California Fish and Game Commission

Marine Resources Committee

Meeting Binder

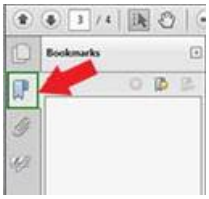
July 21, 2021

Webinar/Teleconference

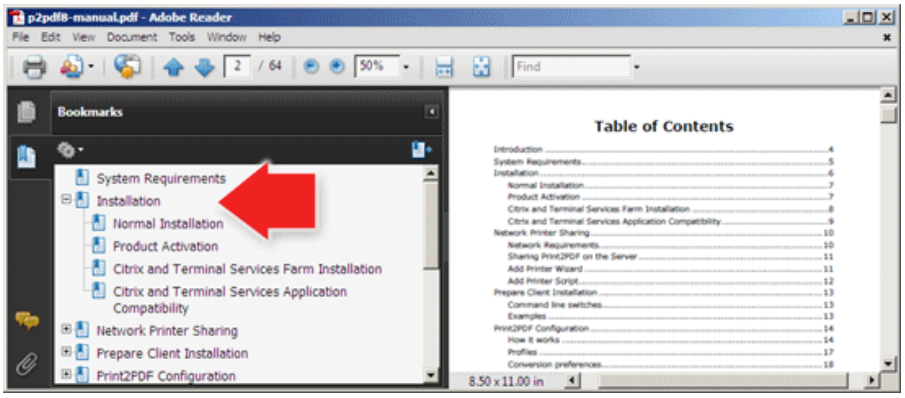
EASY GUIDE TO USING THE BINDER

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 FISH AND GAME COMMISSION COMMITTEE MEETING

- Welcome to this meeting of the Marine Resources Committee. The Committee is comprised of up to two Commissioners who co-chair each meeting; members are assigned by the Commission annually.

- 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 chairs cannot take action independent of the full Commission; instead, the chairs make recommendations to the full Commission at regularly scheduled meetings.

- These proceedings are being recorded for reference and archival purposes and are available upon request.

- Items may be heard in any order pursuant to the determination of the Committee Co-Chairs.

- As a general rule, requests for regulatory change need to be redirected to the full Commission and submitted on the required petition form, FGC 1, titled “Petition to the California Fish and Game Commission for Regulation Change” (Section 662, Title 14, CCR). 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.

- Committee meetings operate informally and provide opportunity for everyone to provide comment on agenda items. If you wish to speak on an agenda item, please follow these guidelines:
    1. Raise your hand and wait to be recognized by the Committee.
    2. Provide your name, affiliation (if any), and the number of people you represent.
    3. Time is limited; please keep your comments precise to give others time to speak.
    4. If several speakers have the same concerns, please appoint a group spokesperson.
    5. If speaking during public comment, the subject matter you present should <u>not be related</u> to any item on the current agenda (public comment on agenda items will be taken at the time the Committee members discuss that item).

INTRODUCTIONS FOR FISH AND GAME COMMISSION MARINE RESOURCES COMMITTEE

FISH AND GAME COMMISSIONERS

Samantha Murray	MRC Chair (Del Mar)
Eric Sklar	MRC Chair (Saint Helena)

COMMISSION STAFF

Melissa Miller-Henson	Executive Director
Rachel Ballanti	Deputy Executive Director
Susan Ashcraft	Marine Advisor
Cynthia McKeith	Staff Services Analyst
David Haug	Regulatory Analyst
Corinna Hong	Sea Grant State Fellow

DEPARTMENT OF FISH AND WILDLIFE

Mike Stefanak	Assistant Chief, Law Enforcement Division
Randy Lovell	Statewide Aquaculture Coordinator
Craig Shuman	Regional Manager, Marine Region
Sonke Mastrup	Program Manager, Invertebrate Fisheries, Marine Region
Becky Ota	Program Manager, Habitat Conservation, Marine Region
Kirsten Ramey	Program Manager, State Fisheries, Marine Region
Wes Boyle	Captain, Marine Law Enforcement Division
Eric Kord	Captain, Marine Law Enforcement Division

INVITED SPEAKERS

Mike Esgro	Marine Ecosystems Program Manager and Tribal Liaison, California Ocean Protection Council

I would also like to acknowledge special guests who are present:
(i.e., key DFW staff, elected officials, tribal chairpersons, other special guests)

_____

_____

STATE OF CALIFORNIA
Gavin Newsom, Governor

Fish and Game Commission

Wildlife Heritage and Conservation
Since 1870

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MARINE RESOURCES COMMITTEE

Committee co-chairs: Commissioner Sklar and Commissioner Murray

Meeting Agenda
July 21, 2021; 9:00 a.m.

Webinar and Teleconference

Pursuant to Executive Order N-08-21, the California Fish and Game Commission is conducting this committee meeting by webinar and teleconference. Commission members will participate remotely. The public may provide public comment during the public comment periods, and otherwise observe remotely consistent with the Bagley-Keene Open Meeting Act.

To participate in the meeting, please join via Zoom or by telephone. Click here or go to https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=193045&inline for instructions on how to join the meeting.

Note: See important meeting deadlines and procedures, including written public comment deadlines, starting on page 4. 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. General public comment for items not on agenda
Receive public comment regarding topics that are not included on the agenda.
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].

3. Marine aquaculture in California

Receive and discuss overview of:

(A) Requests related to existing state water bottom leases and new lease applications currently under review.

(B) Initial steps toward defining public interest determination criteria for new aquaculture lease applications.

4. Marine protected area network

Receive Department update on planning, structure, and reporting for the first decadal review of California's marine protected area network in 2022. Discuss options for Commission and public receipt and review.

5. Kelp and algae - Commercial harvest of bull kelp

(A) Receive an update on the coverage and distribution of north coast bull kelp canopy observed in 2020.

(B) Receive Department overview of bull kelp working group outcomes and recommendations for commercial bull kelp harvest regulation changes. Consider a potential committee recommendation.

(C) Consider potential committee recommendation for commercial bull kelp harvest regulations

6. Pink shrimp fishery

Receive Department update on and discuss a draft pink shrimp fishery management plan (FMP) and proposed implementing regulations. Consider a potential committee recommendation.

7. Market squid fishery

Receive and discuss Department plans to commence a review of market squid fishery management.

8. Staff and agency updates requested by the Committee

Receive updates from staff and other agencies.

Note: The public will be given opportunity to provide comment, although the level of in-meeting discussion will be at the discretion of the Committee.

(A) California Ocean Protection Council

(B) Department

- I. Law Enforcement Division
  - a. MPA-related enforcement actions in 2020
- II. Marine Region
  - a. Recreational red abalone FMP development
  - b. Use of hydraulic pump gear to take clam, sand crab, and shrimp
  - c. Experimental Fishing Permit Program Phase II

(C) Commission staff

- I. Coastal Fishing Communities Project

9. Future agenda items

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

(B) Potential new agenda topics for Commission consideration

Adjourn

California Fish and Game Commission
2021 Meeting Schedule

Note: As meeting dates and locations can change, please visit www.fgc.ca.gov for the most current list of meeting dates and locations.

Meeting Date	Commission Meeting	Committee Meeting
August 17, 2021		**Tribal** Webinar/teleconference
August 18-19, 2021	Webinar/teleconference	
September 16, 2021		**Wildlife Resources** Sacramento
October 13-14, 2021	Sacramento	
November 9, 2021		**Marine Resources** Sacramento
December 14, 2021		**Tribal** Sacramento
December 15-16, 2021	Sacramento	

Other Meetings of Interest

Association of Fish and Wildlife Agencies
- September 12-15, 2021; Providence, RI

Pacific Fishery Management Council
- September 8-15, 2021; Spokane, WA
- November 15-22, 2021; Costa Mesa, CA

Pacific Flyway Council
- August 27, 2021; Bozeman, MT

Western Association of Fish and Wildlife Agencies
- July 18-23, 2021; Santa Fe, NM

Wildlife Conservation Board
- August 26, 2021; videoconference or teleconference
- November 18, 2021; videoconference or teleconference

IMPORTANT COMMITTEE MEETING PROCEDURES INFORMATION

Welcome to a meeting of the California Fish and Game Commission's Marine 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. 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**; mail** to California Fish and Game Commission, P.O. Box 944209, Sacramento, CA 94244-2090; or **deliver** to California Fish and Game Commission, 1416 Ninth Street, Room 1320, Sacramento, CA 95814.

COMMENT DEADLINES

The **Written Comment Deadline** for this meeting is **5:00 p.m. on Thursday, July 8, 2021**. 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 Friday, July 16, 2021**. Comments received by this deadline will be made available to Commissioners at 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.*

Note: Materials provided to the Committee may be made 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* (Section 662, Title 14, California Code of Regulations). 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 comment on agenda items. If you wish to speak on an agenda item, please follow these guidelines:

1. You will be given instructions during the meeting for how to be recognized by the Committee co-chair(s) to speak.
2. Once recognized, please begin by giving your name and affiliation (if any) and the number of people you represent.
3. Time is limited; please keep your comments concise so that everyone has an opportunity to speak.
4. If there are several speakers with the same concerns, please try to appoint a spokesperson and avoid repetitive comments.
5. If speaking during public comment for items not on the agenda (Agenda Item 2), the subject matter you present should not be related to any item on the current agenda (public comment on agenda items will be taken at the time the Committee members discuss that item). As a general rule, 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.

1. Electronic presentations must be provided by email to fgc@fgc.ca.gov or delivered to the Commission on a USB flash drive by the deadline.
2. All electronic formats must be Windows PC compatible.

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

2. GENERAL PUBLIC COMMENT

Today's Item **Information ☒** **Action ☐**

Receive public comment for items not on the agenda.

Summary of Previous/Future Actions (N/A)

Background

MRC receives two types of correspondence or comment under general public comment: requests for MRC to consider new topics and informational items. As a general rule, requests for regulatory change must be submitted to FGC on petition form FGC 1, *Petition to the California Fish and Game Commission for Regulation Change* (Section 662). However, MRC may, at its discretion, request that staff follow up on items of potential interest for possible recommendation to FGC.

Significant Public Comments (N/A)

Recommendation

Staff recommends any new agenda items based on issues raised and within FGC's authority be held for discussion under Agenda Item 9, Future Agenda Items.

Exhibits (N/A)

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

3. MARINE AQUACULTURE IN CALIFORNIA

Today's Item **Information ☒** **Action ☐**

Receive and discuss overview of:

(A) Requests related to existing state water bottom leases and new lease applications currently under review.

(B) Initial steps toward defining public interest determination criteria for new aquaculture lease applications.

Summary of Previous/Future Actions

(A) N/A

(B)

- FGC hiatus on receiving new aquaculture lease applications — Jun 2020-Mar 2021
- MRC recommended developing *public interest* criteria for new aquaculture leases in lieu of extending hiatus — Mar 16, 2021; MRC, Webinar/Teleconference
- FGC approved MRC recommendation to develop *public interest* criteria for new lease applications — Apr 14-15, 2021; Webinar/Teleconference
- **Today receive update on developing criteria** — **Jul 21, 2021; MRC, Webinar/Teleconference**

Background

FGC has the authority to lease state water bottoms to any person for the purpose of conducting aquaculture in marine waters of the State, under terms agreed upon between FGC and the lessee (sections 15400 and 15405, California Fish and Game Code). Currently there are 17 FGC-issued aquaculture leases used to cultivate shellfish (16 leases) or seaweed (1 lease). Changes to existing leases must be approved by FGC following staff analysis and review. Three applications for new state water bottom leases were received by FGC prior to 2020 and are currently undergoing DFW and/or environmental reviews. Recognizing that the three new lease applications were the first that FGC had received in over 25 years, the processes for reviewing leases and methods of interagency coordination had to be created anew. At the same time, staff were already tasked with reviewing nearly a dozen requests for amendments to existing leases.

Based on MRC recommendations, FGC established a temporary hiatus on considering any additional new lease applications, to allow time for staff to focus on advancing existing requests and create the necessary coordination and environmental review processes. The hiatus continued for ten months, from Jun 2020 – Apr 2021 (see exhibits 1 and 2 for additional background).

At the Mar 2021 MRC meeting, DFW gave an update on progress made structuring a more coordinated, interagency approach to reviewing lease requests submitted to FGC and referred to DFW for review. The California Ocean Protection Council also gave an update on broader state aquaculture planning, including leading the development of aquaculture principles to serve as guidance to improve interagency coordination amongst the various state agencies of jurisdiction; the council expects a statewide aquaculture action plan to be completed in 2023. MRC also requested that staff bring a more detailed overview of current requests related to existing aquaculture leases, the three new lease applications currently under review, and long-term aquaculture planning.

In Apr 2021, MRC recommended, and FGC approved, initiating a process to formalize criteria for FGC to evaluate and determine whether future proposed leases would be in the public interest, as required in Fish and Game Code section 15400, in lieu of recommending a continued hiatus on new lease applications. FGC also approved MRC's recommendation to schedule an update on the public interest criteria for today's meeting.

Update

(A) Current lease requests

In Jun 2021, DFW provided FGC with a memo summarizing current marine aquaculture leases and projects under review by DFW staff (Exhibit 3); some of the projects under review by DFW staff do not require FGC staff input or participation. Several of the FGC lease requests have recently been resolved, will be completed in the coming weeks, or are moving to the next stage of environmental review. The Jun summary memo and a DFW presentation today (Exhibit 4) will serve as the foundation for an overview of lease requests, the review process, and considerations for how staff is prioritizing incoming requests.

(B) Initial efforts towards developing public interest determination

DFW and FGC staff will give verbal updates on the first steps taken to develop a set of public interest criteria.

Significant Public Comments

(A) An aquaculture leaseholder operating offshore from Santa Barbara asks for updates on the status of its lease amendment request to add species, seeking the estimated time until action can be scheduled. The leaseholder highlights the time-sensitive nature of its partnership with scientists who have received grant funding to develop the two native species the leaseholder has requested to add to the lease (Exhibit 5).

A concerned community member commented on debris associated with aquaculture operations in Tomales Bay and specifically asks for: (a) FGC not to grant the request to transfer an existing lease to a new leaseholder until a complete survey of the lease area is conducted due to large amounts of plastic debris the commenter believes were generated by the existing shellfish operation, and (b) for FGC and DFW to take the lead on initiating removal of legacy debris left by prior and current shellfish operations in Tomales Bay and other waters of the state (Exhibit 6).

(B) A concerned citizen notes that FGC should consider all the public's interests—such as fishing, sailing, kayaking and birding—while developing a set of public interest criteria for aquaculture, especially under the current challenges created by global sea rise (Exhibit 6).

Recommendation

Discuss current approaches to coordinating reviews overall and prioritizing individual requests, and provide guidance or direction. Schedule an update on staff progress developing public interest concepts at a future MRC meeting.

Exhibits

1. *Background document*: Staff summary for Mar 17, 2020 MRC meeting, agenda Item 7
2. *Background document*: Staff summary for Nov 10, 2020 MRC meeting, agenda item 5
3. DFW memo and table regarding marine aquaculture leases and projects, received Jun 11, 2021
4. DFW presentation
5. Email from Bernard Friedman, Santa Barbara Mariculture Company, received Jul 7, 2021
6. Email from Richard James, Coastodian, received Jul 8, 2021

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

4. MARINE PROTECTED AREA NETWORK

Today's Item **Information ☒** **Action ☐**

Receive and discuss DFW update on planning for the first decadal review of California's marine protected area (MPA) network in 2022.

Summary of Previous/Future Actions

- FGC adopted master plan for MPAs — Aug 24-25, 2016; Folsom
- MRC received first DFW update on plans for decadal management review — Mar 16, 2021; MRC, Webinar/Teleconference
- **Today's update and discussion** — **Jul 21, 2021; MRC, Webinar/Teleconference**

Background

The Marine Life Protection Act (MLPA) master plan for MPAs, adopted by FGC in 2016, provides a structure for monitoring and adaptively managing California's MPA network to meet the goals of the MLPA. The master plan established a formal 10-year review cycle to evaluate network efficacy and determine whether changes in management are warranted. The first such decadal management review of the statewide MPA network will occur in 2022. The review will cover four core areas - research and monitoring, enforcement and compliance, policy and permitting, and outreach and education - and provide adaptive management recommendations.

In Mar 2021, DFW provided MRC an update on preparation for the first decadal management review. DFW reported that preparation has involved substantial coordination among DFW, OPC, and FGC staff, MPA monitoring project leads, and partners. DFW also highlighted that two science advisory working groups, convened by DFW, OPC, and California Ocean Science Trust, were in the process of developing guidance on scientific evaluation for the decadal review. Substantial effort is needed to develop not only the approach to the first review, but also considerations for subsequent reviews.

Updates

Since Mar, the two science advisory working groups have concluded and released reports with recommendations to lend scientific support to the 2022 review. The "decadal working group" report focuses on approaches and priorities for evaluating MPA network performance, while the "climate resiliency working group" report provides guidance for integrating climate change with MPA science (see links listed as exhibits 3 and 4). Several active contracts are also proceeding; these aim to increase education and outreach surrounding MPAs or gain input from tribes, stakeholders, and partners over the next 12 to 16 months. There are also seven OPC-funded research projects underway, designed to synthesize long-term monitoring data associated with key habitats found in the MPA network (see Exhibit 1 for project descriptions and links).

Today, DFW will present an update on planning efforts for the 2022 MPA network decadal management review (Exhibit 2), and will highlight for MRC discussion potential options for how to incrementally release reporting and results to the MRC, FGC, and public.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits

1. Long-term MPA monitoring project descriptions, received Jul 8, 2021
2. DFW presentation
3. Decadal working group report, available at https://www.opc.ca.gov/webmaster/_media_library/2021/06/Evaluating-Californias-Marine-Protected-Area-Network-2021.pdf?mc_cid=10b78d03c5&mc_eid=c1c16576a3
4. Climate resiliency working group report, available at https://www.opc.ca.gov/webmaster/_media_library/2021/06/Climate-Resilience-and-Californias-MPA-Network-2021_final.pdf?mc_cid=10b78d03c5&mc_eid=c1c16576a3

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

5. KELP AND ALGAE – COMMERCIAL HARVEST OF BULL KELP

Today's Item **Information ☐** **Action ☒**

Receive and discuss DFW updates, and potential committee recommendation.

(A) Receive update on north coast bull kelp canopy coverage and distribution observed in 2020

(B) Receive DFW overview of commercial bull kelp working group outcomes and recommendations

(C) Consider a potential committee recommendation for commercial bull kelp harvest regulations

Summary of Previous/Future Actions

• MRC received updates on review of commercial kelp and algae harvest management	2015-2019; MRC, various
• DFW presented draft regulations; MRC recommended additional outreach	Mar 17, 2020; MRC, Santa Rosa and Webinar/Teleconference
• DFW proposed formation of stakeholder working groups, starting with bull kelp	Nov 10, 2020; MRC, Webinar/Teleconference
• DFW provided updates on bull kelp working group meetings	Mar 16, 2021; MRC, Webinar/Teleconference
• **Today's updates, discussion, and potential recommendation**	**Jul 21, 2021; MRC, Webinar/Teleconference**

Background

In Mar 2020, DFW presented MRC an overview of draft proposed regulation changes for commercial kelp and algae harvest (see Exhibit 1 for background). Based on feedback from commercial kelp harvesters, MRC recommended that FGC request DFW conduct additional outreach with affected industry members, tribes, and other interested parties, and continue discussions of a potential revised proposal with MRC. In Apr 2020, FGC approved the MRC recommendation and shifted the proposed the rulemaking schedule to a date to be determined.

At the Nov 2020 MRC meeting, DFW announced its plans to form two ad hoc working groups — one for bull kelp harvest followed by one for edible seaweeds harvest — to collaboratively develop revised regulatory change proposals, including regional approaches, harvest methods, and data needs. DFW proposed to prioritize the bull kelp working group (BKWG) and harvest review first, in light of the current focus on tracking restoration and recovery of north coast bull kelp. Bull kelp restoration and recovery tracking is also a standing topic on the MRC work plan. DFW noted that it is also continuing in a government-to-

government tribal consultation that began in 2018 with several InterTribal Sinkyone Wilderness Council member tribes about kelp and seaweed.

In Mar 2021, DFW reported on outcomes from first BKWG meeting, held in late Dec 2020, and plans for two additional BKWG meetings. DFW also discussed its continued consultation with member tribes of the InterTribal Sinkyone Wilderness Council to understand tribal concerns around kelp and marine algae management. DFW anticipated completing the BKWG process and preparing a recommendation for commercial bull kelp harvest regulations for discussion and potential MRC recommendation at the Jul 2021 MRC meeting (this meeting) followed by a rulemaking later this year.

At its Jun 2021 meeting, FGC approved scheduling MRC receipt and vetting of the BKWG outcomes and DFW's proposal for changes to commercial bull kelp harvest regulations for potential MRC recommendation at today's meeting. Following public comment from a harvester requesting that MRC account for recently observed bull kelp recruitment when considering harvest regulations (see significant public comments below), FGC expanded the agenda item. FGC requested that today's agenda item begin with an update on the status of north coast bull kelp canopy coverage and distribution from recent observations in 2020 (and 2021, if available), to provide context when receiving the BKWG outcomes and DFW's proposal.

Consistent with FGC direction, today's item will include:

(A) Status of bull kelp in 2020: DFW will present an update on current trends in bull kelp canopy cover using satellite imagery data (Exhibit 2). DFW has attempted to gain access to satellite imagery of canopy cover for the first quarter of 2021, but the data were not available at the time this binder was produced.

(B) Bull kelp harvest regulations: DFW will report on the outcomes of the completed BKWG process and present its proposal for regulation changes. In total, BKWG met four times between Dec 2020 and Jun 2021. Individual meeting summaries prepared by DFW are available on the DFW website (Exhibit 3). BKWG reviewed extensive data from DFW, researchers, and harvesters to inform its discussions. DFW presented its draft proposed regional management approach north of San Francisco to BKWG for discussion, and in response to feedback made modifications to the original draft. BKWG did not agree to a unified recommendation for bull kelp harvest regulations; however, the working group did reach several areas of agreement. DFW has summarized the BKWG areas of agreement and clarified areas where divergence remains (Exhibit 4).

In today's presentation (Exhibit 5), DFW will present a recap of kelp management review, stakeholder engagement, and data considerations (including areas of uncertainty), and note goals for longer-term planning through a kelp restoration and management plan. As requested, DFW has outlined its recommendation for regulation changes as informed by BKWG discussions and the ongoing tribal consultation. Proposed changes north of San Francisco include:

- Prohibit take of bull kelp in Sonoma and Mendocino counties;

- maintain the individual annual limit of two tons per year in Humboldt and Del Norte counties, but limit total annual harvest in those counties to four tons/year;
- limit new kelp lease applications to lease-only beds;
- include a sunset date for the first three items (approximately five years or upon adoption of a kelp restoration and management plan); and
- add data fields to harvest logs and modify the kelp harvester license.

As a trustee agency of the state charged with protecting fish and wildlife resources for present and future generations, DFW's proposal reflects a precautionary approach in its recommendation for harvesting a currently-depressed resource, consistent with other actions taken in response to the dramatic declines of bull kelp and impacts to associated species.

(C) Discussion and potential recommendation: There are a range of perspectives expressed among BKWG members and tribes as to the most appropriate actions to employ in applying precaution. This meeting is the first public vetting of DFW's revised proposal, BKWG outcomes and differences in perspective amongst BKWG members, and tribal proposals relative to DFW's proposal. Today is an opportunity to ask questions, clarify different perspectives, and discuss input from tribes and stakeholders. A potential committee recommendation could include identifying options for resolving areas of disagreement within the proposed regulations and advance a regulation proposal to FGC as recommended by DFW, or to continue the topic to the Nov 2021 MRC meeting before developing a recommendation and advancing the topic to FGC.

Significant Public Comments

At the Jun 2021 FGC meeting, a commercial seaweed harvester from Mendocino County reported observations of recent bull kelp recruitment in the county this year that he believes are not accounted for in DFW's survey data. He requested that MRC consider recent observations as he believes that DFW's proposal to close harvest in the county is not justified based on improving conditions. The harvester also asked what standard of bull kelp "recovery" would be used to determine when to lift any restrictive harvest regulations that might be adopted.

Recommendation

FGC staff: Concurs with DFW in taking a precautionary approach to commercial harvest of a currently-depressed stock, while minimizing the impact to current bull kelp harvesters to the extent possible. Receive updates from DFW as a kelp recovery and management plan is developed with stakeholders.

DFW: Advance a rulemaking to amend commercial harvest of bull kelp regulations with provisions as proposed in Exhibit 5, and schedule for rulemaking as soon as possible.

Exhibits

1. Background document: Staff summary from Mar 17, 2020 MRC meeting, agenda item 6

2. DFW presentation: Bull kelp status in 2020
3. DFW Bull Kelp Working Group webpage with individual meeting summaries, available at https://wildlife.ca.gov/Conservation/Marine/Kelp/Commercial-Harvest/Bull-Kelp-Working-Group
4. DFW report: *Bull Kelp Working Group Areas of Agreement and Divergence*, dated Jul 16, 2021
5. DFW presentation: Kelp and algae harvest – bull kelp

Committee Direction/Recommendation

The Marine Resources Committee recommends that the Commission support proposed regulation measures for commercial bull kelp harvest as recommended by the Department and discussed today, and schedule for rulemaking on a timeline to be determined.

OR

The Marine Resources Committee recommends that the Commission support proposed regulation measures for commercial bull kelp harvest as recommended by the Department and discussed today, except _____, and schedule for rulemaking on a timetable to be determined.

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

6. PINK SHRIMP FISHERY

Today's Item **Information ☐** **Action ☒**

Receive and discuss an update on a draft pink shrimp fishery management plan (FMP) and proposed implementing regulations, and consider a potential committee recommendation on the plan.

