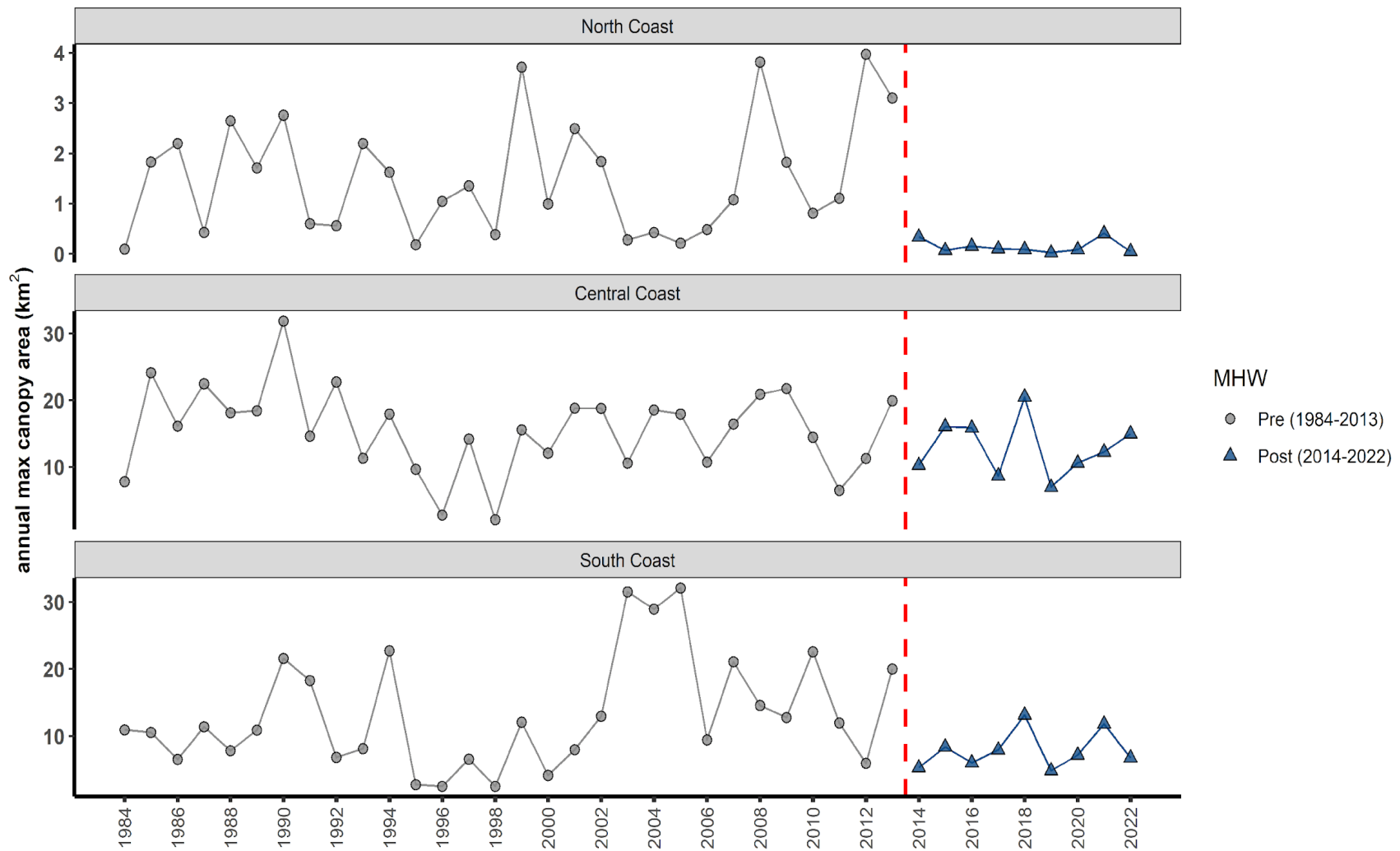


Figure 1. Landsat derived regional canopy data from 1984 through the end of 2022 (Q4). The red dashed line indicates the onset of the MHW in 2014. Data Source: SBCLTER et al. 2022.



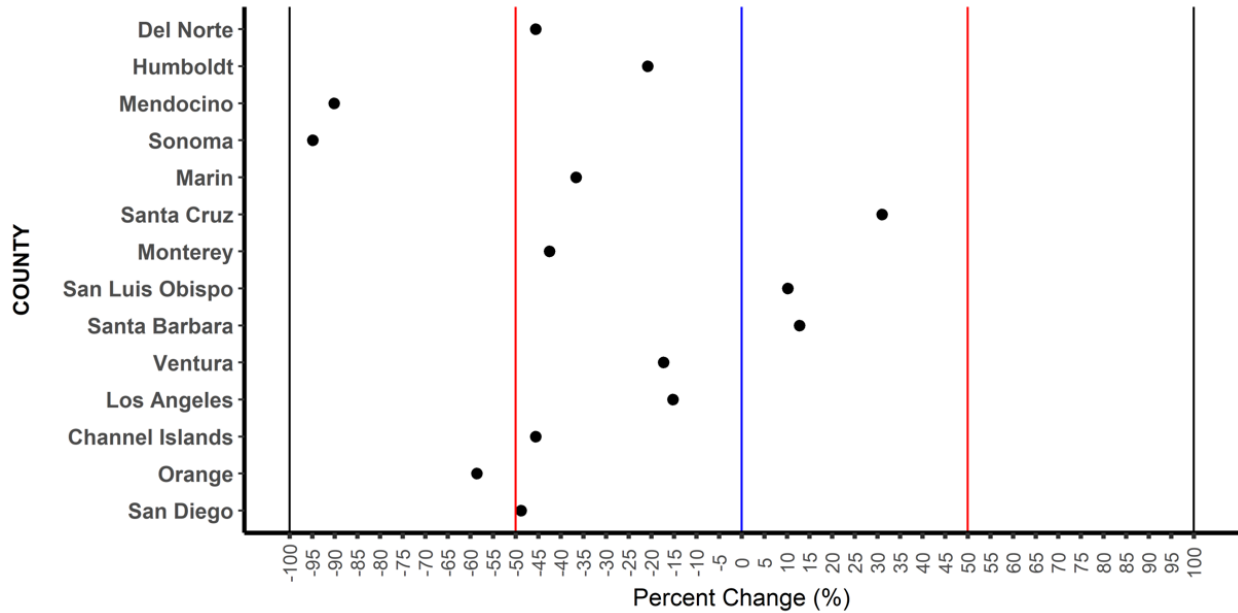


Figure 2. Percent change in mean canopy cover by county (listed north to south) from 1984-2013 (pre-MHW) and 2014-2022 (post-MHW). Note that this figure excludes San Mateo County due to greater than 400% increase in kelp canopy cover and San Francisco County due to zero kelp canopy cover over time. Central blue line indicates 0% or no change; Red lines indicate 50% change (left: negative indicating a decrease; and right: positive indicating increase in mean canopy cover). Data Source: SBCLTER et al. 2022.

**3.1.2. Subtidal Fishery-Independent Data**

Subtidal monitoring of kelp forests using SCUBA divers has occurred for several decades and provides critical information on kelp density, community diversity, and ecosystem health. There are several subtidal monitoring programs collecting long-term data in kelp forest ecosystems throughout the state, including the Department’s north coast (Mendocino and Sonoma counties) nearshore ecosystem dive surveys (est.1971). Other important subtidal monitoring programs include Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO; est.1999), Channel Islands National Park Kelp Forest Monitoring Program (est. 1982), and Reef Check (2005-present). The data collected by these monitoring groups are used directly by managers to make informed, science-based decisions regarding California’s marine communities. While remote sensing and aerial surveys are useful tools to assess changes in kelp canopy abundance, diver surveys can provide critical *in situ* kelp and marine algae abundance and biodiversity data as well as important indicator species data that are used to quantify, model, and track ecosystem health (Figure 3). Further, these data help marine managers assess the efficacy of marine managed areas and provide updates for marine resource managers. An interactive map

showing the monitoring sites of many Sanctuary Integrated Monitoring Network (SIMoN) can be found on the [Kelp Ecosystem Monitoring Map webpage](#). Additionally, MPA monitoring provides [baseline and long-term monitoring of kelp forest ecosystems](#).

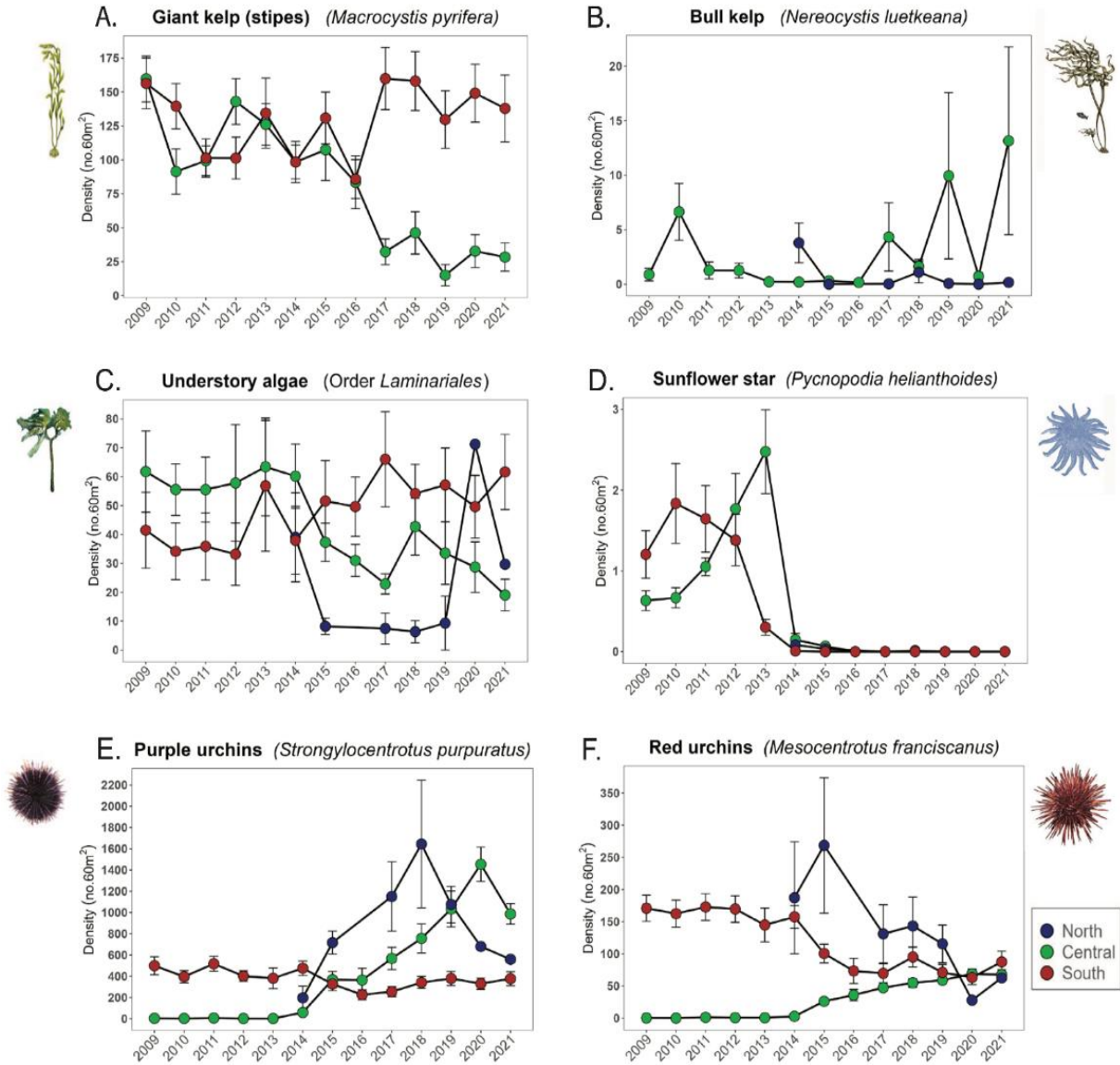


Figure 3: Giant kelp stipe counts (A), bull kelp counts (B), understory stipitate kelp counts (C), sunflower sea star counts (D), purple urchin density counts (E), and red urchin density counts (F). Data are provided by PISCO; figure provide by Dr. Jenn Caselle, UCSB. Due to sampling and data availability limitations, data for the north coast date back to 2014; only one site was surveyed in 2021 and 2022.

### **3.1.3. Commercial Kelp Harvest Fishery-Dependent Data**

The Department manages commercial kelp and other marine algae harvest statewide. The commercial harvest of giant and bull kelp is managed and reported differently depending on use (for general use, i.e., including as feed for farmed abalone aquaculture or for human consumption as edible seaweed). The Department's commercial kelp harvest data for general use dates back to 1916 with the majority of kelp harvest likely being giant kelp. Edible seaweed harvest reporting for giant and bull kelp began in 2002. The FGC recently adopted amendments to the commercial harvest regulations that include more precise harvest location reporting for bull kelp, separating reporting weights for bull and giant kelp in the Commercial Kelp Harvester's Monthly Report (harvest for general use), and information on catch by unit effort. There are currently no reporting requirements for recreational kelp harvest.

### **3.2. Monitoring Next Steps**

Historically, aerial surveys have been the primary method of monitoring kelp canopy off the California coast. However, aerial surveys are expensive and have considerable logistical constraints. Remote sensing, via satellite imagery, provides a more cost-effective and reliable strategy for long-term kelp canopy monitoring. Pilot work supported by OPC shows that maps of kelp canopy derived from high-resolution PlanetScope satellite imagery match well with maps derived from aerial surveys. A recent investment by the State will support the next steps in the development of a novel approach for kelp canopy monitoring. This project will result in the creation of seasonal, statewide, high-resolution maps of kelp canopy from 2016-2023, the development of a fully automated approach for processing large amounts of satellite imagery, the use of satellite imagery to analyze kelp canopy dynamics, and the development of a method for monitoring kelp at very small spatial scales (0.5m - 3m) using very high-resolution imagery.

To further advance the implementation of emerging technologies to inform kelp forest management, the State has invested in the use of SkySat/Pelican, a high-resolution satellite dataset from PlanetScope, which will provide satellite imagery on a scale of 0.5m. These data are not suited for large-scale statewide maps but will be more cost effective and useful for site-based monitoring and evaluation at current kelp restoration sites, and for planning and monitoring future kelp restoration efforts.

In advance of their December 2023 meeting, OPC plans to recommend a \$9 million dollar investment for three years of MPA monitoring from 2024 to 2026 including rocky intertidal, kelp forest, estuary, sandy beach, and surf zone habitats. OPC staff are currently scoping further monitoring investments for their February 2024 meeting.

## **4. REGULATORY ACTION**

### **4.1. Commercial Bull Kelp**

Given the dramatic and persistent loss of bull kelp in Sonoma and Mendocino counties since 2014, and due to the lack of scientific data to explain whether commercial harvest does or does not have an impact on the current bull kelp population, the FGC adopted precautionary measures to protect and maintain the remaining bull kelp in the region. These regulatory actions included temporary closure of commercial bull kelp harvest in Sonoma and Mendocino counties, implementation of an annual bull kelp harvest limit of four tons wet weight in Humboldt and Del Norte counties combined (harvest is allowed for human consumption only), and closure of three lease-only administrative kelp beds in Mendocino, Humboldt, and Del Norte counties (see California Code of Regulations [CCR], Title 14, Section 165(c)(9) and Section 165.5(c)). These temporary commercial bull kelp regulations became effective on January 1, 2023, and are intended to sunset in three years (January 1, 2026) with the intent to allow time for the Department, Tribes, industry, and other stakeholders to develop the KRMP.

### **4.2. Recreational Purple Urchin**

Amendments to the recreational purple urchin regulations were implemented in response to increased densities of purple urchin and over-grazing pressure on northern California kelp forests since the onset of the MHW and associated loss of the predatory sunflower sea star and impacts to local fisheries such as the closure of the red abalone fishery. In 2018, an emergency regulatory action was approved by the FGC, increasing the daily bag limit for (hand harvest) from 35 individuals to 20 gallons of purple urchin in Sonoma and Mendocino counties. In 2019, the daily bag limit of purple urchin was further increased from 20-gallons to 40-gallons in Sonoma, Mendocino, and Humboldt counties (CCR, Title 14, Section 29.06(b)), with no sunset date. The intent of the higher 40-gallon limit was to promote continued involvement of recreational divers in efforts to restore severely-impacted kelp forest ecosystems and contribute more greatly to urchin suppression efforts without adversely affecting the long-term health of the native purple urchin population. Separately, in 2020 a temporary regulation to remove the recreational bag limit for purple urchin was implemented at two specific locations in California, including unlimited take of purple urchin via hand harvest or culling at Caspar Cove, Mendocino County, and unlimited take of purple and red urchin via hand harvest or culling at Tanker Reef, Monterey County. The intended sunset date for both of these temporary site-specific regulations is April 1, 2024, however, a current regulatory process is underway that may allow one or both of the sites to extend regulations for an additional five years



(April 1, 2029) or modify the existing site boundaries for Tanker Reef (Department, 2023). The FGC adoption hearing for these proposed regulations is anticipated at their February 2024 meeting.

## **5. ADVANCING KELP RESEARCH**

### **5.1. Kelp Research and Recovery Program**

The Kelp Research and Recovery Program (KRRP) was created by OPC, CASG, and the Department to fill critical knowledge gaps and advance understanding of kelp research and restoration. In 2020, a combined total of \$1,800,000 was released to fund six KRRP projects as the first round of competitive kelp research and restoration projects. These projects filled critical knowledge gaps in applied restoration techniques for temperate rocky reefs in California and have helped establish protocols for future kelp forest restoration.

A team of researchers from UC Santa Barbara and UC Santa Cruz created the first of its kind decision tree to inform agency managers, funders, and other restoration practitioners about where and when to focus kelp restoration efforts. Concomitant with the generation of this model, a multi-faceted team from UC Davis, UC San Diego and Sonoma State University investigated the synergistic factors that influence bull kelp loss. Specifically, this team sought to understand bull kelp's vulnerability to heat, the decline in sunflower sea stars, which has contributed to an overabundance of purple urchins on the north coast, and the efficacy of different protocols for removing urchins. While canopy-forming kelps persist exclusively on subtidal rocky reefs (in California), purple urchins spawn in both subtidal and intertidal ecotones. Researchers from CSU Monterey Bay (CSUMB) and Reef Check surveyed the urchin populations at nine intertidal sites across the Monterey Peninsula and discovered that intertidal areas are a far more important source for urchin populations than previously thought. The results from these projects directly inform critical spatiotemporal knowledge gaps surrounding restoration success and help ensure the direction and efficacy of future projects.

The urgency to restore the staggering loss of kelp forests in key areas across the state has suggested human intervention may be necessary to ensure success on manageable timelines. Scientists from Moss Landing Marine Laboratories (MLML) and San Jose State University developed a novel, low-cost technique for culturing bull kelp year-round. When scaled, these methods will greatly inform the feasibility and success of future bull kelp outplanting. Separately, a team from UC Irvine adapted a giant kelp outplanting technique for use in California. The use of an inoculated gravel substrate, in conjunction with laboratory-rearing experiments to breed heat-tolerant kelps, will influence how projects can “future-proof” restoration efforts to ensure efficacy under climate change-induced ocean warming. Finally, a consortium of researchers from the University of Wisconsin-Milwaukee, UC Santa Cruz, and University of Southern California developed a “seed bank” of more than

1,700 bull kelp genotypes from 14 sites across the state. This collection, the first of its kind, will help preserve the genetic diversity of bull kelp, and may be used in captive rearing and outplanting restoration projects.

## **5.2. 2024 Kelp Research and Restoration Program Request for Proposals**

To advance the KRRP and fill critical knowledge gaps, OPC, CASG, and the Department announced a second round of competitive funding with a combined total of \$5,000,000 in Summer 2023. Building on the success of the KRRP, this second round of funding is intended to specifically support solutions-oriented projects that directly contribute to the recovery of California's kelp ecosystems and coastal communities, and to inform management approaches for protecting and restoring kelp ecosystems. Over 40 Letters of Intent were submitted to CASG in Summer 2023; OPC, CASG, and the Department will be participating in the full proposal review and selection process with an external panel of scientific experts in Fall 2023. The final suite of recommended projects will be brought to the OPC at their December 2023 meeting for consideration of funding. Upon approval, the three-year research awards are expected to begin in February 2024.

## **5.3. Non-State Funded Research**

Due to its ecologic and economic importance, many academic institutions, NGOs, and other interested entities are engaged in cutting edge kelp research. One such project is the Kelp Restoration as an Integrated Socio-Ecological System (Kelp RISES) consortium hosted by UC Davis, which aims to understand how different management approaches account for ongoing climate change in relation to California's kelp forest communities. Other notable consortia include the Pycnopia Working Group facilitated by The Nature Conservancy (TNC), which is leading efforts to explore the recovery of a key kelp forest predator (the sunflower sea star; see below).

## **6. EFFORTS INFORMING THE DEVELOPMENT OF THE KELP RESTORATION AND MANAGEMENT PLAN**

### **6.1. Building a Science-based Kelp Restoration Toolkit**

Kelp forest restoration has been practiced in California since the late 1950s, with most historical efforts occurring in southern California (Eger et al. 2022b). Projects have included removing urchins, removing competitive and invasive algae, outplanting kelp, transplanting reproductive material, and providing substrate. More recent kelp restoration and recovery projects have been focused on the northern California region due to the dramatic loss of the resource particularly in Sonoma and Mendocino counties. Much of the restoration work occurring in California is aimed to identify restoration tools or a combination of methods that can be used strategically to defend restoration sites from overgrazing and facilitate kelp growth and persistence. Kelp restoration work is extremely labor intensive and logistically challenging (e.g., variable weather, remoteness of sites, etc.), therefore many of the restoration projects are being implemented through partnerships and coordination with several other state and federal agencies, researchers, non-profits, tribal, and coastal communities.

Restoration tools that are currently being implemented include urchin suppression such as commercial hand harvest, recreational hand harvest (increased bag limit in Humboldt, Mendocino, and Sonoma; CCR, Title 14, Section 29.06(b)), recreational culling (Caspar Cove; CCR, Title 14, Section 29.06(d)(1) and Tanker Reef; CCR, Title 14, Section 29.06(d)(2)), commercial culling (via Scientific Collecting Permit), and boat-based urchin trapping. Several restoration projects have also explored using commercial urchin divers to remove purple urchin via hand harvest and landing purple urchins where they are sold or donated for use as soil amendment in compost. These projects have been mutually beneficial to restoration practitioners and the commercial urchin fishery due to the collapse of the red urchin fishery and need for experienced urchin divers to clear restoration areas.

Some restoration projects are also exploring methods of kelp enhancement to facilitate kelp growth and persistence in areas that have been recently cleared of urchin including, outplanting of cultured substrates such as green gravel and inoculated biodegradable substrates (including seeded twine). Other more passive methods of kelp enhancement being tested are transplanting reproductive material via introduction of spore bags and pumping concentrated spore solution onto the benthos.



## 6.2. Current and Ongoing Restoration Projects

Below is a summary of current restoration projects, from north to south, including a brief background, project goals, approximate timeframe, initial take-aways and next steps, and key partners and contributors.

