



# Kelp Restoration and Management Plan Community Working Group

Wednesday, March 13, 2024  
2:00pm - 6:00pm PST



# Webinar Considerations and Zoom Reminders

- Webinar is being recorded and closed-captions are available
- Technical difficulties viewing the screen share
  - Contact Noelia at [noelia@strategicearth.com](mailto:noelia@strategicearth.com) or 787-383-0265, or send a message in the chat
- Unmuting: To speak
  - Click the microphone on the bottom-left of your screen
  - Use the chat box at the bottom of the screen to ask for help
- Chat Function
  - Troubleshooting and clarifying questions



# Webinar Considerations and Zoom Reminders

- Renaming: To help identify yourself and other participants
  - Click “Participants” in meeting controls
  - Locate your name and click “More” and choose “Rename”
  - Enter your full name (first and last) and any identifying sector(s)
- Closed Captioning: To turn on subtitles
  - Click “CC” in meeting controls
- Gallery View: To see more than one speaker
  - Click “View” in upper right corner, and select “Gallery View”



# Meeting Agreements

- Be present
- Be prepared to discuss agenda items constructively
- Share if you need to leave early
- Approach discussions from a place of diversity and inclusion
- Focus discussions on strategies and solutions that move conversations forward
- Listen for understanding and seek clarification
- Identify any personal/professional conflicts of interest
- Do not work at cross-interests with the group's goals and objectives
- Personal attacks will not be tolerated
- Take space, make space



# Introductions - Project Team

- **California Department of Fish & Wildlife:** Kristen Elsmore, Rebecca Flores Miller, Adam Frimodig, Kirsten Ramey
- **Ocean Protection Council:** Pike Spector
- **Strategic Earth Consulting:** Noelia Aponte-Silva, Rachelle Fisher, Teresa Romero, Kelly Sayce, Scarlett Schroeder
- **Science Advisory Committee:** Marissa Baskett, co-chair



# Introductions - CWG Members

Please share:

- Your Name
- Affiliation/Sector
- Region (North, Central, or South coast)