Summary of Previous/Future Actions

- FGC approved MRC recommendation to develop rulemaking for pink shrimp trawl fishery regulations — Dec 6-7, 2017; San Diego
- FGC approved MRC recommendation to support development of a pink shrimp FMP — Dec 9-10, 2020; Webinar/Teleconference
- DFW provided an update on pink shrimp FMP development — Mar 16, 2021; MRC, Webinar/Teleconference
- **Discuss pink shrimp FMP update, proposed implementing regulations, and potential recommendation** — **Jul 21, 2021; MRC, Webinar/Teleconference**

Background

At the Nov 2017 MRC meeting, DFW presented an overview of management issues, permit capacity, and research needs for the commercial pink shrimp trawl fishery, and provided initial recommendations for addressing management issues such as a capacity goal, bycatch reduction and lack of a harvest control rule. In Dec 2017, FGC approved an MRC recommendation to develop a rulemaking to address the identified management issues and explore additional management and research goals for the current fishery. FGC added a rulemaking to the regulatory timetable on a timeline to be determined (see Exhibit 1 for background information).

In Nov 2020, DFW recommended to MRC that developing an FMP and implementing regulations is the preferred way to address pink shrimp management needs. DFW noted that the FMP approach would put the commercial pink shrimp trawl fishery on the path to be the first state-managed fishery in California with a Marine Stewardship Council (MSC) sustainability certification and, therefore, has broad fishing industry support. In Dec 2020, FGC approved an MRC recommendation to support DFW development of an FMP for California pink shrimp.

The pink shrimp fishing industry supports an FMP as a crucial step in meeting eligibility requirements for MSC certification of sustainability. In particular, an FMP would help resolve deficiencies in management, such as lack of a harvest control rule, that led to previous failures of California's pink shrimp trawl fishery in achieving MSC certification. In contrast, the Oregon and Washington pink shrimp fisheries are MSC-certified, leading to marked increases in landings value relative to California product.

In Mar 2021, DFW provided MRC a draft timeline for pink shrimp FMP development; it included a public outreach webinar in spring and a draft FMP for FGC receipt in late summer or early fall. DFW also noted that the required peer review of the FMP will be completed by Marine Resources Assessment Group Americas, Inc. (known as MRAG Americas), who also issues MSC certification. DFW has reported that, due in part to the disparity in landings value without MSC certification, fishery participants from California are landing nearly all pink shrimp in Oregon instead of California at this time. Therefore, DFW requests FGC adopt the FMP in time for the 2022 fishery, which opens Apr 1, to provide incentive to California fishermen to land product in California.

Today, DFW will provide an overview of the draft pink shrimp FMP and proposed implementing regulations, and preferred timeline for discussion, and a potential committee recommendation (Exhibit 2).

Significant Public Comments (N/A)

Recommendation

FGC staff: Schedule the draft pink shrimp FMP for FGC consideration as proposed by DFW, and schedule a subsequent rulemaking to adopt implementing regulations, on timelines that account for FMP requirements in the Marine Life Management Act and for capacity of DFW and FGC regulatory staff.

DFW: Schedule a two-meeting FMP process for FMP approval in advance of the 2022 season, followed by a rulemaking process for implementing regulations.

Exhibits

1. Background document: Staff summary from Nov 2017 MRC meeting, agenda item 6
2. DFW presentation

Committee Direction/Recommendation

Schedule consideration of a draft pink shrimp fishery management plan as proposed by the Department on a timeline to be determined, and request that the Department propose a schedule for fishery management plan approval and adoption of implementing regulations that accounts for fishery management plan requirements and regulatory staff capacity.

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

7. MARKET SQUID FISHERY

Today's Item **Information ☒** **Action ☐**

Receive and discuss DFW plans to commence a review of market squid fishery management.

Summary of Previous/Future Actions (N/A)

Background

The market squid fishery is one of the largest commercial fisheries in California in both landings volume and value. The fishery has been under FGC's authority since 2001 and is managed under the *Market Squid Fishery Management Plan* (FMP) adopted by FGC in 2004. The FMP establishes harvest control rules, a restricted access program, environmental protections for seabird interactions, and fishery administration.

Over time, changes to regulations have been adopted to adaptively manage certain elements of the fishery. Additionally, commercial fishing industry members and other interested stakeholders have raised numerous requests and concerns to FGC and MRC over the years. However, there has not been a comprehensive review of market squid fishery management since the FMP was adopted in 2004.

DFW recently informed FGC of its intent to commence a review process for the market squid fishery and has developed a proposed structure for management review through an advisory committee process (Exhibit 1). For this meeting, DFW will present an overview of the market squid species and fishery, highlight monitoring approaches and status, and outline the proposed objectives and structure of a multi-phase squid fishery management review process leading to potential future management action (Exhibit 2).

Significant Public Comments (N/A)

Recommendation

Clarify proposed approach, solicit public feedback about the scoping and review process, and identify next steps for MRC engagement.

Exhibits

1. DFW informational flyer: Proposed Squid Fishery Advisory Process
2. DFW presentation

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

8. STAFF AND AGENCY UPDATES

Today's Item **Information ☒** **Action ☐**

Receive updates from staff and other agencies, including current topics on the work plan for which the Committee has requested an update. Verbal updates are expected for items (A) through (C).

(A) California Ocean Protection Council (OPC)

(B) DFW

I. Law Enforcement Division (LED)
   a. MPA-related enforcement actions in 2020

II. Marine Region
   a. Recreational red abalone fishery management plan (FMP) development
   b. Use of hydraulic pump gear to take clam, sand crab and shrimp
   c. Experimental Fishing Permit (EFP) Program Phase II

(C) FGC staff

I. Coastal Fishing Communities Project

Summary of Previous/Future Actions

(B) II.c. EFP Program Phase II

• MRC recommendation to support EFP rulemaking	Jul 21, 2020; MRC, Webinar/Teleconference
• FGC approved MRC recommendation for EFP rulemaking	Aug 19-20, 2020; Webinar/Teleconference
• EFP notice hearing continued and rulemaking referred to MRC for an update	Jun 16-17, 2021; Webinar/Teleconference
• **Today's EFP rulemaking update**	**Jul 21, 2021; MRC, Webinar/Teleconference**
• EFP notice hearing	Aug 18, 2021; Webinar/Teleconference

Background

This is a standing item for staff and agencies to provide an update on marine-related activities of interest. Verbal reports are expected at the meeting for items (A) through (C).

(A) ***OPC***

A verbal report will be provided by OPC staff.

(B) ***DFW***

I. *LED*

The LED report will include a summary of MPA enforcement actions tracked in 2020, as requested by FGC in Jun.

II. *Marine Region*

Marine Region will provide updates on two topics on the MRC work plan, and an update on a previous work plan topic that is scheduled for FGC action in Aug 2021.

- *Recreational red abalone FMP development.* The most recent MRC update was provided in Mar 2021, when DFW reported plans to conduct 2021 field surveys to check on stock status, and to host a summer webinar to share latest developments on harvest control rule integration. Today, DFW will give an update on progress.
- *Use of hydraulic pump gear to take clam, sand crab and shrimp.* In Feb 2021, FGC adopted an emergency rulemaking to ban use of hydraulic pump gear for recreational take of clam, sand crab, and shrimp. The emergency action was taken in response to a dramatic increase in angling effort and concerns about sustainability of the recently-employed gear type. A regular rulemaking to make the emergency regulations permanent is scheduled for Dec 2021. In Mar 2021, based on comments received at the emergency hearing from pump gear users, MRC recommended that FGC refer the topic to MRC. In Apr, FGC referred the topic to MRC to discuss the concerns raised by hydraulic pump gear users, including the request to explore in the regular rulemaking possible alternatives to a total gear ban. Today, DFW will give an update on recent field observations at clamming beds. A more detailed discussion is proposed for the Nov 2021 MRC meeting.
- *EFP Program Phase II rulemaking.* In Jul 2020, following a public engagement process led by DFW with regular updates to MRC, MRC recommended that FGC advance a rulemaking for the proposed EFP program. FGC approved the recommendation and scheduled the notice hearing for Jun 2021. At its Jun 2021 meeting, FGC continued the notice hearing to Aug 2021 to allow time for integrating program elements identified during DFW and FGC staff coordination. This meeting provides an opportunity for DFW to update MRC on program and rulemaking elements developed since the topic moved from MRC to FGC in Aug 2020.

(C) ***Commission Staff***

I. *Coastal Fishing Communities Project*

Consistent with previous direction, at the Mar 2021 MRC meeting staff presented analyses of several staff recommendations from the 2019 *Staff Synthesis Report on coastal fishing community meetings held 2016-2018*. To date, staff has provided MRC with draft analyses for five of the ten recommendations from the report. The analyses are currently available in various MRC meeting binders, but will be posted to the newly-revised FGC Coastal Fishing Communities Project webpage (https://fgc.ca.gov/Committees/Marine/Coastal-Fishing-Communities-Project) in the coming days. Staff has continued making progress on analyzing the remaining staff recommendations.

In Mar, staff also recommended that MRC support moving forward with staff recommendation 1 (*develop and adopt a policy and definition for coastal fishing communities*) while additional analyses continue, and presented options for a policy development process through stakeholder engagement. Specifically, staff proposed four to five small regional roundtable discussions followed by two public drafting workshops that allow for broad participation. Following discussion, MRC recommended that FGC direct staff to begin engaging stakeholders to initiate drafting a policy for coastal fishing communities as recommended by staff. In Apr 2021, FGC approved the MRC recommendation.

Today, the staff update will focus on policy planning progress, including initial steps taken to initiate regional roundtables.

Significant Public Comments (N/A)

Recommendation (N/A)

Exhibits (N/A)

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR JULY 21, 2021 MRC

9. FUTURE AGENDA ITEMS

Today's Item **Information ☐** **Action ☒**

Review work plan topics, priorities and timeline, and discuss potential new agenda topics for Commission consideration

Summary of Previous/Future Actions

- FGC approved MRC agenda and work plan — Jun 16-17, 2021; Webinar/Teleconference
- **Today's discussion** — **Jul 21, 2021; MRC, Webinar/Teleconference**
- Next MRC Meeting — Nov 9, 2021; MRC, Sacramento

Background

Committee topics are referred by FGC and scheduled as appropriate. FGC-referred topics and their schedule are shown in the MRC work plan (Exhibit 1), and currently include several complex and time-intensive topics under development. MRC has placed emphasis on issues of imminent regulatory or management importance; thus, scheduling current topics and considering new topics for MRC review will require planning relative to existing workload and timing considerations.

MRC Work Plan and Timeline

At this time, four discussion topics and four updates are proposed for the Nov 2021 meeting; topics are grouped by the type of anticipated action to help inform workload and prioritization, if needed.

Discussion and potential recommendations

1. California halibut fishery management plan
2. Kelp and algae commercial harvest
    a. Polstelsia (sea palm)
    b. Edible algae (seaweed)
3. Use of hydraulic pump gear to take clam, sand crab and shrimp, and future rulemaking
4. Coastal Fishing Communities Project

Updates from staff and other agencies

1. MLMA master plan for fisheries implementation
2. Red abalone fishery management plan
3. Aquaculture state water bottom leases: existing and future lease considerations
4. Kelp restoration and recovery tracking

Staff welcomes guidance from MRC regarding scheduling any specific topics on the work plan. Staff will bring an update and recommendation for Nov 2021 agenda topics to the Oct 13-14 FGC meeting.

Discuss and Recommend New MRC Topics

Today is an opportunity to identify any potential new agenda topics to recommend to FGC for referral to MRC. No new topics have been identified for potential referral to MRC at this time.

Significant Public Comments (N/A)

Recommendation

Discuss priorities, review list of topics to clarify those to schedule as updates versus discussion or recommendation items, and determine if any additional topics on the work plan should be scheduled for the Nov 2021 MRC meeting.

Exhibits

1. MRC work plan, updated Jun 19, 2021
2. FGC perpetual timetable for regulatory actions, dated Jun 25, 2021

Committee Direction/Recommendation

The Marine Resources Committee recommends that the Committee work plan be updated with the following changes: _____.

COMMITTEE STAFF SUMMARY FOR MARCH 17, 2020 MRC

For Background Purposes

7. MARINE AQUACULTURE IN CALIFORNIA

Today's Item **Information ☐** **Action ☒**

Receive update on marine aquaculture and discuss near-term priorities and potential committee recommendations related to:

(A) DFW aquaculture informational report, status of programmatic environmental impact report (PEIR), and proposed next steps; and

(B) Potential temporary hiatus in considering new state water bottom lease applications.

Summary of Previous/Future Actions

• Discussed best management practices in shellfish aquaculture	2016-2017; FGC and MRC, various
• FGC referred topic of future lease planning to MRC	Jun 21-22, 2017; Smith River
• MRC initial discussion on future lease planning	Jul 20, 2017; MRC, Santa Rosa
• MRC received overview of current aquaculture leases and update on future lease planning	Mar 6, 2018; MRC, Santa Rosa
• FGC referred PEIR topic to MRC	Apr 18-19, 2018; Ventura
• MRC received general overview of PEIR	Nov 14, 2018; MRC, Sacramento
• MRC received PEIR update	Mar 20, 2019; MRC, Sacramento
• FGC referred discussion of potential temporary hiatus on new lease applications to MRC	Feb 21, 2020; Sacramento
• **Today's program update and discussion**	**Mar 17, 2020; MRC, Santa Rosa**

Background

FGC has the authority to lease state water bottoms to any person for the purpose of conducting aquaculture in marine waters of the State, under terms agreed upon between FGC and the lessee (sections 15400 and 15405, California Fish and Game Code). FGC is prohibited from issuing leases for commercial offshore marine finfish aquaculture in California until a programmatic environmental impact report (PEIR) evaluates a management framework for potential future offshore marine aquaculture.

There are currently 17 active, FGC-issued, state water bottom leases held by 10 growers across the state for cultivating shellfish (16 leases) or seaweed culture (1 lease). In addition, FGC has received 3 applications for new state water bottom leases that are currently undergoing DFW and/or environmental reviews necessary before FGC schedules them for consideration.

Topics related to current lease management, desired enhancement of the state aquaculture program, and possible pathways to achieving an enhanced program have been discussed at various FGC and MRC meetings since 2016.

COMMITTEE STAFF SUMMARY FOR MARCH 17, 2020 MRC

For Background Purposes

In Mar 2018, MRC received an overview of existing leases and current management efforts from DFW, and discussed how management efforts by DFW and other agencies may contribute to future aquaculture planning and enhanced management of the state aquaculture program (Exhibit 1). However, the discussion highlighted a disparity between proposed program development areas and staff capacity to pursue them. In light of the competing interests and needs, MRC made a recommendation for how to prioritize the various planning efforts.

In Apr 2018, FGC accepted the MRC recommendation and, based on FGC direction, MRC received an overview and update on PEIR development at the Nov 2018 and Mar 2019 meetings (see Exhibit 2 for background).

For today's meeting there are two areas of focus for discussion: aquaculture in California generally and new state water bottom leases.

(A) DFW will provide an update on its recommendations regarding the aquaculture PEIR, including discussions and public engagement it believes are necessary to clarify a long-range vision for California's marine aquaculture development. DFW is developing an aquaculture information report and anticipates the report will be available at today's meeting. DFW suggests that the report could serve as a foundation to engage interested parties in discussions about current and future marine aquaculture management and development in California.

(B) FGC referred to MRC a discussion about a potential temporary hiatus in considering new state water bottom lease applications, excluding the applications already received (two proposed offshore sites in southern California, and one proposed site in Tomales Bay). The three applications are the first new lease applications FGC has received in over 25 years; currently there is not an established process to guide FGC review and consideration of lease applications, coordination protocols between FGC and DFW staff need to be further developed, staff roles and responsibilities need to be more clearly articulated, and practices for communicating expectations with lease applicants need to be refined. Available staff resources are a concern; staff needs to focus on managing the 17 existing leases and processing the three applications already under consideration before undertaking additional new leases. It may be helpful for decisions regarding prospective new lease applications to be made within the context of a broader statewide policy and vision.

Significant Public Comments

1. A mariculturist supports placing a hiatus on considering new state water bottom leases, requests that future lessees be subject to more stringent experience and qualification requirements, and recommends provisions for a program that would train new lessees in mariculture, such as providing small trial plots to new lessees and internships in mariculture. Requests clarification on where future leases will be placed (Exhibit 3).
2. A non-governmental organization expresses support for placing a hiatus on considering new state water bottom leases until a review of aquaculture activities by FGC and other agencies is complete, and asks that FGC exercise caution when considering new leases, especially in Tomales Bay, due to potential impacts of shellfish farms on bay food webs and shorebird populations (Exhibit 4).

3. A non-governmental organization expresses a desire for a more workable permitting process for restorative aquaculture, requests that the State remove barriers to entry into restorative aquaculture, and asks that a completed PEIR and a more streamlined permitting process be established by the end of 2020 (Exhibit 5).

Recommendation

(A) Consider requests received from DFW during the meeting, and

(B) Consider supporting a temporary hiatus on considering new state water bottom lease applications not already received by FGC and schedule a follow-up discussion for a future MRC meeting.

Exhibits

1. Background document: Staff summary for Mar 6, 2018 MRC meeting, Agenda Item 8
2. Background document: Staff summary for Mar 20, 2019 MRC meeting, Agenda Item 8
3. Email from Bernard Friedman, Santa Barbara Mariculture Company, received Mar 2, 2020
4. Email from Nils Warnock, Audubon Canyon Ranch, received Mar 4, 2020
5. Email from Katherine O'Dea, Save Our Shores, received Mar 5, 2020

Committee Direction/Recommendation (N/A)

COMMITTEE STAFF SUMMARY FOR NOVEMBER 10, 2020 MRC
For Background Purposes Only

5. NEW MARINE AQUACULTURE LEASES

Today's Item **Information ☐** **Action ☒**

Discuss and consider potential MRC recommendation regarding the current temporary hiatus on receipt of new applications for state water bottom leases for the purpose of aquaculture (excepting previously-received applications currently under consideration).

Summary of Previous/Future Actions

• FGC referred discussion of potential temporary hiatus on new lease applications to MRC	Feb 21, 2020; Sacramento
• MRC discussion and recommendation for six-month hiatus on new lease applications	Apr 29, 2020; MRC (part 2), webinar/teleconference
• FGC approved MRC recommendation for six-month hiatus on new lease applications	Jun 24-25, 2020; webinar/teleconference
• **MRC review of hiatus and potential recommendation**	**Nov 10, 2020; MRC, webinar/teleconference**

Background

In Feb 2020, FGC referred to MRC discussion about a potential temporary hiatus in considering new state water bottom lease applications, excluding the applications already received (two proposed offshore sites in Southern California, and one proposed site in Tomales Bay). With the exception of Santa Barbara Mariculture, where reconfiguration of its existing lease was administered as a new lease application for purposes of the California Environmental Quality Act (CEQA), the three applications are the first for new lease areas that FGC has received in over 25 years; much has changed in the subsequent years and the methods and processes for reviewing leases have had to be created anew.

At the Apr 29 MRC meeting, FGC staff highlighted the need to establish an administrative process and standards to guide FGC review and consideration of new lease applications, further develop coordination protocols between FGC and DFW staff, more clearly articulate staff roles and responsibilities, and refine practices for communicating expectations with lease applicants. Available FGC and DFW staff resources were identified as a particular concern; staff is responsible for managing 17 existing leases that must necessarily take priority, in addition to processing the three lease applications already under consideration, before it can consider undertaking additional new lease reviews. See Exhibit 1 for additional background.

MRC recommended, and FGC approved at its Jun 24-25, 2020 meeting, a six-month hiatus on accepting any new state water bottom lease applications for aquaculture purposes; the approved hiatus is slated to expire Dec 24, 2020.

Update

Marine aquaculture is an adapting and growing industry, with increased interest in supporting locally-grown seafood. Optimally, decisions regarding prospective new lease applications would

be made within the context of a broader policy and vision, in addition to the enhanced administrative process being developed. FGC staff is participating in an effort led by the California Ocean Protection Council (OPC) to develop statewide aquaculture principles and a statewide aquaculture action plan, recognizing the need to have a common vision among the multiple state agencies of jurisdiction and to more efficiently and effectively coordinate the resources currently allocated to permitting and managing aquaculture in California. OPC's effort is likely to identify the need for additional state support if the state's goal is to increase sustainable aquaculture.

Specific to the approved hiatus, FGC and DFW staff has made progress in administrative coordination of application review, clarifying respective roles, advancing environmental review under CEQA for one application, and improving coordination with other agencies of jurisdiction (there are at minimum seven, and usually more depending on the project). Additional progress is still needed to support a consistent review process for new lease applications, especially with regard to meeting CEQA requirements. Meeting the review and coordination requirements in a time frame preferred by applicants will continue to be a challenge.

Concurrent to the existing lease application review processes, staff is also focused on responding to requests from several existing lessees for lease amendments, transfers, or other remedies related to authorized culture species, culture methods, lease boundaries and/or operations. Some requests are discretionary; however, for the majority of the current requests, the principle driver is the need to comply with new conditions established through other agency permitting processes that are raising questions and concerns not previously identified or addressed. The current requests from existing lessees have not been simple and have required research, interagency consultation, and environmental review.

Staff recognizes that continuing the hiatus on any new lease applications will not serve to remedy the challenges facing FGC and DFW staff in the receipt and review of lease applications; therefore, staff is not requesting a continuation of the hiatus. However, staff anticipates that OPC's effort to develop statewide aquaculture principles will contribute to articulating a vision and framework that will support how FGC reviews and considers aquaculture lease applications while a statewide aquaculture action plan is being developed. Based upon initial conversations, staff believes the principles will be consistent with concepts and values that FGC has previously expressed regarding aquaculture in California.

Unless directed otherwise, staff will prioritize existing lessee requests first, followed by the three lease applications already under consideration before initiating a review process for any new applications that may be received in the future.

Significant Public Comments

An aquaculture leaseholder operating offshore from Santa Barbara urges that FGC not approve any new state water bottom leases until a clear vision is defined and comprehensive management program for implementing new leases developed, including the applications already received by FGC. Offers specific recommendations related to leveraging the capacity of other organizations, supporting training and internship opportunities, setting more stringent experience and qualification requirements, and authorizing complementary rather than

competing culture operations where available sites are constrained (Exhibit 2).

Recommendation

FGC staff: Allow the current hiatus on receipt of new lease applications to lapse, recognizing the limitations in staff and resources; direct staff to continue developing and refining review processes with DFW and other agencies of jurisdiction; schedule an update related to aquaculture principles and action plan details for the Mar 2020 MRC meeting, and schedule an update on aquaculture leases for a future MRC meeting.

Exhibits

1. Background document: Staff summary for Mar 17, 2020 MRC meeting, Agenda Item 7
2. Email from Bernard Friedman, Santa Barbara Mariculture Company, received Oct 27, 2020

Committee Direction/Recommendation (N/A)

State of California
Department of Fish and Wildlife

M e m o r a n d u m

Date: May 19, 2021 Received 6/11/21; signed copy on file

To: Melissa Miller-Henson
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director

Subject: **Marine Aquaculture Leases and Projects Under Review**

The Department of Fish and Wildlife (Department) provides administrative management, oversight, field support, and coordination for the leasing and permitting of commercial marine aquaculture throughout the state while ensuring that marine resources and essential habitats are protected. Marine aquaculture activities occur through state water bottom leases issued by the Fish and Game Commission (Commission), leases that are issued and managed by city or local government or operate on private tidelands and may potentially occur through proposed federal projects outside of state waters.

There are currently 17 active state water bottom leases issued by the Commission consisting of approximately 900 acres of state-owned aquatic lands that are leased by 11 unique commercial businesses. The Department is also working with three applicants on three new lease requests that have been received by the Commission. These coordination efforts include reviewing draft project proposals; providing guidance to applicants on the regulatory and permitting processes; preparing public interest and California Environmental Quality Act (CEQA) recommendations to the Commission; reviewing and commenting on draft CEQA documents and other agencies' permits as a trustee agency; and final staff recommendations to the Commission on each new lease request.

In addition to the new lease requests, staff are currently evaluating several requests received by the Commission from existing state-managed aquaculture lease holders. These requests include expanding or reconciling lease area boundaries (5 leases); adding new aquaculture species (6 leases); adding new culture methods (2 leases); evaluating compliance with lease conditions (2 leases); and a lease reassignment (1 lease). Similarly, to new lease requests, any lease amendment includes reviewing draft project proposals, providing guidance to applicants on the permitting process, coordinating with other relevant local, state, and federal agencies, preparing CEQA recommendations to the Commission, reviewing and commenting on draft CEQA documents, and providing final staff recommendations to the Commission on each lease amendment request. The list of pending requests is attached in Table 1.

Department staff are also engaged in providing environmental review and recommendations, as the state's Trustee Agency for fish and wildlife resources, on multiple proposed federal and local agency aquaculture projects. These projects range from developing commercial finfish and kelp farms in southern California federal waters; to expanding intertidal shellfish aquaculture in Humboldt Bay; to developing an Atlantic

Salmon land-based fish farm in Samoa, Humboldt County (Table 2). Staff are evaluating risks to native fish and wildlife from these proposed operations and providing comments to relevant permitting agencies.

Department staff are also coordinating with NOAA on its development of the first Aquaculture Opportunity Area off the southern California coast[1] and partnering with the Ocean Protection Council to develop the Marine Aquaculture Action Plan[2] (Action Plan) whose goal will be to support the development and piloting of innovative tools and approaches to inform sustainable current and potential future aquaculture management in the State. The Action Plan will improve the state's effectiveness in researching, planning for, facilitating, permitting, managing, and promoting sustainable aquaculture in the state. The first step in informing the Action Plan was the development of aquaculture principles to increase alignment and coordination among state agencies, improve clarity and transparency for industry, and provide near-term guidance to state agency staff to protect the environment, effectively manage public trust resources, enhance food supply, and promote sustainable aquaculture. The principles will provide consistent interim guidance until the Action Plan is finalized.