### 6.2.1. Noyo Bay, Mendocino County: *Coordinated Grazer Suppression via Commercial Hand Harvest of Purple Urchin to Support Kelp Recovery*

**Background:** In 2020, the first State-supported bull kelp restoration effort was initiated in Mendocino County. Noyo Bay and Albion Cove (see “Albion Cove” section below) were selected as restoration sites based on several criteria, including logistics, proximity to extant bull kelp patches, and encroachment of purple urchin into these kelp refugia locations (Eger et al. 2022a, Ward et al. 2022). Restoration began at Noyo Bay; commercial divers systematically harvested purple urchin from August through November in 2020, during which time they completed the initial clearing of the site to the target threshold density of  $\leq 2$  purple urchins per  $m^2$  (Ward et al 2022). Harvest resumed in March 2021, and the purple urchin target density was maintained until project completion in December 2021 (Ward et al 2022). Increases in bull kelp density were observed at the restoration site in Noyo Bay in comparison to the control site and reached approximately 20% of historical densities (Eger et al 2022a, Ward et.al 2022).

**Goals:** Evaluate the feasibility and efficacy of coordinated grazer suppression via commercial urchin diver hand harvest to a maintained threshold density (2 urchin/ $m^2$ ) as a bull kelp restoration tool in the north coast region.

**Timeframe:** 2020 - 2021

**Take-aways:** Commercial urchin divers demonstrated a coordinated approach in reducing urchin densities to the target density in the restoration area of Noyo Bay. This project was co-managed by state agencies and nonprofit entities and established successful engagement with local commercial divers impacted by the loss of the kelp forest. This project provided mutual benefits for the fishing community by providing supplement income and fiscal support for the recovery of the red urchin fishery. Restoration practitioners gained vital local knowledge, experience, and equipment to effectively reduce urchin densities (Ward et al. 2022, Eger et al. 2022a). The work at Noyo initiated strong partnerships and collaboration that continues to evolve in the region.

**Next Steps:** Though grazer densities were reduced, and initial bull kelp growth was detected at Noyo Bay (Figure 4), the project timeframe (two-years) did not allow

consecutive seasons to facilitate expansion or self-sustaining kelp recovery (Ward et al. 2022). The outcomes of this work necessitate the need for continued research and exploration of grazer suppression paired with novel bull kelp enhancement techniques over longer periods of time for ecosystem recovery. Outcomes from this state-supported project have led to ongoing research and exploration of grazer suppression and kelp enhancement techniques, supported by TNC, at Noyo Bay and Albion Cove.

**Partners and Contributors:** OPC, the Department, Reef Check, TNC, Waterman's Alliance, Noyo Center for Marine Science, and commercial urchin divers and processors.



Figure 4. [Left-Photo] Commercial urchin diver hand harvesting purple urchins at the Noyo Bay restoration site. [Right-Photo] Bull kelp stipes observed at the Noyo Bay restoration site following purple urchin removals. Photo Credit: Tristin McHugh (TNC).

### **6.2.2. Caspar Cove, Mendocino County: *Evaluating Efficacy of Recreational Diver Participation in Kelp Recovery***

**Background:** Leading to the closure of the recreational red abalone fishery at the end of 2017, there was high public interest and momentum to reduce detrimental purple urchin grazing pressure on bull kelp recruitment and growth in Sonoma and Mendocino counties. As such, emergency regulations were initiated in 2018 to increase the daily bag limit of purple urchin for the recreational diving community. For divers with valid fishing licenses, bag limits increased from 35 individuals per day to 20 gallons, and most recently to 40 gallons in Mendocino, Sonoma, Humboldt, and Del Norte counties. However, due to logistical challenges, and safety and efficiency considerations, public interest remained to reduce urchin densities *in situ*. In 2020, the FGC adopted a temporary emergency regulation to remove the recreational bag limit for purple urchins and allow unlimited take by hand and

handheld tools inside the boundary area of Caspar Cove, Mendocino County (Figure 5).

**Goals:** Provide a science-based assessment of in-water purple urchin culling at a focused location by recreational divers as a potential bull kelp restoration tool in the north coast region.

**Timeframe:** 2018 to present

**Take-aways:** Though regulations allowing for *in situ* recreational culling efforts at Caspar Cove began in February 2020, engagement was minimal due to the COVID-19 pandemic, which imposed significant challenges such as site accessibility, limited local resources, and other logistical constraints. Despite the unique setbacks that impacted the rural coastal community of Mendocino County, the recreational dive community, led by The Waterman's Alliance, remained engaged and motivated to conduct urchin removals. The Watermen's Alliance and partners have since identified solutions to many of these local challenges, such as working with Sonoma County Sheriff and Mendocino Fire Department to secure SCUBA cylinder fills for monthly recreational diver events, which has resulted in increased diver effort. As of July 2023, 241 self-reported dives have been logged by 110 unique divers, resulting in an estimated removal of 130,758 purple urchins. Recreational divers have been able to successfully coordinate within a one-acre restoration focal area established in 2022 inside Caspar Cove (Figure 5) that was developed between The Waterman's Alliance, TNC, and the Department. Within this area divers have been able to effectively reduce purple urchin densities detectable via subtidal monitoring by Reef Check and patchy kelp canopy has been detected through Unoccupied Aerial Vehicle (UAV, e.g., drones) surveys (Figure 5).

**Next Steps:** The temporary regulation allowing culling *in situ* at Caspar Cove is under consideration by the FGC to extend past the original sunset date of April 1, 2024, for an additional five years (April 1, 2029). Due to the early disruptions that caused delays in recreational diver effort, extension of this regulation would allow continued engagement and monitoring needed to inform whether urchin culling by recreational divers represents a viable tool for bull kelp restoration in northern California.

**Partners and Contributors:** The Department, Waterman's Alliance, TNC, Reef Check, Cal Poly Humboldt State University, Sonoma County Sheriff, Mendocino Fire Department, California State Parks, Caspar Campground and Store, and the recreational dive community

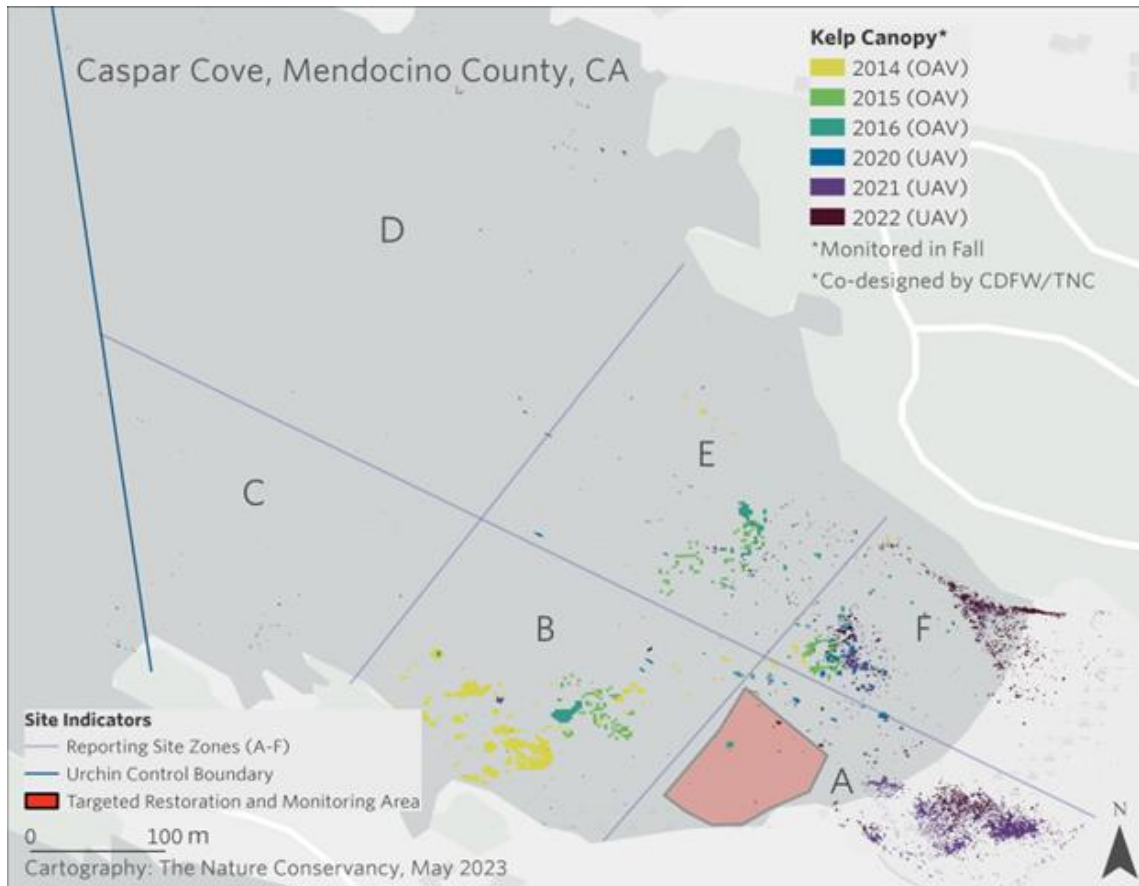


Figure 5. Map of Caspar Cove restoration site including the regulation boundary, site zones, and one-acre Targeted Restoration and Monitoring Area (inside site zone A). Layered OAV kelp canopy data from 2014-2016 was sourced from the Department and Sandoval & Associates, LLC (30cm resolution) and UAV kelp canopy data from 2020-2023 was sourced from TNC (3cm resolution). Map cartography by TNC.

### 6.2.3. Albion Cove, Mendocino County: *Identifying Scalable Kelp Enhancement Techniques Alongside Urchin Suppression via Commercial Hand Harvest*

**Background:** Suppression of purple urchins by commercial urchin divers began at Albion Cove in 2021 in the year following the initiation of restoration at Noyo Bay (see “Noyo Bay” above). The first in-water testing of bull kelp enhancement techniques in California were initiated alongside the effort to reduce urchin densities below the 2 urchins per m<sup>2</sup> threshold. This limited spatial-scale kelp enhancement study was part of the state’s first Kelp Recovery and Research Program and sought to identify optimal methods for outplanting juvenile bull kelp for the north coast region (2020-2021). Considerations for scaling (2022-2023) were continued and managed by TNC.

**Goals:** Leverage best practices and lessons learned in kelp enhancement at Albion Cove to identify scalable and regionally appropriate bull kelp enhancement techniques. Multiple kelp enhancement techniques are being tested alongside grazer suppression via commercial urchin diver hand harvest.

**Timeframe:** 2020 to present

**Take-aways:** Results from 2020-2022 suggest that grazer densities can be reduced to the desirable threshold by commercial urchin divers. In addition, spore bags and seeded lines are likely to be the two most viable bull kelp enhancement strategies to test at larger spatial scales (Graham et al. 2023). In 2023, leading kelp enhancement techniques (spore bags, seeded lines and *in-situ* inoculation) were implemented by researchers at MLML and Sonoma State University (SSU) in Albion Cove to further develop kelp enhancement methods and approaches that can be used to boost productivity in a limited kelp recovery environment. Commercial urchin divers were able to effectively maintain threshold urchin densities with coordination support by Reef Check. Initial findings in 2023 demonstrated that spore bags support kelp recruitment on the reef and subsequent recruitment, growth, and increased survivorship of outplanted kelp on suspended lines (Figure 6). For the first time in California, researchers have observed bull kelp growth from “seed” to reproductive adult on outplanted lines on an open coast environment.

**Next Steps:** Continuation of urchin suppression to support assessment of kelp enhancement techniques at Albion Cove is planned through 2023, and monitoring for kelp enhancement successes will continue through 2024. Future restoration studies have proposed techniques that deviate from horizontal lines in the water and instead use smaller-profile vertical infrastructure.

**Partners and Contributors:** TNC, the Department, MLML, SSU, Reef Check, Albion River Campground, and commercial urchin divers and processors.



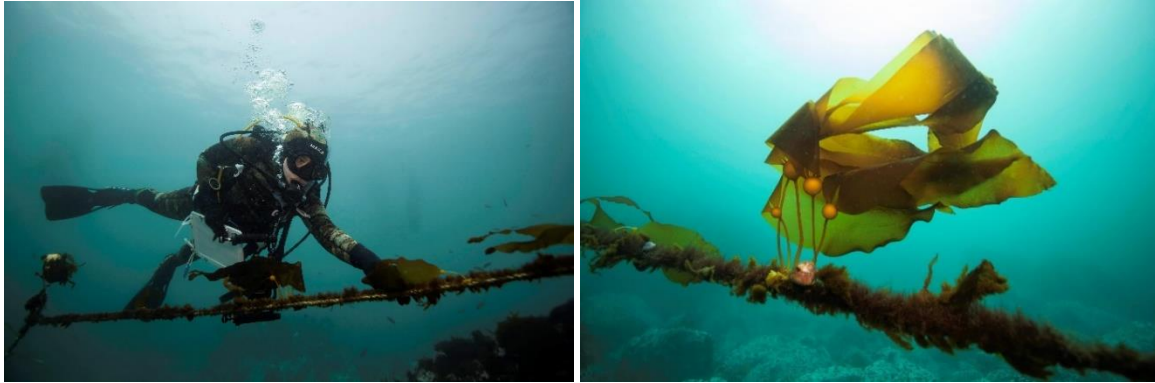


Figure 6. [Left-Photo] Researcher surveying bull kelp recruits on lines at the Albion Cove restoration site. [Right-Photo] Close-up of bull kelp growing on suspended seeded lines in Albion Cove. Photo Credit: Abbey Dias (SSU).

#### **6.2.4. Fort Ross and Timber Cove, Sonoma County: *Implementing Urchin Suppression via Commercial Hand Harvest of Purple Urchin Supplemented with Kelp Outplanting Techniques***

**Background:** The Greater Farallones National Marine Sanctuary (GFNMS) is a federally marine-managed area that encompasses nearshore ecosystems from its northern boundary just north of Point Arena in Mendocino County, to its southern boundary, near Rocky Point in Marin County. To address the severe loss of kelp forests in GFNMS, The Greater Farallones Association (GFA) launched the Kelp Recovery Program in 2017 in partnership with GFNMS. GFA-GFNMS have conducted research to investigate strategies for kelp forest restoration, with a focus on strategically restoring bull kelp forest refugia, or ‘oases’, along GFNMS’s northern coastline to serve as source populations to supply spores for surrounding areas that may be suitable as kelp forest habitat. Sonoma County, located within the GFNMS has suffered the greatest kelp loss (over 95%) in the state of California since 2014. In response, the first large-scale effort to restore bull kelp forest habitat at key sites within GFNMS was initiated by the Greater Farallones Kelp Restoration Project, led by GFA and GFNMS.

**Goals:** Restore resilient kelp habitat by establishing a network of kelp forest oases in GFNMS and facilitate broad-scale sustainable kelp recovery. The primary restoration tools being implemented in Sonoma County are urchin suppression via large scale hand harvest of purple urchin by experienced local commercial urchin divers. In sites with reduced grazing pressure, natural bull kelp recovery will be supplemented with seasonal outplanting techniques.

**Timeframe:** 2023-present

**Take-aways:** Commercial divers began conducting purple urchin hand harvest in early September at Fort Ross and Timber Cove. As of October 2023, five local divers have removed approximately 16,000 pounds of urchins from both sites over a total of 30 dive days. Concurrently, researchers from SSU and MLML conducted kelp enhancement via spore bags and seeded substrates at Fort Ross. NOAA divers from GFA-GFNMS conducted restoration assessment surveys of both sites, and ten sites along Sonoma County were mapped by staff from CSUMB to capture data on kelp canopy extent.

**Next Steps:** Restoration work in the form of commercial hand harvest and supplemental kelp enhancement is anticipated at Fort Ross and Timber Cove through November 2023 and is planned to restart and expand to Ocean Cove in Spring of 2024. Stillwater Cove (Sonoma County) is proposed as a future restoration site as restoration work expands in GFNMS.

**Partners and Contributors:** GFNMS, GFA, CSUMB, MLML, SSU, the Department, and commercial urchin divers.

#### **6.2.5. Drakes Bay, Marin County: *Investigating (Non-diver) Bull Kelp Enhancement Techniques to Support Natural Recovery of Kelp Forest Habitat***

**Background:** In 2022, GFA-GFNMS launched a pilot restoration study in Marin County, also located within the GFNMS to help preserve the nearshore bull kelp spore bank and facilitate natural recovery of kelp forest communities.

**Goals:** Investigate kelp enhancement techniques for establishing bull kelp refugia along the Point Reyes National Seashore (Marin County) and characterize interconnectivity between coastal habitats.

**Timeframe:** June 2022-present

**Take-aways:** This project piloted kelp enhancement techniques at Drakes Bay and Double Point in Marin County. The two vessel-based (non-diver) kelp outplanting techniques conducted at this site include: (1) the use of twine seeded with bull kelp sporophytes wrapped around biodegradable substrate (Figure 7); and (2) pumping concentrated bull kelp zoospore solution to the benthos via the “reef duster” method (Figure 7). Drones are being used to monitor and map kelp canopy at fine scales and a Remotely Operated Vehicle (ROV) is being used to check substrate type and survey previous outplanting locations. Moorings have also been deployed at these sites to track oceanographic conditions at depth.

**Next Steps:** Kelp canopy in Drake’s Bay and Double Point will be surveyed again in the spring of 2024 and findings will be coalesced into a report in the summer of 2024. The project may be extended another two years pending funding.

**Partners and Contributors:** GFNMS, GFA, SSU, FishBio, Monterey Bay Seaweeds (MBS), CSUMB, and the Department.

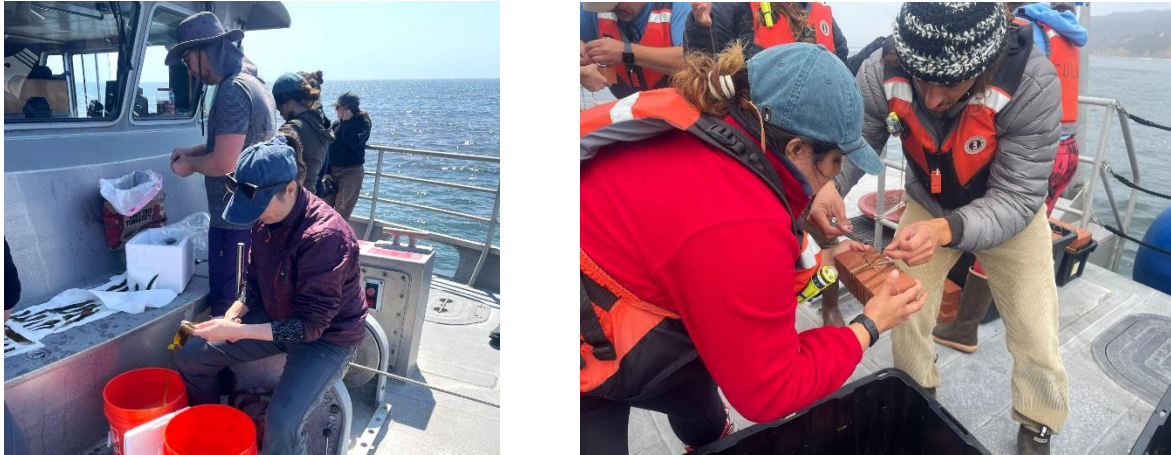


Figure 7: [Left-Photo] Researchers prepare reproductive bull kelp samples for “reef duster” kelp enhancement method. [Right-Photo] Researchers carefully wrap inoculated twine around clay bricks to be deployed at the Drakes Bay restoration site. Photo Credit: Rietta Hohman (GFA-GFNMS; NOAA Affiliate).

#### **6.2.6. Tanker Reef, Monterey County: *Evaluating Recreationally-led Urchin Suppression to Aid in Kelp Recovery***

**Background:** In 2020, the FGC adopted an emergency regulation to remove the recreational bag limit for Caspar Cove (Mendocino County). In August 2020, the FGC authorized notice to initiate a regular rulemaking to continue the take provisions for a period of three years. Additionally, in response to a petition regarding concerns of giant kelp declines along the Monterey Bay Peninsula, the FGC authorized notice to remove the bag limit for purple and red urchins and allow unlimited take by hand and handheld tools at Tanker Reef (Monterey County) for the same three-year period.

**Goals:** The exemption for unlimited recreational take of purple and red urchin at Tanker Reef was designed to provide an assessment of the efficacy of the recreational diver community to self-organize and implement *in situ* urchin culling, which would later be evaluated as a potential tool in support of kelp restoration by facilitating natural recovery. Data gathered from the three-year Tanker Reef effort would be analyzed and evaluated in terms of feasibility and efficacy, to inform the state’s response to kelp loss via future management and restoration strategies.

**Timeframe:** 2021 to present

**Take-aways:** Culling efforts at Tanker Reef were initiated in April 2021 and led through the efforts of the petitioner. As of July 27, 2023, the petitioner reported 1,369 dives conducted by 187 unique divers, resulting in an estimated removal of 633,211 purple and red urchins. Actual counts of urchins culled were not made but estimated based on average rates of culling per minute of diver effort multiplied by diver bottom time. Of the estimated 633,211 urchins removed, approximately 219,733 (34%) were removed from the 100-meter squared focal restoration area (“grid”). Between Spring and Fall 2021 monitoring surveys revealed that urchin densities were reduced below a target threshold of  $\leq 2$  urchins per  $m^2$  within the grid and remained around the threshold density through Summer of 2023 (Figure 8). Beginning in Spring of 2022, densities of giant kelp individuals increased in the grid and reached a maximum in Summer of 2022 (Figure 9). Through Summer 2023 giant kelp individual and stipe densities have remained higher in the grid as compared to the control site, an adjacent area of similar size where culling is not supposed to occur.

**Next Steps:** The temporary regulation allowing culling *in situ* at Tanker Reef is under consideration by the FGC to extend past the original sunset date of April 1, 2024, for an additional five years (April 1, 2029). To date, data have been collected by the Department and Monterey Bay National Marine Sanctuary (MBNMS) scientists (“targeted monitoring” of urchins and kelp only), Reef Check volunteer citizen science divers (“ecosystem monitoring”, including kelp and marine algae, invertebrates (including urchins), and fishes), and the petitioner (e.g., culled urchin estimates, diver effort). These data sets have not yet been combined into a synthesized report that can serve as the basis for understanding the dynamics at Tanker Reef, whether it can be scaled up, and feasibility and application to other parts of the state. Depending on the outcome of the ongoing regulatory process, the Tanker Reef site may enter a post-restoration phase. This phase of post-restoration monitoring would be conducted at the grid and control sites to characterize the resistance and resilience of the newly established kelp patch in the absence of ongoing diver intervention.

**Partners and Contributors:** Giant Kelp Restoration Project (G2KR), Reef Check, MBNMS, the Department, and the recreational dive community.

