

**Kelp Restoration Management Plan
Community Working Group Meeting #4 Summary
Wednesday, December 18, 2024**

Attendees

Claire Arre, MPA Collaborative Network¹
Capt. David Bacon, WaveWalker Charters, Coastal Conservation Association
Kathryn Beheshti, University of California, Santa Barbara
Doug Bush, The Cultured Abalone Farm LLC
Grant Downie (member and Anna Neumann's alternate), Commercial Sea Urchin Diver
Gary Fleener, Hog Island Oyster² Company
Jan Freiwald, Reef Check California
Tom Ford, The Bay Foundation
Jess Gravelle, Trinidad Rancheria
Jacob Harris, Ocean and Coastal Stewardship Program Manager at Amah Mutsun Land Trust
Rietta Hohman, Greater Farallones National Marine Sanctuary (NOAA Affiliate)
James Jungwirth, Naturespirit Herbs LLC
MariaElena Lopez, Coastal Band of the Chumash Nation
Tristin Anoush McHugh, The Nature Conservancy
Tyler McKinner, Monterey Bay Scuba
Anna Neumann, Noyo Harbor District
Andrea Paz-Lacavex, University of California Santa Cruz
Dave Rudie, California Sea urchin Commission
Joshua Russo, Watermen's Alliance
Javier Silva, Sherwood Valley-Noyo Pomo
Marc Shargel, Living Sea Images
Severino Gomes Alternate, Kashia Band of Pomo Indians
Patrick Webster, Underwater Photographer
Tribal Participant - Name Redacted Upon Request

Overview

The fourth virtual meeting of the Kelp Restoration Management Plan (KRMP) Community Working Group (CWG) was held on December 18, 2024, with twenty-four KRMP CWG Members, and the KRMP Project Team (i.e., California Department of Fish and Wildlife (CDFW), Ocean Protection Council (OPC), and Strategic Earth Consulting). Background materials and an agenda were shared in advance to help support a productive meeting (see Appendix). CDFW, in partnership with OPC, provided two presentations on 1) Tribal and recreational harvest and 2) Commercial harvest regulations that informed and supported discussions. Following presentations and updates, the CWG discussion ensued, supported by guiding questions.

KRMP CWG Updates

CDFW gave updates related to the KRMP process and components. The Science Advisory Committee (SAC) met three times since the last CWG meeting. During the SAC's August 15 and October 1 meetings, they discussed key

¹ Aubrie Fowler was present as an alternate for Claire Arre

² Rosie Campbell was present as Gary Fleener's alternate for the beginning portion of the CWG meeting

abiotic, ecologic, and human indicators that inform the status of the kelp forest resource and ecosystem health. Additionally, they identified measurable parameters for existing monitoring programs and datasets. On December 5, the SAC met to discuss thresholds and pair down the indicator list. Summaries from SAC meetings will be posted on CDFW's website soon. CDFW, OPC, Sea Grant, and Strategic Earth are working on coordinating an in-person exchange between the SAC and CWG, which is planned to occur in May 2025.

Kelp Harvesting Practices

CDFW provided an overview of Tribal, recreational, and commercial kelp harvest regulations in California ([see slides 13 - 16](#)). Then, the CWG broke into small community-specific break-out groups to discuss their constituents' perspectives and concerns surrounding current kelp harvesting, including Tribal subsistence, recreational, and commercial harvesting practices.

CWG Members discussed the following guiding questions with other representatives from their sector:

Tribal Community Specific Questions

- *How can TEK inform sustainable harvest practices?*
- *Are current commercial or recreational harvest regulations suitable for Tribal subsistence harvest? If not, how can that be remedied?*
- *What are your suggestions for balancing commercial, recreational, and Tribal subsistence uses in California?*
- *How can CDFW partner with Tribes to inform the KRMP and kelp harvest management?*
- *Do you have guidance on other questions we should be asking Tribes about harvest?*

Non-Tribal Community Specific Questions

- *Share your community's experiences with giant kelp and bull kelp harvesting in your area. Do you feel current practices are sustainable and minimize environmental impacts? Are there kelp harvesting methods that should be promoted or restricted based on environmental impact or community priorities? Why?*
- *Should there be limits on Tribal, commercial and/or recreational giant kelp and bull kelp harvest? Why? If so, what could that look like (e.g., trip limits, annual limits, license limits, etc.)?*
- *Should Tribal and recreational harvesters follow the same regulations as commercial harvesters (e.g., license requirements, reporting requirements, harvest methods, limitations, etc.)? Why?*

There were a few underlying themes that surfaced across all groups, notably, that Tribal subsistence harvest should not be limited, restricted, or required to be reported to state managers. Tribal subsistence harvest should have its own designation because it is inappropriate to call it recreational harvest. Recreational harvest should be tracked by CDFW to better understand the overall quantity of harvest occurring on a statewide basis. There is very little information on recreational harvest and should be better tracked. A comprehensive data collection system for recreational harvesting and promoting broader co-management strategies involving Tribal communities, could enhance the resilience and recovery of these vital ecosystems.