Regulatory ambiguities, lack of clarity on roles and responsibilities between the Commission and the Department and understaffing at the Department and the Commission are challenges that have existed with aquaculture lease management and oversight for many years. These long-standing challenges have been amplified by the unprecedented number of concurrent requests for amendments to existing leases and new leases. From June 2020 to April 2021, the Commission instituted a hiatus on accepting new lease applications to address some of the coordination challenges and prioritize pending new lease requests and amendments. Department and Commission staff coordination has improved, and efficiencies have been gained; however, staff resources and capacity are insufficient to meet the existing and growing needs of the aquaculture industry. The Department will continue to do our best to improve coordination and implement administrative improvements within existing resources to enable us to fulfill our trustee responsibilities and ensure efficient oversight and management of the industry.

If you have any questions regarding this item, please contact Craig Shuman, Marine Regional Manager, at (916) 217-2370 or by email at Craig.Shuman@wildlife.ca.gov or Randy Lovell, State Aquaculture Coordinator, at (916) 376-1650 or by email at Randy.Lovell@wildlife.ca.gov.

Attachment

[1] NOAA Announces Regions for First Two Aquaculture Opportunity Areas under Executive Order on Seafood | NOAA Fisheries
[2] Item 5 Statewide Aquaculture Action Plan Sept 2020 (ca.gov)

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Marine Aquaculture Leases and Projects Under Review Memo - Attachment

Table 1 - State-Managed Marine Aquaculture Lease Requests and Projects Under Review

Date Received	Business Name	Type of Request	Lease No.	Location	Request
12/22/2016	San Andreas Shellfish	New Lease	N/A	Tomales Bay (proposed)	New lease in Tomales Bay
5/31/2018	Santa Barbara Sea Ranch	New Lease	N/A	Santa Barbara (proposed)	New lease in Santa Barbara channel
1/28/2019	Hog Island Oyster Company	Amendment	M-430-10	Tomales Bay	Lease boundary reconciliation and expansion
1/28/2019	Hog Island Oyster Company	Amendment	M-430-11	Tomales Bay	Lease boundary reconciliation
1/28/2019	Hog Island Oyster Company	Amendment	M-430-12	Tomales Bay	Lease boundary reconciliation and expansion
1/28/2019	Hog Island Oyster Company	Amendment	M-430-15	Tomales Bay	Lease boundary reconciliation
3/25/2019	Malibu Oyster Company	New Lease	N/A	Malibu (proposed)	New lease offshore Malibu
11/4/2019	Morro Bay Oyster Company	Authorize	M-614-01	Morro Bay	Clarify lease provisions for use of barge on lease area
11/14/2019	Tomales Bay Oyster Company	Amendment	M-430-05	Tomales Bay	Add additional species and culture methods
8/28/2020	Tomales Bay Oyster Company	Amendment	M-430-05	Tomales Bay	Lease boundary reconciliation
10/14/2020	Cove Mussel Company	Assignment	M-430-06	Tomales Bay	Reassignment
11/18/2020	Charles Friend Oyster Company	Amendment	M-430-04	Tomales Bay	Add additional culture methods
12/8/2020	Grassy Bar Oyster Company	Authorize	M-614-01, parcel 1	Morro Bay	Clarify lease provisions for use of barge on lease area
1/28/2021	Santa Barbara Mariculture	Amendment	M-653-02	Santa Barbara	Add additional species
1/28/2021	Santa Barbara Mariculture	Amendment	M-653-02	Santa Barbara	Expand lease size
2/12/2021	Hog Island Oyster Company	Amendment	M-430-10	Tomales Bay	Add additional species
2/12/2021	Hog Island Oyster Company	Amendment	M-430-11	Tomales Bay	Add additional species
2/12/2021	Hog Island Oyster Company	Amendment	M-430-12	Tomales Bay	Add additional species
2/12/2021	Hog Island Oyster Company	Amendment	M-430-15	Tomales Bay	Add additional species

Table 2 - List of Other Marine Aquaculture Projects Under Review (Non Fish and Game Commission)

Project Name	Type of Project	Location	Lead/Permitting Agency(ies)
Nordic Aquafarms	Land-based Atlantic salmon facility	Samoa Peninsula	Humboldt County Planning Department
Hog Island Oyster Company	Intertidal shellfish lease	Humboldt Bay	HBHRCD
Humboldt Bay Harbor, Recreation, and Conservation District (HBHRCD) and Jerry Yeung	Intertidal shellfish leases	Humboldt Bay	HBHRCD
Pacific Ocean AquaFarms	Offshore finfish farm	San Diego or Long Beach	NMFS
Ocean Rainforest	Offshore kelp farm	Santa Barbara	US Army Corps of Engineers (ACOE)
Avalon Ocean Farm	Offshore shellfish and kelp farm	Huntington Beach	ACOE
Pacific Mariculture	Offshore mussel farm	San Pedro	ACOE and California Coastal Commission
Aquaculture Opportunity Area	Spatial planning effort	Southern California (federal waters)	NOAA
Marine Aquaculture Action Plan	Planning effort	Statewide	Ocean Protection Council and the Department

Marine Aquaculture in California

Marine Resources Committee Meeting
July 21, 2021

RANDY LOVELL
State Aquaculture Coordinator

Photo: Tristen McHugh

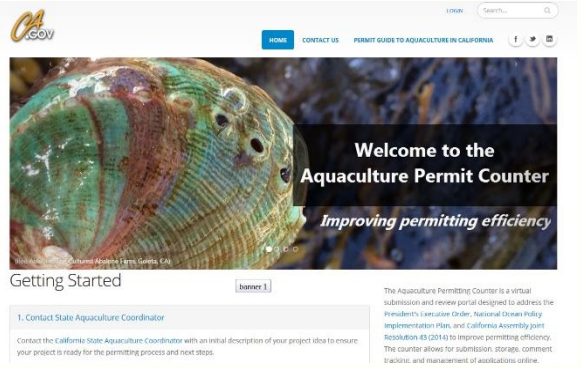
Current Marine Aquaculture Overview

- Currently 17 active state water bottom leases
  - 15 in Tomales Bay and Morro Bay
  - 2 in ocean waters of Southern California
- Approximately 900 acres of state-owned aquatic lands
- Operated by 11 commercial businesses

Current Proposed Marine Aquaculture

- 3 new lease applications being considered
  - Tomales Bay
  - Offshore from Santa Barbara
  - Offshore from Malibu

Marine Aquaculture Review Process



- Provide guidance to applicants
- Review draft project proposals
- Coordinate with other relevant agency staff
- Prepare California Environmental Quality Act (CEQA) recommendations
- Review and comment on draft and final CEQA
- Develop final staff recommendations to the Fish and Game Commission on each request
- Align with statewide policies and guiding principles

Pending Lease Requests

Date Received	Business Name	Type of Request	Lease No.	Location	Request
12/22/2016	San Andreas Shellfish	New Lease	N/A	Tomales Bay (proposed)	New lease in Tomales Bay
5/31/2018	Santa Barbara Sea Ranch	New Lease	N/A	Santa Barbara (proposed)	New lease in Santa Barbara channel
1/28/2019	Hog Island Oyster Company	Amendment	M-430-10	Tomales Bay	Lease boundary reconciliation and move/expansion
1/28/2019	Hog Island Oyster Company	Amendment	M-430-11	Tomales Bay	Lease boundary reconciliation
1/28/2019	Hog Island Oyster Company	Amendment	M-430-12	Tomales Bay	Lease boundary reconciliation and move
1/28/2019	Hog Island Oyster Company	Amendment	M-430-15	Tomales Bay	Lease boundary reconciliation
3/25/2019	Malibu Oyster Company	New Lease	N/A	Malibu (proposed)	New lease offshore Malibu
11/4/2019	Morro Bay Oyster Company	Authorize	M-614-01	Morro Bay	Clarify lease provisions for use of barge on lease area
11/14/2019 rev'd 4/7/2021	Tomales Bay Oyster Company	Amendment	M-430-05	Tomales Bay	Add additional species and culture methods
8/28/2020	Tomales Bay Oyster Company	Amendment	M-430-05	Tomales Bay	Lease boundary reconciliation
10/14/2020	Cove Mussel Company	Assignment	M-430-06	Tomales Bay	Reassignment
11/18/2020	Charles Friend Oyster Company	Amendment	M-430-04	Tomales Bay	Add additional culture methods
12/8/2020	Grassy Bar Oyster Company	Authorize	M-614-01, parcel 1	Morro Bay	Clarify lease provisions for use of barge on lease area
1/28/2021	Santa Barbara Mariculture	Amendment	M-653-02	Santa Barbara	Expand existing lease size
1/28/2021	Santa Barbara Mariculture	Amendment	M-653-02	Santa Barbara	Add additional species
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2/12/2021	Hog Island Oyster Company	Amendment	M-430-12	Tomales Bay	Add additional species
2/12/2021	Hog Island Oyster Company	Amendment	M-430-15	Tomales Bay	Add additional species

Additional Marine Aquaculture Projects

Project Name	Type of Project	Location	Lead or Permitting Agencies
Nordic Aquafarms	Land-based Atlantic salmon facility	Samoa Peninsula	Humboldt County Planning Dept
Hog Island Oyster Company	Intertidal shellfish lease	Humboldt Bay	HBHRCD
Humboldt Bay Harbor, Recreation, and Conservation District (HBHRCD) and Jerry Yeung	Intertidal shellfish leases	Humboldt Bay	HBHRCD
Pacific Ocean AquaFarms	Offshore finfish farm	San Diego or Long Beach	NOAA / USACE / USEPA
Ocean Rainforest	Offshore kelp farm	Santa Barbara	US Army Corps of Engineers (USACE)
Avalon Ocean Farm	Offshore shellfish and kelp farm	Huntington Beach	USACE
Pacific Mariculture	Offshore mussel farm	San Pedro	USACE and California Coastal Commission
Aquaculture Opportunity Area	Spatial planning effort	Southern California (federal waters)	NOAA
Marine Aquaculture Action Plan	Planning effort	Statewide	Ocean Protection Council and the Department

Pending Lease Requests (grouped)

Date Received	Business Name	Type of Request	Lease No.	Location	Request
12/22/2016	San Andreas Shellfish	New Lease	N/A	Tomales Bay (proposed)	New lease in Tomales Bay
5/31/2018	Santa Barbara Sea Ranch	New Lease	N/A	Santa Barbara (proposed)	New lease in Santa Barbara channel
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2/12/2021	Hog Island Oyster Company	Amendment	M-430-15	Tomales Bay	Add additional species

Marine Aquaculture Requests Prioritization

- Processes and work requirements for each request vary;
- Seemingly similar requests may not be;
- Policy, procedural, or regulatory gaps revealed may divert progress;
- CEQA roles of applicant, Commission staff, and Department evolving;

Accomplishments versus Constraints

- **Accomplishments**
  - Improved Department and Commission staff coordination
  - Clarified roles and responsibilities
  - Refining prioritization approach

- **Constraints**
  - Budget and Staffing at Department and Commission
  - Regulatory and policy ambiguities
  - Advancing multiple requests concurrently
  - Capacity to enforce existing management and regulatory framework

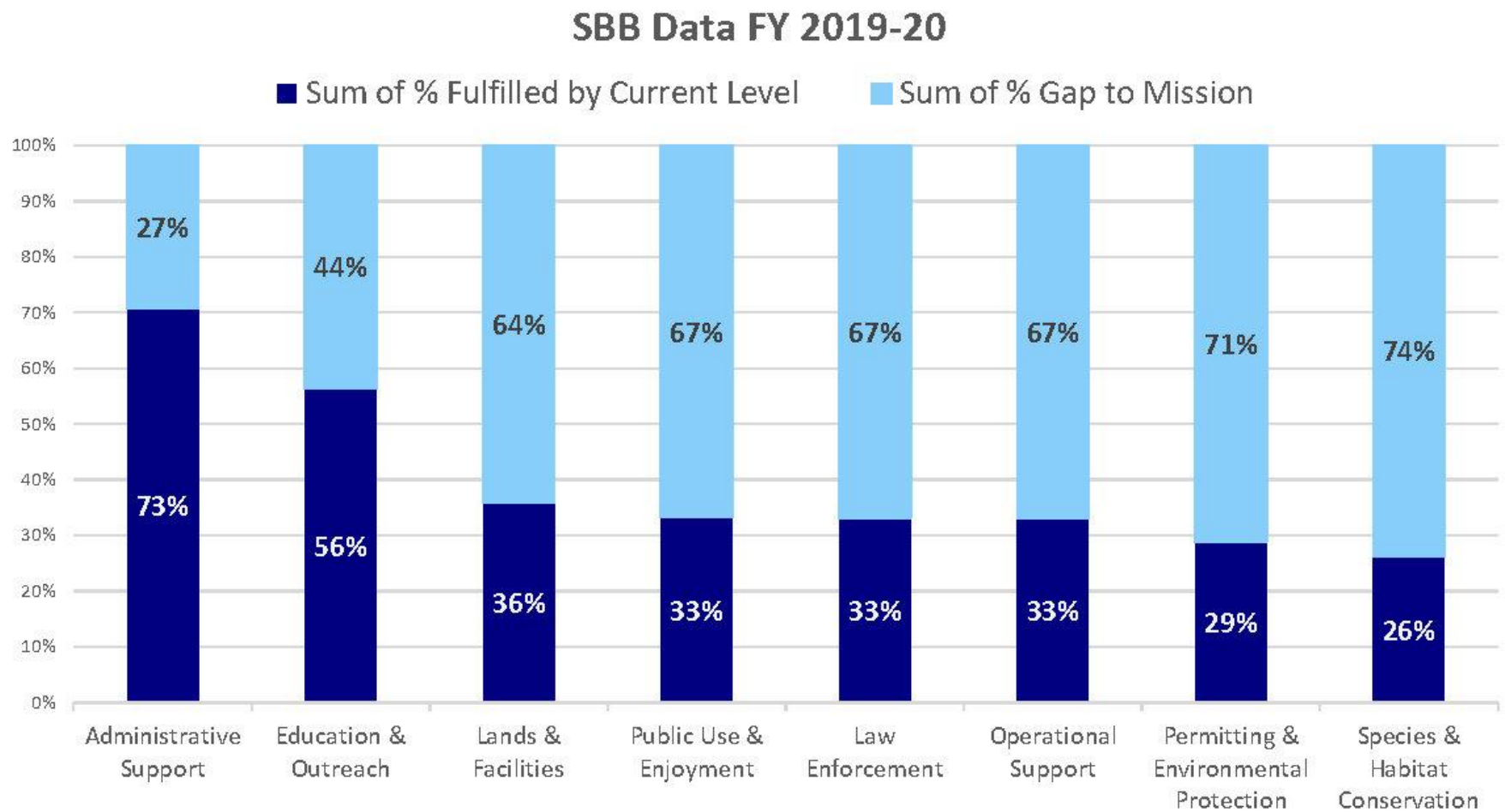
California Department of Fish and Wildlife

SBB
SERVICE BASED BUDGETING

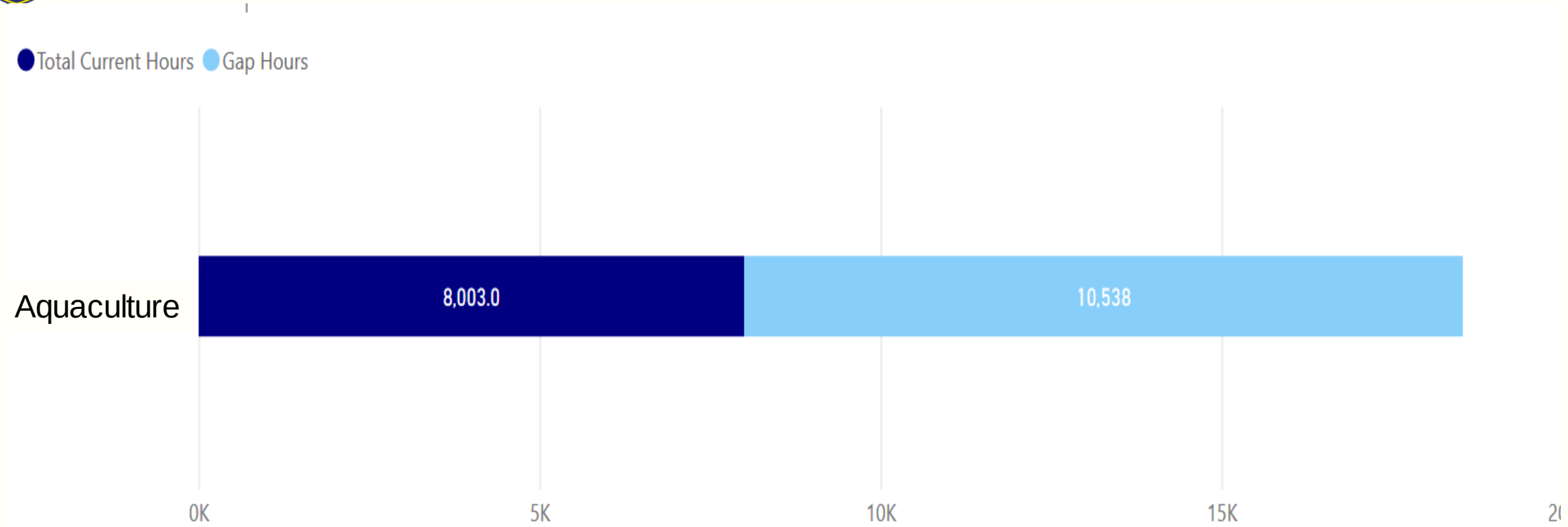
Aquaculture Subprogram

Gap Analysis Overview

Services displayed by least gap to mission to greatest gap to mission as percentage of a whole



Service Based Budgeting Aquaculture Sub Program

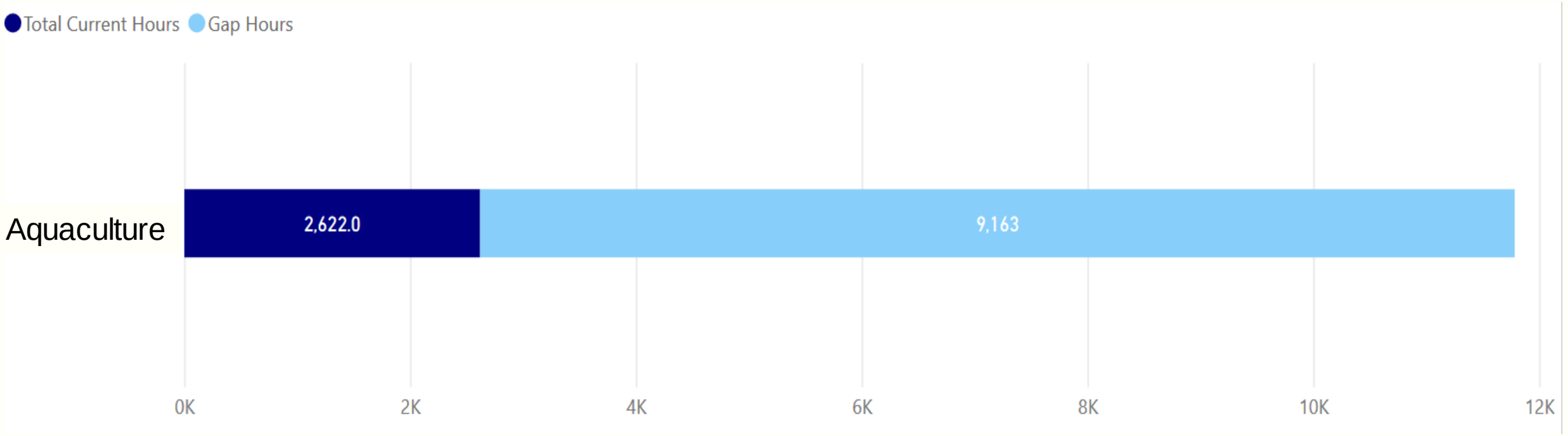


Program	Total Current Hours	Gap Hours	Total Mission Hours
Aquaculture	8,003.0	10,538	18,540.8

FY20-21 preliminary data as of 7/14/2021

Service Based Budgeting Aquaculture Sub Program (Cont.)

Lease-Oriented Tasks



Program	Total Current Hours	Gap Hours	Total Mission Hours
Aquaculture	2,622.0	9,163	11,784.8

FY20-21 preliminary data as of 7/14/2021

Service Based Budgeting Aquaculture Sub Program (Cont. 2)

The Aquaculture sub program has large gaps reflected in lease-related tasks:

Task ID	Task Name	Mission Hours	Current Hours	Gap Hours	Task Description
3341	New Aquaculture Leases	4,284	630.0	3,654	Help FGC issue and administer new aquaculture leases
3343	Lease Renewal, Amendment, Or Assignment	2,478	814.0	1,664	Help FGC renew, amend, or assign aquaculture leases
3362	Administrative Oversight Of State Water Bottom Leases	2,106	560.0	1,546	routine administrative oversight of aquaculture leases (including: Calculate lease rental rates, update forms, process annual Proof-of-Use Reports, track escrow accounts for state water bottom leases)
3352	New Complex Regulations""	1,740	530.0	1,211	Promulgate new regulations as needed
3342	Ongoing Resource Mgt Lease Oversight	1,176	88.0	1,088	non-routine (intermittent) site inspections, enforcement, referrals, leaseholder engagement

FY20-21 preliminary data as of 7/14/2021

Team Effort

The Aquaculture 'Program' is truly a team effort, with special thanks to dedicated efforts by:

Marine Region:
Sara Briley
Kirsten Ramey

Office of State Aquaculture Coordinator:
Jessica Girardot

Fish & Game Commission:
Susan Ashcraft
Melissa Miller-Henson

Thank You ◈ Questions?

Further info:

Randy Lovell
State Aquaculture Coordinator
aquaculturecoord@wildlife.ca.gov
916-376-1650

From: bernard@sbmariculture.com <bernard@sbmariculture.com>
Sent: Wednesday, July 07, 2021 9:03 PM
To: FGC <FGC@fgc.ca.gov>
Cc: Lovell, Randy@Wildlife <Randy.Lovell@wildlife.ca.gov>; Shuman, Craig@Wildlife <Craig.Shuman@wildlife.ca.gov>
Subject: mrc meeting July 21 2021 comment aquaculture

Hi. Please see attached.

Santa Barbara Mariculture Co.
Bernard Friedman
939 N. Patterson Ave.
Santa Barbara, CA 93111
805 886-1283

SANTA BARBARA
M-653-02
MARICULTURE

7/7/21

Bernard Friedman
939 N. Patterson Ave.
Santa Barbara, CA 93111

Californian Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244-2090

Re: Aquaculture at MRC meeting July 21, 2021

I want to thank Dr. Shuman for responding to my queries at the last commission meeting on agenda item 22 b. He said the MRC meeting would be the appropriate place to discuss my permitting issues. I have known Dr. Shuman a long time and I regard him as a friend and I am thankful that he is willing to address my concerns with the permitting issues related to my stat water bottom lease.

I submitted to the Commission at the February 10, 2021 meeting a request to add two native species to the list of species I can grow at the farm. My central question is **How long will it take to process this permit request?** I understand that I have to wait in line. What I am asking is how long is the line, where am I in the line, and how fast is it moving.

My last permit amendment took 7 years to complete and that was before the department got busy with multiple requests. I also asked that you coordinate with other agencies because it is a multi-agency process.

I have partnered with highly esteemed scientist with grant funding to develop these two native species as commercial products. They are algae and shellfish which is what the State of California has publicly encouraged. The funding is a gift, a golden opportunity, to try and understand how to grow these species of which we do not know how to grow. This would be public information that is very valuable for the development of aquaculture here in California. This Commission should signal that they wish to go down this road by speeding up this request. The money will not wait another 7 years.

I am attaching an email thread with a CCC staff member also stating that getting these two species permanently approved rather than repeated experimental requests is the more prudent road forward. We have had trouble getting the SCP from the department to move forward as well.

Our experimental permits for kelp expire February 7, 2021. I do not think it is an unreasonable request to ask for service for my request within a one year timeline.

Regards,

Bernard Friedman

Hi Bernard –
Thank you for the advance notice on this. You can certainly apply for the amendment now – even without the SCP in place – and I would encourage it. I don't think we'd take it to hearing unless CDFW has signed off but having the application in would allow us to start working on reviewing it and coordinating with the other agencies (CDFW, Water Board, Corps) that may also be involved in reviewing it.

You could apply for an immaterial amendment and we'll let you know if we can't go that route. One thing we'll have to consider is the repeated continuation of an activity that was initially proposed and authorized as a very limited term endeavor (five months in 2019 and 2020). Rather than continuing to do these short term extensions, it may make more sense to seek approval of kelp cultivation on a longer term or permanent basis, especially if Eliza and/or Dan are considering seeking additional grants to keep the work going after these next three years. If we go that route, the review may be more involved this time but you wouldn't have to keep coming back for amendments every year or two. If CDFW is still working on your SCP, this may be something to run by them too.
-Cassidy

From: bernard@sbmariculture.com <bernard@sbmariculture.com>
Sent: Thursday, July 1, 2021 7:11 PM
To: Teufel, Cassidy@Coastal <Cassidy.Teufel@coastal.ca.gov>
Cc: Dan Reed <dan.reed@lifesci.ucsb.edu>; Eliza C Harrison <eliza@oceanrainforest.com>
Subject: re: SB Mariculture Amendment

Hi Cassidy,

I was just talking with Dan Reed today and both he and Ocean Rainforest have been approved for more research funding for kelp and they both wish to continue growing kelp on the farm.

Looking over the last permit amendment, the date to remove all the kelp is February 7, 2022. I would like to apply for another permit amendment to keep the kelp experiments in continuation for the next 3 years.

I assume we should be applying for one right away. The problem is that both are waiting to renew their scientific collection permits which have been taking forever. In order to meet timelines and deadlines and kelp planting schedules I am looking for your wise counsel on how to proceed and make this as smooth and boring as possible.