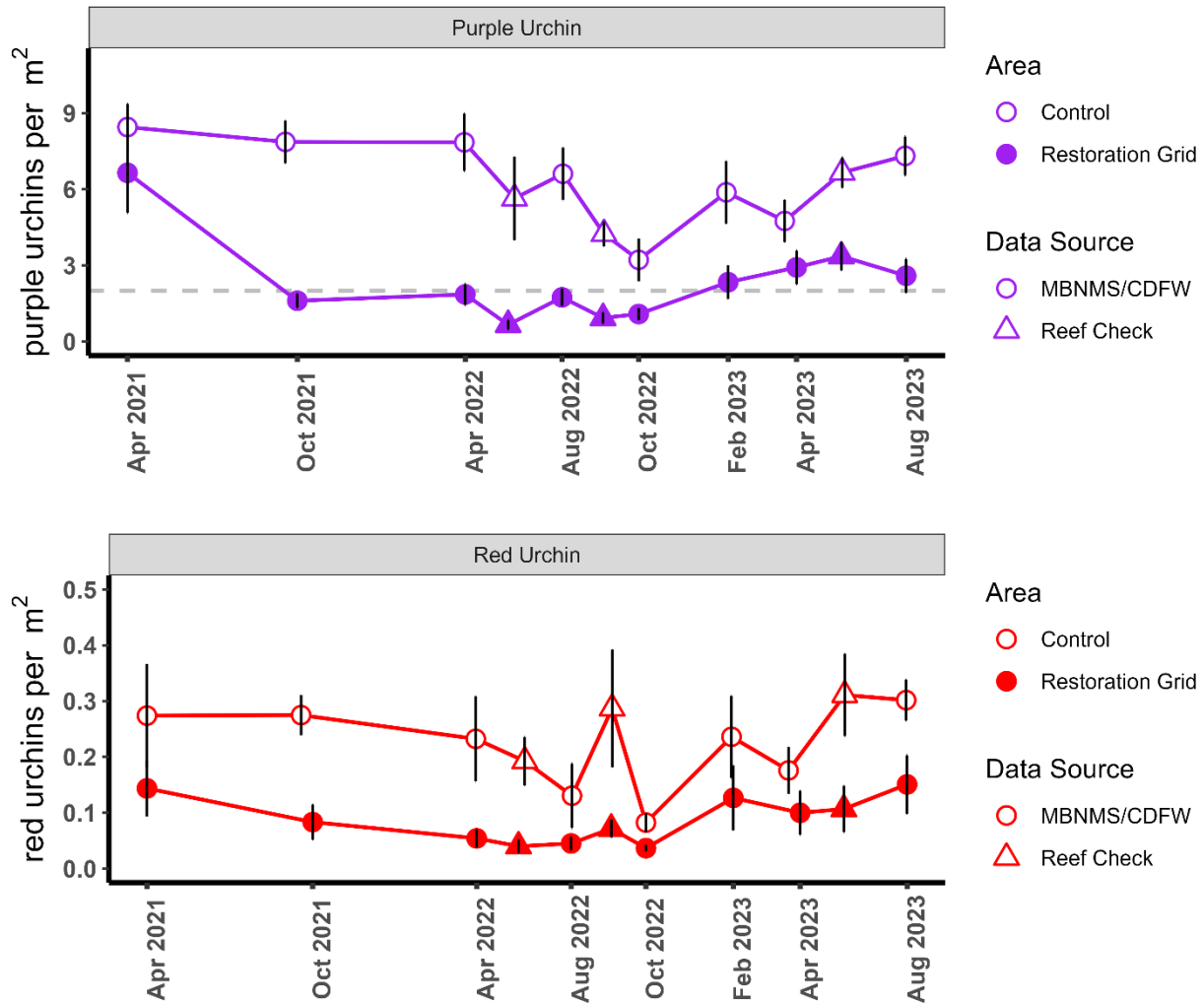


Figure 8. Purple urchin (top) and red urchin (bottom) density (urchin/m<sup>2</sup>) during each subtidal survey timepoint (2021-2023). Filled points indicate densities at the restoration focal area (100x100m) and open points indicate urchin densities at the control area (comparable 100x100m area). Data source: the Department and MBNMS (circles) and Reef Check (triangles).



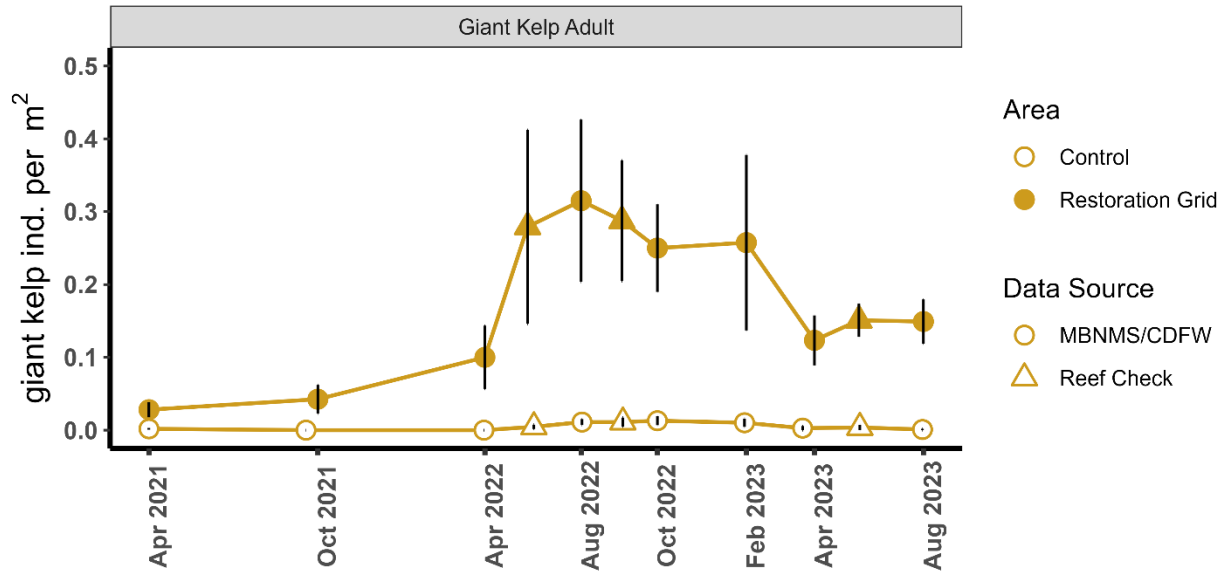


Figure 9. Giant kelp individual density (per/m<sup>2</sup>) during each subtidal survey timepoint (2021-2023). Giant kelp individuals are defined as individuals >1m off the bottom. Filled points indicate kelp densities at the restoration focal area (100x100m) and open points indicate densities at the control area (comparable 100x100m area). Data source: the Department and MBNMS (circles) and Reef Check (triangles).

### 6.2.7. Palos Verdes, Los Angeles County: *Systematic Urchin Suppression via Commercial Diver Culling Results in Minimal Maintenance of Restoration Sites*

**Background:** The Palos Verdes Peninsula, located between Los Angeles and Long Beach, has one of the longest documented declines in kelp forests along the California Coast. Subtidal surveys in 2010 revealed an estimated 62 hectares of the peninsula’s rocky reefs were described as persistent urchin barrens. Building on previously successful kelp restoration in the Santa Monica Bay via the removal of urchins, The Bay Foundation (TBF) partnered with NOAA, Vantuna Research Group (VRG, Occidental College), Montrose Settlements Trustees, and commercial urchin fishermen in one of the longest running subtidal restoration projects in California.

**Goals:** TBF seeks to restore the Palos Verdes Peninsula to a kelp-dominated state through culling purple urchins *in situ* with the use of hand tools by commercial divers. At select sites along the coast of the Peninsula, adjacent to the Point Vicente and Abalone Cove State Marine Conservation Areas, TBF conducts pre- and post-urchin removal surveys to comprehensively determine the initial and post removal densities of purple urchins. These efforts ensure a restoration target of approximately 2 purple urchins per m<sup>2</sup> is achieved throughout a restoration site. In conjunction with project

partners, TBF also conducts surveys in adjacent reference sites. TBF's methods of systematically delineating and clearing urchins along band transects has resulted in minimal maintenance of restoration sites. VRG has and continues to conduct annual Cooperative Research and Assessment of Nearshore Ecosystems surveys across selected restoration sites and in neighboring rocky reef/kelp forest habitats to contextualize and describe trends resulting from these efforts.

**Time Frame:** 2013-present

**Take-Aways:** TBF has implemented large-scale restoration via a core team of commercial urchin divers systematically culling purple urchins, reducing densities from an average of  $\sim 30/m^2$  to  $\sim 2/m^2$ . A total of 58 acres of kelp forest has been restored since 2013, with minimal maintenance needed. Increases to giant kelp, invertebrates, fish diversity and biomass, and increased red urchin gonad weight have been documented in restoration sites along the Palos Verdes Peninsula (Figure 10).

**Next Steps:** As this is an ongoing project, TBF and VRG continue to monitor pre- and post-culling, and reference sites as it expands its efforts across the southeast coast of the Peninsula.

**Partners and Contributors:** TBF, VRG, NOAA, Montrose Settlement Trustees, and commercial urchin harvesters.



Figure 10: [Left-Photo] Before and after [Right-Photo] systematic commercial urchin culling at TBF restoration site in Palos Verdes. Photo Credit: TBF.

### **6.2.8. Urchin Trapping: A Non-diving Opportunity for Urchin Suppression**

**Background:** Urchin trapping is a novel urchin grazer suppression technique that may provide an alternative and cost-effective approach for reducing purple urchin

populations that does not require divers to get in the water. This is a key consideration for the north coast where the ocean conditions often constrain the hand harvest of urchins. A novel approach to testing urchin traps in Mendocino County was initiated in 2021 by TNC alongside the Department and a commercial urchin diver. During Phase 1 (2021), the project team refined trap design, tested bait types (drift kelp, fish carcass, produce), and explored viable soak times to maximize catch and streamline logistics for deployment on the north coast. In Phase 2 (2022) the project team sought to understand trap performance in urchin barrens on reefs with differing urchin densities to evaluate performance under differing restoration scenarios. Currently, in Phase 3 (2023), the project team is testing trapping to protect kelp refugia and, at an exploratory scale, developing techniques to maximize catch per unit effort (CPUE) and reduce cost to help guide potential expansion of this work to additional participants and geographies.

**Goals:** Identify best methods and approaches for urchin trap deployment to maximize CPUE, reduce costs of restoration, provide equitable solutions for grazer suppression (non-diving options), and thereby serve as an effective kelp restoration tool

**Timeframe:** 2021 to present

**Take-aways:** During Phases 1 and 2 over 23,000 purple urchins were caught using traps. Although questions of efficiency compared to other methods remain, there is strong interest to explore grazer suppression methods that do not require humans to get in the water. Urchin trapping study results identified the following for maximum trap performance: kelp beach wrack as bait distributed evenly across the trap, soak time of less than 48 hours, and trap catch is greater in higher density urchin barrens (McHugh et al. in prep). However, in lowered urchin density scenarios, traps have been observed to “attract” wandering urchin and aggregate them to a focal area. Urchin traps can be an effective urchin suppression tool and may provide increased catch capacity if coupled with commercial diving, allowing divers to soak traps while hand-harvesting urchins.

**Next Steps:** Expand opportunity to more commercial urchin harvesters to test urchin traps in other geographies within California to maximize CPUE, reduce restoration costs, and provide equitable opportunities for non-diving participants. Further, questions remain regarding their efficiency in defending recovering restoration areas with low urchin density, especially in scenarios where urchins are inhibiting kelp recovery and persistence of kelp refugia.

**Partners and Contributors:** TNC, UC Santa Barbara, F/V *Crazyhorse* (Commercial Sea Urchin Diver), Reef Check, the Department, and Urchin Processors at Noyo Harbor.

### **6.2.9. Sunflower Star: *Restoring Ecosystem Balance Following the Loss of an Apex Predator***

**Background:** The sunflower sea star (*Pycnopodia helianthoides*) is a significant predator in Northeastern Pacific nearshore ecosystems and can impose top-down pressure on urchins, thus promoting kelp proliferation (Heady et al., 2022). Beginning in 2013, sunflower sea star populations along the West Coast were significantly affected by SSWD, ultimately reducing populations by over 99% in California waters, resulting in the functional extinction of this species (Gravem et al. 2021). Numerous entities through the range of sunflower sea stars have been investigating the ecology and epidemiology of SSWD and are developing a pathway for the recovery of this species.

**Goals:** Identifying key steps necessary for recovery, securing funding, and developing strong partnerships and coordination for action.

**Take-aways:** The 2022 *Roadmap to Recovery for the Sunflower Sea Star*, was developed through TNC convening a working group of West Coast experts and managers and provides an overview of the species, status, and threats as well as identifies knowledge gaps and priority objectives and actions for informing recovery of the species. Unfortunately, since the onset of SSWD, the sunflower sea star has exhibited little natural recovery in California, necessitating the need for continued research and redundant captive breeding programs. The first subtidal sighting on the north coast since 2014 was in December of 2022 in Mendocino County by F/V *Crazyhorse*, and since, there have been a total of at least four recent (2022-2023) individual sightings of sunflower sea stars in Mendocino County.

**Next Steps:** Current studies are investigating the ecology and behavior of sunflower sea stars, SSWD and disease mitigation, expansion of captive breeding and rearing of the sunflower sea star and identifying best methodology for potential translocation.

**Partners and Contributors:** TNC, University of Washington, University of Oregon, the Department, Aquarium of the Pacific, California Academy of Sciences, Sunflower Sea Star Lab, and many others.

## **7. LOOKING AHEAD**

The Department and OPC continue to explore novel tools and techniques to restore, enhance, protect, and manage California’s kelp forest ecosystems. These efforts include the ongoing support in monitoring the kelp resource as well as urchin suppression and kelp enhancement practices, and the strategic release of competitive funds to catalyze research that will fill vital knowledge gaps and inform current and future regulatory actions and adaptive management. In addition, OPC and the Department anticipate releasing an update to the Kelp Action Plan in early 2024, which directly supports the development and implementation of the KRMP. Throughout KRMP planning and development, OPC and Department staff will continue to engage with California Native American tribes, KRMP SAC and CWG, FGC, stakeholders, and the ocean community to ensure that expert knowledge, and community perspectives support and inform the KRMP.



## ACKNOWLEDGEMENTS

We would like to thank the following partners for their specific contributions to this document including Tristin McHugh (TNC), Nora Eddy (TNC), Rietta Hohman (GFA-GFNMS), Tom Ford (TBF), Annie Bauer-Civiello (RC), and Steve Lonhart (MBNMS). Additionally, we would like to thank the many partners and stakeholders (Figure 11) the Department and OPC work with to support kelp monitoring, research, and recovery efforts moving forward.



Figure 11. Non-exhaustive list of entities engaged in current kelp monitoring, research and recovery efforts in California.

## LITERATURE CITED

CDFW. 2023. State of California, Department of Fish and Wildlife, Draft Initial Statement of Reasons for Regulatory Action (Pre-publication of Notice Statement). Amend Section 29.06, Title 14, California Code of Regulations Re: Recreational Sea Urchin Bag Limit Exemption.  
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=216482&inline>

Eger, A. M., Layton, C., McHugh, T. A., Gleason, M., and Eddy, N. 2022a. Kelp Restoration Guidebook: Lessons Learned from Kelp Projects Around the World. The Nature Conservancy, Arlington, VA. <https://kelpforestalliance.com/TNC-KFA-Kelp-Guidebook-2022.pdf>

Eger, A.M., Marzinelli, E.M., Christie, H., Fagerli, C.W., Fujita, D., Gonzalez, A.P., Hong, S.W., Kim, J.H., Lee, L.C., McHugh, T.A., Nishihara, G.N., Tatsumi, M., Steinberg, P.D. and Vergés, A. 2022b. Global kelp forest restoration: past lessons, present status, and future directions. *Biol Rev*, 97: 1449-1475.

Graham, M., Hamilton, S., Kim, A., and Bugbee, B. 2023. Assessment of practical methods for re-establishment of northern California bull kelp populations at an ecologically relevant scale. Report no. R/HCEOPC-13.  
[https://caseagrants.ucsd.edu/sites/default/files/R\\_HCEOPC-13\\_2023\\_final\\_report.pdf](https://caseagrants.ucsd.edu/sites/default/files/R_HCEOPC-13_2023_final_report.pdf)

Gravem, S. A., W. N. Heady, V. R. Saccomanno, K. F. Alvstad, A. L. M. Gehman, T. N. Frierson, and S. L. Hamilton. 2021. *Pycnopodia helianthoides*. IUCN Red List of Threatened Species 2021.

Harvell, C. D., D. Montecino-Latorre, J. M. Caldwell, J. M. Burt, K. Bosley, A. Keller, S. F. Heron, A. K. Salomon, L. Lee, O. Pontier, C. Pattengill-Semmens, and J. K. Gaydos. 2019. Disease epidemic and a marine heat wave are associated with the continental-scale collapse of a pivotal predator (*Pycnopodia helianthoides*). *Science Advances* 5:eaau7042.

Heady, W. N., R. Beas-Luna, M.N Dawson, N. Eddy, K. Elsmore, F. T. Francis, T. Frierson, A. L. Gehman, T. Gotthardt, S.A. Gravem, J. Grebel, S. L. Hamilton, L. Hannah, C.D. Harvell, J. Hodin, I. Kelmartin, C. Krenz, L. Lee, J. Lorda, D. Lowry, S. Mastrup, E. Meyer, P. T. Raimondi, S. S. Rumrill, V. R. Saccomanno, L. M. Schiebelhut, C. Siddon. 2022. Roadmap to recovery for the sunflower sea star (*Pycnopodia helianthoides*) along the west coast of North America. The Nature Conservancy, Sacramento, CA.  
[https://www.nature.org/content/dam/tnc/nature/en/documents/tnc\\_Roadmap\\_to\\_Recovery\\_for\\_the\\_Sunflower\\_Sea\\_Star\\_Nov2022.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/tnc_Roadmap_to_Recovery_for_the_Sunflower_Sea_Star_Nov2022.pdf)

McHugh, Tristin A. et al. in prep. Evaluating Urchin Traps as a Grazer Suppression Technique in Mendocino, California.

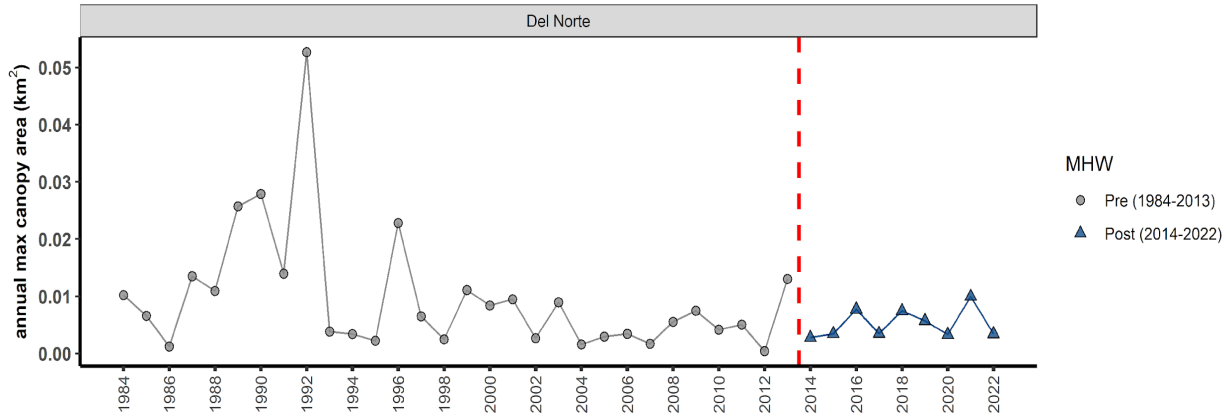
Rogers-Bennett, L, & CA Catton. 2019. Marine heat wave and multiple stressors tip bull kelp forest to sea urchin barrens. Scientific Reports 9:1-9.

Ward, M., McHugh, T. A., Elsmore, K., Esgro, M. Ray, J., Murphy-Cannella, M., Norton, I. and Freiwald, J. April 2022. Restoration of the North Coast Bull Kelp Forests: A Partnership Based Approach. Reef Check Foundation, Marina del Rey, CA.

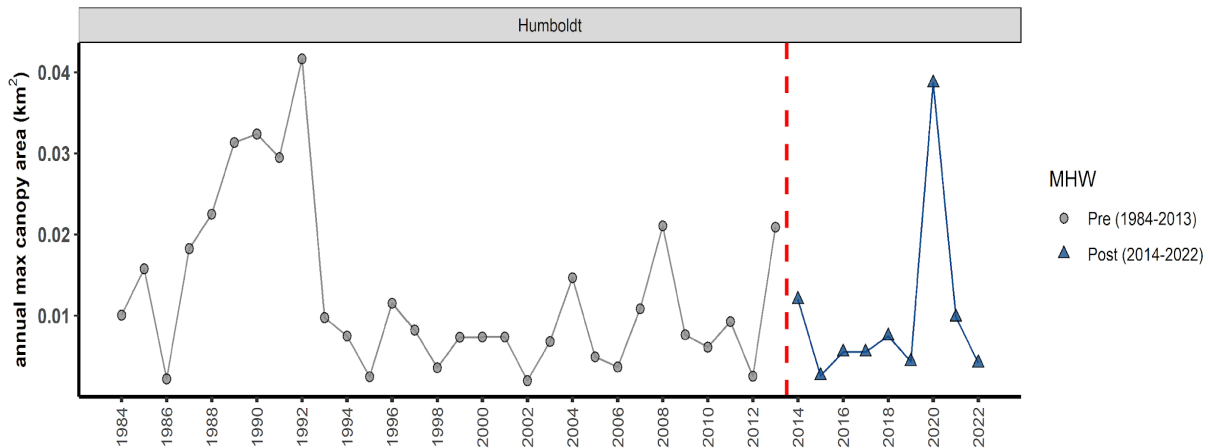
# APPENDIX 1: Kelp Canopy Data by County

Landsat derived canopy data by California County from 1984 through the end of 2022 (Q4). The red dashed line indicates the onset of the MHW in 2014. Data Source: SBCLTER et al. 2022. Please note that San Francisco County is not included due to zero kelp canopy data over time.