Breakout Group: Tribal Representative

Tribal representatives highlighted that Traditional Ecological Knowledge³ is the original blueprint of sustainability. Sustainability is an iterative process and complex conversation since the term revolves around

³ Tribal Ecological Knowledge should be spelled out, and the TEK acronym be retired to honor Tribal nomenclature

post-colonization, not pre-settlement conditions. “One size fits all regulations” do not honor Tribal Ecological Knowledge. Restoration should also be a larger conversation and should not be prioritized in one location or for one species over another. In regards to harvest, a CWG Member shared that harvest practices should be lower than what they are today since kelp forests are currently unhealthy. One CWG Member indicated an interest in seeing the entire coastline closed to all harvest to aid recovery, while others expressed concerns about commercial harvest, especially mechanical harvest. CWG Tribal representatives feel strongly that Tribal subsistence harvest limits should be developed by each Tribe and remain confidential. Other CWG Members were supportive of this sentiment. Tribes have been removed from the coast and should have access and co-manage the resource. There was a strong interest in integrating Traditional Ecological Knowledge with scientific research in management practices. For example, Tribal representatives shared they have been taking first steps to engage in discussions around purple urchin management.

Breakout Group: Commercial Harvest and Industry

CWG Members shared that elevating environmental impacts such as water temperatures, pollution, storms, the lack of upwelling, and increase in the number of urchin barrens are the biggest impacts to both giant and bull kelp populations. Tribal, recreational, or commercial harvest are not impacting kelp populations. Additionally, when there are low levels of kelp, many of the commercial harvesting community will choose to relocate to a more promising area or reduce harvest altogether to ensure the resource is protected in areas of low canopy cover. They acknowledged the season-to-season variation and explained that all forms of harvest have an overall minimal impact on the quantity of kelp and the current harvest regulations are sufficient to maintain sustainable kelp forests.

Breakout Group: Recreational Harvest and Local Businesses

CWG Members shared that recreational harvest is so low and insignificant that it is not impacting kelp forests. This group spoke briefly about commercial harvest explaining that an abalone farm uses mechanical kelp harvesting techniques that appear to be sustainable. The group agreed that current harvest limits seem sufficient and they recommend sparing as much kelp as possible. However, many of their community members would oppose allowing commercial and recreational harvest of kelp in large quantities if it would impact their dive sites and oppose the complete removal of beach wrack since it is essential for the overall health of beach ecosystems. A topic of discussion that did arise was the impact of recreational boating vessels on kelp ecosystems. CWG Members shared a strong interest in connecting with the United States Coast Guard (USCG) to request that educational pamphlets or regulations for recreational and commercial boaters include language about traversing through kelp canopy to reduce unintended damage to the canopy.

Breakout Group: Academic, Agency, and Nongovernmental Organizations

Some CWG Members explained that Scientific Collecting Permits (SCPs) were their main avenue for their interaction with kelp harvest. Many CWG Members expressed discomfort in sharing their community’s views when there is not sufficient scientific evidence available to provide context. This group was interested in understanding how macroalgae moves within the system, including outplanting as well as which harvest types were lethal before they could weigh in. Multiple CWG Members shared existing surveys that could support the collection of recreational harvest data.

Kelp Harvest Management

CDFW gave a presentation on current giant kelp and bull kelp harvest management strategies throughout the state ([slide 18 - 23](#)). The CWG remained in plenary to discuss the effectiveness of various commercial harvest

management strategies over the years as well as their current impact on the environment and various communities who interact with kelp.