Regards,

Bernard

8 July, 2021

California Fish & Game Commission
Peter Silva, President
Via electronic mail to: fgc@fgc.ca.gov

Comments on items 3a & 3b

Dear President Silva and The Commission,

Item 3a

Again I am writing, as I did on 30 December, 2020, to implore The Commission to conduct a complete and objective survey of shellfish lease M-430-06 PRIOR to the transfer of this lease from Mr. Zahl to Mr. Starbird.

Recently I learned that the current sub-lesee (soon to be main leaseholder) has been losing and leaving many dozens, possibly hundreds of large plastic baskets on the bay floor over the years. I regularly find these baskets along the east shore of Tomales Bay near this lease. Only after hearing that I had become aware of this plastic disaster on the bay floor did the sub-lesee make an effort to clean up his mess. See images 1 & 2 below of baskets recently recovered by current sub-lesee.

The current leaseholder of M-430-06, at the suggestion of the Coastal Commission a couple years ago, cleaned up a large sunken boat from the lease, and removed hundreds of pounds of iron rack remnants and other debris. I am not aware of any oversight by the CFGC or the CDFW to ensure that all debris was removed. Clearly the many plastic baskets lost by Mr. Zahl's sub-lesee were neither discovered at that time, nor removed.

Given the large amount of shellfish debris disgracing Tomales Bay, and the desire of the industry to expand their footprint in the bays and shoreline of California, it seems to me that NOW is the time for the CFGC and CDFW to take the lead on removing the debris left by prior and current shellfish operations in Tomales Bay and other waters in the state.

Tomales Bay examples of debris waiting to be cleaned up:

120+ treated 2 x 6 posts on what is now lease M-430-15 (see image 3 below).

The never-ending supply of large plastic bags (many full of large dead oysters) and rusty, sharp iron racks left on what is now lease M-430-04 after International Shellfish Co. abandoned their lease after the 1982 flood event buried their inventory. See images 4, 5, 6 below)

The rusting racks, PVC posts and associated gear left by a previous leaseholder and oyster shell dumped by current holder of lease M-430-05. See images 7, 8 below)

The hundreds of redwood stakes, likely left in the south end of Tomales Bay when Samuel Taylor owned that lease in the 1870's. Even if you left the full-length posts so that cormorants and eagles could perch on them, please remove the hundreds of stubs that now only serve as habitat for invasive oyster drills, or present a hazard to boaters at lower tides. See images 9, 10 below)

Item 3b

The public has wide and varied interests with respect to the public trust tidelands currently leased by the CFGC. Given the challenges presented by global sea rise, some known others unknown, it is critically important to account for the health of a changing bay. Bird populations in the bay have been declining for many years. Some of what is intertidal will become sub-tidal. The increasing number of visitors to Tomales Bay cause greater impacts and a desire for more room to fish, sail, recreate and to watch birds and other sea life in a natural setting.

Many of the public, I suspect, would enjoy more of a bay that is not covered in plastic, ropes and posts. Please consider all of the public's interest, not just those making millions of dollars per year on tidelands leased for a minute fraction of those millions.

Thank you for your time, thoughtful actions and for reading this.

Regards,

Richard James
lead coastodian
coastodian.org

Image 1

Image 2

Image 3

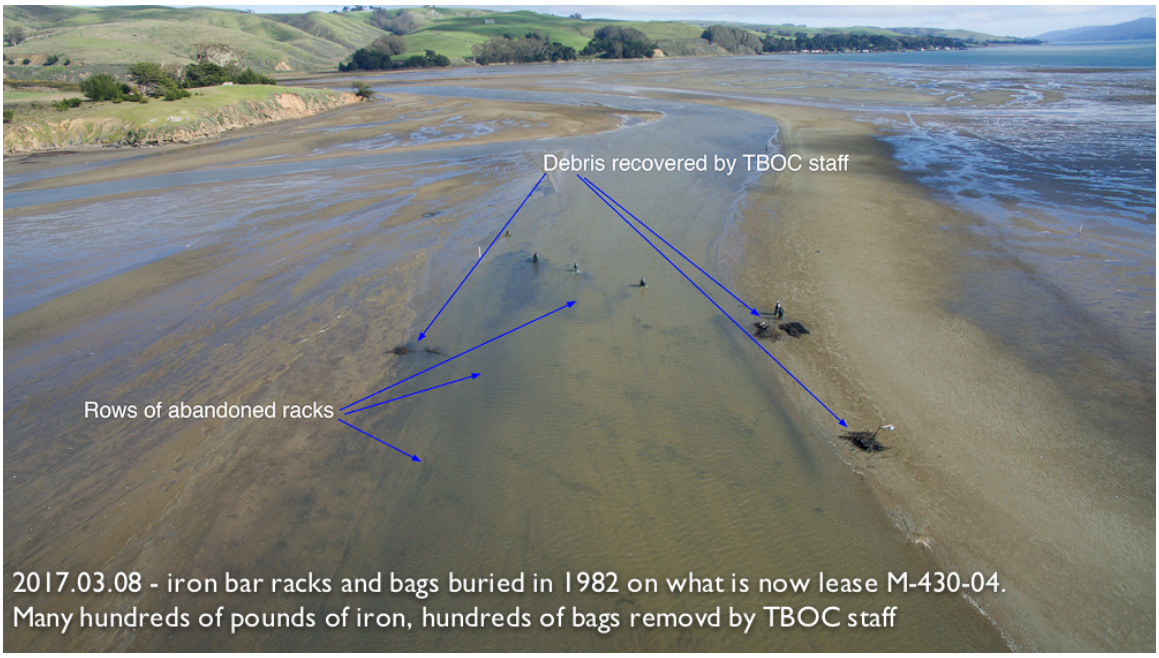


Image 4

Image 5

Image 6

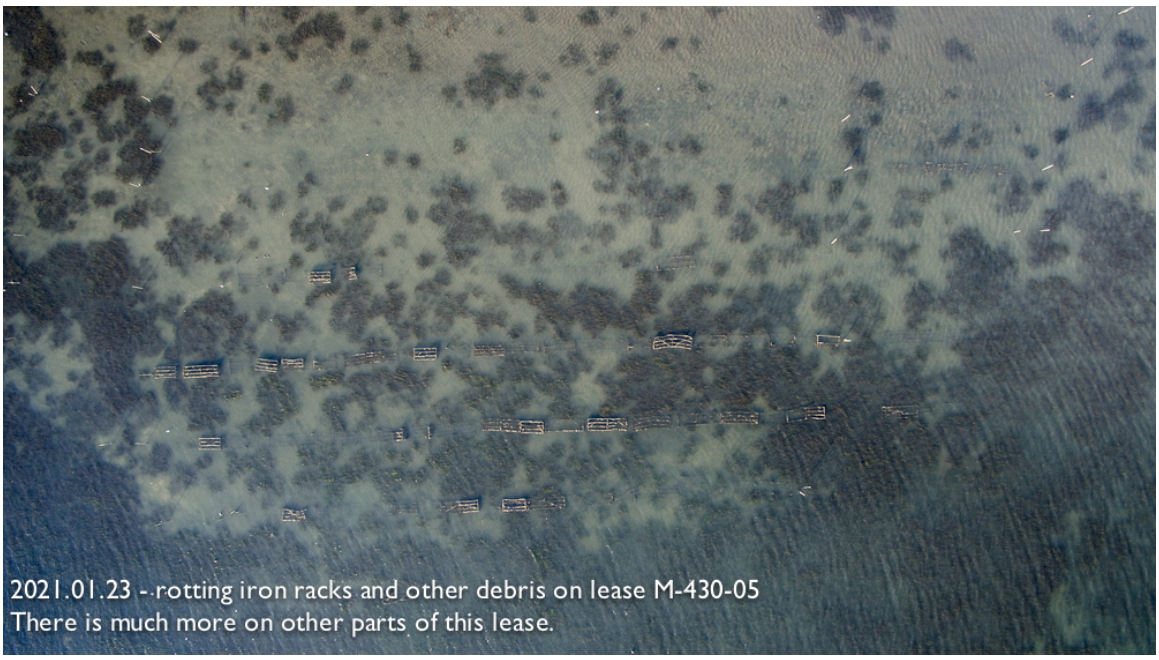


Image 7

Image 8

Image 9

Image 10

Long-term MPA monitoring

Project descriptions

https://caseagrant.ucsd.edu/news/ocean-protection-council-awards-9-million-for-marine-protected-area-monitoring

Habitat-based monitoring

- **Estuary:** This project will establish an estuarine technical advisory committee (TAC) to identify key estuary monitoring questions of management relevance and develop measurable indicators for these questions. Lead investigators will engage the TAC to develop standardized data collection protocols and monitoring tools to assess indicators of estuary health. These protocols and tools will be tested through focused field data collection at a subset of California's estuary MPAs and associated reference sites in 2020-2021, with data collection stratified across a variety of estuary types. Analyses will be conducted to evaluate ecological and socioeconomic conditions of estuary MPAs using currently available baseline data as well as data collected in the 2020-2021 field seasons. Lead investigators will develop a "blueprint" for ongoing, coordinated estuary monitoring into the future.
- **Sandy beach and surf zone:** This project will conduct standardized transect surveys at beaches inside Tier I MPA sites and associated reference sites to collect key biological and environmental data. Analyses will compare abundance and biomass of indicator species, species diversity, trophic structure, and occurrence of special status species between Tier I MPAs and reference sites. Additional analyses will examine changes in biological and environmental variables inside and outside MPAs over time, as well as across the statewide network, using a variety of advanced statistical and modeling approaches. Changes in human use patterns as a result of MPA implementation will also be assessed.
- **Rocky intertidal:** This project will aggregate biological and environmental data from rocky intertidal habitats (20-30 years at some sites) from a variety of sources. The project will concurrently collect biological and environmental data via transect and fixed plot surveys in Tier I MPAs and at associated reference sites, according to standardized protocols established by the Multi-Agency Rocky Intertidal Network. Analyses will be conducted using both historical and new data to assess individual MPA effects as well as network-wide effects in intertidal communities.
- **Kelp forest and shallow rocky reef:** This project will aggregate biological and environmental datasets from previous kelp forest and shallow rocky reef surveys, including baseline MPA monitoring. The project will also collect biological data via SCUBA transect surveys in Tier I MPAs and at associated reference sites, as well as a limited number of Tier II and Tier III MPAs, according to standardized protocols established by the Partnership for Interdisciplinary Studies of Coastal Oceans and Reef

Check California (RCCA). Environmental data will be collected via remote sensing as well as in situ instruments measuring temperature, pH, and dissolved O2. Sea surface temperature, wave height, and chlorophyll-a data will be harvested from online databases. Kelp canopy data will be collected via aerial monitoring, as well as historical analysis of Landsat imagery. Integrative analyses will be conducted using historical and new data to assess trends in kelp forest and shallow rock communities at the scale of individual MPAs, bioregions, and the three coastal regions identified in the Action Plan.

- **Deep rocky reef:** This project will analyze 25+ years of historical imagery and data from California waters (submersible, ROV, towed camera, etc.) via advanced modeling approaches. ROVs and drop camera surveys will be conducted to collect biological data in Tier I MPAs and associated reference sites. Historical and newly collected data will be synthesized to provide a comprehensive assessment of deep rocky reef ecosystem health across the MPA network.
- **CCFRP (deep rocky reef hook and line):** This project will continue California Collaborative Fisheries Research Program (CCFRP) trips and data collection in Tier I MPA sites statewide through 2020, and on the central coast through 2021, with a focus on monitoring fish abundance, size, biomass, diversity, species composition, and spillover. Spatial and temporal analyses will be conducted to evaluate MPA performance (abundance/biomass of indicator species, species diversity, trophic structure, occurrence of special status species) as well as assess spillover, connectivity, and impact of environmental stressors. Additional data collection via surveys will assess level of compliance and attitude towards/perception of MPAs in the recreational fishing community.

Socioeconomic monitoring

- **UC Davis and MPA Watch partnership:** MPA Watch is a community science program that utilizes volunteers to collect human use and activity data inside and outside MPAs statewide. This project will use MPA Watch data to examine if and how human uses, both consumptive and non-consumptive have changed since MPA implementation.

- **Consumptive - commercial & CPFV/party boat:** This project will conduct focus groups with commercial fishermen in each of California's major ports to obtain qualitative information on direct and indirect socioeconomic consequences of MPA establishment. Integrated analyses will be conducted using Ecotrust and CDFW data (commercial landings, CPFV logbooks from 1992-2018) to quantitatively assess effects of MPA establishment on fishing communities (e.g., changes in landings, revenue, participation rates, etc.; changes in spatial distribution of fishing effort; loss of revenue and broader economic changes). The project will involve significant communication and collaboration with commercial and CPFV fishermen and will recommend key metrics and methods for monitoring the socioeconomic health of commercial and CPFV fisheries into the future.
- **Consumptive – recreational (CDFW):** This project will assess and map relative catch rates in the private recreational fishery and charter boat fishery using CDFW data (California Recreational Fisheries Survey). GIS maps will be created displaying relative catch rates at a resolution of 1-by-1 nautical mile. These maps will be used to visualize

and assess changes in relative catch rates over time. With the MPA network added as a map layer, changes in relative catch rates can be compared in relation to MPA locations. Incidentally, this study may also allude to MPA compliance issues.

- **Nonconsumptive – CDFW survey:** This project will survey the general public visiting MPAs to learn what type of recreational activities they are doing in them and what they know about the MPA program. An additional survey will be shared with recreational outfitter shops such as dive shops, surf shops, whale watching tours, etc. to determine if interest in participating in recreational activities changed because of MPA implementation. These surveys will be added to our knowledge base from existing surveys such as MPA Watch or Ecotrust collected baseline surveys, to provide as encompassing picture as possible of recreational uses and MPA knowledge of the general public following MPA implementation.

Ocean observing & modeling

- **MPAs and ocean conditions:** This project will use satellite data and other ocean observing system assets to develop regularly updating data products (both large and fine scale), quantifying relationships between large-scale oceanographic phenomena and conditions at Tier I MPA sites statewide. PIs on this project will work with PIs conducting long-term MPA monitoring projects to integrate in situ data (e.g. temperature, pH) into data products referenced above. Ecological models and in situ data will be integrated into a multivariate description of regional ecosystem health. Quantitative, indicator-based assessments of environmental health and water quality will be created for Tier I MPAs statewide.
- **Improved connectivity modeling:** This project will build on an existing population connectivity model specific to California, which was originally created to inform the spatial design of California's long-term MPA monitoring program. Based on key priorities outlined in the state's MPA Monitoring Action Plan, a demographic component will be added to the population connectivity model to include the effects of MPA protection, and population dynamics in general, in model outputs. This updated model will more accurately identify the separate and combined contributions of MPAs to ecological connectivity across the statewide network.

MPA Network Performance Evaluation

Working group of the National Center for Ecological Analysis and Synthesis (NCEAS): Evaluation of ecological functioning, design, and performance of the MPA Network will be a core component of the Decadal Review. The NCEAS working group will perform integrative analyses using existing data streams to address many of the network level evaluation questions outlined in Appendix B of the MPA Monitoring Action Plan and Decadal Evaluation Working Group report. The analysis will include integrating across habitats targeted for monitoring, better linking human dimension and governance aspects of the MPA Network with ecological performance and examining the effectiveness of the MPA design criteria at a network level.

MPA Network – 2022 Decadal Review Update

21 July 2021

Presented to:

Marine Resources Committee

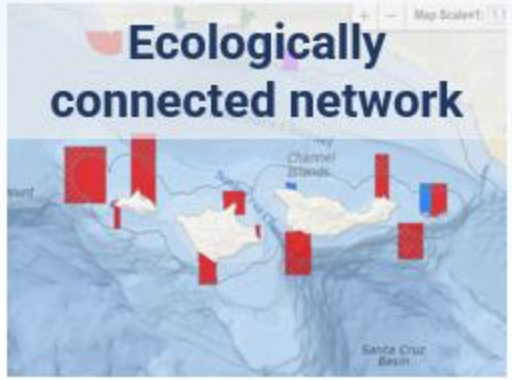
Virtual Webinar

Presented by:

Becky Ota

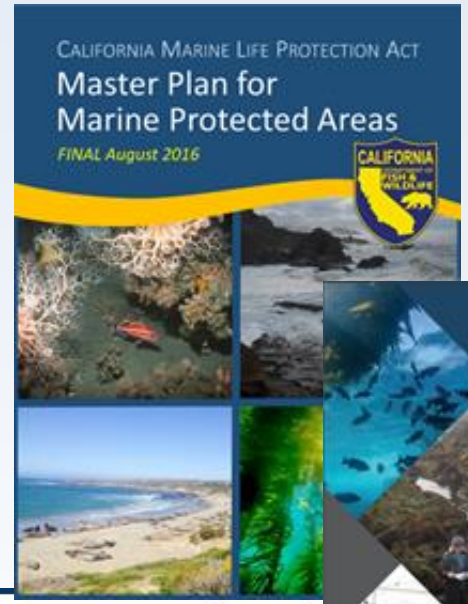
Program Manager
Marine Region

Marine Life Protection Act (MLPA) Goals



MPA Master Plan + Decadal Management Review

- MLPA Master Plan established:
  - MPA Management Program
  - 10-year management review cycle
  - Monitoring Program
    - Action Plan
      - Performance evaluation questions



MPA Statewide Leadership Team

MPA Management Program

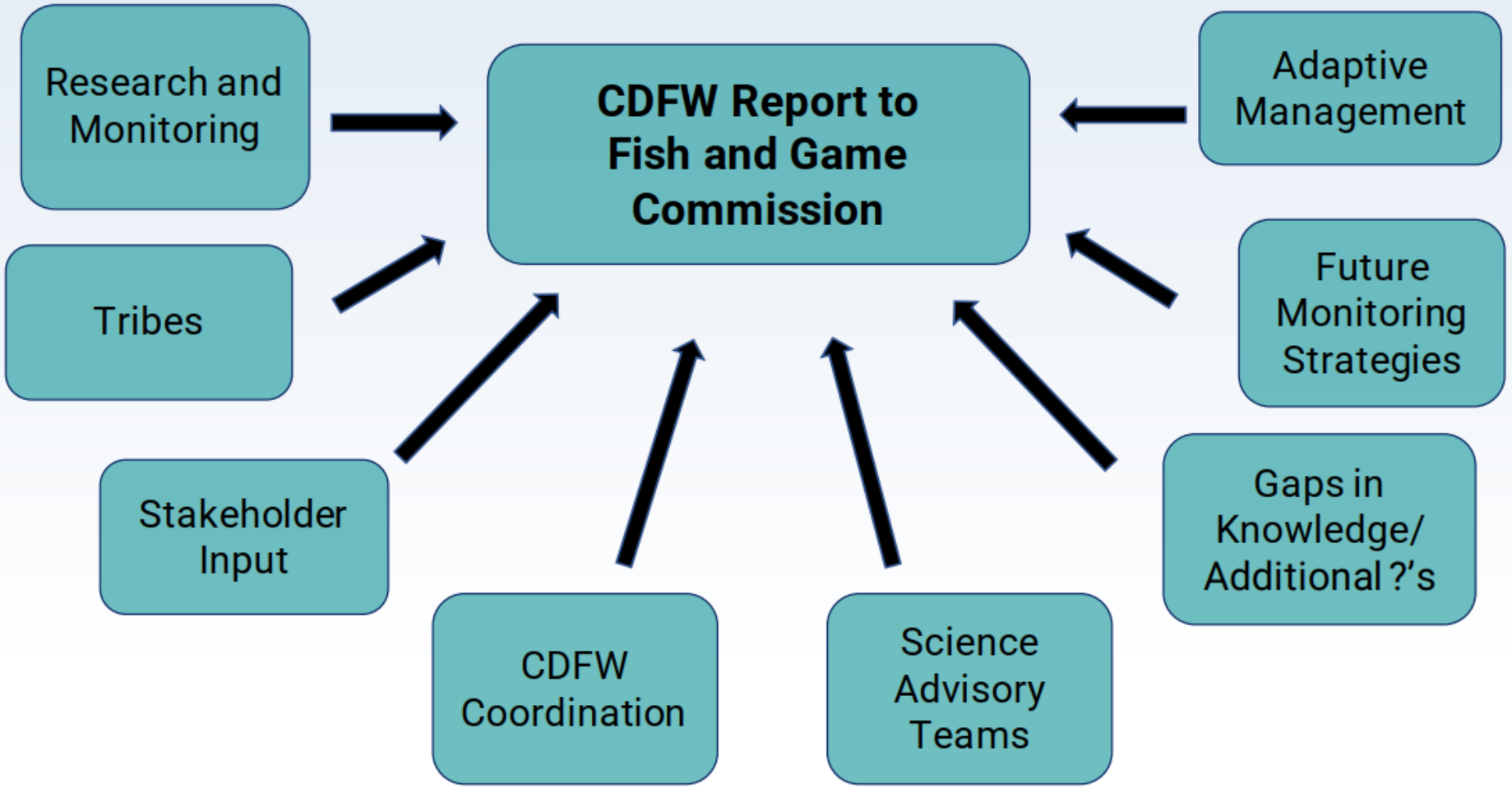
Outreach and Education

Research and Monitoring

Enforcement and Compliance

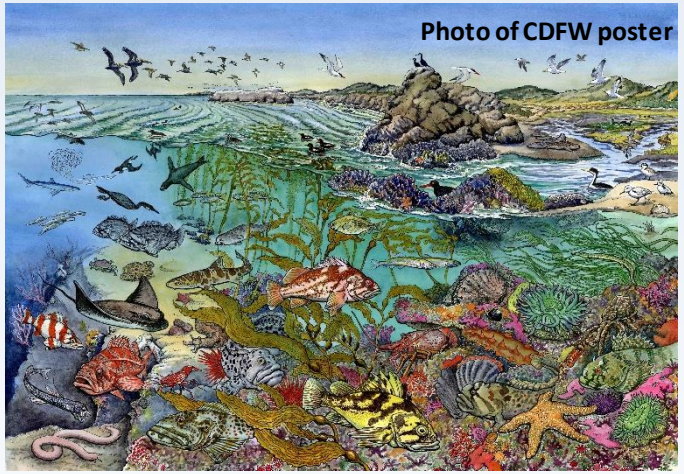
Policy and Permitting

Components of Decadal Management Review



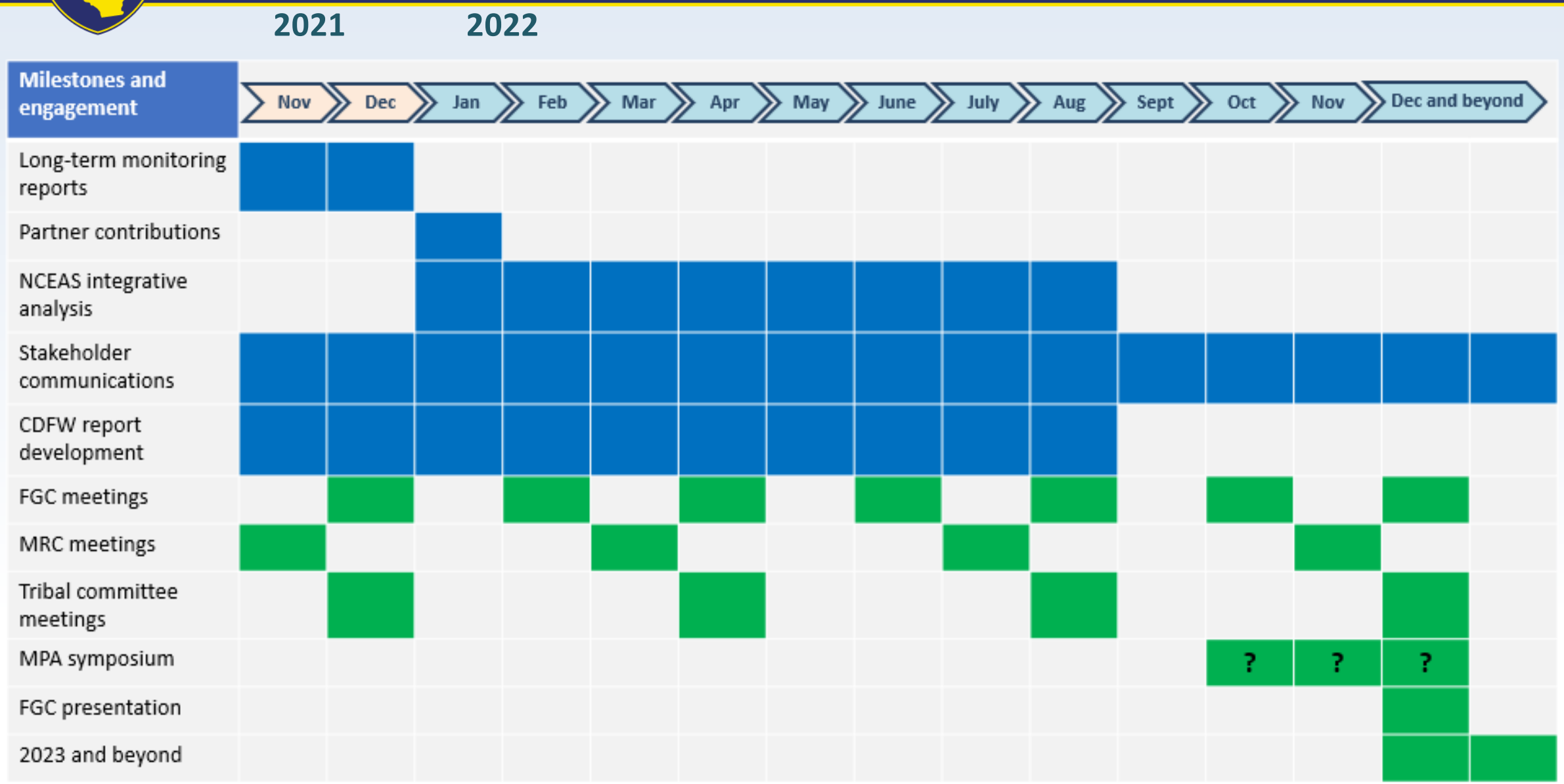
Outreach and Engagement Steering Committees

- Stakeholder (Key Communicators)
  - Identify
    - communications channels
    - strategies
    - target audiences
    - advise on the Outreach Workplan



- Tribal (a separate/parallel committee)
  - inform Tribal engagement
  - not a substitution for government to government consultation
  - similar roles

Decadal Management Report Timeline



Anticipated Outcomes from Decadal Review

- Progress towards meeting the MLPA goals
- Actions taken to engage Tribes and Ocean Community
- Summary of knowledge gaps
- Opportunities for next steps
- Recommendations on adaptive management

MPA Symposium

- Recognize partners
  - Options
    - Full Day Symposium
      - October 2022
      - November 2022
      - Day before the December Commission meeting
    - Half Day Symposium
      - Same months for full day
      - Half day prior to December Commission meeting
      - Half day on same day of December Commission meeting

December 2022 Commission Meeting

- How does the Commission want to receive the MPA Decadal Management Review Report at your December 2022 meeting?
- How much time do you want to set aside?
  - 1 hour
  - 2 hours
  - Half day
  - Full day

CALIFORNIA MARINE PROTECTED AREAS

Thank You

- **Becky Ota, Program Manager**

Becky.Ota@wildlife.ca.gov

wildlife.ca.gov/Conservation/Marine/MPA

MPAManagementReview@wildlife.ca.gov

Climate Resilience and California's Marine Protected Area Network

Science Guidance for Evaluating California's Marine Protected Area Network

www.oceansciencetrust.org/wp-content/uploads/2021/06/Foreword-MPA-reports-2021.pdf

COMMITTEE STAFF SUMMARY FOR MARCH 17, 2020 MRC

For background purposes only

6. REGULATIONS FOR COMMERCIAL HARVEST OF KELP AND ALGAE

Today's Item **Information ☐** **Action ☒**

Discuss DFW-proposed regulation changes concerning commercial harvest of wild kelp and algae and consider potential committee recommendation.