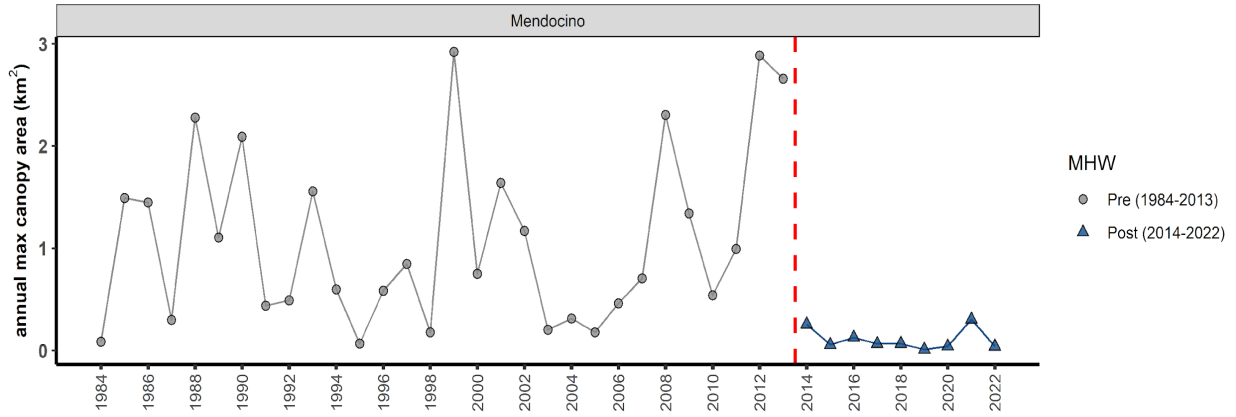
## Del Norte



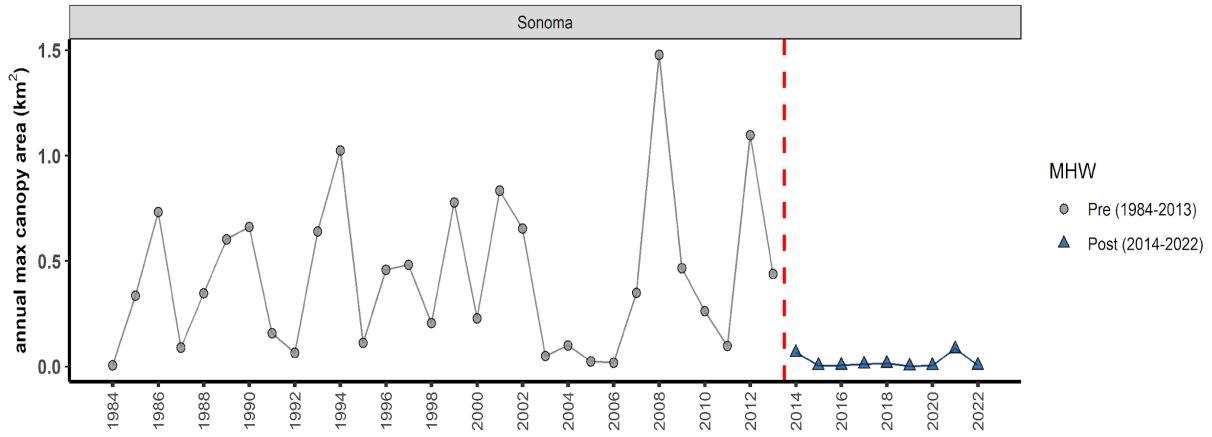
## Humboldt



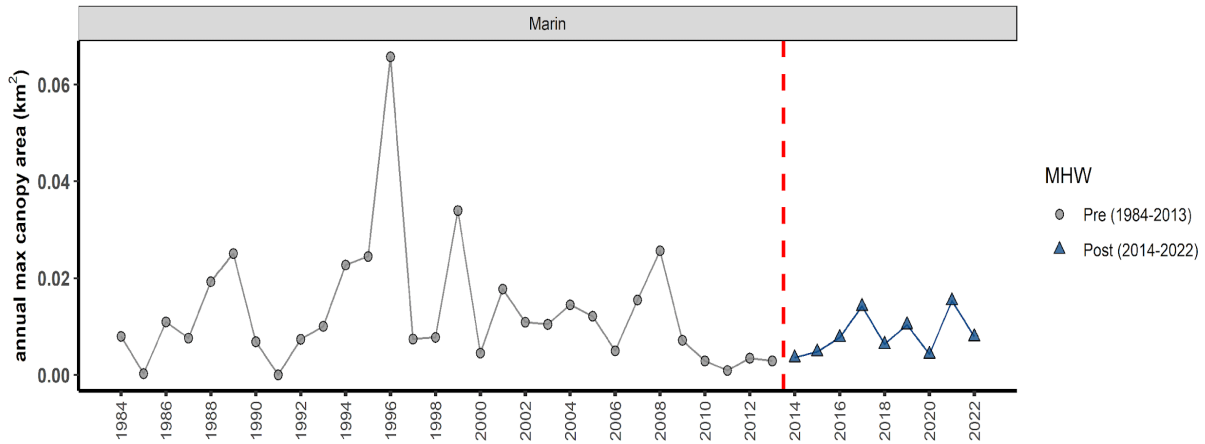
# Mendocino



# Sonoma



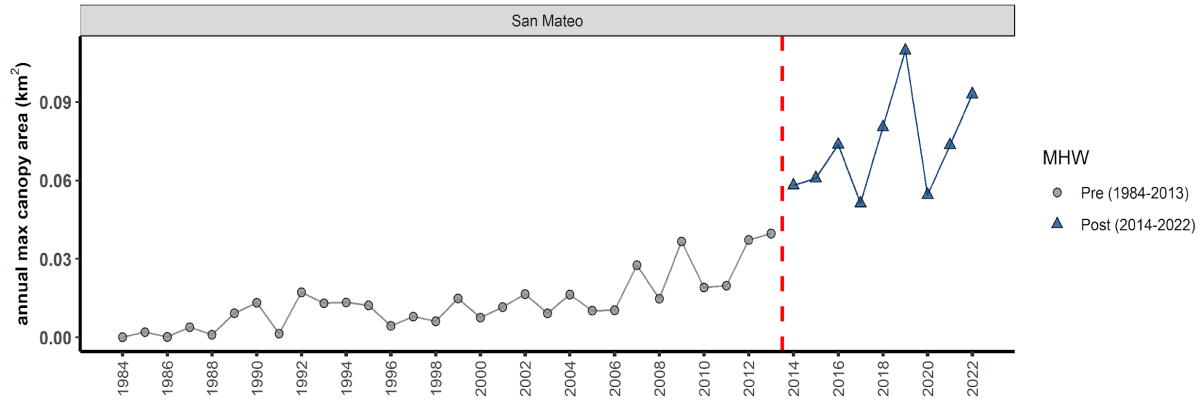
# Marin



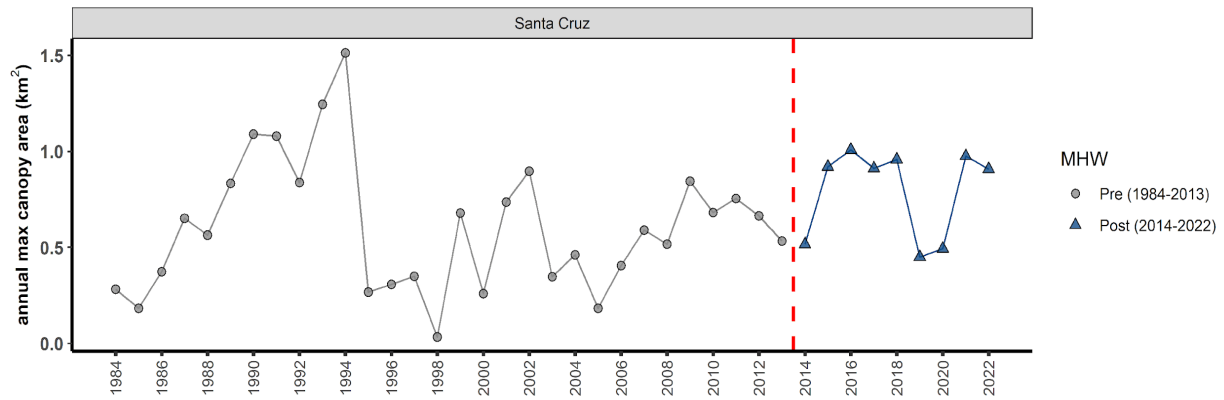


San Francisco: no kelp canopy data for San Francisco county

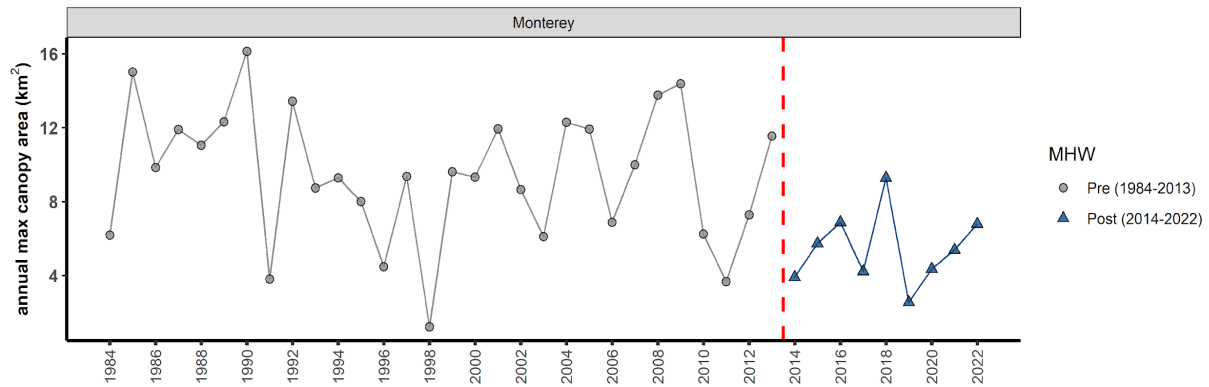
### San Mateo



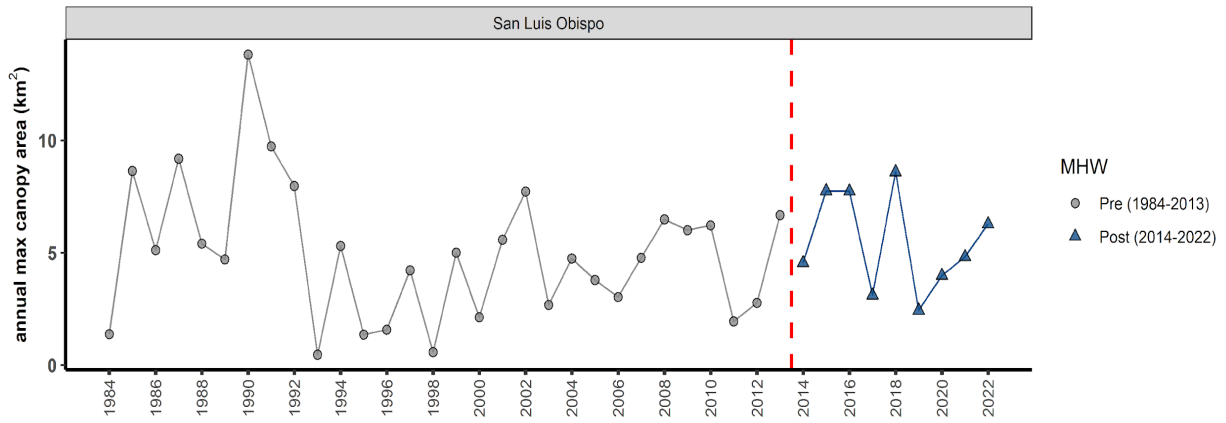
### Santa Cruz



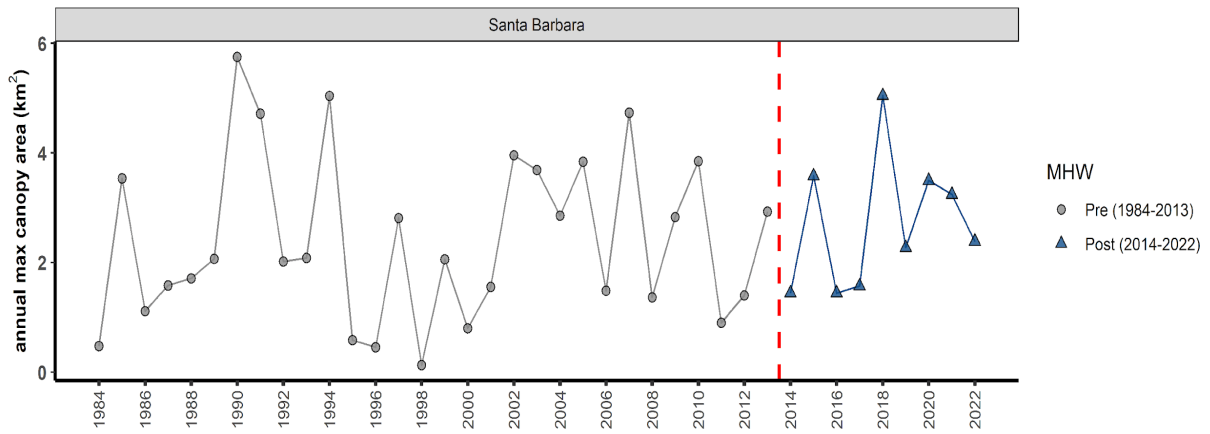
### Monterey



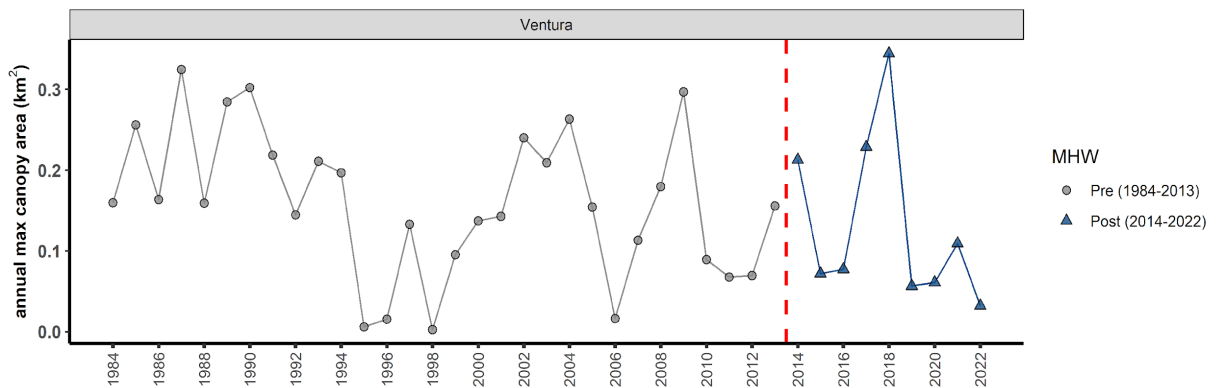
### San Luis Obispo



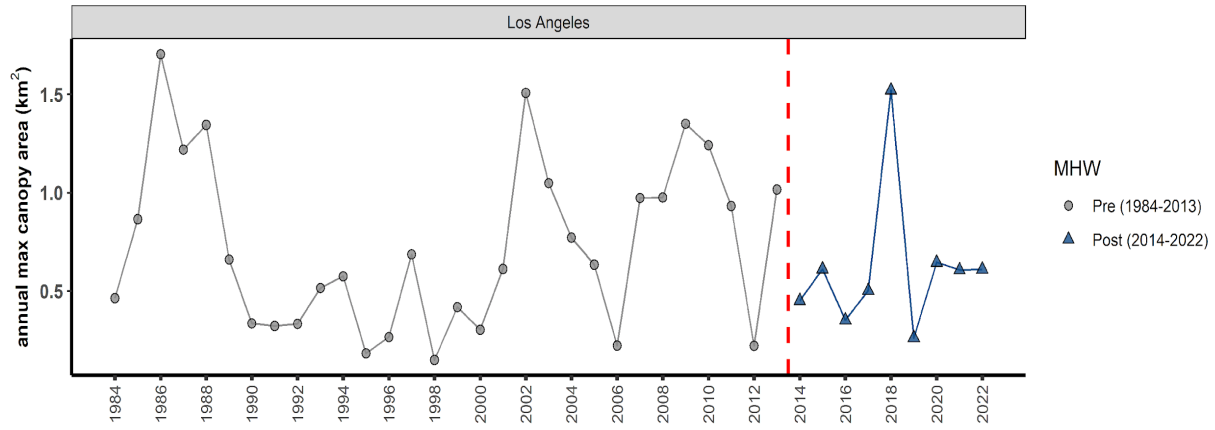
### Santa Barbara (mainland)



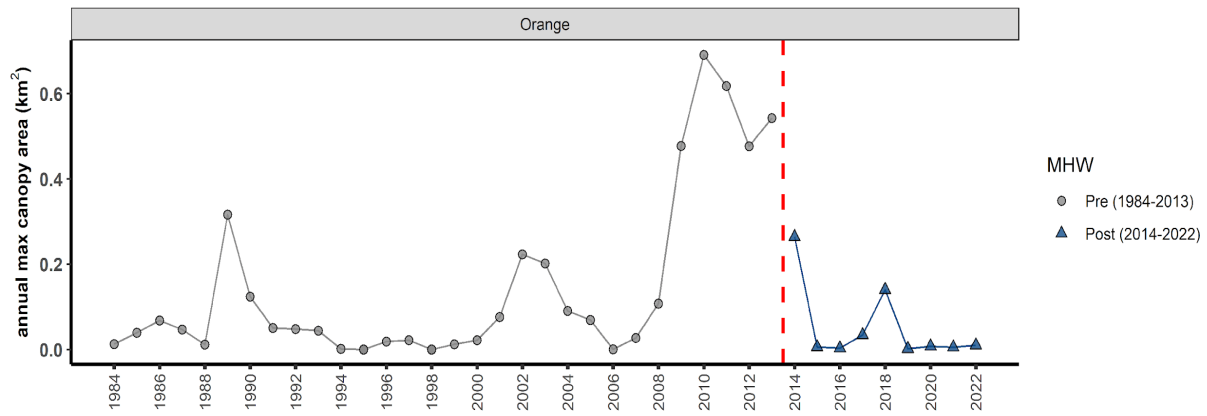
### Ventura (mainland)



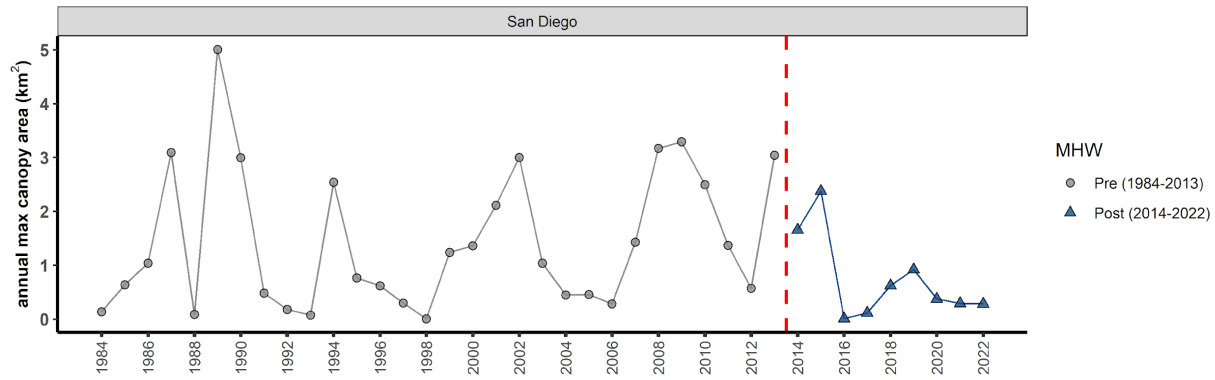
## Los Angeles (mainland)



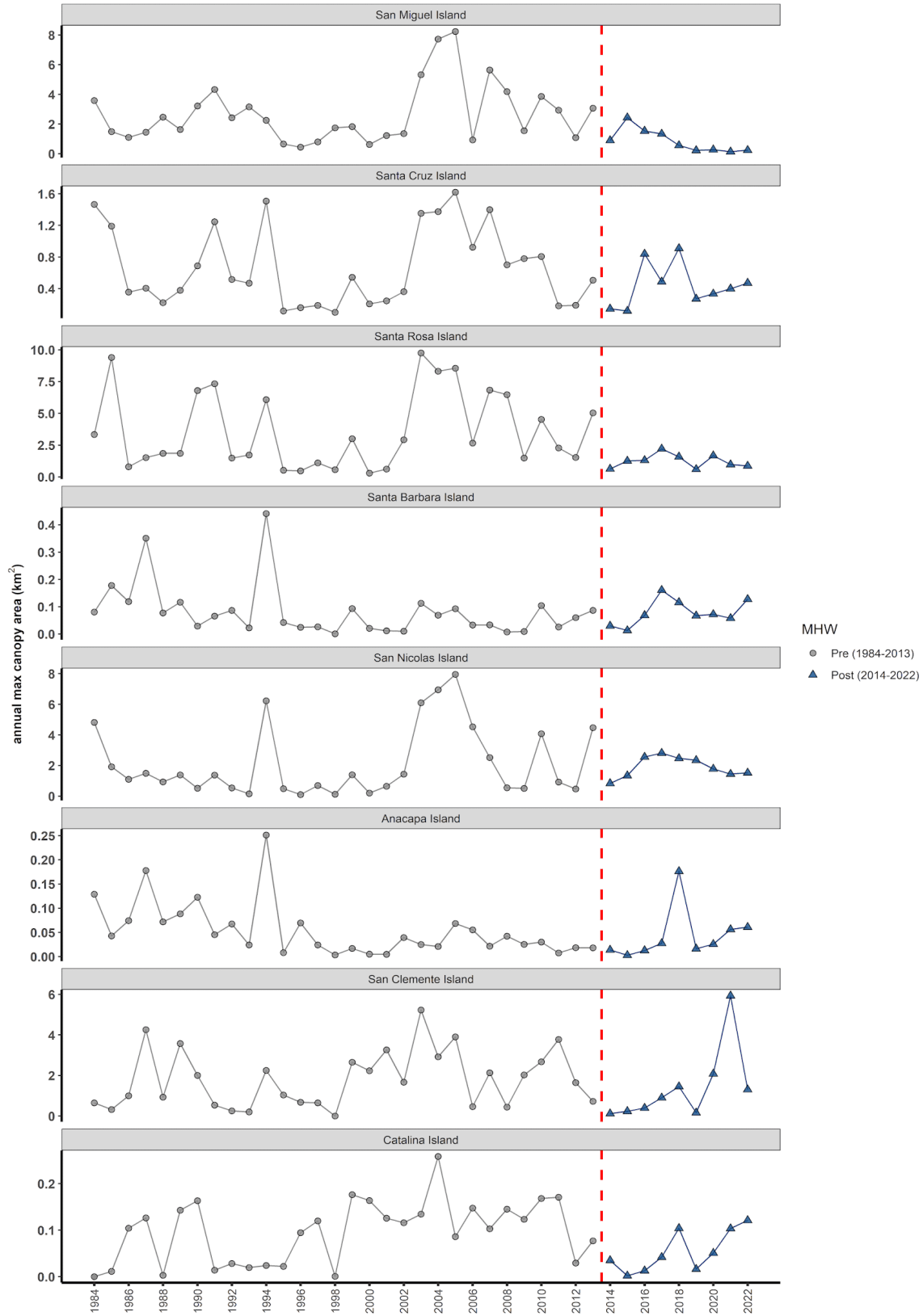
## Orange



## San Diego



# Channel Islands (all)





# Agenda Item 4: Kelp Restoration Update

*16 November 2023*

*Presented to:*

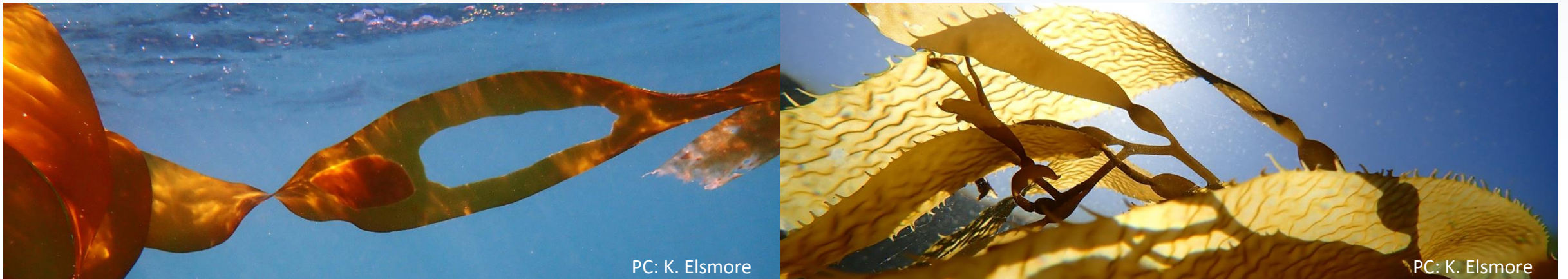
**Marine Resources Committee  
Fish and Game Commission**