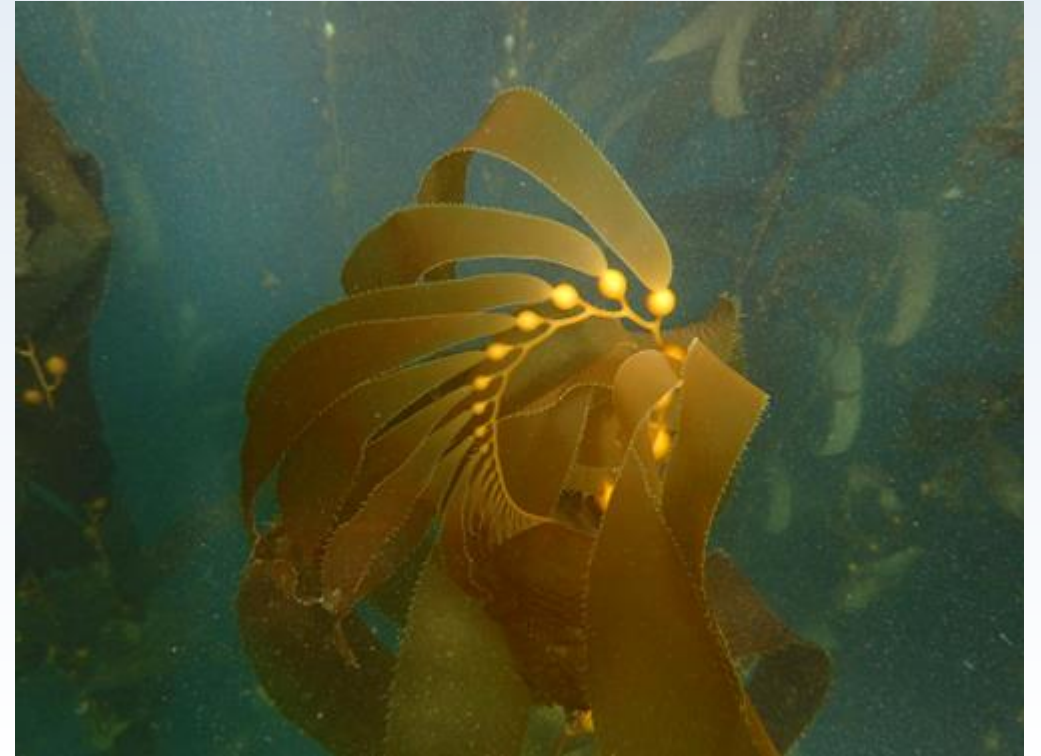


Photo by Kristen Elsmore, CDFW



# Meeting Agenda



Photo by Kristen Elsmore, CDFW

- Welcome and Introductions
- CWG Work Schedule for 2024-25
- Identify key characteristics, considerations, and priorities to inform the KRMP and SAC meetings
  - Ecosystem-Based Management
  - Kelp Harvest
  - Kelp Restoration
- Looking Ahead & Adjourn





# CWG & SAC Work Schedules for 2024-25\*

Group	CWG Meeting Schedule			SAC Meeting Schedule		
Year	Date	Topic	Details	Date	Topic	Details
2023; Q3	Jul 26	Introduction	Virtual	Sep 19	Introduction	Virtual
2023; Q4	Dec 18	Charter	Virtual	Dec 5	Kelp Socio-ecosystem Conceptual Framework	Virtual
2024; Q1	Mar 13	EBM, Restoration, Harvest	Virtual			
2024; Q2	May/Jun	EBM, Restoration	Virtual	Apr 11-12	Goals and Indicators	In-person
2024; Q3				Jul	Monitoring and Existing Data	Virtual
2024; Q4	Dec/Jan	EBM, Harvest, connections to Restoration	In-person	Oct	TBD	Virtual
				Dec	TBD	In-person
2025; Q1				Feb/Mar	TBD	Virtual
2025; Q2	May/Jun	EBM, Restoration, Harvest	Virtual	May/Jun	TBD	Virtual
2025; Q3				Aug/Sep	TBD	Virtual