Summary of Previous/Future Actions

• FGC approved 3-phase approach for wild kelp and algae regulation review	June 20, 2012; Mammoth Lakes
• FGC adopted Phase 1 kelp regulations	Nov 6, 2013; La Quinta
• MRC reviewed approach to next regulation phases	Nov 4, 2015; MRC, Ventura
• FGC approved revised 3-phase approach	Dec 9, 2015; San Diego
• DFW updated MRC on new Phase 2 regulation review	Nov 15, 2016; MRC, Los Alamitos
• DFW provided updates on regulation review	2018-2019; MRC, various
• **Today's discussion and potential recommendation**	**Mar 17, 2020; MRC, Santa Rosa**
• Notice hearing	August 19-20, 2020; Fortuna
• Discussion/adoption hearing	October 14-15, 2020; Oakland

Background

Kelp, an important biogenic habitat, is managed with other marine algae through DFW's kelp management program. In Jun 2012, FGC and DFW agreed to revise antiquated commercial kelp regulations over several years through a three-phase approach, to improve management and enforceability. Phase 1 was completed in 2013 and implemented in 2014; DFW commenced with Phase 2 in late 2016.

Phase 2 has focused on both regulatory clean-up and broader management and regulation overhaul in consultation with kelp and algae harvesters, which DFW highlighted through updates to MRC in Mar 2018 and Jul 2019.

During phase 2, DFW conducted direct outreach to kelp and algae harvesters, solicited feedback from stakeholders at MRC meetings, and engaged directly with individual tribes and tribal communities and through the FGC Tribal Committee. Concerns raised during public and tribal engagement focused, in part, on the extensive loss of bull kelp on the north coast, and how the recent impacts should be incorporated into DFW's kelp harvest management. DFW has integrated additional management proposals intended to be responsive to the ecosystem changes and public input received, which will be described at today's meeting.

COMMITTEE STAFF SUMMARY FOR MARCH 17, 2020 MRC

For background purposes only

In Nov 2019, DFW presented an overview of the types of regulatory changes proposed for the Phase 2 rulemaking and highlighted a potential rulemaking timeline for consideration. In Feb 2020, FGC approved an updated rulemaking timeline as proposed.

Today MRC will receive a presentation from DFW staff on specific proposed regulatory changes in seven management categories (Exhibit 1) and discuss possible recommendations.

Significant Public Comments

A non-governmental organization expressed support for the proposed statewide closure of bull kelp harvest; in conjunciton with the bull kelp closure, it recommends that harvest provisions associated with bull kelp be removed and that administrative kelp beds within the bull kelp range be changed to a closed status to avoid public confusion (Exhibit 2).

Three edible seaweed harvesters do not believe they have had adequate time to fully engage in the regulation development process following DFW's harvester survey, and request 1) a delay in the rulemaking timeline until autumn*; 2) time to present at the Mar MRC meeting; 3) accommodation for participation via webinar; and 4) access to DFW survey results (Exhibit 3). (**Note that in Feb 2020, FGC adjusted the rulemaking timeline to Aug/Oct, which may satisfy this request.)*

Recommendation

FGC staff: Consider public input and develop a recommendation to support advancing draft regulations to a rulemaking stage with proposed changes recommended by DFW.

Exhibits

1. DFW presentation
2. Email from Gillian Lyons, Pew Cheritable Trusts, received Feb 18, 2020
3. Email from Terry D'Selkie, Ocean Harvest Sea Vegetables, Larry Knowles, Rising Tide Sea Vegetables, and James Jungwirth, Naturespirit Herbs, received Feb 14, 2020

Committee Direction/Recommendation

The Marine Resources Committee recommends that the Commission support proposed regulation measures for commercial kelp and algae harvest as recommended by the Department and discussed today.

OR

The Marine Resources Committee recommends that the Commission support proposed regulation measures for commercial kelp and algae harvest as recommended by the Department and discussed today, except _____.

North Coast Kelp Status Update

Marine Resources Committee Meeting

July 21, 2021

James Ray

CDFW Kelp Specialist

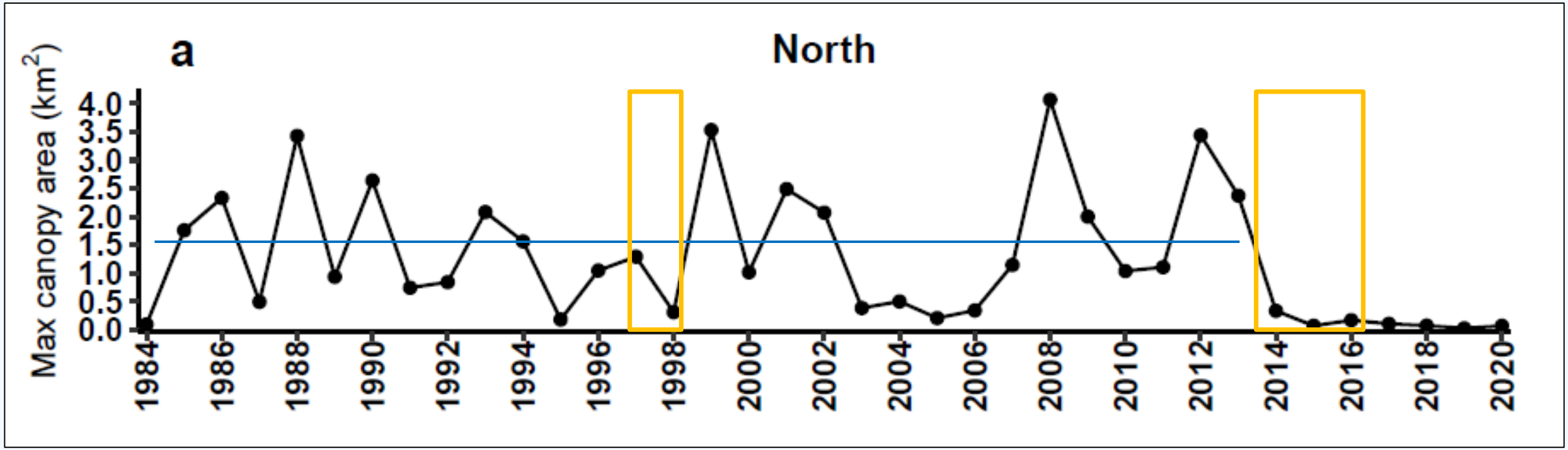
Photo: Morgan Murphy-Canella

Outline

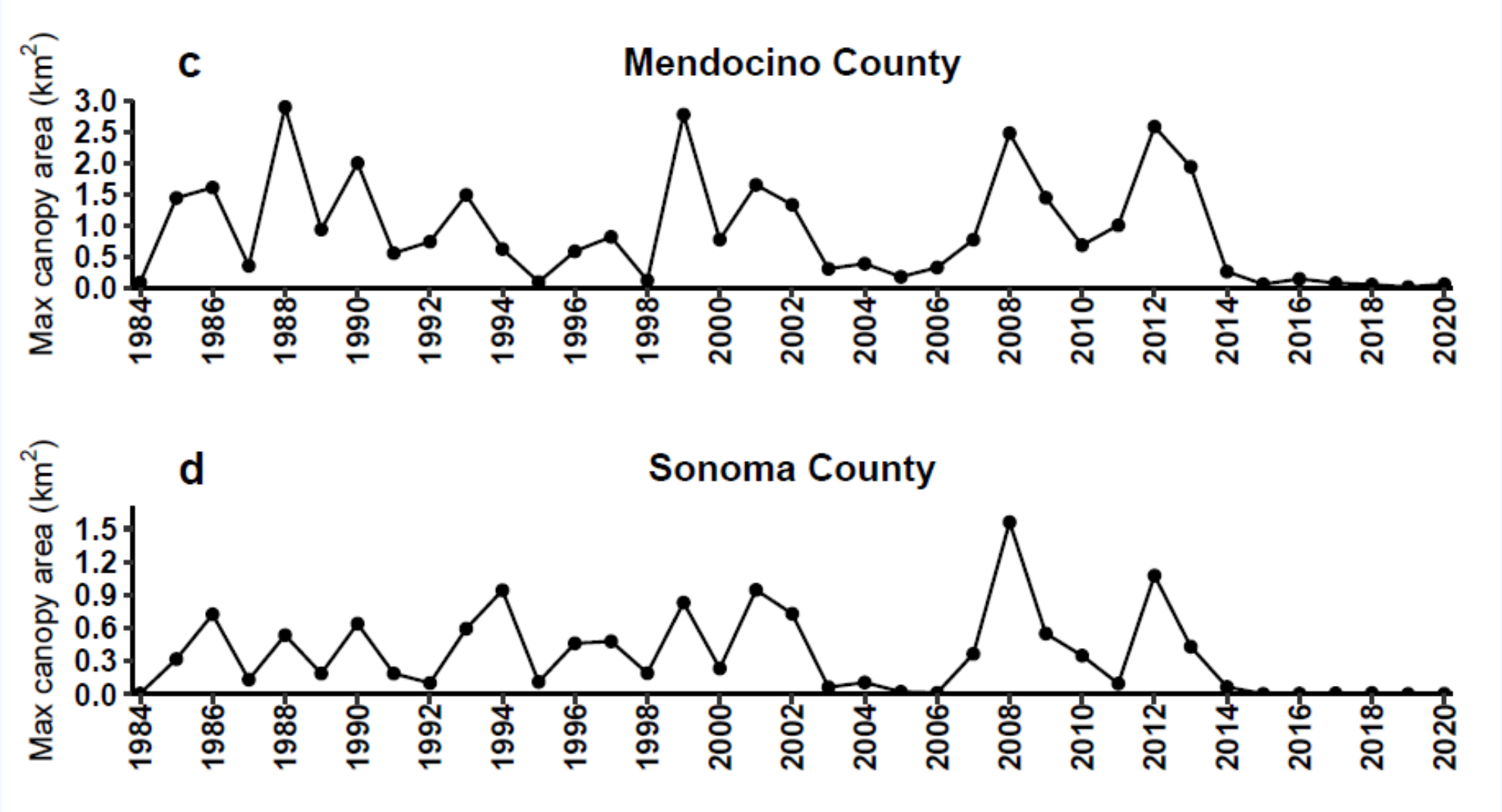
- Review satellite kelp canopy data for the north coast
- Review Occupied and Unoccupied Airborne System kelp canopy data from north coast sites

Photo: Tristin McHugh

Kelp Canopy – North Coast Region

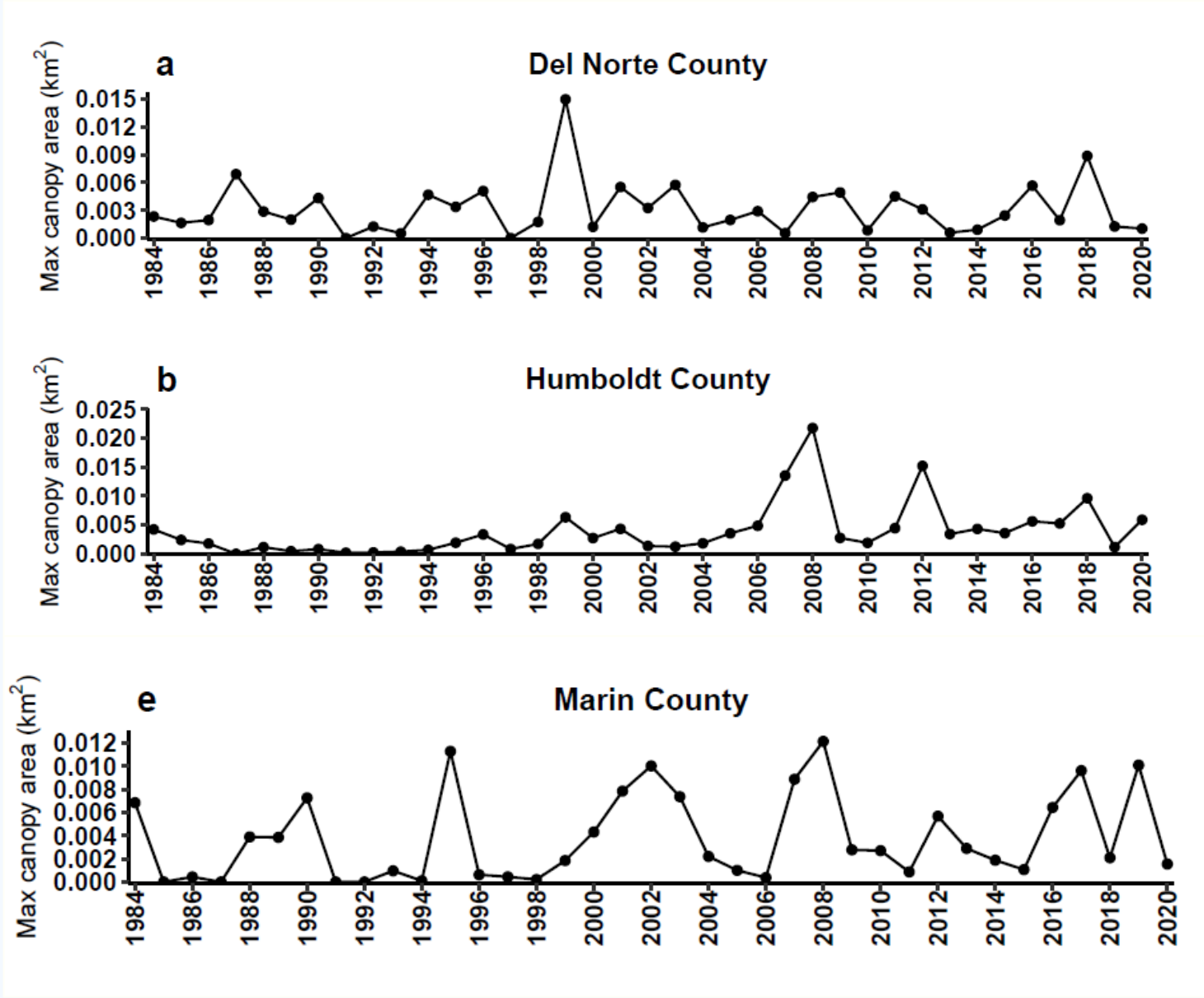


Kelp Canopy – Mendocino, Sonoma



Source: Santa Barbara Coastal LTER et al. 2021

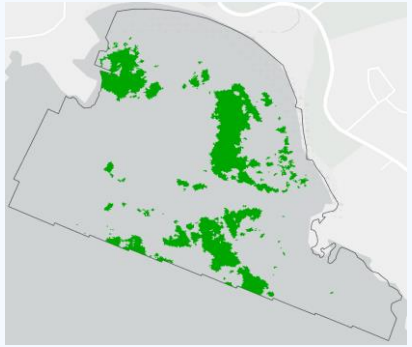
Kelp Canopy – Del Norte, Humboldt, Marin



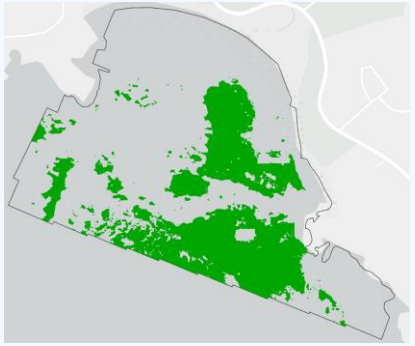
Source: Santa Barbara Coastal LTER et al. 2021

Aerial and Drone Kelp Canopy Data

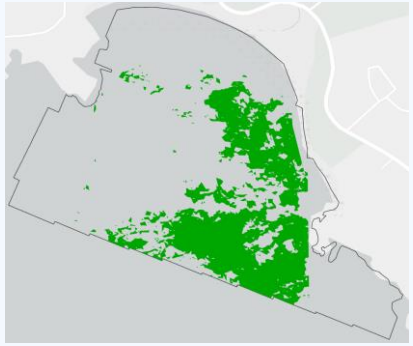
2003



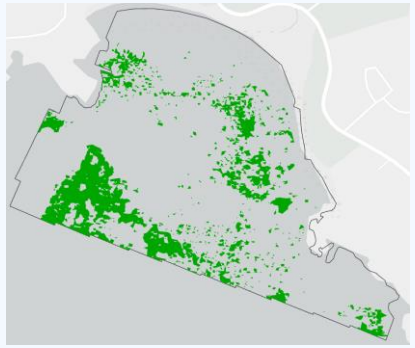
2004



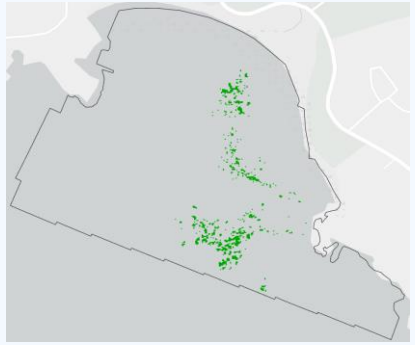
2005



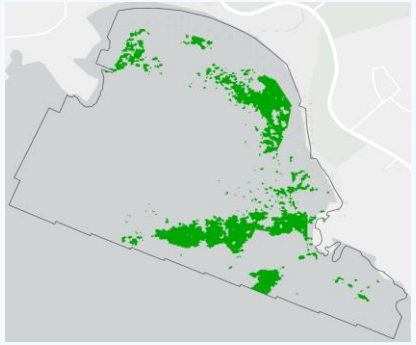
2008



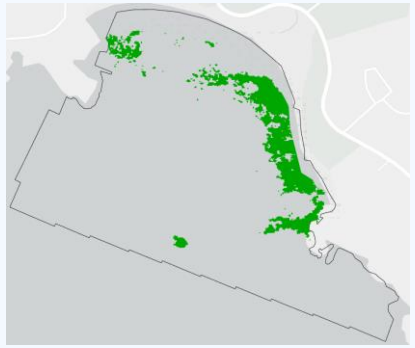
2014



2015



2016



2019

2020

VAN DAMME

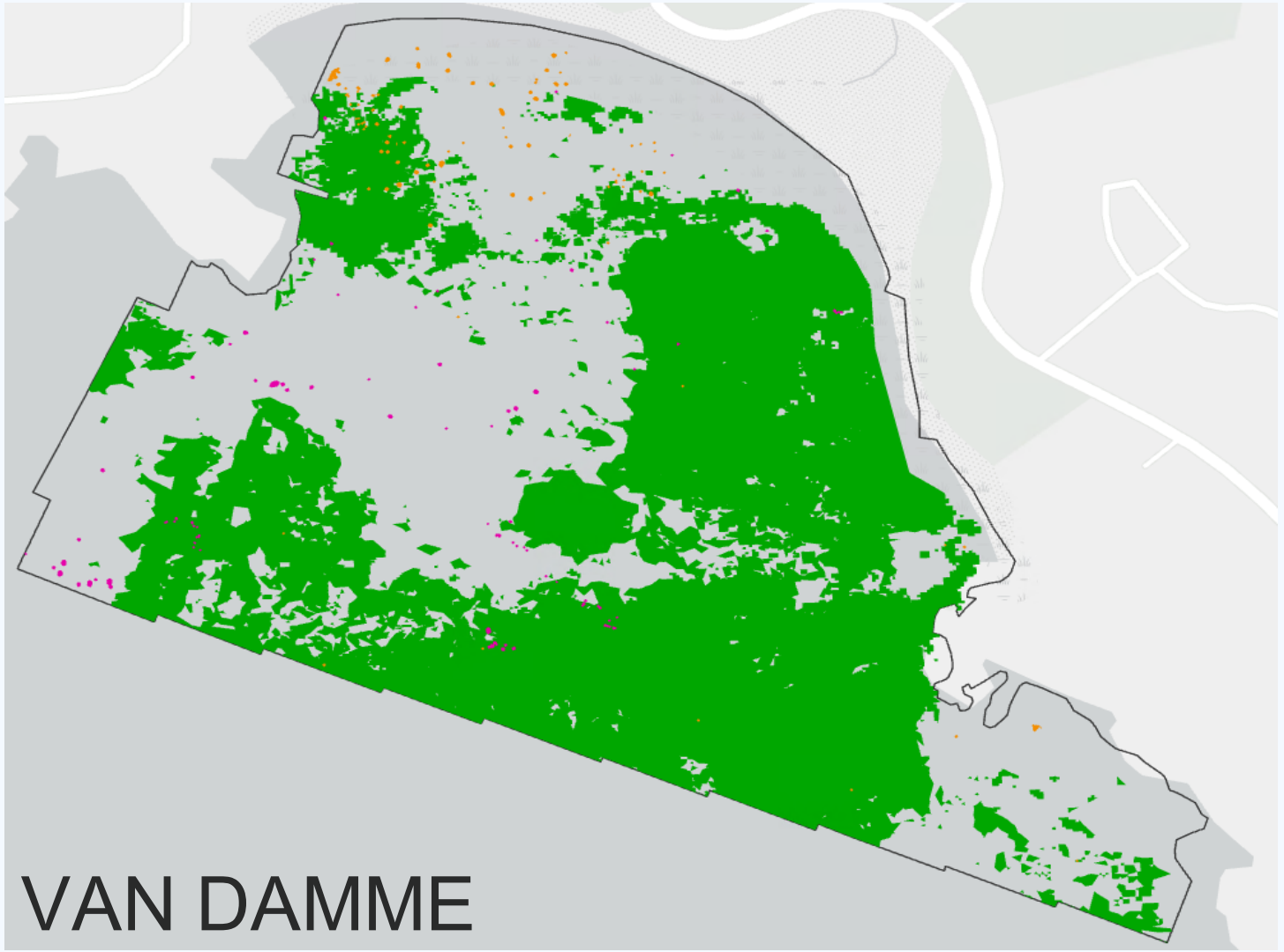
Drone survey extent

Data sources:
2003 – 2016 CDFW occupied aircraft surveys

2019 – 2020 unoccupied aerial vehicle (UAV/drone) surveys.

2019-20 UAS data collaboration: The Nature Conservancy (TNC), Greater Farallones Association, UCLA, UCSB, and CSUMB. Kelp classification and mapping was completed by TNC; data have been provided to CDFW for their use. Please contact Vienna Saccomanno (v.r.saccomanno@tnc.org) with questions.

Aerial and Drone Kelp Canopy Data (Cont.)