CWG Members discussed the following guiding questions with other representatives from their sector:

- *What are some successful regulations or management strategies for commercial and recreational giant kelp and bull kelp harvesting, and where have they been effectively implemented?*
 - *Should there be spatial limits or seasonal closures on Tribal, commercial and/or recreational giant kelp and bull kelp harvest?*
- *How do current giant kelp and bull kelp harvest regulations or management strategies align with your community's practices and needs? If they do not, what changes would you suggest?*
- *How have recent temporary commercial bull kelp harvest limits in Del Norte and Humboldt counties and closures in Mendocino and Sonoma counties affected your community, and what impacts—positive or negative—do you foresee with any potential future limits or closures?*
- *What are the potential implications of kelp harvesting on restoration efforts, and vice versa?*
- *What role can your community play in managing and monitoring kelp harvest beds? Could community-based monitoring or co-management help protect kelp resources?*

CWG Members pointed to the requirement of a California Fish and Game Commission approved kelp harvest plan by those who intend to mechanically harvest giant kelp and/or lease an administrative kelp bed as an example of a successful management strategy. The temporary bull kelp harvest closures in Sonoma and Mendocino counties as well as harvest limits in Humboldt and Del Norte counties were also considered successful. However, CWG Members were interested in whether measures may be evaluated to potentially inform reopening other beds in the future. They expressed approval that the closure was only for commercial harvesters and emphasized that Tribal subsistence harvesters should not be restricted, and instead can manage their own harvest.

Regarding the alignment of current management regulations with communities across California, Tribal CWG Members shared that they have historically been marginalized and their perspectives have not been included in management decisions. Tribes have not ceded their rights to fish and gather. These problems to-date may be addressed through discussions, government-to-government consultation, and co-management, especially when it comes to closures for subsistence harvesters. Other CWG Members stressed the need to consider avoiding overlap between scientific collection and regulatory measures (e.g. commercial and recreational harvest). Commercial harvesters feel that the current management practices are working well for their communities.

When asked about the role of harvest limits and closures, CWG Members elevated the importance of timing closures to correspond with the annual density cycles of each species and not be reflective of economic drivers. The declines in the north have impacted small businesses as their customer bases have moved to more promising locations, similar to commercial harvesters relocating to more prevalent locations. A Tribal CWG Member shared that they are unsure if commercial harvest has negatively impacted kelp recovery but they do not think this is likely. Another CWG Member expressed that they think it would be reasonable to have sea urchin farmers take drift kelp that is floating in the ocean. Subsequently, the conversation led to impacts of harvest on restoration. One CWG Member expressed that despite restoration efforts, it does not seem that kelp is returning. Humans may not be the solution to the problem (i.e., there are broader oceanographic and biological drivers at play) and restoration could be a waste of time and money. It is unclear if kelp harvesting occurs before reproduction, how robust the spore source is, and how that translates to natural recruitment to

canopy forming kelp. Others were adamant that artificial reefs should be an important part of the restoration process. Additionally, when considering abalone populations, their success relies on access to kelp for all stages of their life history.

Multiple CWG Members shared information about community-based monitoring projects that have allowed them to play an active role in managing and monitoring kelp. The following projects and teams were highlighted:

- Tribes play an active role as stewards of kelp and abalone.
- The MPA Collaborative's attempt to ground truth aerial survey kelp biomass metrics with on-the-water kelp health monitoring by groups such as Reef Check who provide insight into reproductive potential in zones where kelp does not reach the surface. Other surveys are occurring through Kelpwatch, however, fine-scale kelp observations are underrepresented in the data.
- The Nature Conservancy (TNC) and the University of Washington are conducting research to understand the quantity of spores in the ecosystem and how to increase their prevalence.
- Multiple groups have expressed interest in sharing data they have collected with CDFW and OPC including but not limited to party boats, commercial fishing vessels, commercial passenger fishing vessels (CPFVs), recreational Mendocino and Sonoma community-based programs as well as data from the general public.
- Others shared interest in creating a data clearinghouse with standardized broad data collection including citizen science data so folks know all the kelp data that exists. CWG harvesters offered to be a point of contact for the public to answer questions.

During a future CWG meeting, members will outline and vote on potential management recommendations intended to be reflective of their community's perspective and interests. These recommendations will then be considered by CDFW and OPC when drafting the KRMP.

Looking Forward

The KRMP CWG is anticipated to have an upcoming in-person meeting ([slide 25](#)) in May 2025, where they will revisit discussions around Ecosystem-Based Management, restoration, and harvest in conjunction with the SAC. Two additional meetings are planned for 2025 and 2026; their timing, focus, and goals are yet to be determined. This meeting summary and future outcomes from CWG meetings will be shared with CDFW and OPC to ensure community insights are incorporated into the KRMP. The summary will also be shared with the SAC for continuity between the two groups.