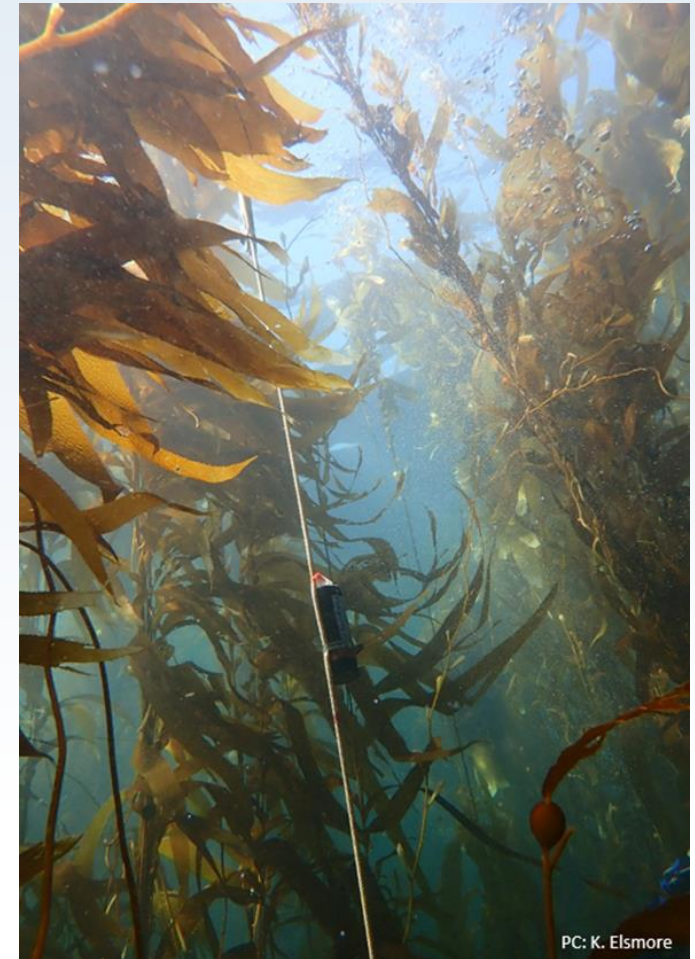
\*Subject to change





# Ecosystem-Based Management

- MLMA Ecosystem-Based Objectives
  1. Limiting bycatch to acceptable types and amounts
  2. Maintaining habitat health
  3. Conserving ecosystem health and diversity





# Ecosystem-Based Management

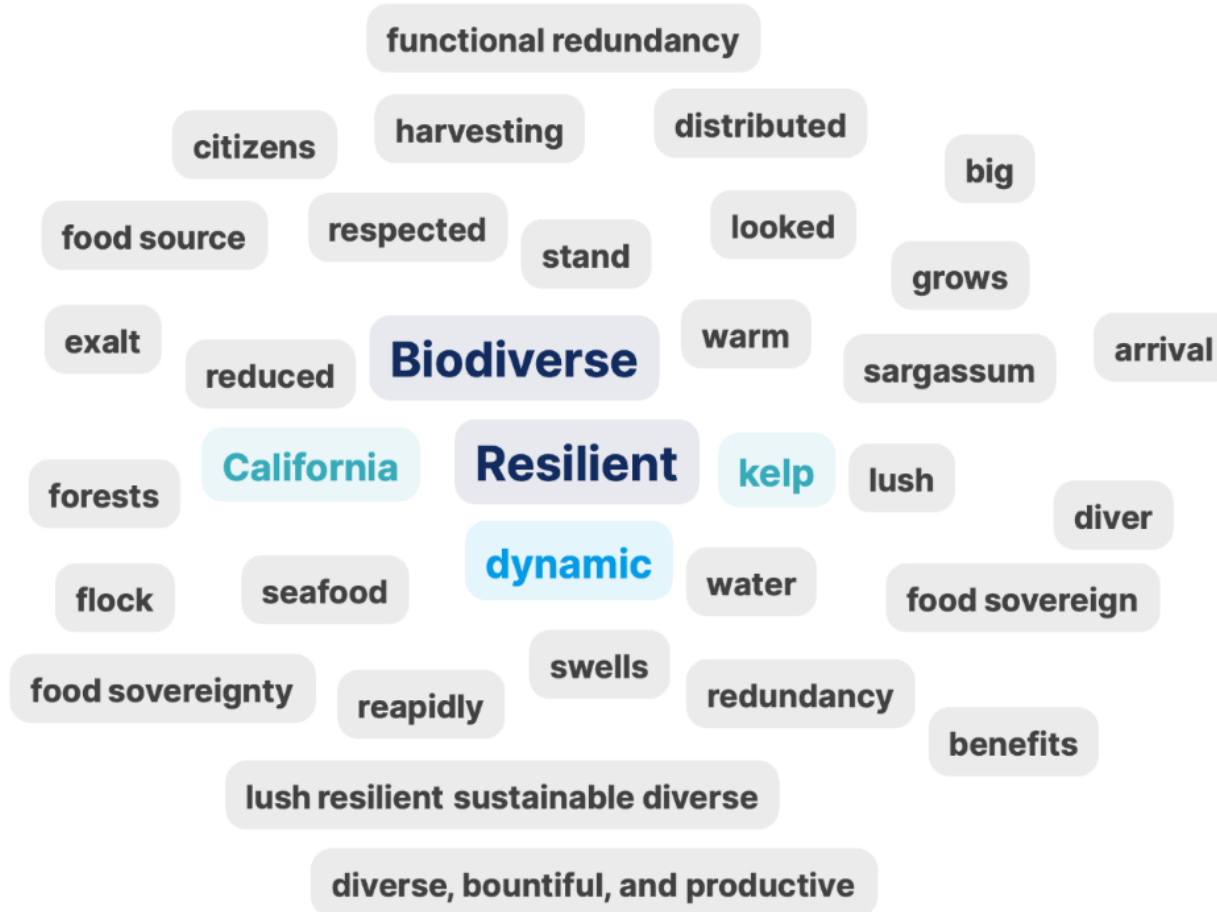
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- MLMA Ecosystem-Based Considerations
  - accounts for ecosystem dynamics
  - identification of species that play key roles in the ecosystem
  - consider management strategies with multiple control measures (e.g., harvest control and restoration)
  - conduct Ecological Risk Assessments to understand which ecological links are most critical