*Presented by:*

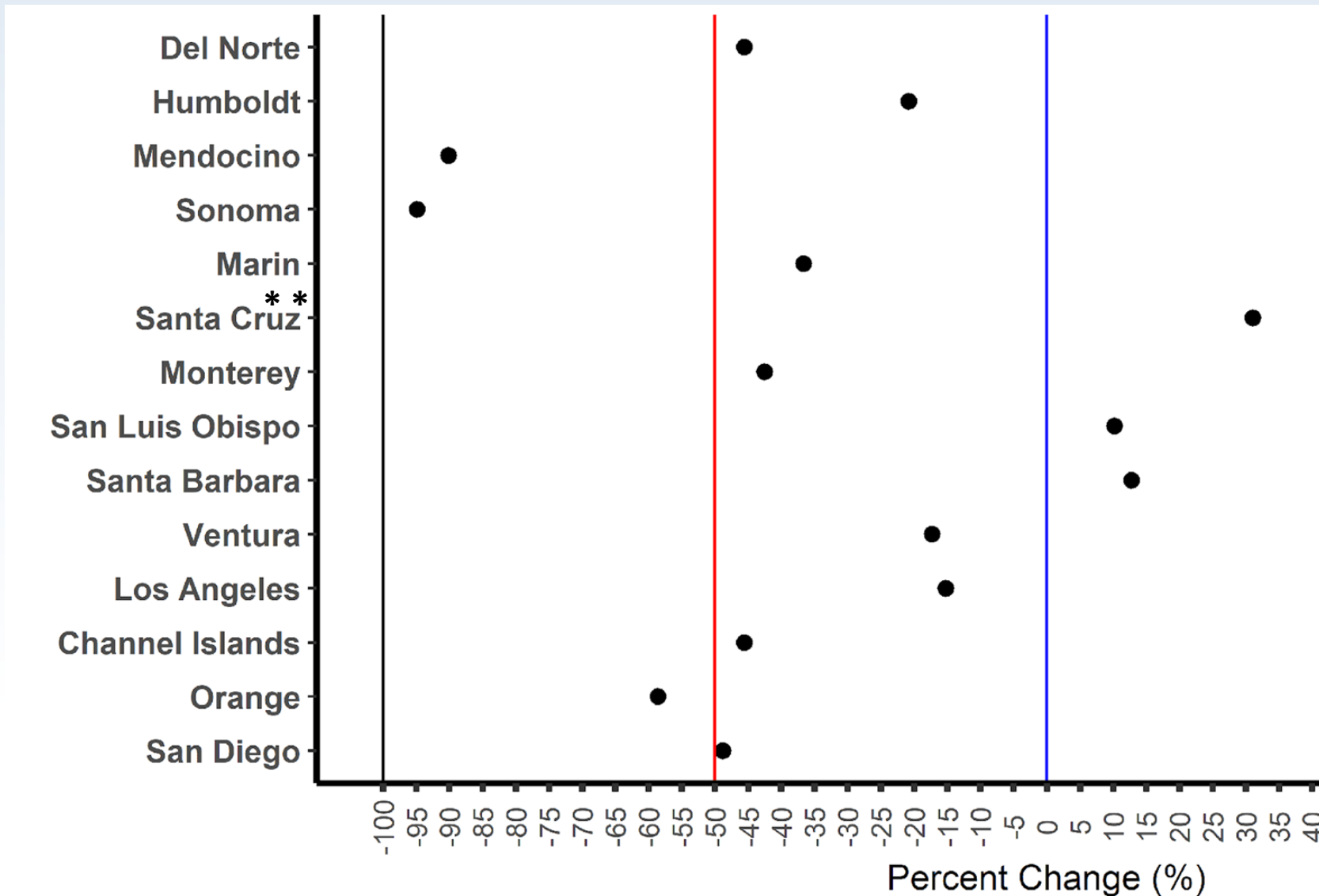
**Dr. Kristen Elsmore  
Senior Environmental Scientist Specialist  
Marine Region**



- Kelp Canopy Status and Trends
- Overview of Select Research and Restoration Efforts
- Upcoming Opportunities for Kelp
- Development of Kelp Restoration and Management Plan (KRMP)

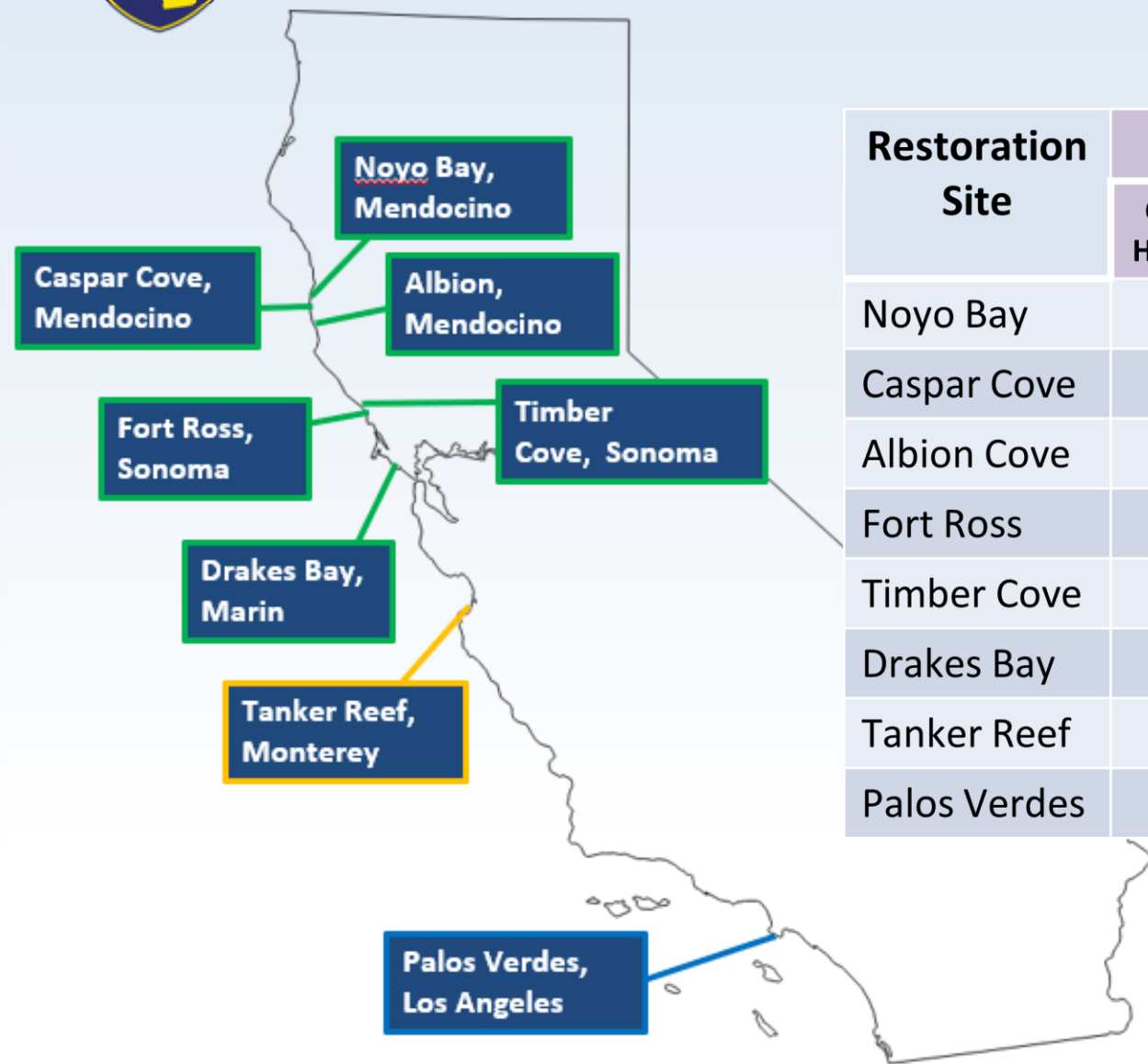


# Changes in Kelp Canopy Across the State



- Urchin suppression techniques
  - Urchin culling by commercial divers
  - Urchin culling by recreational divers
  - Experimental traps
- Kelp enhancement techniques
  - Spore bags
  - Seeded substrates and lines
  - Concentrated spore solution





Restoration Site	Urchin Suppression				Kelp Enhancement
	Commercial Hand-Harvest	Recreational Culling	Commercial Culling (SCP)	Exp. Trapping	
Noyo Bay	X			X	
Caspar Cove		X		X	
Albion Cove	X				X
Fort Ross	X				X
Timber Cove	X				
Drakes Bay					X
Tanker Reef		X			
Palos Verdes			X		



- **Sites:** Noyo Bay
- **Goal:** Efficacy of commercial harvest to maintain less than 2 urchin/meter<sup>2</sup> density
- **Takeaways:**
  - Strong partnerships and collaboration
  - Urchin densities reduced
  - Initial bull kelp regrowth
  - Timeframe (< 2 yrs) was short-lived
- **Next Steps:**
  - Continued research





- **Sites:** Caspar Cove and Tanker Reef
- **Goal:** Efficacy of urchin culling via recreational divers
- **Takeaways:**
  - Successful coordination of recreational divers
  - Caspar: Delayed effort due to COVID-19
    - Increased diver effort in 2022
  - Tanker: Urchin densities reduced; initial kelp regrowth
- **Next Steps:**
  - Pending regulatory decision process





# Urchin Suppression & Kelp Enhancement



- **Sites:** Albion Cove (Mendocino); Fort Ross (Sonoma)
- **Goal:** Test kelp enhancement techniques alongside urchin suppression efforts
- **Take Aways:**
  - Albion: Bull kelp recruitment through spore bags and seeded lines
  - Fort Ross: Outplanting of spore bags and seeded substrates
- **Next Steps:**
  - Continue urchin suppression and monitoring of kelp recruitment

- **Site:** Drakes Bay (Marin County)
- **Goals:** Establish bull kelp refugia and characterize interconnectivity between coastal habitats
- **Takeaways:**
  - Outplanting of seeded twine on substrate and “reef dusting”
  - Drone + ROV monitoring
- **Next Steps:**
  - Monitoring of kelp recruitment



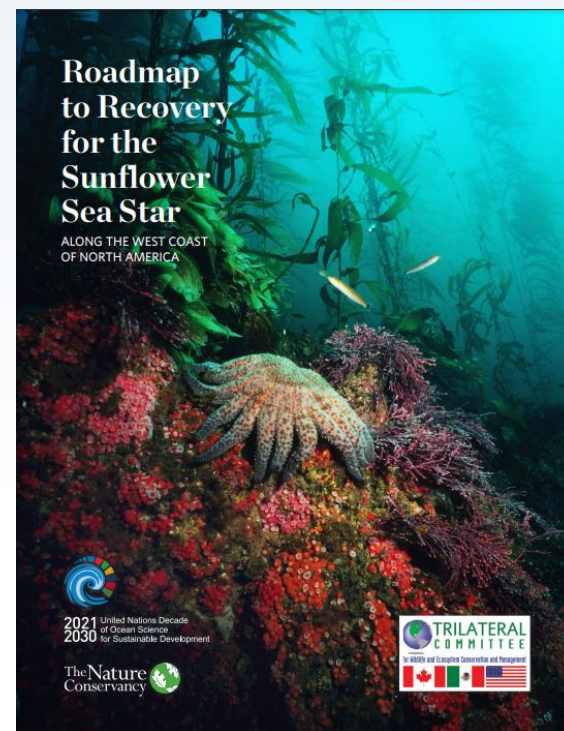


# Commercial Urchin Culling (SCP)

- **Site:** Palos Verdes (Los Angeles County)
- **Goals:** Restoration via urchin culling by commercial divers
- **Takeaways:**
  - 58 acres of kelp forest restored since 2013
  - Minimal maintenance of restoration sites
  - Increases in giant kelp, inverts, fish diversity and biomass, and red urchin gonad weight
- **Next Steps:**
  - Continued monitoring pre/post-culling and reference sites



- Status of Sunflower Star in CA
  - Little-to-no recovery
  - First subtidal sightings since initial loss (Mendocino County, Dec. 2022)
- Roadmap to Recovery (2022)
  - Overview of the species, status, and threats
  - Identifies knowledge gaps
  - Priority objectives and actions for informing recovery







# Broad, Collaborative Efforts Across the State





- \$5 million for state-funded Accelerating Kelp Research and Restoration in California



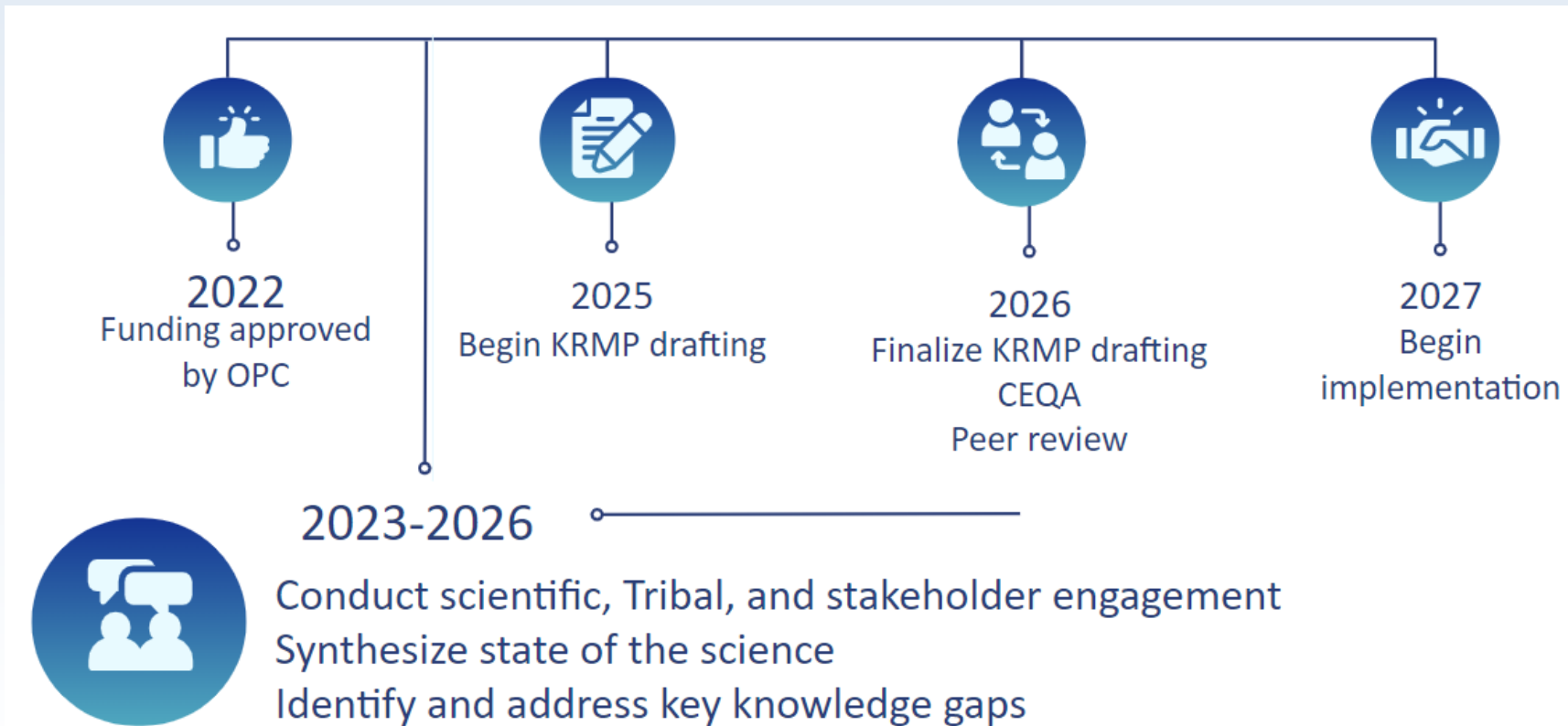
## Goal:

To develop a robust, adaptive, climate-ready approach to managing, protecting, and restoring giant and bull kelp forest ecosystems statewide for consideration and adoption by the Fish and Game Commission

## Core components:

- Ecosystem-based management approach
- Adaptive kelp harvest framework
- Restoration Toolkit

- Tribal Engagement
- Community Working Group
- Scientific Advisory Committee





## 2023 KRMP Milestones

- Community Working Group (CWG): Solicitation and establishment
  - First Community Working Group meeting (July)
- Establishment of Science Advisory Committee (SAC)
  - First SAC meeting (September)
  - Second in-person SAC meeting (December)
- Tribal Roundtable Listening Sessions (June)
  - Representatives from several California tribal nations to sit on the CWG and SAC





# Summary



- Kelp Canopy Data
  - Persistent kelp loss in the north coast
  - Different patterns of loss and recovery across the state
- Research and Recovery Efforts
  - Broad suite of collaborative efforts across the state
  - Will inform KRMP development
- Kelp Restoration and Management Plan
  - Plan development funded by OPC
  - Initiating science, tribal, and stakeholder engagement

# Thank You!

- [kelp@wildlife.ca.gov](mailto:kelp@wildlife.ca.gov)
- <https://wildlife.ca.gov/Conservation/Marine/Kelp>
- <https://marinespecies.wildlife.ca.gov/kelp/true/>
- [https://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20210216/Item7\\_KelpActionPlan\\_ExhibitA\\_FINAL.pdf](https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20210216/Item7_KelpActionPlan_ExhibitA_FINAL.pdf)

**Overview of Proposed Process to Develop a Statewide Red Abalone Recovery Plan  
California Department of Fish and Wildlife**

**Marine Resources Committee Meeting  
of the California Fish and Game Commission  
July 20, 2023**

**Overview:** The California Department of Fish and Wildlife (CDFW) has developed a proposed process to create a statewide recovery plan for red abalone (*Haliotis rufescens*). The Red Abalone Recovery Plan (RARP) will use a science-based approach to support recovery of the population to sustainable harvestable levels. The RARP will facilitate a robust, adaptive, climate-ready approach to improve the red abalone population in the face of changing ocean conditions.

**Process:** To develop the RARP, CDFW staff proposes a process which includes engaging with tribal interests, establishing technical and stakeholder teams, and collaborating with agency partners (e.g., Fish and Game Commission, National Marine Fisheries Service, Ocean Protection Council, etc.) to solicit input on technical and policy guidance throughout recovery plan development.. CDFW will lead the engagement process by:

- A) Work with California Native American Tribes to develop pathways and opportunities to **promote Tribal engagement** throughout the RARP development process. Pathways and opportunities will be explored and identified initially through solicitation for feedback by reaching out to California Tribes and Tribal Communities. Tribal engagement may include early consultation, listening sessions, opportunities to provide input on draft documents. Regular updates on the development process will be provided at the Fish and Game Commission's Tribal Committee meetings.
- B) Assembling a **Technical Team** consisting of abalone restoration experts from a broad array of disciplines and geographic areas, tasked with providing scientific and technical guidance on all aspects of the RARP.
- C) Assembling a **Stakeholder Team** to solicit stakeholder perspectives on the development of the RARP. The Stakeholder Team will include recreational and commercial fishing representatives, conservation interests, and other interested individuals with expertise in abalone recovery. Members of the Stakeholder Team will be selected through a solicitation process.