Future CWG meetings will continue to be informed by the KRMP SAC meetings, California Fish and Game Commission meetings, OPC meetings, Tribal discussions, etc.

If you have questions or comments or would like additional information, please contact kelp@wildlife.ca.gov. If you would like to request government-to-government Tribal consultation on the KRMP, please contact kelp@wildlife.ca.gov and cc r7regionalmgr@wildlife.ca.gov. Updates, informational materials, upcoming opportunities, and events will be highlighted on the [KRMP Website](#).

Next Steps

CWG Members will continue to review background materials already circulated (see Appendix), review materials that will be circulated before the next CWG meeting, and liaise with their communities to ensure their broader community perspectives are incorporated into each CWG meeting discussion. The next meeting is tentatively

planned for Spring 2025.

Appendix
Kelp Restoration & Management Plan Community Working Group
Meeting #4 Agenda
Wednesday, December 18, 2024
1:00 pm - 5:00 pm PST

Meeting Goals

- Discuss and gather community feedback on giant kelp and bull kelp harvesting practices, regulations, and management strategies.
- Explore perspectives on current regulations, including species-specific and regional considerations.
- Identify priorities for policy development and next steps for sustainable giant kelp and bull kelp harvest management.

Welcome, Introductions and Community Building

Confirm meeting goals and intentions and walk through the agenda.

Kelp Restoration and Management Plan Updates

California Department of Fish and Wildlife (CDFW) and Ocean Protection Council (OPC) to provide updates on the Kelp Restoration and Management Plan (KRMP) process, future Community Working Group (CWG) meetings, connections with Tribal engagement efforts and the Science Advisory Committee (SAC), updates from Fish and Game Commission (FGC) committees, OPC, etc.

Kelp Harvesting Practices

CDFW to provide a brief presentation on current giant kelp and bull kelp harvest practices in California. Discussion on community perspectives and concerns surrounding kelp harvesting, including commercial, recreational, and Tribal subsistence practices. Explore harvest practices and the sustainability of harvest practices.

● **Discussion Questions**

- Share your community's experiences with giant kelp and bull kelp harvesting in your area. Do you feel current practices are sustainable and minimize environmental impacts? Are there kelp harvesting methods that should be promoted or restricted based on environmental impact or community priorities? Why?
- Should there be limits on Tribal, commercial and/or recreational giant kelp and bull kelp harvest? Why? If so, what could that look like (e.g., trip limits, annual limits, license limits, etc.)?
- Should Tribal and recreational harvesters follow the same regulations as commercial harvesters (e.g., license requirements, reporting requirements, harvest methods, limitations, etc.)? Why?

Kelp Harvest Management

CDFW to provide a brief presentation on current giant kelp and bull kelp harvest regulations or management strategies, followed by an interactive discussion. Key topics will include the effectiveness of various commercial and recreational kelp harvest management strategies, their application, and their impact on the environment and communities. Explore the role of communities in managing and monitoring kelp beds.

- **Discussion Questions**

- What are some successful regulations or management strategies for commercial and recreational giant kelp and bull kelp harvesting, and where have they been effectively implemented?
 - Should there be spatial limits or seasonal closures on Tribal, commercial and/or recreational giant kelp and bull kelp harvest?
- How do current giant kelp and bull kelp harvest regulations or management strategies align with your community's practices and needs? If they do not, what changes would you suggest?
- How have recent temporary commercial bull kelp harvest limits in Del Norte and Humboldt counties and closures in Mendocino and Sonoma counties affected your community, and what impacts—positive or negative—do you foresee with any potential future limits or closures?
- What are the potential implications of kelp harvesting on restoration efforts, and vice versa?
- What role can your community play in managing and monitoring kelp harvest beds? Could community-based monitoring or co-management help protect kelp resources?

Looking Ahead and Adjourn

Strategic Earth, in partnership with CDFW and OPC, will review key takeaways, actionable next steps, and opportunities for continued CWG communication and engagement.

Available Resources

- [Key Regulations and an Overview of Considerations on Giant Kelp and Bull Kelp Harvest in California](#)
- [Community Survey on Giant Kelp and Bull Kelp Recreational Harvest Practices](#)
- [Giant Kelp and Bull Kelp Enhanced Status Report](#) - Please note that the information available online does not reflect temporary amendments to bull kelp regulations and the current status of Administrative Kelp Beds.