Please share a word or two to describe what you and your community envision a healthy kelp forest looks like.

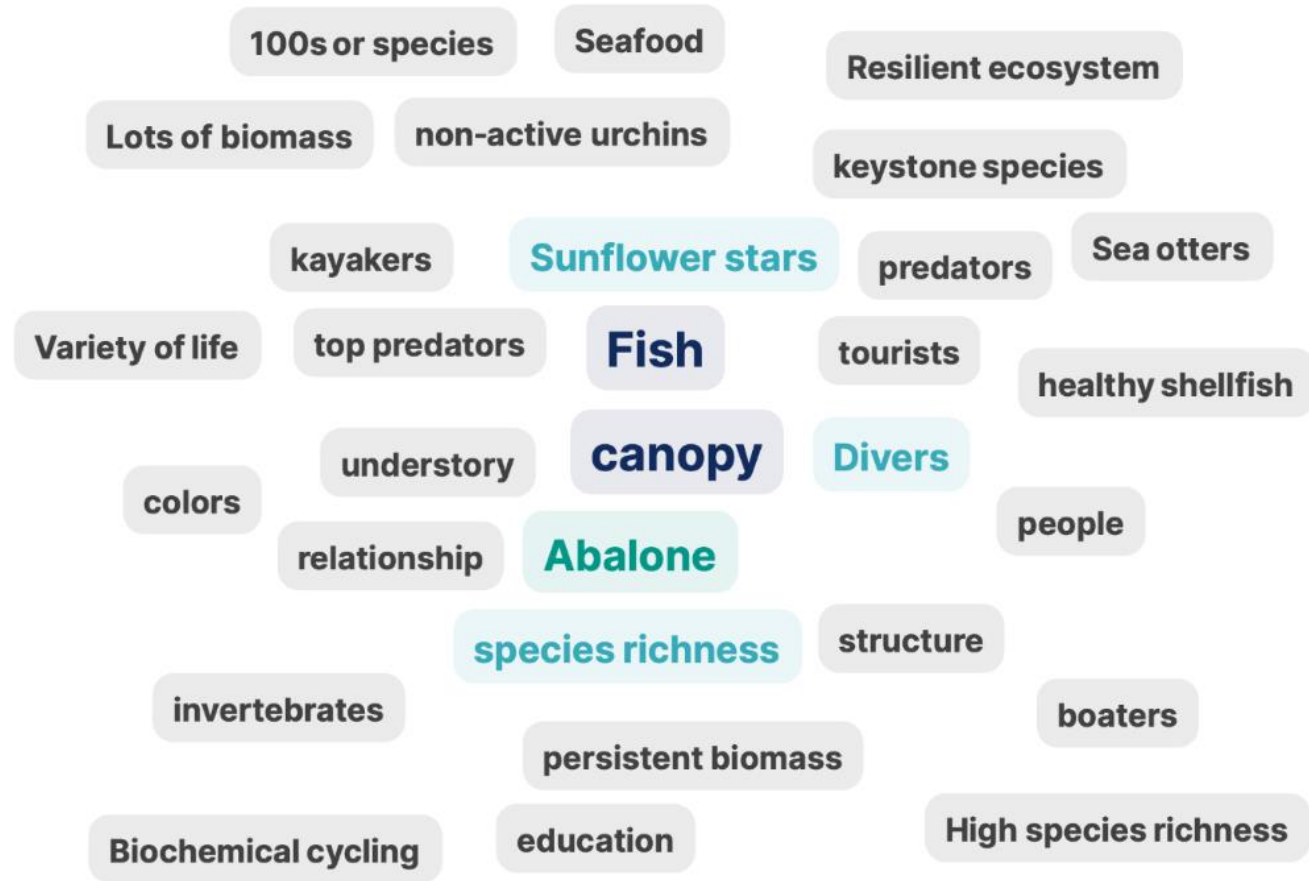
Wordcloud Poll  51 responses 23 participants