**Timeline:** CDFW proposes the following RARP development timeline:

- 2023: Solicit nominations for tribal, technical and stakeholder groups
- 2024-26: Conduct tribal, scientific and stakeholder engagement
- 2024: Begin drafting RARP
- 2026: Finalize RARP, public review, submission to Fish and Game Commission
- 2027: Recovery plan implementation



# Agenda Item 3: Red Abalone Recovery Plan Update

*16 November 2023*

*Presented to:*

**Marine Resources Committee**  
**CA Fish and Game Commission**

*Presented by:*

**Joanna Grebel**  
**Invertebrate Program Manager**  
**Marine Region**



# Overview

- 2023 Field Work
- Red Abalone Recovery Plan
- Red Abalone Monitoring Strategy
- Next Steps

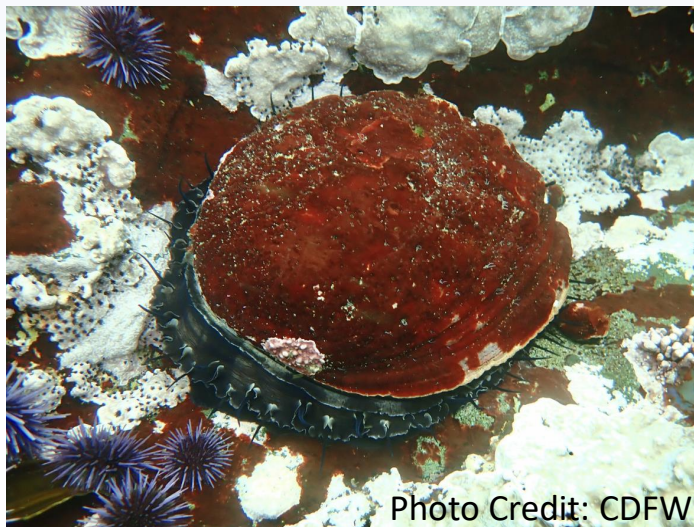


Photo Credit: CDFW



Photo Credit: CDFW





# 2023 Field Work



# 2023 Survey Statistics



**11 CDFW  
SCIENTISTS**

**5 VOLUNTEERS**

**3 CDFW  
WARDENS**

**3,960**  
METERS SQUARED  
SURVEYED

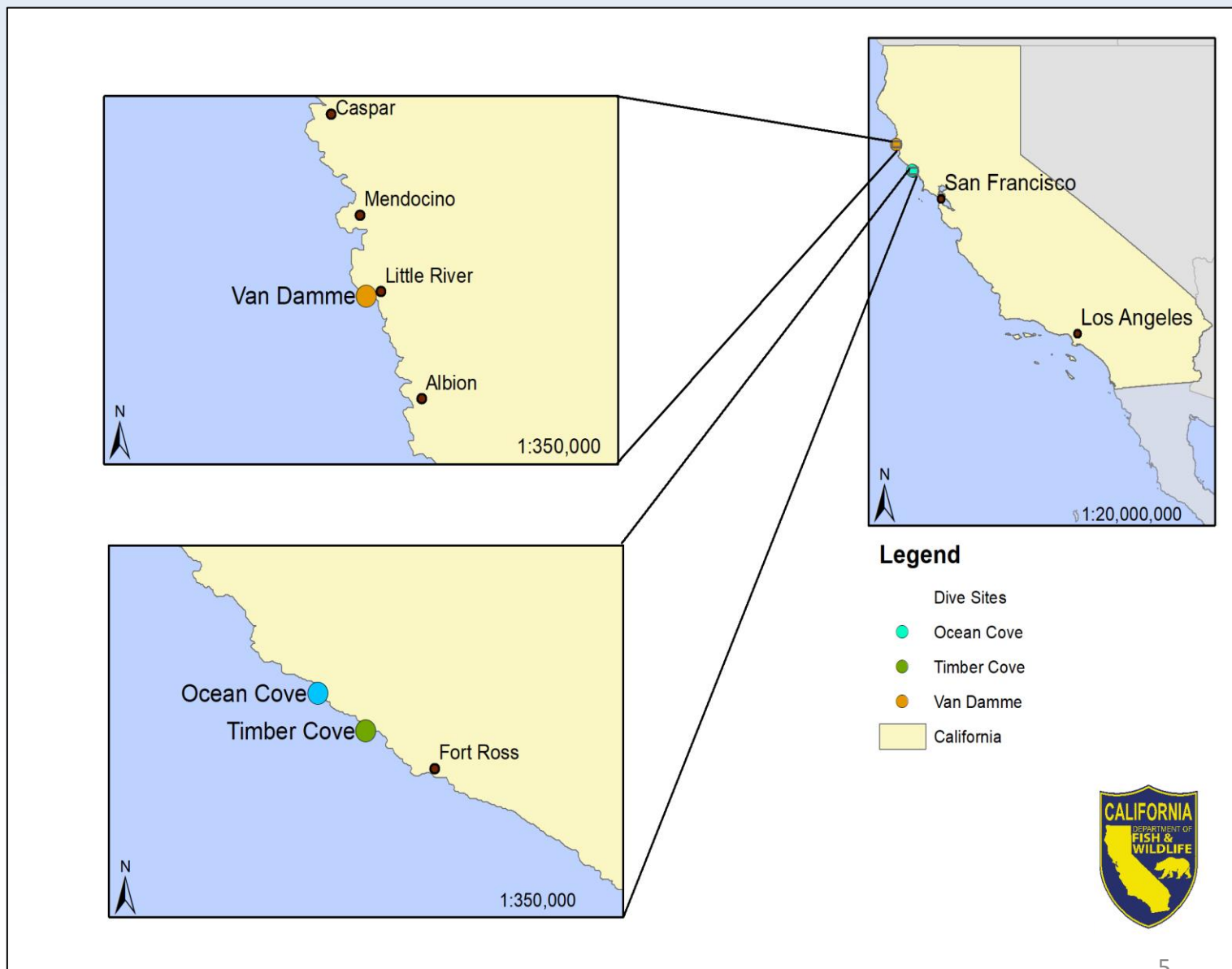
**397**  
RED ABALONE  
SURVEYED

**7**  
# OF CDFW VESSELS

**116,037**  
PURPLE URCHINS  
COUNTED

# Survey Sites

- Mendocino County
  - Van Damme
- Sonoma County
  - Ocean Cove
  - Timber Cove





# 2023 Survey Data

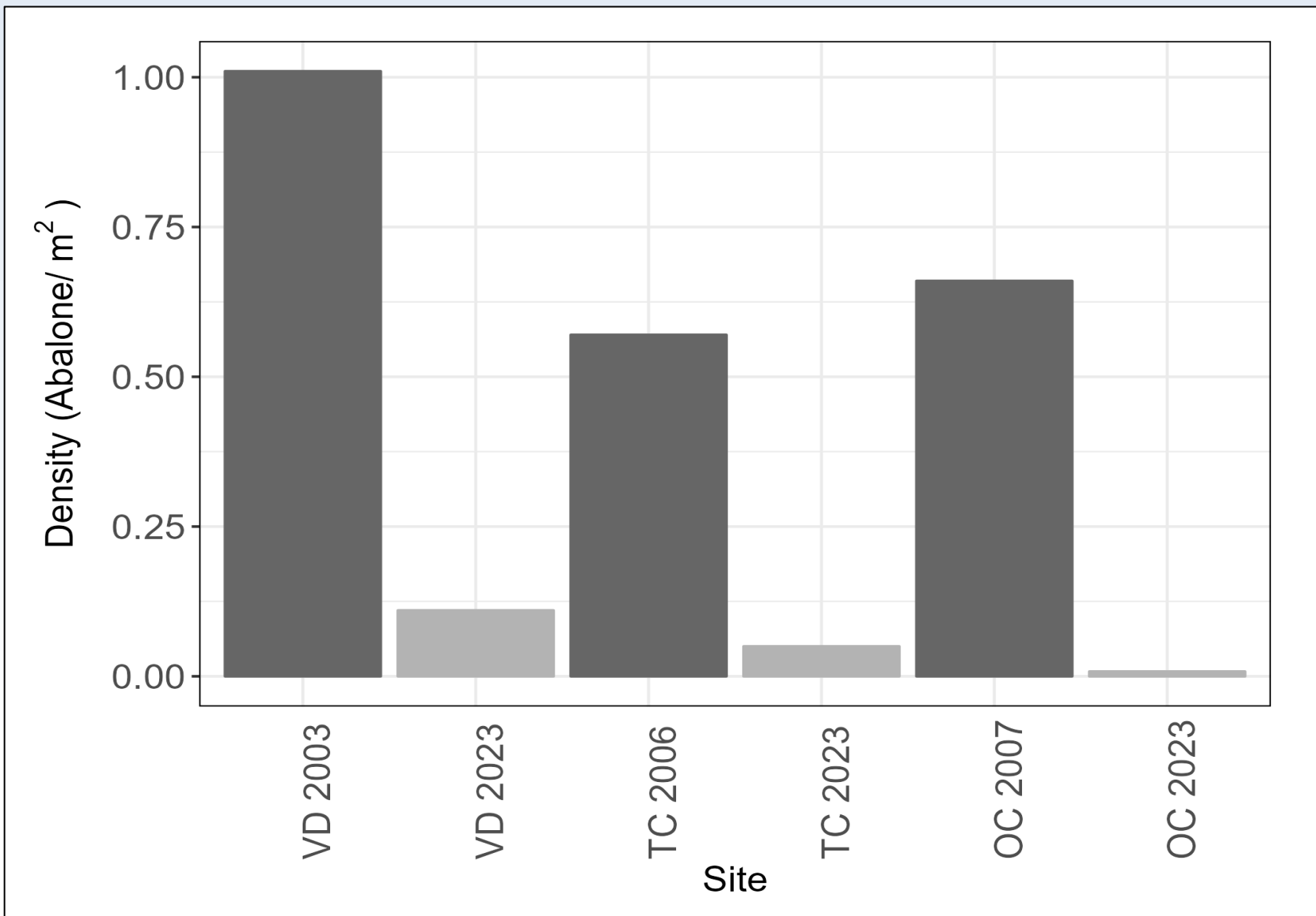
Site	Transects	Area Surveyed (m <sup>2</sup> )	Red Abalone Observed	Density (ab/m <sup>2</sup> )	2018 Density
Ocean Cove (Sonoma)	16	360	12	0.01	0.08
Timber Cove (Sonoma)	12	720	29	0.05	0.09
Van Damme (Mendocino)	48	2,880	356	0.11	0.16



Photo Credit: CDFW



# 2023 Density Compared to Historical



VD= Van Damme

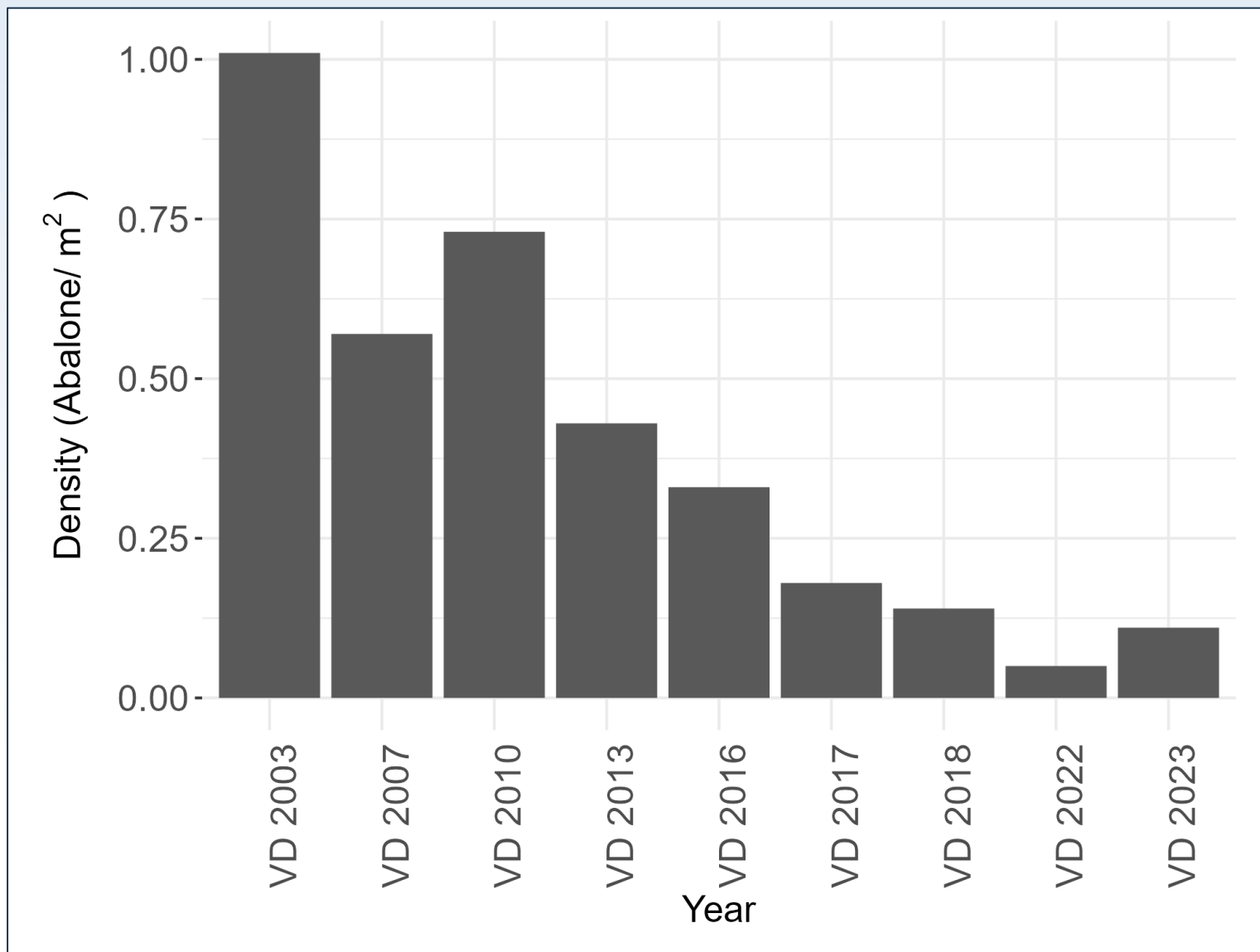
TC= Timber Cove

OC= Ocean Cove



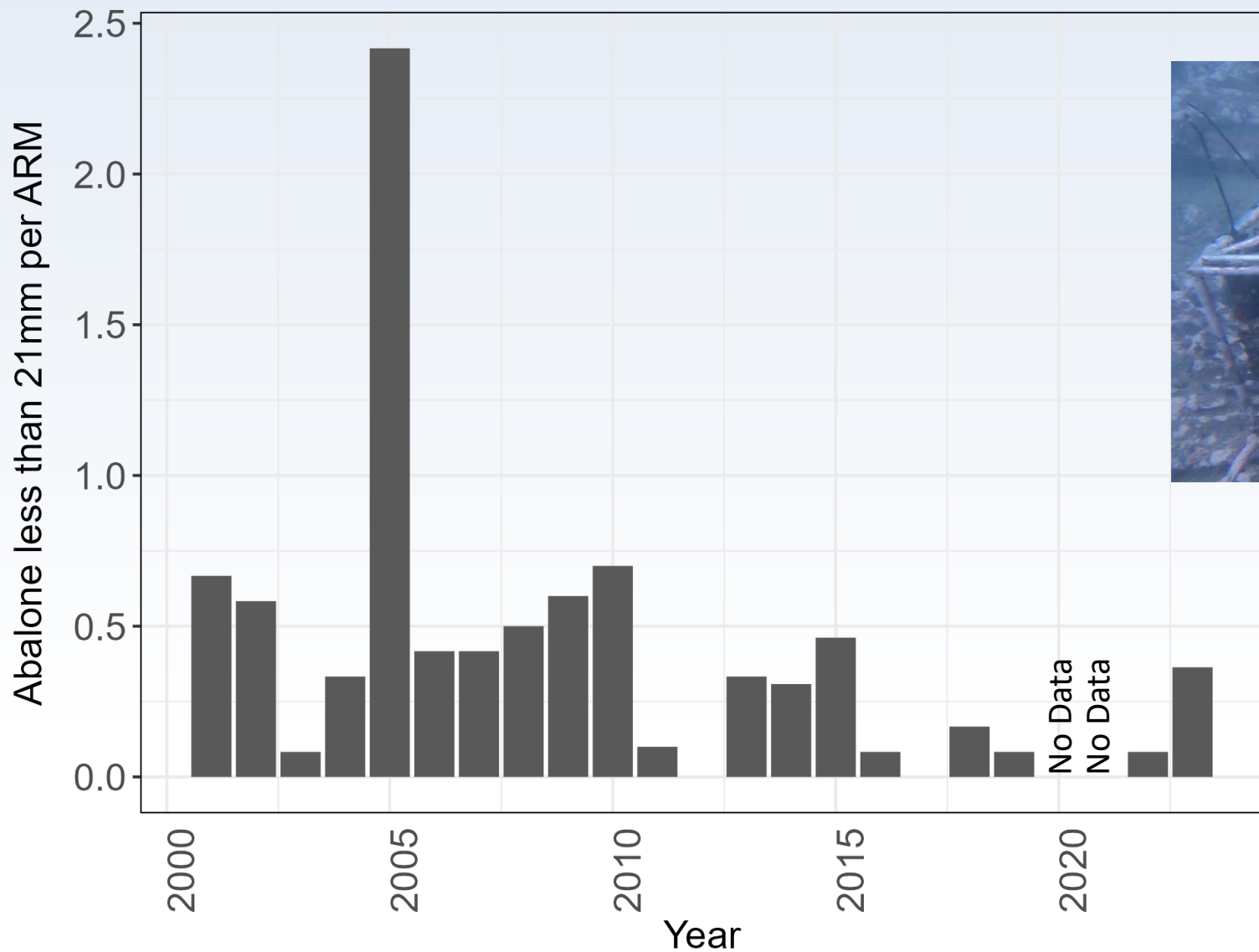


# Van Damme Density





# Van Damme Recruitment







# Pycnopodia Sighting







# Future Surveys

- Current surveys are time intensive and expensive
  - Duration: 2 years
  - Approximate cost: \$40-50K/yr
- Intensive monitoring not needed until stock status improves
- Need to explore different monitoring methods

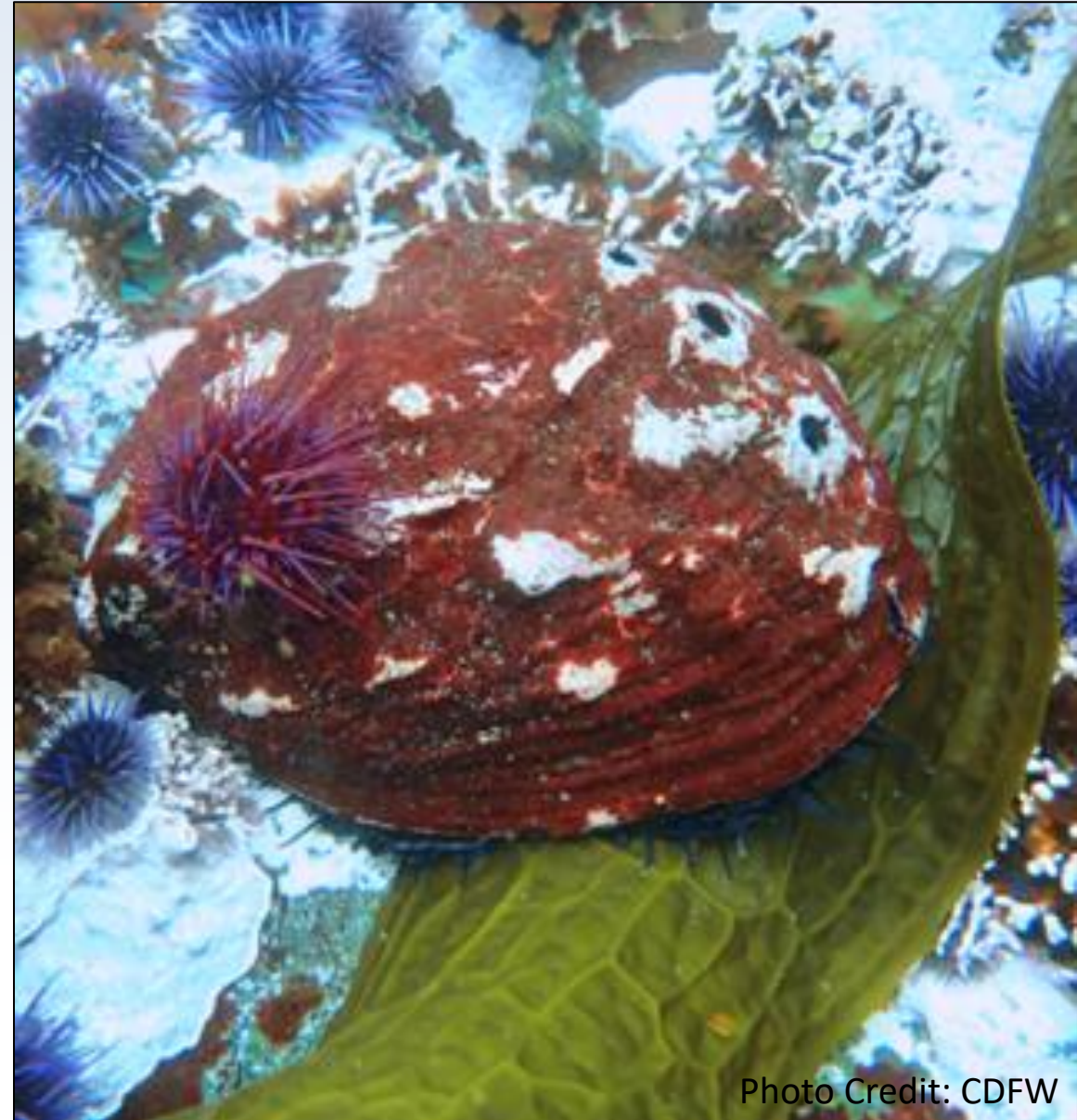


Photo Credit: CDFW



# Red Abalone Recovery Plan





# Need for a Red Abalone Recovery Plan

- Abalone Recovery and Monitoring Plan (2005) includes a recovery plan framework
- However, the ARMP is:
  - Limited in geographic scope
  - Focused on fishing related impacts
  - Does not address current threats to stock



# Plan Development

- Develop a robust, adaptive, climate ready approach to improve the red abalone population in the face of changing ocean conditions
- Opportunity to incorporate new information and ideas
- Develop in partnership with Tribes, community stakeholders, and technical experts



# Monitoring Strategy

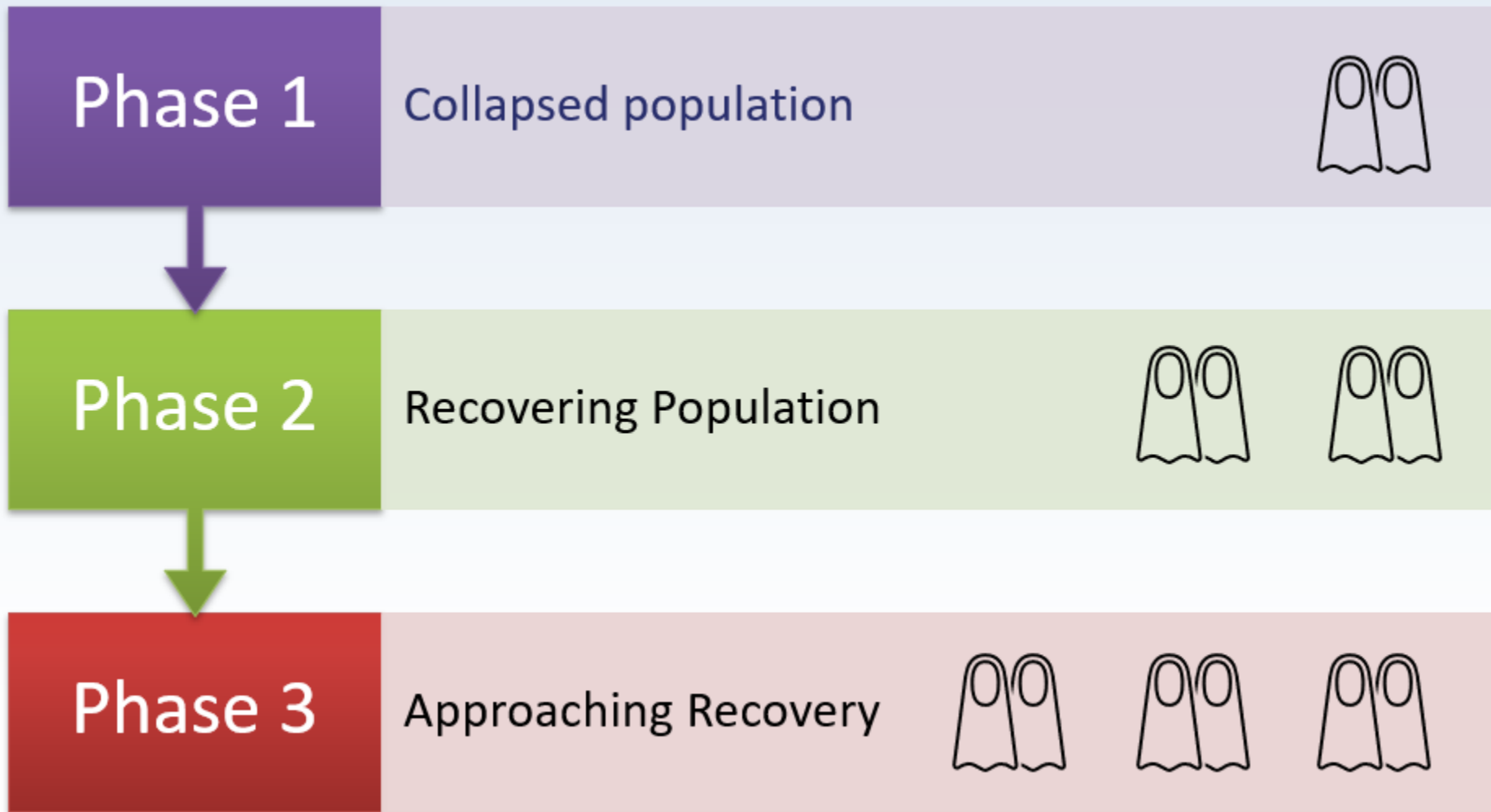
- Develop efficient, collaborative approach:
  - Citizen science
  - Explore new methodologies
- Adaptable to different stock conditions