Kelp max extent '03-'16 (CDFW occupied aircraft surveys)

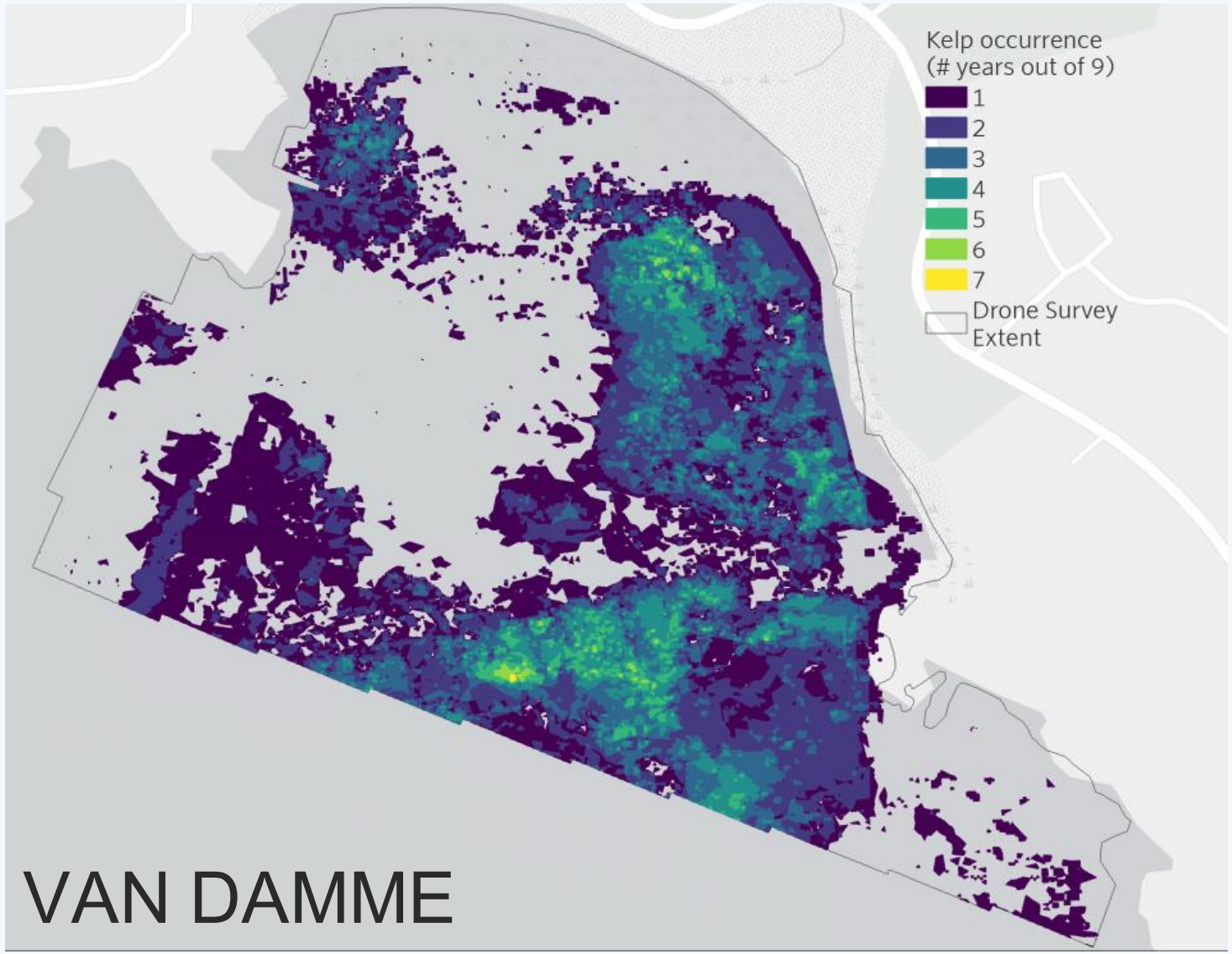
Kelp canopy cover 2019 (UAV survey)

Kelp canopy cover 2020 (UAV survey)

UAV survey extent

UAV data collection in 2019 and 2020 was conducted through a collaboration of partners including The Nature Conservancy (TNC) , Greater Farallones Association, UCLA, UCSB, and CSUMB. Kelp classification and mapping was completed by TNC; data have been provided to CDFW for their use. Contact Vienna Saccomanno (v.r.saccomanno@tnc.org) with questions.

Aerial and Drone Kelp Canopy Data (Cont. 2)



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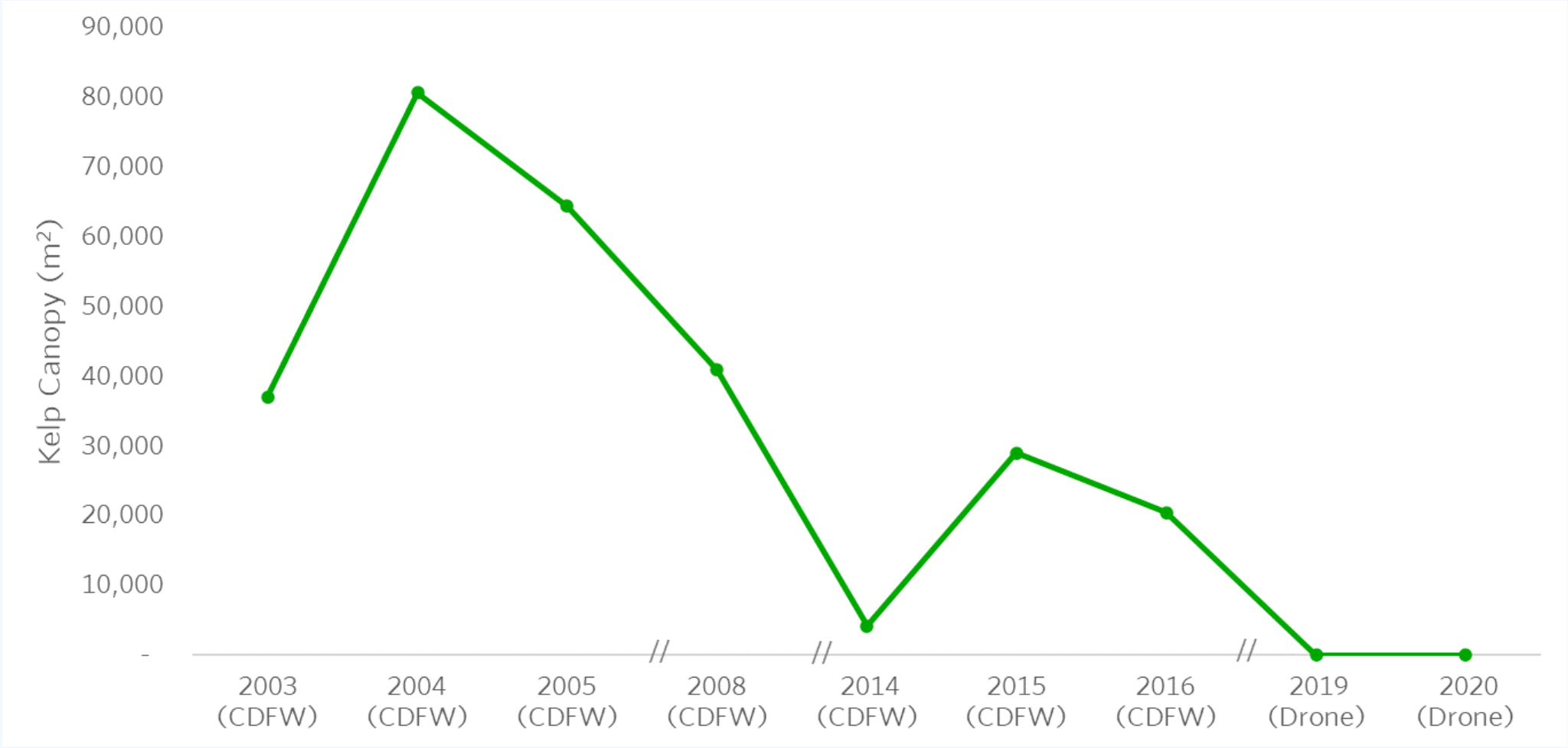
Aerial and Drone Kelp Canopy Data (Cont. 3)

VAN DAMME



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Summary

- Kelp canopy area in Mendocino and Sonoma counties declined to extremely low levels beginning in 2014 low due to the 2014-16 marine heatwave and ecological stressors.

- Levels remained consistently low with no significant regrowth through 2020 – likely due to persistent high abundance of purple urchin.

- Observations of kelp regrowth in 2021 - unknown how significant the regrowth is until satellite and drone survey data from 3rd quarter surveys is available.

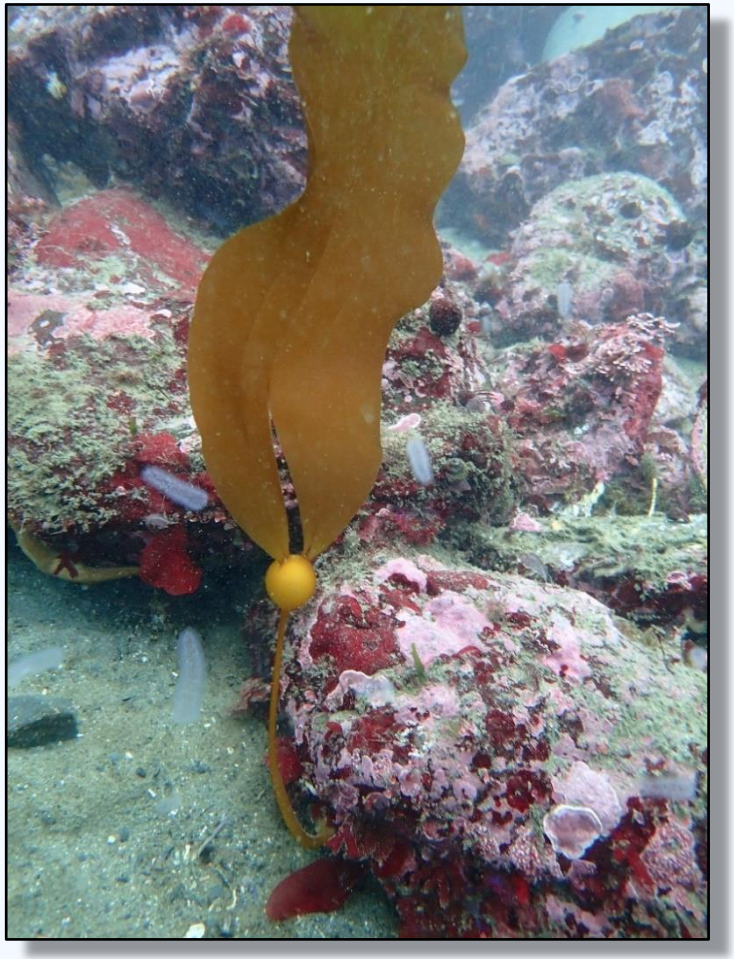


Photo: Tristen McHugh

Acknowledgements

The Nature Conservancy

California State University
MONTEREY BAY

OCEAN
PROTECTION
COUNCIL

Thank You ◈ Questions?

James Ray
James.Ray@wildlife.ca.gov

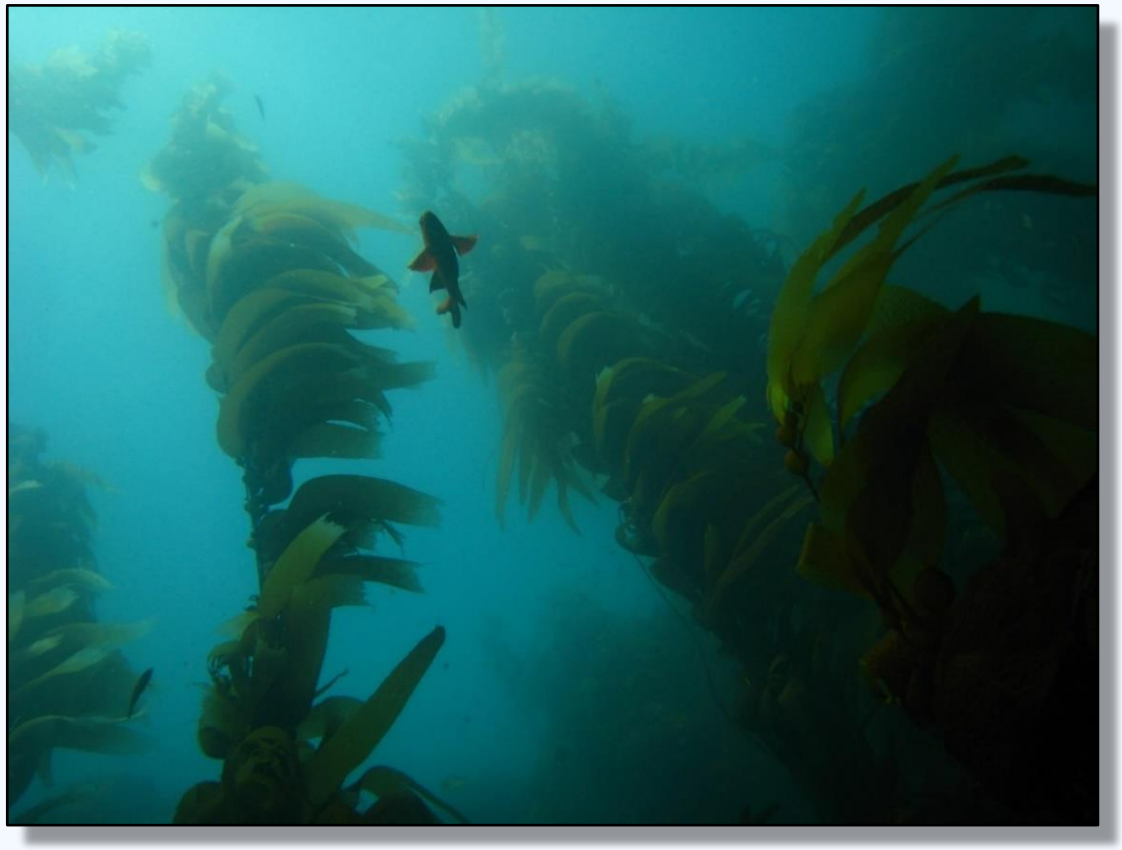


Photo: Derek Stein CDFW

Bull Kelp Working Group – Areas of Agreement and Divergence
July 16, 2021

Background

As part of the California Department of Fish and Wildlife (CDFW) and the California Fish and Game Commission's (FGC) ongoing effort to review and consider changes for the commercial harvest of marine algae, CDFW formed an ad hoc Bull Kelp Working Group (BKWG) aimed at collaboratively developing potential regulatory changes to manage commercial bull kelp through a regional approach including consideration of specific harvest methods and data needs.

The BKWG consisted of a small group of vested participants representing various key constituencies. The BKWG brought together commercial harvesters, non-governmental organizations, kelp aquaculture businesses, and academic researchers to have focused discussions regarding bull kelp management.

CDFW facilitated four BKWG meetings held December 30, 2020 – June 9, 2021. This document identifies the areas of agreement and divergence within the BKWG during the meetings and communications outside of the meetings. The document also identifies information needed to support an adaptive management framework for bull kelp which will be addressed in the Kelp Restoration and Management Plan (KRMP).

Areas of agreement

- A regional approach is needed for bull kelp management
- Bull kelp abundance is variable spatially and temporally
- Aerial/satellite/drone surveys are tools to measure canopy area. Drone data may be appropriate to consider smaller patches of bull kelp and would require further consideration
- Bull kelp in Mendocino and Sonoma counties has been severely impacted due to warm water conditions driven in part by a marine heatwave, and purple sea urchin increases due to the loss of urchin predators from Sea Star Wasting Syndrome. Satellite imagery data through the last quarter of 2020 suggests historically low levels of bull kelp have persisted for an unprecedented duration since 2014. Satellite imagery data for 2021 is not yet available.
- The cause of the bull kelp decline since 2014 is due to oceanographic and ecological factors, not commercial harvest of bull kelp
- Satellite imagery data suggests bull kelp in Del Norte, Humboldt, and Marin counties has not experienced the same reductions that Mendocino and Sonoma counties have experienced, beginning in 2014
- There have been recent reports of purple urchin congregations in Del Norte County
- It is important to monitor canopy area to inform adaptive management
- There are areas of uncertainty that need to be addressed for bull kelp management, ideally through the development of the KRMP, including:
    - Developing estimations of standing biomass from remotely-sensed canopy area
    - Determining acceptable levels of harvest based on biomass

    - Understanding the impacts of harvest on kelp populations and determining sustainable harvest methods
    - Defining recovery for kelp populations
- There is support for the KRMP and adaptive management
    - The KRMP has been identified as a priority by CDFW, to be developed with stakeholders and subject matter experts and include a science-based adaptive management approach for bull and giant kelp
- Harvest permits and reporting should be improved and made useful for management, including:
    - Transitioning to an online format
    - Including a drying permit option to meet statutory requirements
    - Including the number of individuals harvesting
    - Including latitude and longitude coordinates of harvest
    - Differentiating between harvest of giant and bull kelp

Areas of divergence

- Satellite imagery data
    - Satellite imagery data is the best available scientific data to determine the status of kelp over a large spatial scale and to use for management
    - One member stated satellite imagery data taken only at low tide is the best available scientific data
- Bull kelp harvest regulations
    - Current regulations are sufficient, it is not necessary to close Mendocino and Sonoma counties and limit harvest in Del Norte and Humboldt counties
    - It is necessary to close Mendocino and Sonoma and limit Del Norte and Humboldt counties harvest
    - Increase the two-ton annual bull kelp limit per license for edible seaweed when bull kelp is abundant
- Level of precaution necessary to protect bull kelp in Mendocino and Sonoma counties
    - Protecting spores by prohibiting harvest is not needed
    - Due to the unprecedented duration of historically low levels of bull kelp in Mendocino and Sonoma counties, establish a temporary harvest closure with a sunset date of 3-5 years coinciding with KRMP completion
    - Harvest should not be closed until triggers for reopening and recovery are defined
    - Instead of a temporary harvest closure, limit harvest to current licensees for one year and do not grant leases for one year
- Use of Administrative Kelp Beds in bull kelp management
    - Link all bull kelp harvest, regardless of use, to Administrative Kelp Beds
    - Do not link bull kelp harvested as edible seaweed to Administrative Kelp Beds
    - Close the current lease-only Administrative Kelp Beds through a regulation change
    - Establish a hiatus on kelp leases through an administrative change

    - Do not change Administrative Kelp Beds status from lease only to closed
- Sunset dates of harvest closures and limits
    - Sunset dates will not be honored and harvest closures will become permanent
    - Regional regulations are needed for 3-5 years or until the KRMP is completed and will be revisited before the sunset date
    - Regional regulations need to be changed earlier than three years
- Areas of harvest
    - Del Norte and Humboldt counties
        - Considering the historical canopy area from 1984-2020, establish a total harvest limit of 4 tons for Humboldt and Del Norte counties based on current regulations and historic harvest in these counties
        - Limiting total annual take without limiting the number of licenses may create a derby-style fishery
        - Create a limited access fishery, limit harvest to those who have historically harvested in these counties
        - Limit harvest to the average take over the last five years and to harvesters with historical take in the counties
    - Sonoma and Mendocino counties harvesters' ability to shift harvest
        - If Sonoma and Mendocino counties are closed to bull kelp harvest, harvesters should be allowed to harvest from Del Norte, Humboldt, and Marin counties
        - Sonoma and Mendocino counties harvesters should not be allowed to shift to Del Norte, Humboldt, and Marin counties
        - Current license holders from Mendocino and Sonoma counties should be allowed to harvest in Del Norte and Humboldt counties if it does not impact harvesters who have historically harvested in Humboldt and Del Norte
- Recent impacts of purple urchins to bull kelp in Del Norte County
    - Bull kelp in Del Norte County has more recently been impacted by purple urchin congregations resulting in bull kelp loss
    - The purple urchin congregations in Del Norte have not impacted bull kelp

Kelp and Algae Commercial Harvest – Bull Kelp

21 July 2021

Presented to:
Marine Resources Committee

Fish and Game Commission

Presented by:
Rebecca Flores Miller
Environmental Scientist
CDFW Marine Region

Outline

Photo Credit: R. Flores Miller, CDFW

- Background
- Tribal Consultations
- Bull Kelp Working Group
- Data considerations
- CDFW recommendation
- Anticipated timeline

Background

- Consultation with Member Tribes of the InterTribal Sinkyone Wilderness Council
- Commercial harvester survey
- Commercial harvester and stakeholder webinars
- Scientific forum – kelp south of Point Montara
- Bull kelp prioritized
- Bull Kelp Working Group

Consultation with Member Tribes of the InterTribal Sinkyone Wilderness Council

- Informal discussions with Tribes began 2018
- Collective process of formal Government-to-Government Consultation with nine of the Sinkyone Council's federally recognized member Tribes initiated in 2019 – ongoing
- Tribal proposal submitted July 14, 2021, available at www.Sinkyone.org/news

Bull Kelp Working Group

- Support for
  - Science based management
  - Satellite imagery is best available data
  - Regional approach
- County considerations
- Harvest methods
- Harvest logs
- Kelp harvester license

Photo Credit: G. Contolini, CASG

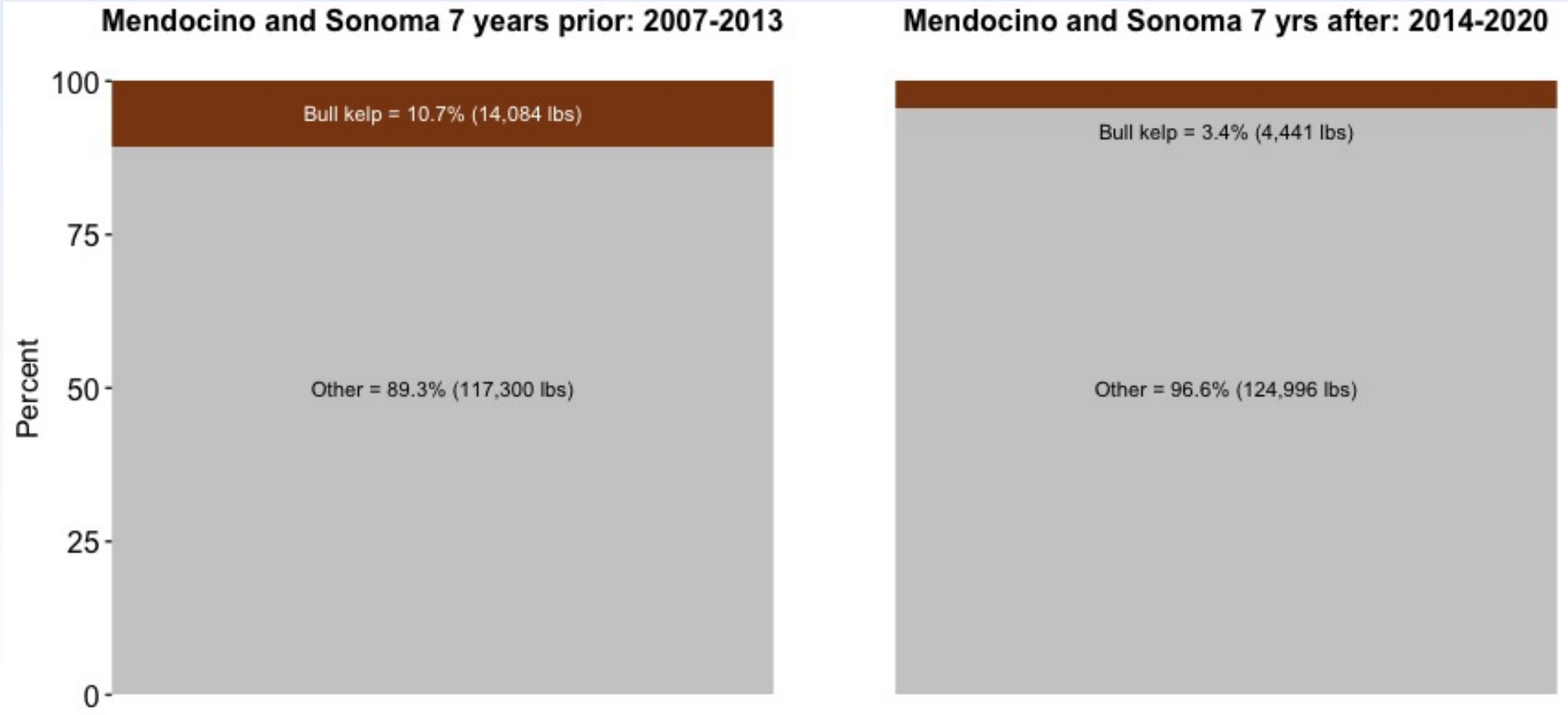
Bull Kelp Working Group (Cont.)

- Areas of agreement
  - Sonoma and Mendocino bull kelp reductions have persisted since 2014 are unprecedented in the amount and duration combined
  - Support for Statewide Kelp Restoration and Management Plan
- Areas of divergence
  - Level of precaution for Mendocino and Sonoma counties
  - Limiting harvest in Del Norte and Humboldt counties
  - Mechanisms for reopening and recovery

CDFW Recommendation – Commercial Bull Kelp

- Prohibit take in Mendocino and Sonoma counties regardless of use
- Limit harvest in Humboldt and Del Norte counties to 4 tons/year
  - Maintain current limit (2 tons wet weight/year per license holder) and use for human food only
  - Weekly reporting
- Limit new kelp lease applications for lease-only beds
- Sunset date of potentially five (5) years or upon Kelp Restoration and Management Plan adoption

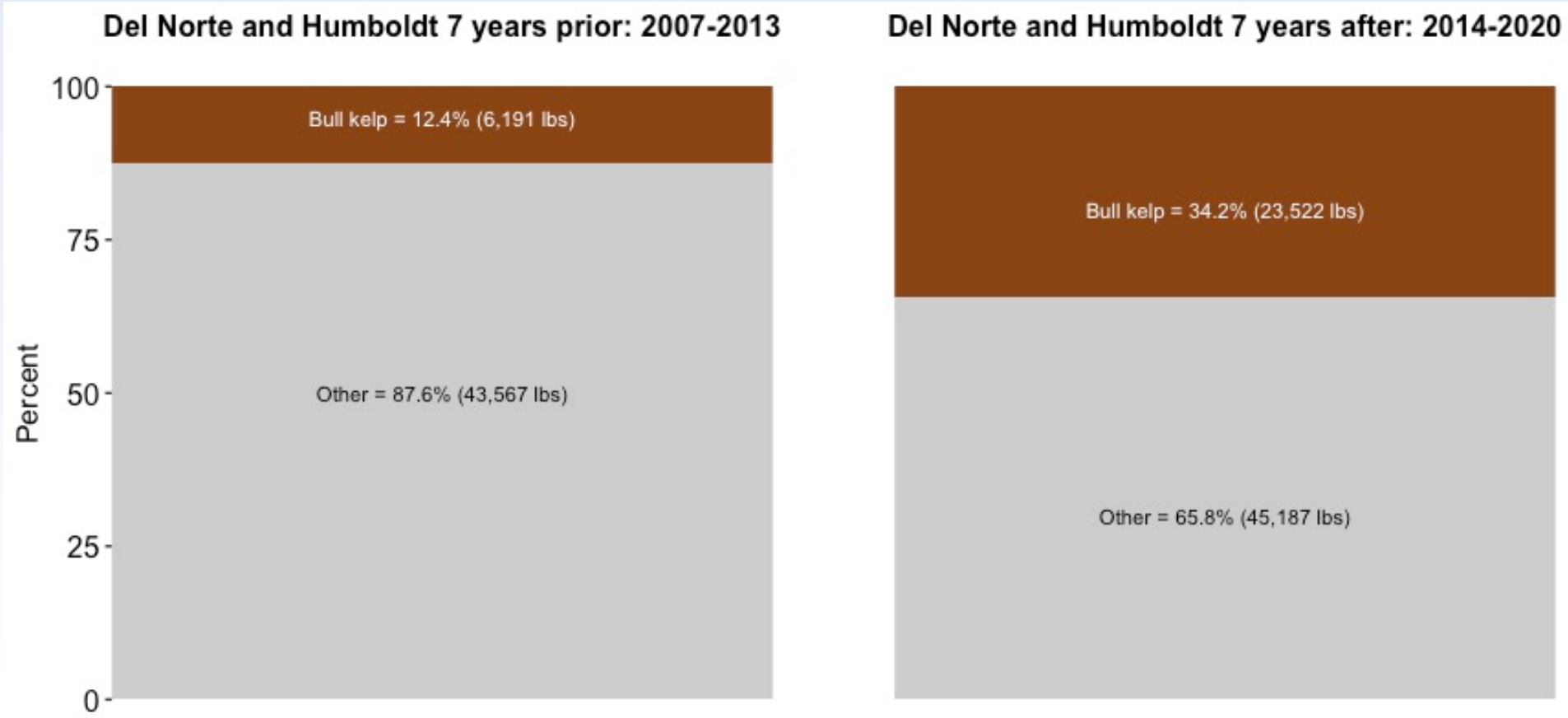
Percent Commercial Bull Kelp Harvest – Mendocino and Sonoma Combined (2007-2020)



Percent of bull kelp harvested for edible seaweed in Mendocino and Sonoma counties, seven years before and after the marine heat wave beginning in 2014. Data only from harvesters that have ever taken bull kelp. Seven years prior (2007-13) had 11 harvesters, 9 of which took bull kelp. Seven years after (2014-20) had 8 harvesters, 6 of which took bull kelp.