Please share a word or two to describe what is present in your vision of a healthy kelp forest.

Wordcloud Poll  55 responses 20 participants





Please share a word or two to describe what is absent in your vision of a healthy kelp forest.

Wordcloud Poll



48 responses



21 participants







Photos by Kristen Elsmore, CDFW

## Guiding Questions

- **What does a healthy kelp forest look like to your community?**
  - Differences in giant kelp forest ecosystems and bull kelp forest ecosystems?
  - Features of the kelp
  - Features of the other ecosystem aspects (e.g., other species, processes, humans, broader ocean regime)
- What are your communities' thoughts around **how a healthy kelp forest is maintained?** What must be considered (e.g., harvest activities, water quality, changing ocean conditions, cultural connections)?



# Kelp Harvest - Recreational

- Sportfishing license is not required, take is not reported
- Regulations allow a daily bag limit of 10 lbs wet weight in the aggregate for all take
  - Cannot harvest, disturb, or cut sea palm, eelgrass, and surfgrass
- Marine Protected Areas may prohibit cutting or harvesting



PC: K. Elsmore



PC: K. Elsmore

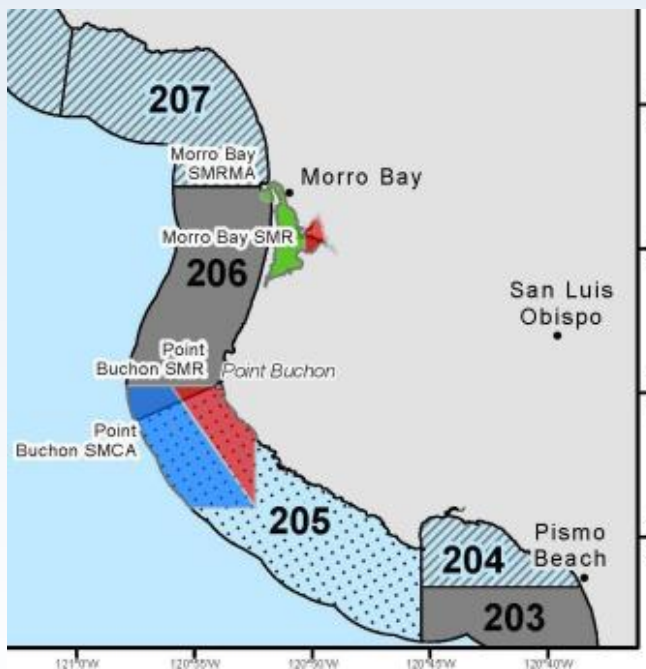




# Kelp Harvest - Commercial

Administrative Kelp Beds (n = 87)	
Status	Management Category
Open	Available to harvest by all licensed commercial kelp harvesters (n = 33)
Closed	Commercial harvest of kelp is prohibited (n = 18 closed)
Leasable	Open to harvest by all licensed commercial kelp harvesters until leased (n= 31 leasable, n= 2 leased)
Lease Only	Closed to harvest until leased (n = 3 lease only, all temporarily closed)