Photo Credit: CDFW

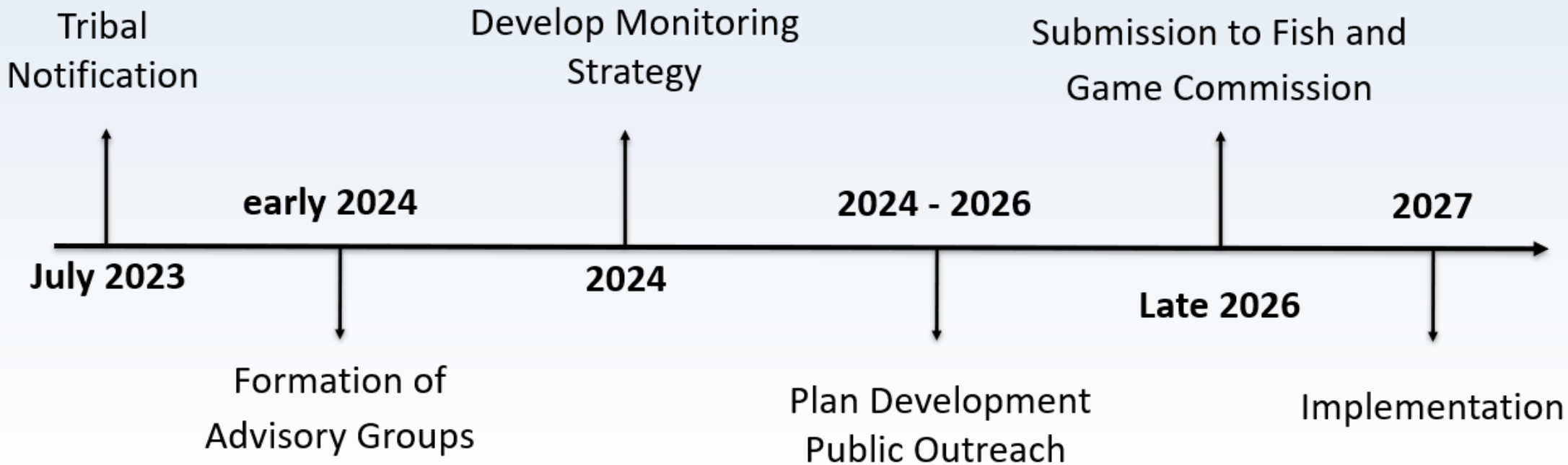


# Phases for Monitoring





# Proposed Process Timeline







# Summary & Next Steps

- Develop nomination process to establish technical and stakeholder teams
- Solicit nominations in early 2024
- Prioritize development of a monitoring plan and monitoring approach
  - Incorporate new survey methodologies and data sources
  - Utilize citizen science and other partnerships

# Thank You



Photo Credit: CDFW

Questions: [Abalone@wildlife.ca.gov](mailto:Abalone@wildlife.ca.gov)

**Squid Fishery Advisory Committee  
California Department of Fish and Wildlife**

**Report to the Marine Resources Committee  
of the California Fish and Game Commission  
July 20, 2023 Meeting**

The CDFW Squid Fishery Advisory Committee (SFAC) consists of a cross section of stakeholders tasked with reviewing market squid fishery management and advising CDFW on potential management changes. The market squid fishery is routinely the largest in the State, both in revenue and landings, and includes one of California's earliest Fishery Management Plans. The SFAC completed its third meeting on May 16<sup>th</sup> to discuss changes in fishing effort dynamics and collaborate with researchers to build a forecast model to test the performance of fishery management controls under climate change. The SFAC's next meeting is scheduled for July 12<sup>th</sup> where discussions will shift to review of the market squid fishery logbook program and strategies to modernize data collection methods. The SFAC is expected to have its final meeting in spring of 2024. The Department currently anticipates bringing final recommendations to the Commission during the summer of 2024 in order to determine next steps. The roster and meeting schedule is included in supporting documents.

**CDFW Squid Fishery Advisory Committee Roster**

<b>Name</b>	<b>Affiliation</b>
Mark Fina	Trade Association
Ken Towsley	Dealer/Processor
Joe Cappuccio	Dealer/Processor
Anthony Vuoso	Dealer/Processor
Ryan Augello	Dealer/Processor
Corbin Hanson	Commercial Squid Fishing - Seine
John Barry	Commercial Squid Fishing - Seine
Porter McHenry	Commercial Squid Fishing - Seine
Tom Noto	Commercial Squid Fishing - Seine
David Crabbe	Commercial Squid Fishing - Light/Brail
Joe Villareal	Commercial Squid Fishing - Light/Brail
Brian Susi-Blair	Commercial Squid Fishing - Light/Brail
Richie Ashley	Commercial/Recreational - Bait
Ken Bates	Commercial Fishing - Access
Dan Yoakum	Commercial Fishing - Access
Caitlin Allen Akselrud	Government Agency
Russell Galipeau	Non-Consumptive
Greg Helms	Non-Governmental Organization
Anna Weinstein	Non-Governmental Organization

# Squid Fishery Advisory Committee (SFAC) Meeting Schedule 2023-2024

4/18/23

Monterey Bay – Effort/EDM

5/16/23

Virtual – Effort/EDM

7/12/23

Virtual – Monitoring

8/15/23

Los Angeles – Monitoring

10/6/23

Virtual – Gear

11/15/23

Virtual – Gear

1/25/24

San Francisco Bay Area – Access

**The SFAC will conclude with a one-to-two-day meeting in Southern California in early 2024.**



**Squid Fishery Advisory Committee Update**  
**California Fish and Game Commission**  
**Marine Resources Committee**  
**November 16, 2023**

The Squid Fishery Advisory Committee (SFAC) consists of a cross section of stakeholders tasked with reviewing market squid fishery management and advising the California Department of Fish and Wildlife (CDFW) on potential management changes. The market squid fishery is routinely the largest in the State, both in revenue and landings, and includes one of California's earliest adopted Fishery Management Plans.

During its first six meetings, the SFAC explored and discussed the following topics:

- Fishing effort, dynamics, and climate readiness
  - These discussions are being supported by empirical dynamic modeling (EDM). EDM provides a novel method to look at past performance and gauge potential outcomes of future climate and fishery management scenarios. It is being developed as a potential tool to assist with analyzing management options and, if successful, help to predict future fishery success.
- Modernizing monitoring efforts including updates to the market squid logbook
  - General SFAC consensus is that the logbook could benefit from being converted to an electronic platform. Some SFAC members have volunteered to assist with development and testing, in advance of a future transition from paper logs.
- Fishing gear, bycatch, habitat, and wildlife interactions
  - SFAC discussions on these topics are just beginning. The group will provide input on potential changes, if necessary, to existing management to address any issues that are identified.

The SFAC completed its seventh meeting on November 15<sup>th</sup>, where they continued discussions on habitat and introduced the topic of small-scale fishery access. The SFAC's next meeting is scheduled for January 25<sup>th</sup> where discussions on these topics will continue.

The SFAC is currently scheduled to have a final meeting in spring of 2024, to conclude the advisory process and finalize recommendations to the Department. With each SFAC meeting, discussions have become more detailed and in-depth, particularly with in-person engagement. The Department is considering options to increase the number of in-person meetings to provide the most comprehensive and complete recommendation to the commission. The Department will seek additional funding in order to allow the upcoming meetings to all be in-person.

The Department anticipates bringing final recommendations and proposed next steps to the Commission during the summer or fall of 2024.

**California Fish and Game Commission**  
**Wildlife Resources Committee (WRC) Work Plan**  
**Scheduled Topics and Timeline for Items Referred to WRC**  
*Updated December 4, 2023*

*Note: Proposed changes to topics/timing are shown in blue underscore or strike-out font*

TOPICS	CATEGORY	Sep 2023	Jan 2024	May 2024
<b>Periodic and Annual Regulations</b>				
Upland (Resident) Game Birds	Regulatory	X/R		<u>X</u>
Mammal Hunting	Regulatory	X/R		<u>X</u>
Waterfowl Hunting	Annual Regulatory	X/R		<u>X</u>
Central Valley Sport Fishing	Annual Regulatory	X/R		<u>X</u>
Klamath River Basin Sport Fishing	Annual Regulatory	X/R		<u>X</u>
Inland Sport Fishing	Regulatory	X	X/R	
<b>Regulations &amp; Legislative Mandates</b>				
Falconry	Referral for Review			
Restricted Species	Regulatory			
Wildlife Rehabilitation	Regulatory	X/R	<u>X/R</u>	
<u>Wildlife Areas/Public Lands</u>	<u>Regulatory</u>			
<u>Wild Pig Validations</u>	<u>Regulatory</u>	<u>X/R</u>		
<u>White sturgeon (2023 and 2024 emergency)</u>	<u>Information/ Regulatory</u>			
White Sturgeon (2025 regular)	Regulatory	X	X/R	
<b>Special Projects</b>				
<u>American Bullfrog and Non-native Turtle Stakeholder Engagement Project</u>	<u>Referral for Review</u>	<u>X/R</u>		
<b>Discussions and Updates</b>				
Take of Nongame Mammals	Referral for Review	X	X	<u>X</u>
Shotgun Wads (plastic pollution)	Referral for Review		<u>X</u>	<u>X</u>
Waterfowl Hunting in Southampton Bay	Referral for Review		<u>X</u>	<u>X</u>

**KEY: X Discussion scheduled X/R Recommendation potentially developed and moved to FGC**

# California Fish and Game Commission Marine Resources Committee (MRC) Work Plan

*Updated December 4, 2023*

Note: Proposed changes to topics/timing are shown in blue underscore or strike-out font.

Topics	Category	Jul 2023	Nov 2023	Mar 2024
<b>Planning Documents and Fishery Management Plans (FMPs)</b>				
MLMA Master Plan for fisheries – implementation updates	Plan Implementation			
Red abalone recovery plan ( <del>north coast</del> )	Management Plan	*	X	
California halibut fishery management review; <u>trawl grounds review</u>	Management Review			X
California halibut bycatch evaluation for fishery management review – set gill net	Management Review	X/R	X/R	<u>X</u>
Market squid fishery management and FMP review	Management/ FMP Review	*	*	X
Kelp recovery and management plan (KRMP) development	Management Plan		X	
Marine protected area (MPA) network 2022 decadal management review <u>implementation: MPA petitions</u>	Management Review	X/R	*	*
<b>Regulations</b>				
<del>California halibut trawl grounds review</del>	<del>Commercial Take</del>			<del>X</del>
Kelp and algae commercial harvest – sea palm ( <i>Postelsia</i> )	Commercial Take			
Petition 2023-04: Commercial sea urchin fishing north of San Luis Obispo/Monterey county line	Commercial Take			X
<u>Recreational crab trap gear options and trap validation for commercial passenger fishing vessels; recreational RAMP regulations</u>	<u>Recreational Take</u>			* –
<u>Section 120.7 logbook rulemaking (to include commercial passenger fishing vessels, lobster, and dive logbooks)</u>	<u>Commercial Take</u>			* –
<b>Marine Aquaculture</b>				
Statewide aquaculture action plan	Planning Document	*		
Aquaculture state water bottom leases: Status of existing leaseholder requests	Current Leases			*
Aquaculture state water bottom leases: Applications for new leases	Lease Applications		*	X
Aquaculture lease best management practices plans (Hold, TBD)	Regulatory			
<b>Informational Topics / Emerging Management Issues</b>				
Kelp restoration and recovery tracking	Kelp		X	
<del>Invasive non-native kelp and algae species</del>	<del>Kelp / Invasive Species</del>			
<b>Special Projects</b>				
Coastal Fishing Communities Project	MRC Special Project			
Box crab experimental fishing permit (EFP) research project	EFP			

**Key:** X = Discussion scheduled X/R = Recommendation may be developed and may move to Commission  
\* = Written or verbal agency update

# California Fish and Game Commission

## Potential Modifications to the Commission Naming Installations Policy

*December 10, 2023*

The Commission Naming Installations Policy is numbered 4.13 for tracking during the 2023-24 Commission policies review process. This document proposes changes to the policy for discussion and feedback at the December 2023 Commission meeting.

The Commission has expressed concerns regarding its existing Naming Installations Policy providing an exception for naming a marine protected area (MPA) after an individual; the over 70-year-old policy was amended in 2012 to allow the exception. Currently, there are three MPAs named after individuals: Lovers Point-Julia Platt State Marine Reserve, Edward F. Ricketts State Marine Conservation Area, and Robert W. Crown State Marine Conservation Area.

Additionally, the Commission has stated the importance of its policies taking into consideration tribal and justice, equity, diversity and inclusion values. The Naming Installations Policy currently does not recognize that, when Europeans arrived, specific geographies already had names established by Native Americans in what is now known as California and off its shores.

For naming purposes, the Commission is directly involved in naming protected areas when it designates such areas: state wildlife areas, ecological reserves, and marine protected areas. The Commission does not have a direct role in establishing, purchasing or naming refuges (established by the California State Legislature), fish hatcheries, vessels, and other installations owned or managed by the Department.

Potential revisions to the policy could include: (1) removing the MPA naming exception; (2) adding a provision to consider, in collaboration with local tribes, tribal placenames when naming or renaming installations, including MPAs; and (3) revising the policy title to reflect proposed policy language focused on protected areas.

If the Commission moves forward with removing the option to name MPAs after individuals, the Commission may wish to specify how to address the three MPAs currently named after an individual. For example, they could be renamed immediately, allowed to remain named as they are, or, if the MPA is renamed, a nearby structure or facility could be named in honor of the individual.

If the Commission moves forward with using tribal placenames, the Commission may wish to consider whether or not a western geographic name might also be referenced to maximize public understanding of where the MPA is located. If a western name is included, the Commission may wish to provide direction regarding a standardized format (e.g., tribal name MPA at western geographic location) and whether to apply the same standard to Kashtayit State Marine Conservation Area and Matlahuayl State Marine Reserve.

Potential revisions are being presented at this meeting for discussion purposes; proposed policy revisions based on Commission and public input are expected to be presented at the February 2024 Commission meeting for potential adoption.

### **Naming Installations Policy with Draft Potential Revisions**

#### ***Naming Protected Areas Installations Policy***

It is the policy of the Fish and Game Commission that:

- I. ~~No fish hatchery, game refuge, wildlife area, ecological reserve, or marine protected area (MPA) or any installation, other than Marine Protected Areas (MPAs), shall be named for any person, living or dead. Installations-Protected areas shall be named in a manner which will indicate their geographical location, avoiding as far as possible the names of local political units. Vessels shall be named for fish.~~
- II. Traditional tribal placenames for a geographic location shall be considered in collaboration and collaboration with local tribes when naming or renaming any protected area, including MPAs.
- I. ~~The Commission may commemorate an individual by including that individual's name after the geographic name of an MPA if all of the following criteria are met:~~
  1. ~~The individual has been deceased for a minimum of 5 years;~~
  2. ~~It has been determined the individual has made an extraordinary, unique, and long-lasting contribution to the conservation, use, and/or enjoyment of California's living marine resources;~~
  3. ~~It has been determined with reasonable care and consideration that the individual's merit and/or contribution can stand the test of time;~~
  4. ~~The individual and/or their efforts have a direct connection with the geographic location of the MPA or immediate vicinity.~~
- III. The Commission shall be represented at and may participate in all ceremonies dedicating the launching or inauguration of any wildlife area, ecological reserve, or MPA or any installation of the facilities mentioned above. The Department and the Commission staff shall coordinate their work and efforts in ~~setting up or arranging~~ such dedication ceremonies programs.

(Amended 4/7/1994, and 5/23/2012, 2/xx/2024)



# California Fish and Game Commission: Perpetual Timetable for Anticipated Regulatory Actions

November 29, 2023

Items proposed for change are shown in blue underlined or strikeout font

Subject of Rulemaking	Title 14 Section(s)	MRC San Diego November 16, 2023	TC San Diego December 12, 2023	FGC San Diego December 13, 2023	FGC San Diego December 14, 2023	WRC Ontario January 18, 2024	FGC Sacramento February 14, 2024	FGC Sacramento February 15, 2024	MRC San Clemente Area March 14, 2024	FGC Teleconference TBD March 2024	TC San Jose April 16, 2024	FGC San Jose April 17, 2024	FGC San Jose April 18, 2024	FGC Teleconference May 15, 2024	WRC Yreka May 16, 2024	FGC Mammoth Lakes June 19, 2024	FGC Mammoth Lakes June 20, 2024	MRC Santa Rosa Area July 18, 2024	TC Fortuna August 13, 2024	FGC Fortuna August 14, 2024	FGC Fortuna August 15, 2024	WRC San Jose Area September 12, 2024	FGC Sacramento October 9, 2024	FGC Sacramento October 10, 2024
Central Valley Sport Fishing (Annual)	7.40(b)(4), (43), (66), (80)							N					D	A				E 7/16						
Klamath River Basin Sport Fishing (Annual)	5.87, 7.40(b)(50)							N					D	A						E 8/15				
Waterfowl (Annual)	502			N				D					A					E 6/30						
Inland Sport Fish Updates <sup>4</sup>	7.40(b)(27), 7.40(b)(79), 7.50(b)(7), 7.50(b)(81)				E 1/1	R																		
Pre-Existing Structures in Marine Protected Areas (MPAs), Marine Managed Areas (MMAs)	632				A						E 4/1													
Permits and Draws for Special Hunts	702, 715								E 1/1															
Mitigating Risks for Cervid Importation and Movement	257.5, 475, 676, 681, 712, 714								E 1/1															
Klamath River Dam Removal Sport Fishing	5.87, 7.40(b)(50), 7.50(b)(73), 8.02			D				A			E 4/1													
Commercial Take of Pacific Herring with Lampara Bait Nets <sup>3</sup>	163, 163.1, 164								E 1/1															
2023 Lands Updates <sup>1, 2</sup>	540, 550, 551, 630			D				A										E 7/1						
Chinook salmon sport fishing closures emergency	7.40(a), 7.40(b)(40), 7.40(b)(50), 7.40(b)(105)								EE 12/28															
Recreational California halibut emergency	28.15		EE 11/30																					
Recreational California halibut emergency (First 90-Day Extension)	28.15		E 11/30						EE 2/29															
Recreational California halibut emergency (Second 90-Day Extension)	28.15				A		A		E 2/29						EE 5/29									
Recreational California halibut updates	28.15			D			A											E 7/1						
Sea Urchin Recreational Harvest Extension	29.06			D			A				E 4/1													
Exotic Game Mammals / Wild Pig Validation	250, 251.5, 252, 257.5, 258, 350, 352, 353, 368, 375, 376, 377, 378, 379, 401, 465.5, 679 708.13			D				A										E 7/1						
White sturgeon emergency	5.79, 5.80, 27.90, 27.92	E 11/16												EE 5/14										
White sturgeon emergency (First 90-Day Extension)	5.79, 5.80, 27.90, 27.92						A						E 5/14					EE 8/12						
White sturgeon emergency (Second 90-Day Extension)	5.79, 5.80, 27.90, 27.92															A		E 8/12						
Recreational Fishing Regulations for Federal Groundfish	<u>27.20, 27.25, 27.30, 27.35, 27.40, 27.45, 27.50, 28.26, 28.27, 28.28, 28.29, 28.47, 28.48, 28.49, 28.55, 28.56</u>				N		D			A	<u>E 4/1</u>													
Mammal Hunting Updates 2024 <sup>5</sup>	362, 363, 364, 554, 555, 708.14			N				D					A					E 7/1						

## Future Rulemakings: Schedule to be Determined

Subject of Rulemaking	Title 14 Section(s)	MRC San Diego Area November 16, 2023	TC San Diego Area December 12, 2023	FGC San Diego Area December 13, 2023	FGC San Diego Area December 14, 2023	WRC Southern California January 18, 2024	FGC Sacramento February 14, 2024	FGC Sacramento February 15, 2024	MRC San Clemente Area March 14, 2024	FGC Teleconference TBD March 2024	TC San Jose April 16, 2024	FGC San Jose April 17, 2024	FGC San Jose April 18, 2024	FGC Teleconference May 15, 2024	WRC Yreka May 16, 2024	FGC Mammoth Lakes June 19, 2024	FGC Mammoth Lakes June 20, 2024	MRC Santa Rosa Area July 18, 2024	TC Fortuna August 13, 2024	FGC Fortuna August 14, 2024	FGC Fortuna August 15, 2024	WRC San Jose Area September 12, 2024	FGC Sacramento October 9, 2024	FGC Sacramento October 10, 2024
Santa Cruz Harbor Salmon Fishing (FGC Petition 2016-018)	TBD																							
European Green Crab (FGC Petition 2017-006)	TBD																							
Possess Game / Process Into Food	TBD																							
American Zoological Association / Zoo and Aquarium Association	671.1																							
Night Hunting in Gray Wolf Range (FGC Petition #2015-010)	474																							
Shellfish Aquaculture Best Management Practices	TBD																							
Ridgeback Prawn Incidental Take Allowance	120(e)																							
Possession of Wildlife and Wildlife Rehabilitation	679																							

### KEY

FGC = California Fish and Game Commission MRC = FGC Marine Resources Committee WRC = FGC Wildlife Resources Committee TC = FGC Tribal Committee OAL = Office of Administrative Law

EM = Emergency EE = Emergency Expires E = Anticipated Effective Date (RED "X" = expedited OAL review) EUF = Effective Upon Filing w/ Secretary of State

N = Notice Hearing D = Discussion Hearing A = Adoption Hearing V = Vetting R = Committee Recommendation

1 = Considers FGC Petition 2017-008 2 = Considers FGC Petition 2018-003 3 = Considers FGC Petition 2020-015 4 = Considers FGC Petition 2021-020 5 = Considers Petition 2021-017

**Commissioners**  
**Eric Sklar**, President  
Saint Helena

**Erika Zavaleta**, Vice President  
Santa Cruz

**Jacque Hostler-Carmesin**, Member  
McKinleyville

**Samantha Murray**, Member  
La Jolla

**Vacant**, Member

STATE OF CALIFORNIA  
Gavin Newsom, Governor

## Fish and Game Commission



*Wildlife Heritage and Conservation  
Since 1870*

**Melissa Miller-Henson**  
**Executive Director**  
P.O. Box 944209  
Sacramento, CA 94244-2090  
(916) 653-4899  
[fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov)  
[www.fgc.ca.gov](http://www.fgc.ca.gov)

### **Revised\* Meeting Agenda** **December 13-14, 2023**

#### **Participate in Person**

**Handlery Hotel San Diego**  
**950 Hotel Circle North**  
**San Diego, CA 92108**

#### **Participate via Webinar/Teleconference**

***The meeting will be live streamed; visit [www.fgc.ca.gov](http://www.fgc.ca.gov) the day of the meeting to watch or listen. To provide public comment during the meeting, please join at the in-person location, via Zoom, or by telephone; you may join the webinar directly at <https://us02web.zoom.us/j/88135179042>. For complete instructions on how to join via Zoom or telephone, [click here](#) or visit [fgc.ca.gov/meetings/2023](http://fgc.ca.gov/meetings/2023)***

#### **\* This revised agenda is amended to:**

- **change the start time on both days to 8:00 a.m.,**
- **move Commission Policies to become item 10**
- **move Commission and Department director reports to become item 11,**
- **add items 15 and 16,**
- **amend items 8 and 24,**
- **add a new section for public receipt of documents, and**
- **renumber the remainder of agenda items accordingly.**

**Note: See important meeting deadlines and procedures, including written public comment deadlines, starting on page 9. Unless otherwise indicated, the California Department of Fish and Wildlife is identified as Department. All section and subsection references are to Title 14 of the California Code of Regulations, unless otherwise noted.**

**Invitation: The Commission invites members of the public to join commissioners and staff for a field trip currently under development that will take place on the afternoon of Wednesday, December 13. Details will be available in advance of the Commission meeting. Members of the public are welcome to join but must provide their own transportation.**

---

**Call to Order and Roll Call to Establish a Quorum**

---

- 1. Consider approving agenda and order of items**

---

**General Public Comment**

---

- 2. General public comment for items not on the agenda**

Receive public comment regarding topics within the Commission’s authority that are not included on the agenda.