Source: CDFW edible seaweed harvest logs

Percent Commercial Bull Kelp Harvest – Del Norte and Humboldt Combined (2007-2020)

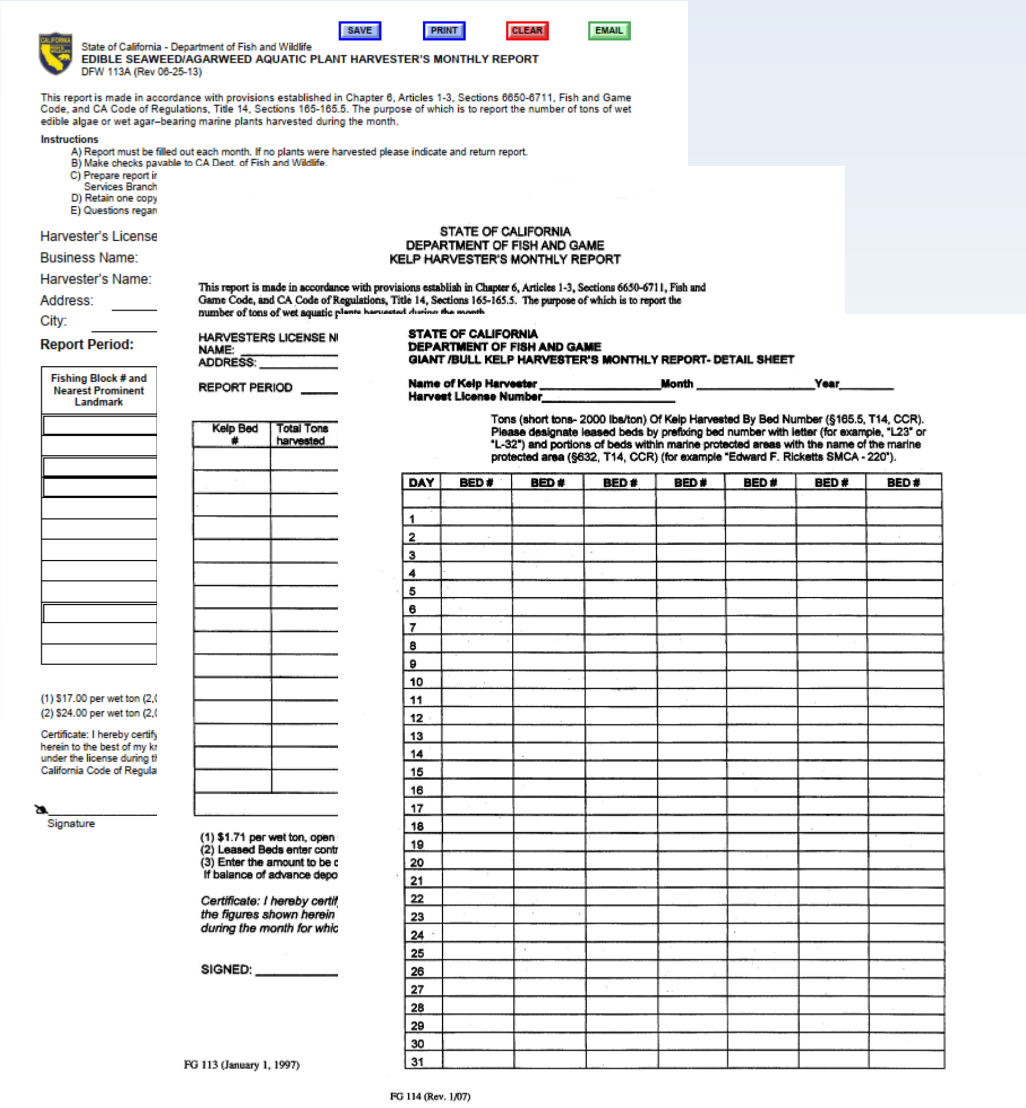


Percent of bull kelp harvested for edible seaweed in Del Norte and Humboldt counties, seven years before and after the marine heat wave beginning in 2014. Data only from harvesters that have ever taken bull kelp. Seven years prior (2007-13) had 3 harvesters, all of which took bull kelp. Seven years after (2014-20) had 2 harvesters, all of which took bull kelp. 2014-20 data reflects removal of outliers.

Source: CDFW edible seaweed harvest logs

CDFW Recommendation – Harvest Logs and License

- Harvest logs
  - Kelp and edible seaweed logs
    - Include the number of individuals harvesting
    - Latitude and longitude reporting for bull kelp
    - Update and Clean-up
  - Kelp log
    - Differentiate between giant and bull kelp
- Kelp harvester license
  - Include drying permit option


SAVE PRINT CLEAR EMAIL

State of California - Department of Fish and Wildlife
EDIBLE SEAWEED/AGARWEED AQUATIC PLANT HARVESTER'S MONTHLY REPORT
DFW 113A (Rev 06-25-13)

This report is made in accordance with provisions established in Chapter 6, Articles 1-3, Sections 6650-6711, Fish and Game Code, and CA Code of Regulations, Title 14, Sections 165-165.5. The purpose of which is to report the number of tons of wet edible algae or wet agar–bearing marine plants harvested during the month.

Instructions
A) Report must be filled out each month. If no plants were harvested please indicate and return report.
B) Make checks payable to CA Dept. of Fish and Wildlife.
C) Prepare report in
Services Branch
D) Retain one copy
E) Questions regar

Harvester's License
Business Name:
Harvester's Name:
Address:
City:
Report Period:

Fishing Block # and Nearest Prominent Landmark

(1) $17.00 per wet ton (2,(
(2) $24.00 per wet ton (2,(

Certificate: I hereby certify
herein to the best of my kı
under the license during tl
California Code of Regula

Signature

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
KELP HARVESTER'S MONTHLY REPORT

This report is made in accordance with provisions establish in Chapter 6, Articles 1-3, Sections 6650-6711, Fish and Game Code, and CA Code of Regulations, Title 14, Sections 165-165.5. The purpose of which is to report the number of tons of wet aquatic plants harvested during the month.

HARVESTERS LICENSE N
NAME:
ADDRESS:

REPORT PERIOD

Kelp Bed #	Total Tons harvested

(1) $1.71 per wet ton, open
(2) Leased Beds enter contr
(3) Enter the amount to be c
If balance of advance depo

Certificate: I hereby certif the figures shown herein during the month for whic

SIGNED:

FG 113 (January 1, 1997)

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
GIANT /BULL KELP HARVESTER'S MONTHLY REPORT- DETAIL SHEET

Name of Kelp Harvester ________ Month ________ Year ________
Harvest License Number ________

Tons (short tons- 2000 lbs/ton) Of Kelp Harvested By Bed Number (§165.5, T14, CCR). Please designate leased beds by prefixing bed number with letter (for example, "L23" or "L-32") and portions of beds within marine protected areas with the name of the marine protected area (§632, T14, CCR) (for example "Edward F. Ricketts SMCA - 220").

DAY	BED #	BED #	BED #	BED #	BED #	BED #	BED #
1							
2							
3							
4							
5							
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31							

FG 114 (Rev. 1/07)

CDFW Proposed Regulation Summary

- Prohibit take in Mendocino and Sonoma counties
- Limit take in Humboldt and Del Norte counties
- Limit new kelp lease applications for lease-only beds
- Include a sunset date
- Harvest logs
- Kelp harvester license

Anticipated Timeline

- Potential Marine Resources Committee recommendation to Commission
- Notice: ASAP
- Discussion: ASAP
- Adoption: ASAP
- Effective date: ASAP

Thank You

kelp@wildlife.ca.gov,
Rebecca.FloresMiller@wildlife.ca.gov

COMMITTEE STAFF SUMMARY FOR NOVEMBER 9, 2017
FOR BACKGROUND PURPOSES ONLY

6. PINK SHRIMP

Today's Item **Information** ☒ **Action** ☐

(A) Receive DFW overview of the commercial pink shrimp trawl fishery and capacity goal.

(B) Discuss and possible recommendation for pink shrimp fishery regulations.

Summary of Previous/Future Actions

- FGC refers petitioner for transferable permit to DFW — Oct 19-20, 2016; Eureka
- FGC refers non-transferable permits petition to MRC — Aug 16-17, 2017; Sacramento
- FGC receives DFW fishery update — Aug 16, 2017; Sacramento
- **Today's vetting of potential options** — **Nov 9, 2017; MRC, Marina**

Background

FGC has had authority to regulate the commercial pink shrimp trawl fishery since 2004 (Fish and Game Code sections 8841 and 8842). Section 120.2 of Title 14 defines permit requirements for separate northern and southern pink shrimp trawl permits, and sets initial permit issuance criteria, vessel length endorsement, permit renewal and transfer conditions, and fees.

FGC has been petitioned twice for additional access to commercial pink shrimp trawl permits. The first (Aug 2016) highlighted that the number of existing permits was less than the minimum permit capacity goal established in regulation, and requested that FGC direct DFW to issue a new transferable permit accordingly (Exhibit 2). FGC denied the petition and referred the petitioner to DFW as the source for permit issuance. The second (Jun 2017) petitioned FGC to create 20 new, non-transferable permits with prescribed conditions (Exhibit 3). FGC referred the petition to MRC for review in the context of a review of pink shrimp trawl fishery capacity.

At the Aug 2017 FGC meeting, DFW presented an overview of the fishery, including review of capacity, management improvements and goals, and initial recommendations; DFW also recommended further review by MRC (Exhibit 1). Today, DFW will give a presentation to recap the history of the fishery permits, capacity, and management; highlight fishing industry goals associated with California pink shrimp; and make initial recommendations for MRC discussion.

Significant Public Comments

1. Scott Fosmark, a fisherman interested in purchasing an existing permit, has not been able to find an available, transferable permit for sale; in 2016 he petitioned FGC to direct DFW to issue a new transferable permit consistent with the capacity goal in regulation (Exhibit 2). Mr. Fosmark has requested time to give a brief presentation to MRC.
2. Scott Hartzell, fisherman, petitioned FGC to create 20 new, non-transferable, northern pink shrimp trawl permits with specified fees, annual renewal requirements, modified boundaries, and forfeiture conditions (Exhibit 3).

COMMITTEE STAFF SUMMARY FOR NOVEMBER 9, 2017
FOR BACKGROUND PURPOSES ONLY

Recommendation

FGC staff: Discuss options for pink shrimp fishery regulations and possible recommendations associated with the capacity goal, permit issuance, and future management. Develop committee recommendation for further discussion or action.

DFW: Initial recommendation (Aug 2017) is for no new transferable permits at this time; consider addition of limited-term, non-transferable permits, and/or replace vessel size restriction for permit transfer to facilitate permit transfers; and initiate further evaluation of the fishery.

Exhibits

1. DFW presentation, given at FGC meeting on Jun 22, 2017
2. Petition #2016-021, received Aug 24, 2016
3. Petition #2017-005, received Jun 6, 2017

Motion/Direction (N/A)

Pink Shrimp FMP Update

July 21, 2021

Presented to:

CA Fish & Game Commission
Marine Resources Committee

Presented by:

Marine Region Invertebrate Project Staff

Pink Shrimp Team

Tom Mason, Sr. ES Supervisor
San Diego

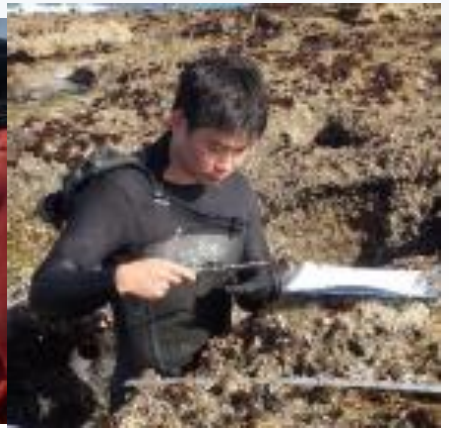
Sonke Mastrup, Program Mgr.
Sacramento

Joanna Grebel, Sr. ES Supervisor,
Monterey

Steve Rienecke, ES
San Luis Obispo

Ian Kelmartin, ES
Santa Rosa

Jerry Kashiwada, ES
Fort Bragg



Tony Shiao, ES
Santa Barbara

Presentation Outline

- Fishery Overview
- Proposed basic FMP process
- Changes to fishery in FMP

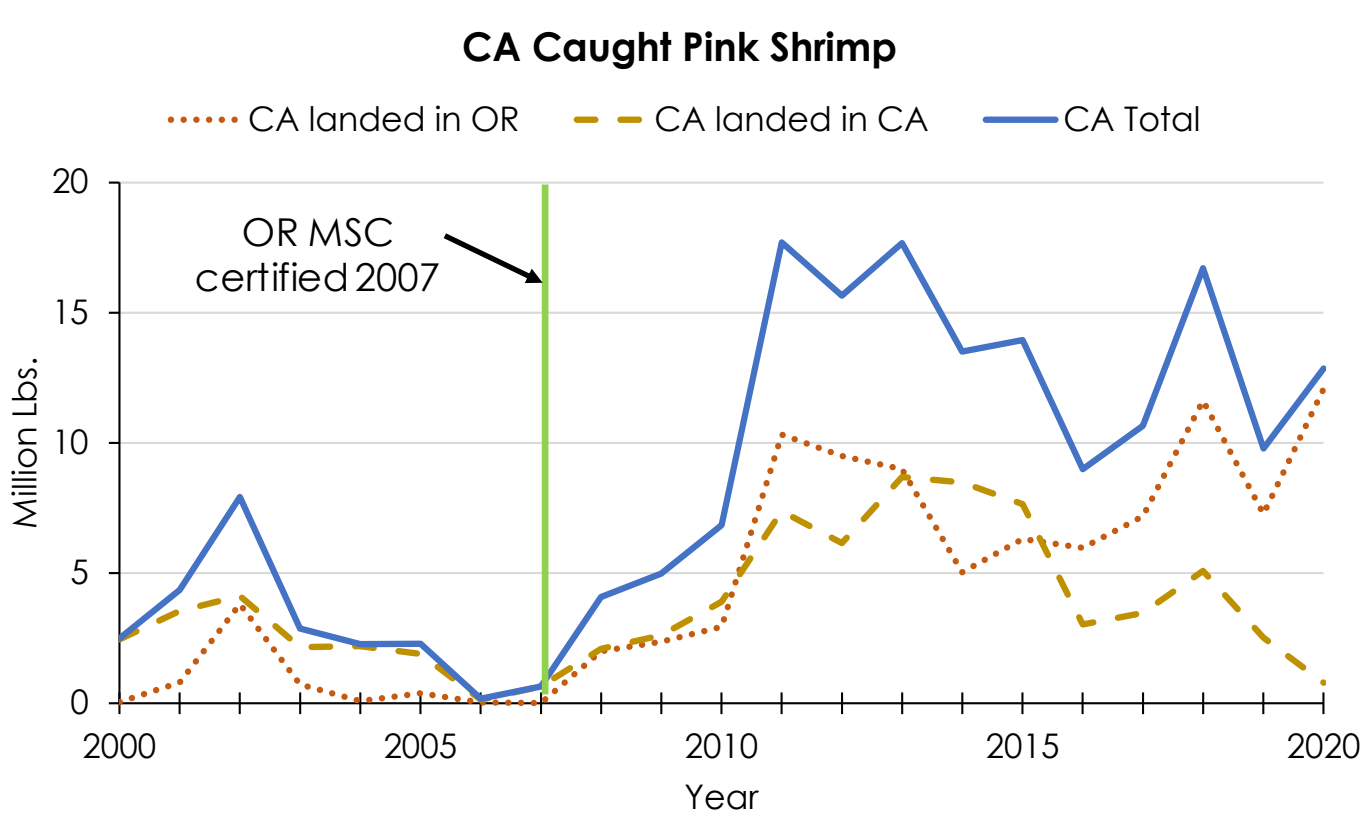
Photo credit: CDFW

Fishery Background

- Highly productive, short-lived species
  - High interannual variation in stock size
- Conducted in federal waters
- Season: Apr 1- Oct 30
- Count per pound limit: 160
- Historic landings in excess of 15 million lb.

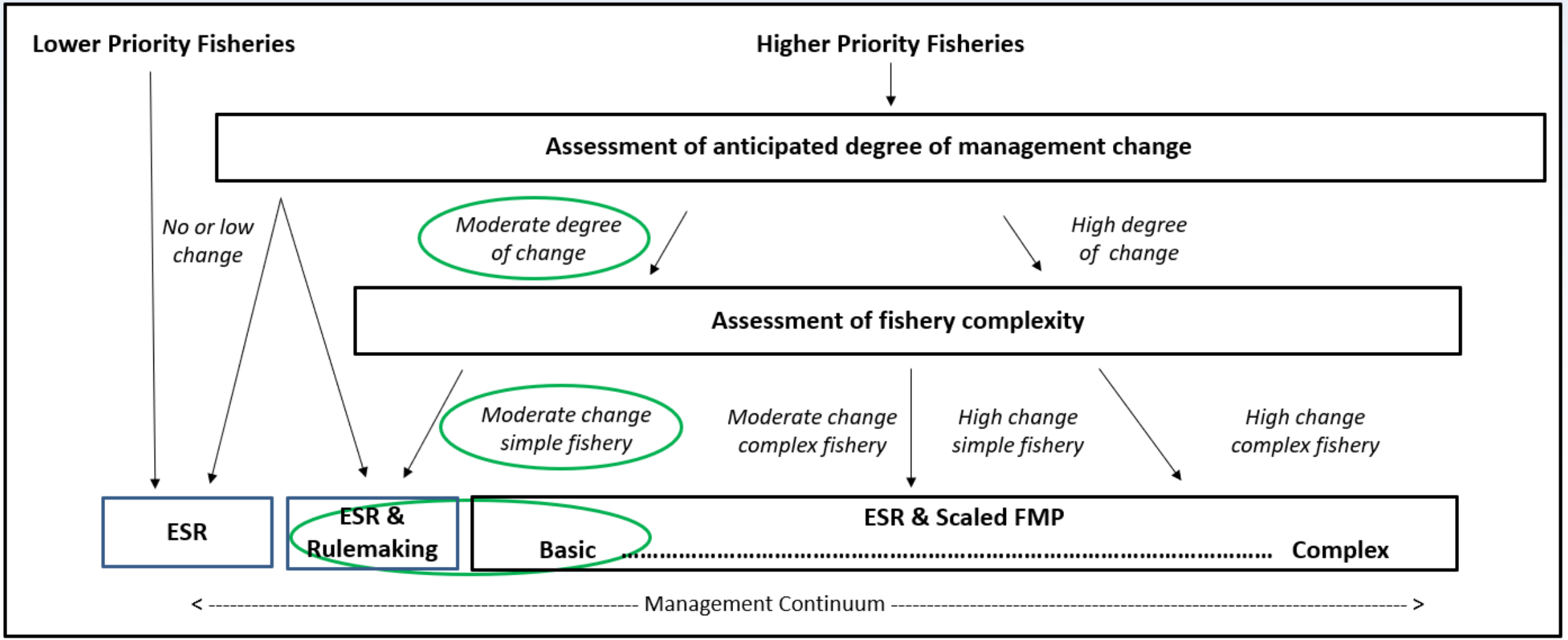
Motivation for FMP

- Better tools to protect stock and reduce bycatch
- Consistent management across CA, OR, WA
- Increase competitiveness of CA fishery through MSC certification
- Test case for Basic FMP



Scaled Management

- Gray area between ESR & Rulemaking vs Basic FMP (FMP Light)



Basic FMP

- Basic FMP provides streamlined, cost-effective approach for less complex fisheries.
- Pink shrimp fishery a good test case
  - Relatively Small, Single Sector (Commercial)
  - Proposed management changes are consistent with OR & WA pink shrimp fisheries.
  - Past and ongoing outreach to the fleet, processors, and environmental NGOs indicate support for the proposed changes

Proposed FMP Review Process

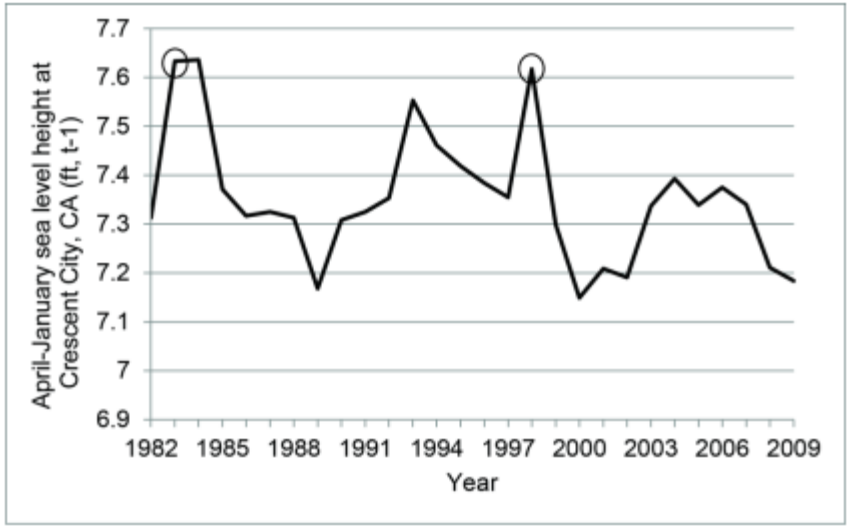
- Peer Review provided by MRAG as part of MSC certification review
- Two Commission Meetings to consider FMP
- Two Commission Meetings to consider implementing regulations
  - Specifics of timeline included later in presentation

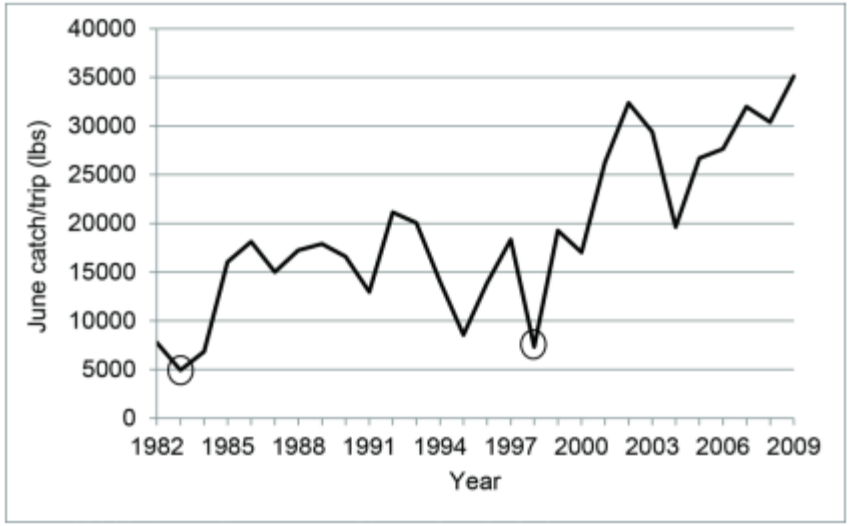
Proposed Changes to Fishery

- Harvest Control Rule
- LED lights to reduce bycatch
- New requirements for reporting landing weight

Harvest Control Rule

- ODFW developed reference points
  - Target reference point
    - If avg. June catch/trip > 12,500 lb – normal season
    - If < 12,500 lb – fishery closes Oct 15 + opens Apr 15
  - Limit reference point
    - June catch/trip < 10,000 lb + Apr-Jan SLH >7.5ft.
    - Fishery closes as soon as practical
- Add correction factor of 1.6 to single-rigged effort





ODFW. 2014. Information Reports #2014-08.