- Marine Protected Areas may prohibit or restrict cutting or harvesting
- Seasonal bull kelp harvesting closure in Monterey Bay National Marine Sanctuary in non-leased beds



- Harvest for uses other than human consumption managed by Administrative Kelp Beds

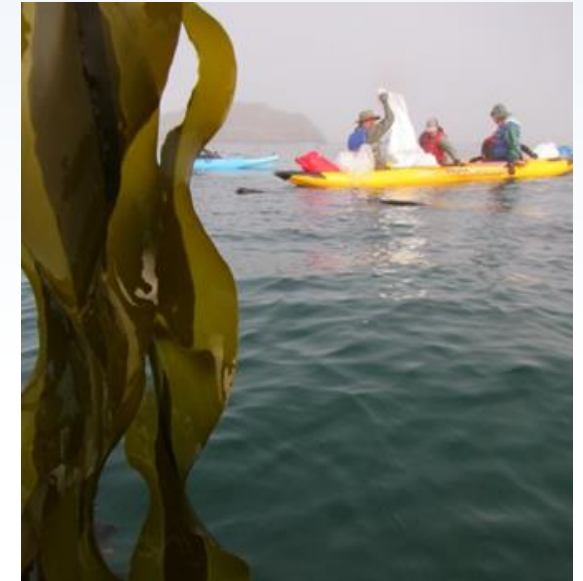


- Harvest for human consumption managed by Commercial Fishing Blocks



# Kelp Harvest - Commercial Methods

- Giant kelp
  - Cut at 4 ft below the water surface
  - Detached kelp can be taken
  - Mechanical harvest allowed in some administrative kelp beds with a Fish and Game Commission-approved Kelp Harvest Plan
- Bull kelp
  - Cut at 4 ft below the water surface; except take for human consumption allows take of the entire individual
  - Detached kelp can be taken
  - Hand-harvest only
  - Harvest for human consumption cannot exceed 2 tons (4,000 lbs) wet weight annually per license
  - Recent temporary commercial regulation amendments





# Kelp Harvest



Photo by Shelby Kawana, CDFW

## Guiding Questions

- What are some **considerations, potential benefits, and potential impacts of harvest** on your community and the kelp forest ecosystem? What are the species-specific considerations, if any?
- What does a **successful harvest season look like** to you and your community? Does this differ for giant kelp and bull kelp?
- What does **sustainable kelp harvest look like** to you and your community? Does this differ for giant kelp and bull kelp?

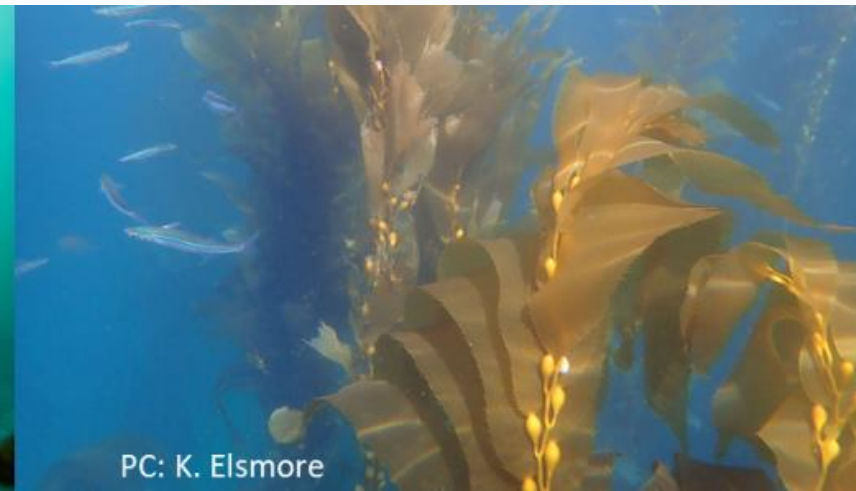




# Kelp Restoration

- To the extent possible, the goal is to promote ecosystem resilience and natural recovery, however, assisted recovery (i.e., restoration) may be needed under certain circumstances.
- **Restoration** is the process of repairing or assisting the recovery of an ecosystem that has been degraded or destroyed as a means of promoting ecosystem functioning and resilience, conserving biodiversity, and maintaining sustainable use and enjoyment by the public.