Note: The Commission may not discuss or take action on any matter raised during this item, except to decide whether to place the matter on the agenda of a future meeting (sections 11125 and 11125.7(a), Government Code).

---

**Discussion and Action Items**

---

- 3. Waterfowl hunting**

Consider authorizing publication of notice of intent to amend waterfowl hunting regulations.

(Amend Section 502)

- 4. Mammal hunting**

Consider authorizing publication of notice of intent to amend mammal hunting regulations.

(Amend sections 362, 363, 364, 554, 555 and 708.14)

- 5. Klamath River dam removal sport fishing**

Discuss proposed amendments to Klamath River dam removal sport fishing regulations and consider publication of a notice of sufficiently related changes for the increased protection of returning Chinook salmon.

(Amend sections 5.87 and 8.02, and subsections 7.40(b)(50) and 7.50(b)(73))

- 6. Department lands**

Discuss proposed amendments to regulations for lands owned or managed by the Department.

(Add Section 540 and amend sections 550, 551 and 630)

- 7. Exotic game mammals and wild pig validation**

Discuss proposed amendments to regulations for exotic game mammals and wild pig validations.

(Amend sections 250, 251.5, 252, 257.5, 258, 350, 352, 353, 401, 465.5, 679 and 708.13, repeal section 368, and add sections 375, 376, 377, 378 and 379)

- 8. Permits and draws for special hunts**

Consider approving sufficiently-related changes to the regulations adopted by the Commission on August 22, 2023 regarding special hunt permit issuance and drawings in the Department Automated License Data System. (Amend sections 702 and 715)

***Staff will recommend that this item be continued to the February 2024 meeting.***

**9. American bullfrog and non-native turtles**

Discuss and consider potentially approving strategies for addressing American bullfrog and non-native turtles.

**10. Commission policies**

Receive update on planning and coordination for review of Commission policies, and discuss potential amendments to three policies: *Legislation, Designation of Department Controlled Lands as State Wildlife Areas*, and *Naming Installations*.

**11. Commission executive director and Department reports**

(A) **Commission executive director's report**

1. *Justice, equity, diversity and inclusion update*

(B) **Department director and Law Enforcement Division**

1. *Presentation and discussion regarding Commission authority related to water.*

***The Department will request that this presentation be deferred to the February 2024 Commission meeting.***

**12. Committee and Department reports**

Receive updates on items of note since the previous Commission meeting from Commission committees and Department divisions.

(A) **Tribal Committee**

Receive summary and consider approving recommendations from the December 12, 2023 Committee meeting. Discuss referred topics and consider revisions to topics and timing.

(B) **Wildlife Resources Committee**

Discuss referred topics and consider revisions to topics and timing. Consider approving draft agenda topics for the next committee meeting to be held on January 11-12, 2024 in Ontario.

(C) **Department Wildlife and Fisheries Division, and Department Ecosystem Conservation Division**

1. *Update on response to spring-run Chinook salmon cohort collapse in Mill, Deer and Butte creeks.*

**Day 2 – December 14, 2023, 8:00 AM**

---

**Call to Order and Roll Call to Establish a Quorum**

---

---

**General Public Comment**

---

**13. General public comment for items not on the agenda**

Receive public comment regarding topics within the Commission's authority that are not included on the agenda.

Note: The Commission may not discuss or take action on any matter raised during this item, except to decide whether to place the matter on the agenda of a future meeting (sections 11125 and 11125.7(a), Government Code).

---

## Consent Items

---

Note: Items on the consent calendar are expected to be routine and non-controversial. After public comment, the Commission will consider approving items on the consent calendar in a single vote without discussion. The presiding commissioner may choose to remove any item from the consent calendar and allow a separate discussion and potential action on that item in response to a request by a Commission member, staff, or an interested person.

**14. Pre-existing structures in marine protected areas (MPAs) and marine managed areas (MMAs)**

Consider adopting proposed amendments to regulations regarding incidental take authorization for work on pre-existing artificial structures within MPAs and MMAs, and take final action under the California Environmental Quality Act.  
(Amend Section 632)

**15. Recreational take of California halibut emergency**

Discuss and consider adopting a 90-day extension of emergency regulations for California halibut recreational daily bag and possession limits.  
(Amend Section 28.15)

---

## Discussion and Action Items

---

**16. Recreational fishing regulations for federal groundfish**

Consider authorizing publication of notice of intent to amend (a) recreational fishing regulations for federal groundfish in state waters for consistency with federal rules in 2024, and (b) recreational groundfish seasons, bag and depth limits.  
(Amend sections 27.20, 27.25, 27.30, 27.35, 27.40, 27.45, 27.50, 28.26, 28.27, 28.28, 28.29, 28.47, 28.48, 28.49, 28.55, and 28.56)

**17. Recreational take of California halibut**

Discuss proposed amendments to regulations for California halibut recreational daily bag and possession limits.  
(Amend Section 28.15)

**18. Recreational take of sea urchin**

Discuss proposed amendments to regulations for the recreational take of sea urchin to extend the bag limit exemption sunset date.  
(Amend Section 29.06)

**19. Recreational take of ocean salmon and Pacific halibut**

Receive and discuss an update on the Pacific Fishery Management Council process and timeline for recreational ocean salmon and Pacific halibut recommendations, and automatic conformance to federal regulations.  
(Pursuant to Section 1.95)

**20. MPA Management Program**

Receive annual update from the Department on the State's MPA Management Program activities.



**21. Coastal Fishing Communities Policy**

Consider and potentially adopt new Commission policy on coastal fishing communities. (Pursuant to Section 703, California Fish and Game Code)

**22. Regulation change petitions (marine, wildlife, and inland fisheries)**

**(A) New petitions**

Receive new petitions for regulation change. (Pursuant to Section 662)

*Consideration of whether to grant, deny, or refer for additional review is expected to be scheduled for the February 14-15, 2024 meeting.*

**(B) Previously received petitions**

Consider whether to grant, deny, or refer for additional review, petitions for regulation change received at previous meetings. Petitions granted today will be added to the Commission's rulemaking calendar for development and future consideration.

(Pursuant to Section 662)

1. *Petition 2021-028: Request to add spearfishing as an allowable method of take for American shad*
2. *Petition 2023-10: Allow anglers to donate fish to non-profit organizations under a sport-caught fish exchange permit*
3. *Petition 2023-11: Authorize recreational take of groundfish inside 50 fathoms using non-motorized vessels or watercraft (less than or equal to 19 feet) with mandatory descending devices*
4. *Petition 2023-12: Require recreational anglers to possess and use descending devices capable of returning rockfish to the depth taken when fishing for or possessing groundfish*

**23. Non-regulatory requests from previous meetings (marine, wildlife, and inland fisheries)**

Consider and potentially act on requests for non-regulatory action received from members of the public at previous meetings.

**24. Committee and Department reports**

Receive updates on items of note since the previous Commission meeting from Commission committees and Department divisions.

**(A) Marine Resources Committee**

Receive summary and consider approving recommendations from the November 16, 2023 Committee meeting. Discuss referred topics and consider revisions to topics and timing.

**(B) Department Marine Region**

1. *Public discussion of action taken in the recreational Dungeness crab fishery to temporarily prohibit the use of crab traps between the Sonoma/Mendocino counties line and Lopez Point, Monterey County (fishing zones 3 and 4) and to issue a fleet advisory for all fishing zones (1-6) to protect marine life from entanglement risk.*

(Pursuant to Section 29.80)

- II. *Public discussion of action taken to close the recreational razor clam fishery in Del Norte County due to elevated levels of domoic acid*  
(Pursuant to subsection 5523(a)(2), Fish and Game Code)
- III. *Commercial and recreational groundfish fisheries*

**25. Commission administrative items**

- (A) ***Legislation and other agency regulations***
- (B) ***Rulemaking timetable updates***
- (C) ***Future meetings – February 14-15, 2024 Commission, request for March 2024 Marine Resources Committee date change, request to add a March 2024 teleconference, and request for August and October 2024 Commission meeting location changes***

Adjourn

### **Public Receipt of Documents**

This section of the agenda highlights reports or other documents received by the Commission since the previous meeting. Any Commission discussion or action on these documents will be noticed and placed on the agenda of a future meeting. Since October 6, 2023, the Commission received two documents:

- 1. A petition from Jonathan Rosenfield, Ph.D., San Francisco Baykeeper to list white sturgeon (*Acipenser transmontanus*) as threatened under the California Endangered Species Act.
- 2. A recommendation from the Department regarding the major amendment of EFP #2022-03, testing of Sub Sea Sonics pop-up gear in the California Dungeness crab and hagfish fisheries.

## EXECUTIVE SESSION

(Not Open to Public)

At a convenient time during the regular agenda of the meeting listed above, the Commission will recess from the public portion of the agenda and conduct a closed session on the agenda items below. The Commission is authorized to discuss these matters in a closed session pursuant to Government Code Section 11126, subdivisions (a)(1), (c)(3), and (e)(1), and Fish and Game Code Section 309. After closed session, the Commission will reconvene in public session, which may include announcements about actions taken during closed session.

- (A) Pending litigation to which the Commission is a Party
  - I. The Ballona Wetlands Land Trust v. California Fish and Game Commission (Ballona Wetlands Ecological Reserve petition for regulation change)
  - II. Fall River Conservancy and California Trout v. California Fish and Game Commission and California Department of Fish and Wildlife (California Environmental Quality Act determination regarding amendments to inland trout regulations)
  - III. United Water Conservation District v. California Fish and Game Commission (southern California steelhead “may be warranted” determination under the California Endangered Species Act and regulation authorizing limited take under Fish and Game Code Section 2084)
  - IV. Crowe v. California Fish and Game Commission (suspension of a commercial fishing license and a lobster operator permit)
- (B) Possible litigation involving the Commission
- (C) Staffing
- (D) Deliberation and action on license and permit items

## California Fish and Game Commission Meeting Schedule

**Note:** As meeting dates and locations can change, please visit [www.fgc.ca.gov](http://www.fgc.ca.gov) for the most current list of meeting dates and locations. All Commission meetings will include a webinar/teleconference option for attendance and every effort will be made to ensure that committee meetings include the same.

Meeting Date	Commission Meeting	Committee Meeting
January 18, 2024		<b>Wildlife Resources</b> Department of Fish and Wildlife Inland Deserts Region Field Office 3602 Inland Empire Boulevard, C220 Ontario, CA 91764
February 14-15, 2024	Natural Resources Headquarters Building Auditorium 715 P Street, 2nd Floor Sacramento, CA 95814	
March 14, 2024		<b>Marine Resources</b> San Clemente area
April 16, 2024		<b>Tribal</b> San Jose
April 17-18, 2024	San Jose	
May 15, 2024	Teleconference	
May 16, 2024		<b>Wildlife Resources</b> Yreka
June 19-20, 2024	Mammoth Lakes	
July 18, 2024		<b>Marine Resources</b> Santa Rosa area
August 13, 2024		<b>Tribal</b> Fortuna
August 14-15, 2024	Fortuna	
September 12, 2024		<b>Wildlife Resources</b> San Jose
October 9-10, 2024	Sacramento	
November 7, 2024		<b>Marine Resources</b> Sacramento
December 10, 2024		<b>Tribal</b> San Diego area
December 11-12, 2024	San Diego area	

## Other Meetings of Interest

### **Association of Fish and Wildlife Agencies**

- September 22-25, 2024 – Madison, WI

### **Pacific Fishery Management Council**

- March 5-11, 2024 – Fresno, CA
- April 5-11, 2024 – Seattle, CA
- June 6-13, 2024 – San Diego, CA
- September 18-24, 2024 – Spokane, WA
- November 13-19, 2024 – Costa Mesa, CA

### **Pacific Flyway Council**

- March 26, 2024 – Grand Rapids, MI
- August 2024 – Date and Location TBD

### **Western Association of Fish and Wildlife Agencies**

- June 3-7, 2024 – Stevenson, WA

### **Wildlife Conservation Board**

- February 15, 2024 – Sacramento, CA
- May 23, 2024 – Sacramento, CA
- August 22, 2024 – Sacramento, CA
- November 21, 2024 – Sacramento, CA



## Important Commission Meeting Procedures Information

### Welcome to a Meeting of the California Fish and Game Commission

This year marks the 154<sup>th</sup> year of operation of the Commission in partnership with the California Department of Fish and Wildlife. Our goal is the preservation of our heritage and conservation of our natural resources through informed decision making; Commission meetings are vital in achieving that goal and we provide this information to be as effective and efficient toward that end. Welcome, and please let us know if you have any questions.

### Persons with Disabilities

Persons with disabilities needing reasonable accommodation to participate in public meetings or other Commission activities are invited to contact the Department's Equal Employment Opportunity (EEO) Office at [EEO@wildlife.ca.gov](mailto:EEO@wildlife.ca.gov). Accommodation requests for facility and/or meeting accessibility and requests for American Sign Language interpreters should be submitted at least two weeks prior to the event. Requests for real-time captioners should be submitted at least four weeks prior to the event. These timeframes are to help ensure that the requested accommodation is met. If a request for an accommodation has been submitted but is no longer needed, please contact the EEO Office immediately.

### Stay Informed

To receive meeting agendas and regulatory notices about those subjects of interest to you, visit the Commission's website, [www.fgc.ca.gov](http://www.fgc.ca.gov), to sign up on our electronic mailing lists.

### Submitting Written Comments

The public is encouraged to comment on any agenda item. Submit written comments by one of the following methods: E-mail to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov); mail to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090; deliver to California Fish and Game Commission, 715 P Street, 16<sup>th</sup> Floor, Sacramento, CA 95814 (you must call at least one business day in advance to arrange delivery). Materials provided to the Commission will be available to the general public.

### Comment Deadlines

The **Comment Deadline** for this meeting is **5:00 p.m. on November 30, 2023**. Written comments received at the Commission office by this deadline will be made available to Commissioners prior to the meeting.

The **Supplemental Comment Deadline** for this meeting is **noon on December 8, 2023**. Comments received by this deadline will be made available to Commissioners at the meeting.

After these deadlines, written comments may be delivered in person to the meeting. Please bring 12 copies of written comments to the meeting and give them to the designated staff member just prior to speaking.

### Petitions for Regulation Change

Any person requesting that the Commission adopt, amend, or repeal a regulation must complete and submit form FGC 1, *Petition to the California Fish and Game Commission for Regulation Change*, available at <https://fgc.ca.gov/Regulations/Petition-for-Regulation-Change>. To be received by the Commission at this meeting, petition forms must be delivered by the **Supplemental Comment Deadline** (or delivered in person at the meeting during the

regulation change petitions agenda item). Petitions received at this meeting will be scheduled for consideration at the next regularly scheduled business meeting, unless the petition is rejected under staff review pursuant to subsection 662(b).

### **Non-Regulatory Requests**

All non-regulatory requests follow a two-meeting cycle to ensure proper review and thorough consideration of each item. All requests submitted by the **Supplemental Comment Deadline** (or heard during general public comment at the meeting) will be scheduled for receipt at this meeting and scheduled for consideration at the next regularly scheduled business meeting.

### **Speaking at the Meeting**

**To speak on an agenda item in-person**, please complete a “speaker card” and provide it to the designated staff member before the agenda item is announced. Please complete one speaker card per item. Cards will be available near the entrance of the meeting room.

**To speak on an agenda item by webinar/teleconference**, please “raise” your hand either through the Zoom function or by pressing \*9 once on your phone when prompted at the beginning of the agenda item.

1. In-person speakers will be identified in groups; please line up when your name is called. Speakers by webinar/teleconference will be identified by your Zoom display name or last three digits of your phone number; please pay attention to when your name or number is called.
2. When addressing the Commission, please give your name and the name of any organization you represent, and provide your comments on the item under consideration.
3. If there are several speakers with the same concerns, please appoint a spokesperson and avoid repetitive testimony.
4. The presiding commissioner will allot between one and three minutes per speaker per agenda item, subject to the following exceptions:
  - a. The presiding commissioner may allow up to five minutes to an individual speaker if a minimum of three individuals who are present when the agenda item is called have ceded their time to the designated spokesperson, and the individuals ceding time forfeit their right to speak to the agenda item.
  - b. In-person participants ceding their time shall complete a speaker card and approach the staff table with the spokesperson so that staff may confirm the presence of those ceding their time. If you are participating via Zoom and ceding your time to another speaker, please notify the Commission at [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov) prior to the start of the agenda item, including to whom you are ceding your time, and be present on Zoom during the agenda item.
  - c. Individuals may receive advance approval for additional time to speak if such requests are received by email or delivery to the Commission office by the **Supplemental Comment Deadline**. The president or designee will approve or deny the request no later than 5:00 p.m. two days prior to the meeting.
  - d. An individual requiring an interpreter is entitled to at least twice the allotted speaking time pursuant to Government Code Section 11125.7(c).
  - e. An individual may receive additional time to speak to an agenda item at the request of any commissioner.

***Agenda items may be heard in any order and on either day pursuant to the discretion of the presiding commissioner.***

### **Visual Presentations and Associated Materials**

All electronic presentations must be submitted by the ***Supplemental Comment Deadline*** and approved by the Commission executive director before the meeting.

1. Electronic presentations must be provided by email to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov). If the presentation file is too large to send via email, contact staff to identify an alternative method for submitting the file.
2. All electronic formats must be Windows PC compatible.
3. If presenting at the in-person meeting location, it is recommended that you bring a print copy of your presentation in case of technical difficulties.
4. If you have written materials to accompany your presentation, please bring 12 copies to the meeting and give them to the designated staff member just prior to presenting.

**California Fish and Game Commission**  
**Potential Agenda Items for the February 2024 Commission Meeting**

*December 8, 2023*

The next Commission meeting is scheduled for February 14-15, 2024 in Sacramento with options to participate by webinar and phone. This document identifies potential agenda items for the meeting, including items to be received from Commission staff and the California Department of Fish and Wildlife (Department).

**Wednesday, February 14: Marine-related and administrative items**

1. General public comments for items not on the agenda (day 1)
2. Election of Commission president and vice president
3. Committee assignments
4. Commission executive director and Department reports (Department director's report and Law Enforcement Division report)
5. Justice, equity, diversity and inclusion plan update
6. Adoption: Recreational California halibut bag and possession limit updates
7. Adoption: Sea urchin recreational harvest extension
8. Discuss: Recreational fishing regulations for federal groundfish
9. Commission policies review
10. New Experimental Fishing Permit application: Receive, consider and potentially act on an application submitted by Craig Thomsson and Rachel Thomsson for Testing and commercial use of hoop nets in the California Dungeness crab fishery
11. Amendment of Experimental Fishing Permit 2022-03: Testing of Sub Sea Sonics Pop-up Gear in the California Dungeness Crab and Hagfish Fisheries
12. Action on marine petitions for regulation change
13. Action on marine non-regulatory requests from previous meetings
14. Items of interest from previous meetings (marine)
15. Committee and Department reports (Marine Resources Committee and Department Marine Region)

**Thursday, February 15: Wildlife- and inland fisheries-related and administrative items**

16. General public comment for items not on the agenda (day 2)
17. Notice: Central Valley sport fishing
18. Notice: Klamath River Basin sport fishing
19. Discussion: Waterfowl hunting
20. Discussion: Mammal hunting updates 2024
21. Adoption: Klamath river dam removal sport fishing

22. Adoption: Department Lands
23. Adoption: Exotic game mammals and wild pig validation
24. Approval of sufficiently related changes to adopted regulations: Permits and draws for special hunts
25. Ballona Wetlands Ecological Reserve consistency determination
26. Action on wildlife and inland fisheries petitions for regulation change
27. Action on wildlife and inland fisheries non-regulatory requests from previous meetings
28. Items of interest from previous meetings (wildlife)
29. Committee and Department reports (Wildlife Resources Committee, Department Wildlife and Fisheries Division, and Ecosystem Conservation Division, and Tribal Committee)
30. Administrative items (legislation and other agency regulations, rulemaking timetable, next meeting)
31. Executive (closed) session



# California Fish and Game Commission Tribal Committee (TC) Work Plan

*Updated December 4, 2023*

*Note: Proposed changes to topics/timing are shown in blue underline or strike-out font.*

Topic / Goal	Type / Lead	Apr 2023	<u>Aug 2023</u>	Dec 2023	<u>Apr 2024</u>
<b>Special Projects</b>					
CFGC justice, equity, diversity and inclusion plan	CFGC Project	X	<u>X</u>	X	<u>X</u>
Tribal subsistence definition and related management mechanisms	TC Project	X	<u>X</u>	X	<u>X</u>
Co-management roundtable discussion	TC Project	X	<u>X</u>	X	<u>X</u>
Coastal fishing communities policy	MRC Project	X	<u>X</u>	X/R	
<b>Management Plans</b>					
Sheep, deer, antelope, trout, abalone, kelp/seaweed: Updates and guidance (timing as appropriate)	DFW	X	<u>X</u>	X	<u>X</u>
<b>Informational <u>and Discussion</u> Topics</b>					
<u>Annual tribal planning meeting</u>			<u>X</u>	<u>X</u>	<u>X</u>
California Natural Resources Agency			<u>X</u>	X	
OPC – MPA Statewide Leadership Team; <del>tribal-outreach strategy</del> ; Tribal Marine Stewards Network	OPC	X	<u>X</u>	X	
CDFW – Possible items include: – Marine protected areas decadal management review – Drought/wildfire impacts and state response – Climate adaptation, mitigation, science – Statewide kelp and abalone recovery efforts – Proposition 64 (cannabis) implementation – Other items as identified by CDFW	CDFW	X	<u>X</u>	X X	<u>X</u>
<u>Other agencies, as appropriate or requested</u>					
Cross-pollination with MRC and WRC: Identify tribal concerns and common themes with MRC and WRC	CFGC Committees	X	<u>X</u>	X	<u>X</u>
Coastal Fishing Communities Project updates	MRC Project	X	<u>X</u>		
CFGC regulatory and non-regulatory updates	CFGC staff	X	<u>X</u>	X	<u>X</u>

**Key:** X = Discussion scheduled      X/R = Recommendation developed and moved to CFGC  
 CFGC = California Fish and Game Commission      MRC = CFGC's Marine Resources Committee  
 CDFW = California Department of Fish and Wildlife      WRC = CFGC's Wildlife Resources Committee  
 OPC = California Ocean Protection Council