LED Lights

- Reduce eulachon bycatch by 80-90%
- Trawls must use ≥5 lights
- Required in OR + WA

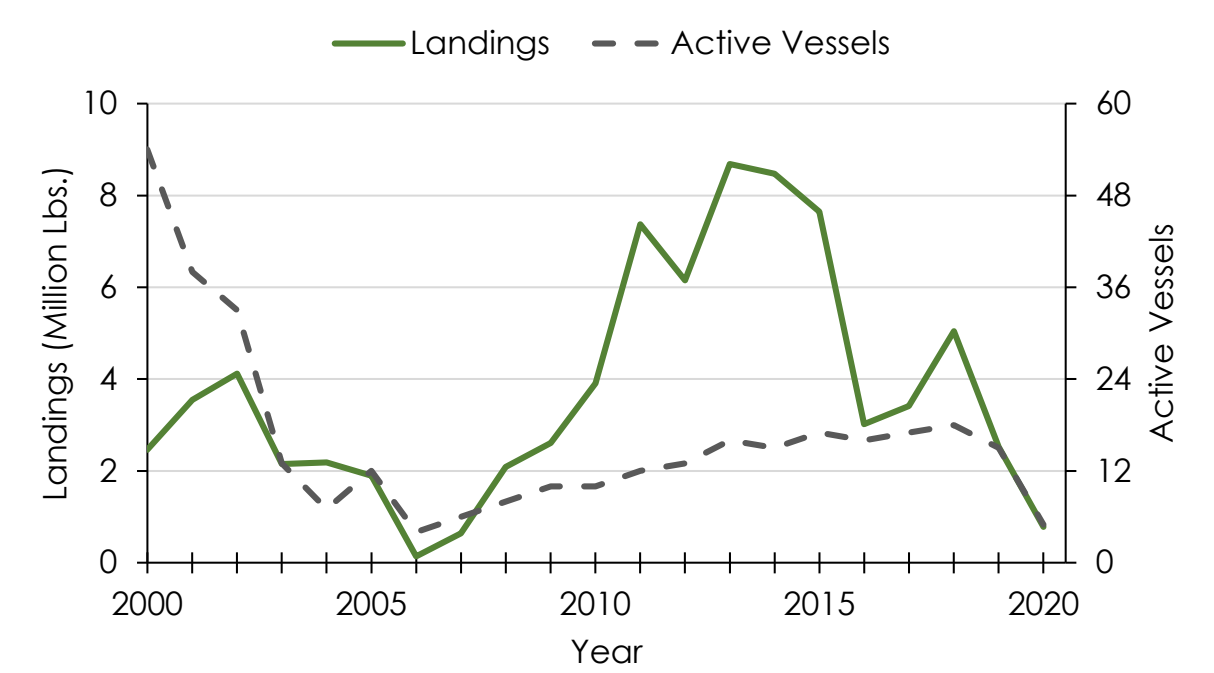
Eulachon bycatch in pink shrimp trawls (left) not equipped with LED lights and (right) equipped with LED Lights. Credit: NMFS

Landing Weight Reporting

- Codifies historical practice
- Allows for landing of shrimp mixed with ice
- Directs processors to develop and have DFW approved procedure for estimating landing weight based on ice percentage

Capacity

- No change to capacity goal
- High number of latent permits
- Effects of reg change unknown
- Sufficient protection for stock by HCR, count-per-pound limit
- Future capacity review



Pink Shrimp FMP Timeline

Milestone	Date
Peer Review	TBD
Presentation to MRC	July 21, 2021
FMP Notice Hearing	TBD
FMP Adoption Hearing	TBD
Implementing Regulations Notice Hearing	TBD
Implementing Regulations Adoption Hearing	TBD
Regulations Effective	TBD
Pink Shrimp Season Begins	April 1, 2022

Summary

- Proposed FMP will:
  - Enact robust measures to prevent overfishing
  - Create consistent, coast-wide management
  - Reduce bycatch
- Potential to set standard for Basic FMP structure and process, encourage more rapid FMP development and implementation of MLMA

Thank You

Steve Rienecke, Environmental Scientist
(805) 242-6629 or
Steven.Rienecke@wildlife.ca.gov

Ian Kelmartin, Environmental Scientist
Ian.Kelmartin@wildlife.ca.gov

Proposed Squid Fishery Advisory Process

15-year average

$46 Million per year

145 Million pounds per year

The Fishery

- High volume, value, and demand fishery
- Large fleet / Statewide fishery – Broad data sets
- Short-lived species – Rapid environmental response
- Management plan and restricted access in place >15 years

Ideal case study for **climate impacts**

Stakeholders

- Industry
- NGO's
- Researchers

Data

- Landings
- Biological
- Paper Logbook

Results

Potential Management Recommendations:

- Updated, climate responsive, **harvest control rules**
- Consideration of **small-scale fishery access**
- New **gear/season** regulations
- Needs for **Electronic data collection**

Concerns with concentrated fishing pressure and **timing** of catch	Do squid need more **time** to spawn to amplify fishing success and forage?	
Fishing communities want access to local resources	How to spread fishing pressure over **space** and **time** to provide greater access?	
Ongoing concerns with **gear disrupting** egg beds and natural spawning behavior	Are **gear** or other **new fishing regulations** needed?	

Estimated Budget

Squid Fishery Advisory Committee:

Phase I Scoping ≈ $45,000

Phase II Process ≈ $140,000

Data Analyses/Modeling ≈ $100,000

Electronic Data Collection ≈ $100,000 - $200,000

Climate-ready fishery management

Market Squid Fishery Management Review

Proposed Fishery Advisory Committee

21 July 2021

Presented to:
Marine Resources Committee

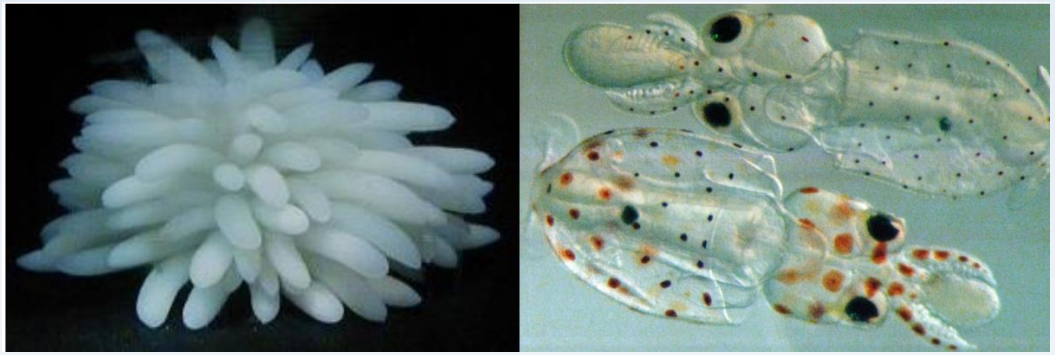
Presented by:
Katie Grady
Environmental Scientist
Marine Region

Objectives

- Squid Fishery Management Review
  1) Respond to stakeholder input
  2) Review changes in fishing activity and evaluate harvest control rules as an iterative process using available data
  3) Explore opportunities for small-scale fisheries
  4) Modernize data collection

Credit: Dane McDermott, CDFW

The Market Squid Species



Credit: CDFW

- Life History
  - Short-lived (6 to 10 months)
  - Majority of life in deeper offshore waters (~2,000 ft)
  - Terminal spawners (die shortly after maturity/spawning)
  - Form large aggregations to spawn
    - Lay thousands of eggs on nearshore sandy bottom
    - Spawn year-round

The Market Squid Species (Cont.)

Credit: Katie Grady, CDFW

- Range and prevalence
  - Primarily found off California
  - Range from Baja CA, Mexico to southeastern Alaska
  - Spawning frequency and population abundance affected by El Niño and the Pacific Decadal Oscillation
  - Northern and Southern California spawning generally asynchronous

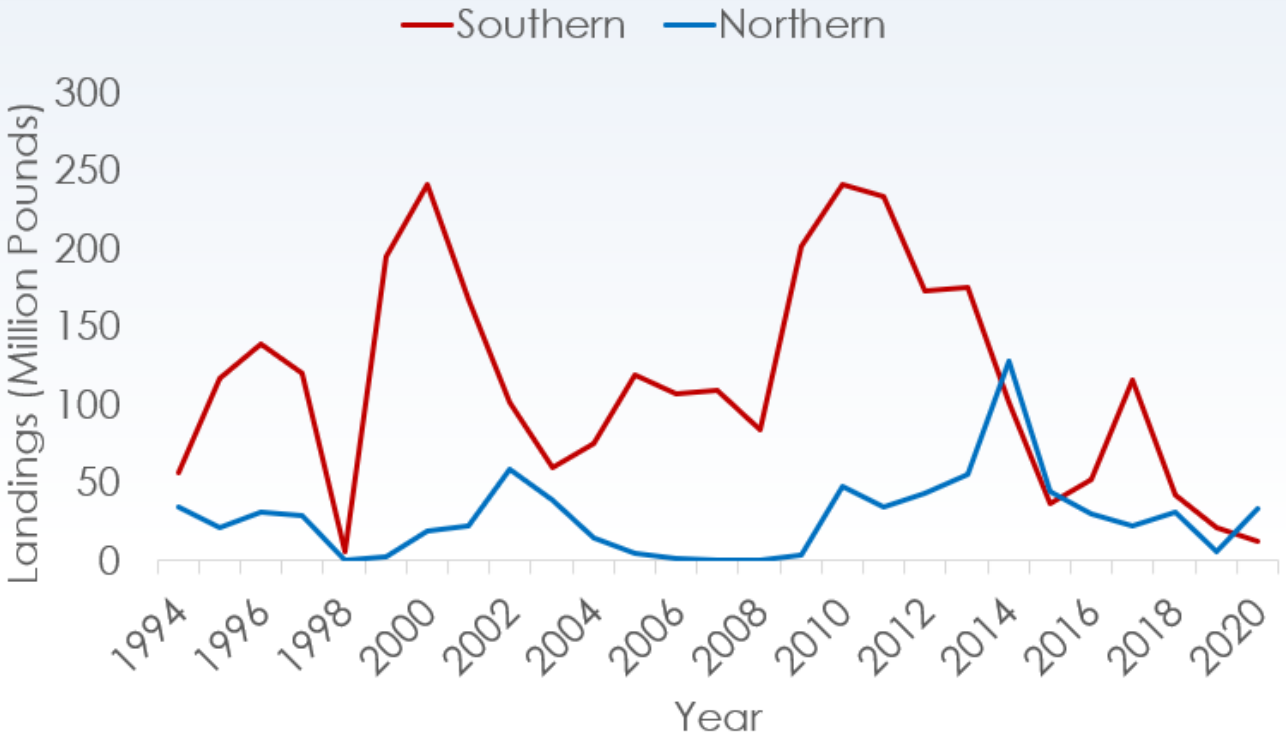
The Market Squid Fishery

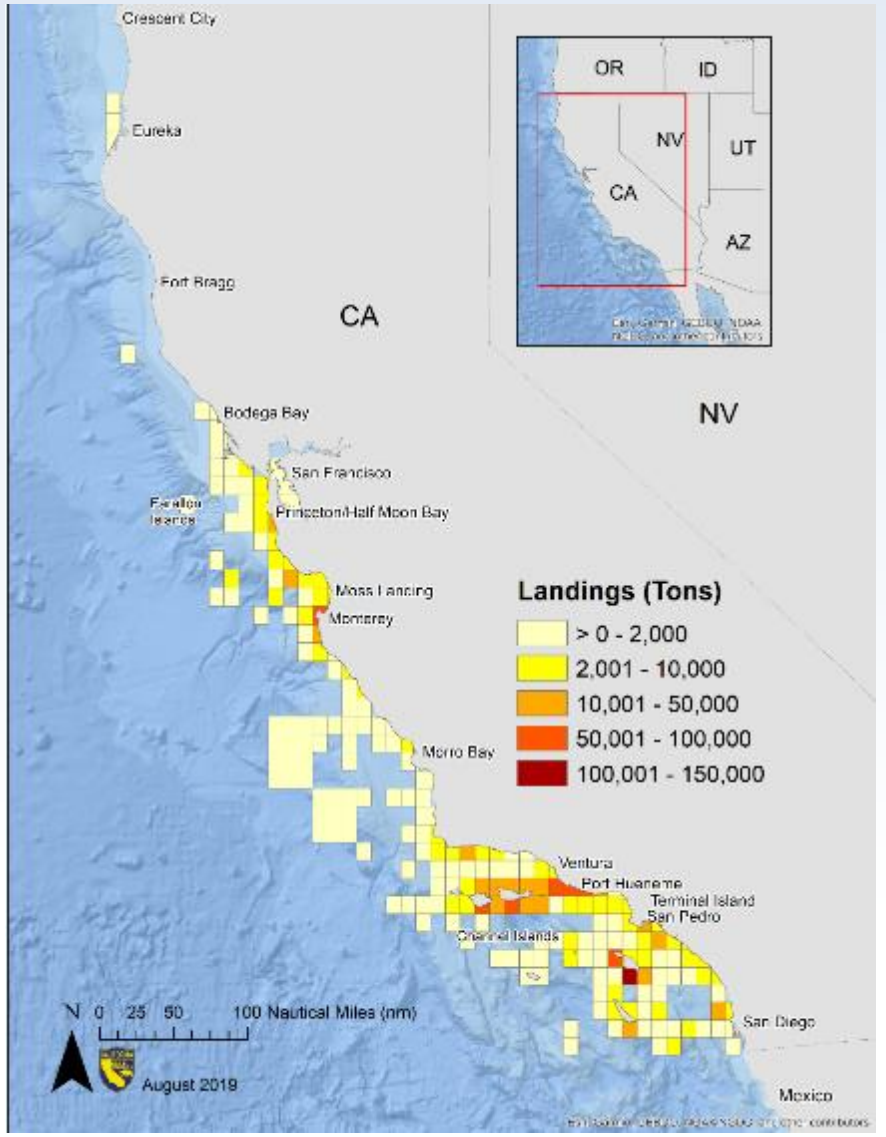
Credit: CDFW

- Highly variable landings
  - Availability
  - Market
- Routinely the largest commercial fishery in both:
  - Volume: 145 million lbs./15-year-average and
  - Value: $46 million in ex-vessel revenue/15-year average
- Also used recreationally as bait

The Market Squid Fishery (Cont.)

- Landings by State region:
  - North and South of Point Conception





The Market Squid Fishery (Cont. 2)

- Managed under the Market Squid Fishery Management Plan (MS FMP, 2005)
  - 48-hour weekend closure to allow for uninterrupted spawning (100+ days closed to fishing annually)
  - Seasonal catch limit of 118,000 tons
  - Restricted access permit program
  - Lighting restrictions – wattage, shields, spatial closures
  - Additional protections from Marine Protected Areas

The Market Squid Fishery (Cont. 3)

- Sectors and Permit Structure
  - Seiners (can use lights)
    - 68 transferable vessel permits ($3,002)
    - 4 non-transferable vessel permits ($1,505)
  - Light boats (no catch, support vessel only)
    - 29 transferable light boat permits ($906)
    - 3 non-transferable light boat permits ($60)
  - Brail boats (can use lights, scoop net only)
    - 46 transferable brail permits ($3,002)

Credit: Carrie Wilson, CDFW

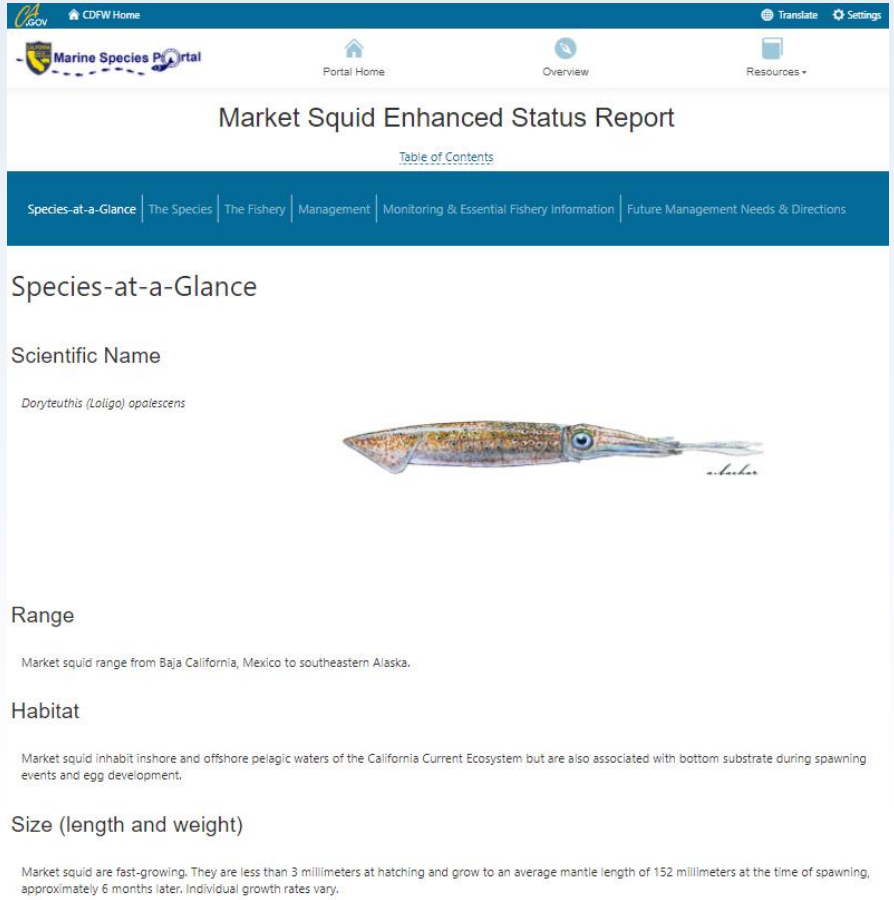
Status and Monitoring

- Monitored by:
  - Landings
    - (1969 – present)
  - Logbooks
    - (1999 – present)
  - Biological sampling
    - (1998 – present)

Credit: Carrie Wilson and Dane McDermott, CDFW

Status and Monitoring (Cont.)

- The Enhanced Status Report (ESR)
  - Opportunities for Management Review:
    - Long-term datasets
    - Utility of egg escapement method
    - Fishing gear used
    - Fishery effort and access
    - Paper logbook evaluation



Future Planning

- Proposed Squid Fishery Advisory Committee (SFAC)
  - Who?
    - Fishing industry, scientists, conservations groups, law enforcement, others
      - Existed previously (Title 14, CCR §53.02)
  - Why?
    - Discuss and review status of squid management
    - Provide new management recommendations
  - When?
    - Approximately 12-month process beginning in 2022*

*Pending funding

Advisory Committee Process

- Phase 1 – Stakeholder Outreach
  - Engage with stakeholders
    - CDFW staff discussion
    - MRC meeting(s)
  - Professional facilitator conducts confidential interviews
    - Catalogue primary concerns
    - Hear perspectives
    - Determine key issues/discussion points

Advisory Committee Process (Cont.)

- Phase 1 – Form Committee
  - Professional facilitator crafts detailed plan
  - Members selected
    - Membership based on interview results
    - Department may solicit nominations
    - Final representation dependent on needs

Advisory Committee Process (Cont. 2)

- Phase 2 – Convene SFAC to Discuss:
  - Management questions, concerns, and opportunities
  - Ongoing research questions
    - –using available data
    - –supported by new analyses/modeling techniques
  - Review harvest strategies, key interactions, uncertainties, and trade-offs as an iterative process
  - Form recommendations for management changes

Management Results and Action

- Phase 3 – Management action
  - Follows SFAC process
  - Scaled to needed changes
  - Action based on:
    - SFAC process results
    - Marine Resource Committee discussions
    - Supplemental analyses/modelling efforts
    - Other public input

Thank You

Market Squid Enhanced Status Report

marinespecies.wildlife.ca.gov/market-squid/

Commercial Landings Summaries

wildlife.ca.gov/Conservation/Marine/Pelagic/Market-Squid-Landing

Katie Grady

Katie.Grady@wildlife.ca.gov

California Fish and Game Commission
Marine Resources Committee (MRC) Work Plan
Scheduled Topics and Timeline for Items Referred to MRC
Updated June 19, 2021

TOPIC	CATEGORY	MAR 2021	JUL 2021	NOV 2021
Planning Documents & Fishery Management Plans (FMPs)				
MLMA Master Plan (MP) for Fisheries – Implementation Updates	MP Implementation	X		X
Red Abalone FMP / ARMP Update	FMP	X	X	X
California Halibut FMP	FMP	X		X
California Pink Shrimp FMP	FMP	X	X/R	
Market Squid Fishery Management Review	Management Review		X	
Marine Protected Area Network – 2022 Decadal Management Review	Management Review	X	X	
Regulations				
Kelp and Algae Commercial Harvest – Bull Kelp	Commercial Kelp	X	X/R	
Kelp and Algae Commercial Harvest – Edible Algae (Seaweed)	Commercial Kelp			X
Kelp and Algae Commercial Harvest – *Postelsia* (sea palm)	Commercial Kelp			X
Use of Hydraulic Pump Gear to Take Clam: Review of Emergency Prohibition and Future Rulemaking	Recreational Take		X	X
California Spiny Lobster FMP Implementing Regulations Review (a*dded Feb 2019; timing TBD*)	FMP Implementing Regulations			
Marine Aquaculture				
Aquaculture Program Planning (Information Report, Action Plan)	Planning Document	X		X
Aquaculture State Water Bottom Leases: Existing & Future Lease Considerations	Current Leases / Planning		X	
Moratorium on New Aquaculture Lease Applications	New Leases	X/R		
Public Interest Determination Criteria for New Aquaculture Lease Applications	New Leases		X	
Aquaculture Lease Best Management Practices (BMP) Plans (On hold, TBD)	Regulations			
Emerging Management Issues				
Kelp Restoration and Recovery Tracking	Kelp	X	X	X
Invasive Non-native Kelp and Algae Species	Kelp / Invasive Species			
Special Projects				
California's Coastal Fishing Communities	MRC Special Project	X/R	X	X

Key: X = Discussion scheduled, X/R = Recommendation developed; topic may be moved to FGC

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

Updated June 25, 2021

Regulatory Change Category	Title 14 Section(s)	MRC Webinar/Teleconference Jul 21, 2021	TC Webinar/Teleconference Aug 17, 2021	FGC Webinar/Teleconference Aug 18, 2021	FGC Webinar/Teleconference Aug 19, 2021	WRC Sacramento Sep 16, 2021	FGC Sacramento Oct 13, 2021	FGC Sacramento Oct 14, 2021	MRC Sacramento Nov 9, 2021	TC Sacramento Dec 14, 2021	FGC Sacramento Dec 15, 2021	FGC Sacramento Dec 16, 2021	WRC Jan 2022 TBD	FGC Feb 2022 TBD	FGC Feb 2022 TBD	MRC Mar 2022 TBD	TC Apr 2022 TBD	FGC Apr 2022 TBD	FGC Apr 2022 TBD	FGC May 2022 TBD	WRC May 2022 TBD	FGC Jun 2022 TBD	FGC Jun 2022 TBD2
Recreational Clam, Sand Crab, and Shrimp Gear Emergency [6]	29.20, 29.80												EE 1/8										
Recreational Clam, San Crab, and Shrimp Gear Emergency (First 90-day Extension) [6]	29.20, 29.80							A					E 1/1				EE 4/1						
Recreational Clam, Sand Crab, and Shrimp Gear Emergency (Second 90-day Extension) [6]	29.20, 29.80														A		E 4/1						
Recreational Clam, Sand Crab, and Shrimp Gear (Implementing Certificate of Compliance) [6]	29.20, 29.80											N		D				A					
Central Valley Sport Fishing (Annual)	7.40(b)(4), (43), (66), (80)	E 7/16				V									N				D	A			
Klamath River Basin Sport Fishing (Annual)	7.40(b)(50)		E 8/15			V									N				D	A			
Waterfowl (Annual)	502	E 7/1				V					N				D				A				
Western Joshua Tree Renewable Energy 2084 EM	749.10				EE 8/27 with Governor's Executive Order																		
Western Joshua Tree Renewable Energy 2084 EM Extension 1	749.10				E 8/27				EE 11/24														
Western Joshua Tree Renewable Energy 2084 EM Extension 2	749.10								E 11/24						EE 2/22								
Western Joshua Tree Dead Hazard Trees 2084	749.11								EE 11/9														
Western Joshua Tree Local Government 2084	749.12								EE 11/9														
Recreational Crab Marine Life Protection Measures	29.80, 29.85, 701								E 11/1														
Experimental Fishing Permit (EFP) Program Phase II	90, 91, 120.1, 149, 149.3, 180, 704				N			D				A					E 4/1						

Rulemaking Schedule to be Determined	Title 14 Section(s)	MRC Webinar/Teleconference Jul 21, 2021	TC Webinar/Teleconference Aug 17, 2021	FGC Webinar/Teleconference Aug 18, 2021	FGC Webinar/Teleconference Aug 19, 2021	WRC Sacramento Sep 16, 2021	FGC Sacramento Oct 13, 2021	FGC Sacramento Oct 14, 2021	MRC Sacramento Nov 9, 2021	TC Sacramento Dec 14, 2021	FGC Sacramento Dec 15, 2021	FGC Sacramento Dec 16, 2021	WRC Jan 2022 TBD	FGC Feb 2022 TBD	FGC Feb 2022 TBD	MRC Mar 2022 TBD	TC Apr 2022 TBD	FGC Apr 2022 TBD	FGC Apr 2022 TBD	FGC May 2022 TBD	WRC May 2022 TBD	FGC Jun 2022 TBD	FGC Jun 2022 TBD2
Pre-Existing Structures in Marine Protected Areas (MPAs), Marine Managed Areas (MMAs), and Special Closures	632																						
CA Grunion (FGC Petition #2019-014)	TBD																						
Commercial Kelp and Algae Harvest Management	165, 165.5, 705	V																					
Santa Cruz Harbor Salmon Fishing (FGC Petition #2016-018)	TBD																						
European Green Crab (FGC Petition #2017-006)	TBD																						
Wildlife Areas/Public Lands [4]	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																						
Ban of Neonicotinoid Pesticides on Department Lands (FGC Petition #2017-008)	TBD																						
Commercial Pink Shrimp Trawl	120, 120.1, 120.2	V																					
Ridgeback Prawn Incidental Take Allowance	120(e)																						

KEY

FGC = California Fish and Game Commission MRC = FGC Marine Resources Committee WRC = FGC Wildlife Resources Committee TC = FGC Tribal Committee

EM = Emergency **EE = Emergency Expires** E = Anticipated Effective Date (**RED "X" = expedited OAL review**)

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

4 = Includes FGC Petition #2018-003 6 = Includes FGC Petition #2019-012