\*These goals and definitions may be refined throughout the KRMP development process, to incorporate scientific, tribal, and community perspectives.





# Kelp Restoration - Toolkit

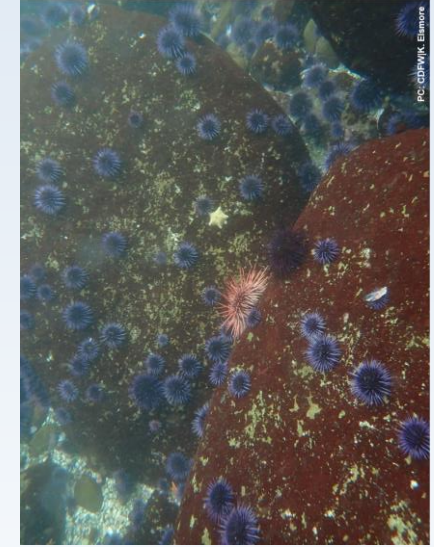
- Suite of scientifically-tested kelp restoration techniques that will be incorporated into the management strategy for the KRMP
  - tools and approaches that have documented and demonstrated efficacy
  - science-based success metrics for different methods of kelp restoration
  - evaluation of the ecological and socioeconomic conditions under which the various options are likely to be most effective
  - strategic decisions on when and how to deploy a given tool or set of tools
- Incorporates knowledge of:
  - natural history, ecology, and oceanography
  - Traditional Ecological Knowledges and other ways of knowing
  - ecological and oceanographic stressors driving decline
  - ecological, cultural, and socioeconomic values
  - cost effectiveness of the restoration action(s)





# Kelp Restoration - Toolkit Exploration

- Grazer suppression techniques
  - urchin culling by commercial divers
  - urchin culling by recreational divers
  - urchin hand-harvest by commercial divers
  - experimental traps
- Kelp enhancement techniques
  - spore bags
  - seeded substrates and lines
  - concentrated spore solution (“spore dusting”)







# Kelp Restoration



Photo by Shelby Kawana, CDFW

## Guiding Questions

- What are some **specific kelp restoration goals and outcomes** most important to your community? How might those differ for giant kelp forest ecosystems and bull kelp forest ecosystems?
- Under **what scenarios or conditions** does your community feel restoration activities should be considered or warranted, if any?
- What **signs of success or optimism** has your community observed with regards to giant kelp and/or bull kelp restoration efforts/techniques?
- Has your community expressed **concerns or risks associated with kelp restoration efforts/techniques**? How might those concerns or risks be addressed?





# Looking Ahead

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<b>2024; Q4</b>	Dec-Jan	Harvest, connections to Restoration, EBM	In-person	Oct	TBD	Virtual
				Dec	TBD	In-person



# Continued Communication



Request additional KRMP information

Email [kelp@wildlife.ca.gov](mailto:kelp@wildlife.ca.gov)



Questions and comments

Email [kelp@wildlife.ca.gov](mailto:kelp@wildlife.ca.gov)



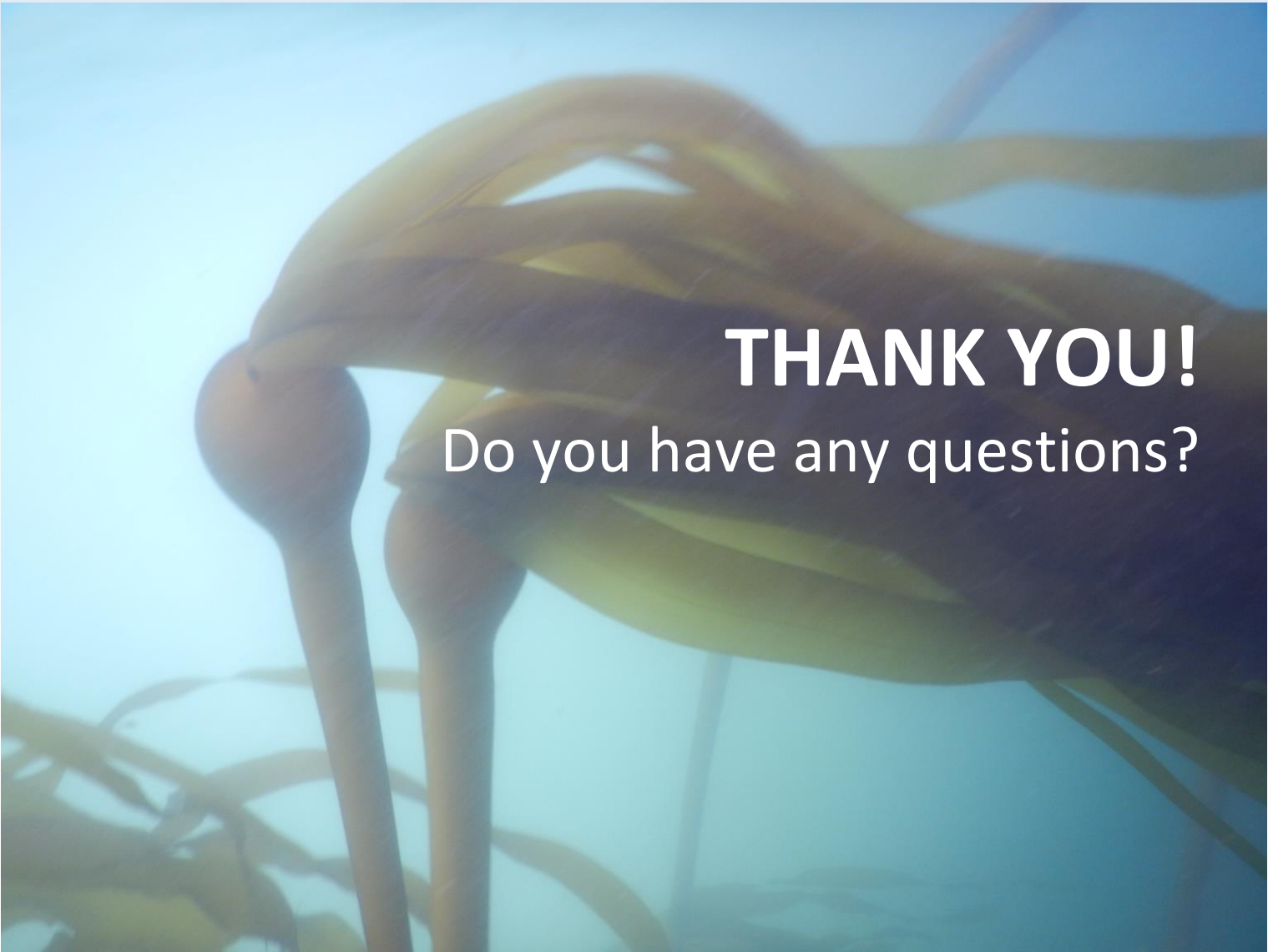
Tribal Specific Engagement Opportunities

Email [kelp@wildlife.ca.gov](mailto:kelp@wildlife.ca.gov)



Updates, Informational Materials, Upcoming Opportunities and Events

KRMP Website: <https://wildlife.ca.gov/Conservation/Marine/Kelp/KRMP>



**THANK YOU!**  
Do you have any questions?

Photo by Shelby Kawana, CDFW