

Kelp Restoration Management Plan

Community Working Group Meeting #6

Monday, April 27, 2026

Summary

Finalized Monday, July 20, 2026

Attendees

Claire Arre, MPA Collaborative Network
Capt. David Bacon, WaveWalker Charters, Coastal Conservation Association
Kathryn Beheshti, University of California, Santa Barbara
Paige Berube, Alternate for Tristin Anoush McHugh, The Nature Conservancy
Doug Bush, The Cultured Abalone Farm LLC
Grant Downie, Commercial Sea Urchin Diver
Grant Downie, Alternate for Anna Neumann, Noyo Harbor District
Gary Fleener, Hog Island Oyster Company
Jan Freiwald, Reef Check California
Tom Ford, The Bay Foundation
Severino Gomes, Kashia Band of Pomo Indians
Peter Guinosso, Blue Harmony
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
Sage Ono, Alternate for Patrick Webster, Underwater Photographer
Andrea Paz-Lacavex, University of California Santa Cruz
Dave Rudie, California Sea urchin Commission
Javier Silva, Sherwood Valley-Noyo Pomo
Marc Shargel, Living Sea Images

Overview

The sixth virtual meeting of the Kelp Restoration Management Plan (KRMP) Community Working Group (CWG) was held on April 27, 2026, with KRMP CWG Members representing 21 of the 23 seats, 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 updates. Then, the CWG discussion and formal voting process, as defined in the [CWG Charter](#) ensued for most of the meeting. The CWG voted on 19 recommendations with 14 passing by consensus (requiring a $\frac{2}{3}$ majority vote) and 4 passing as a minority vote (requiring two or more affirmative votes), with guidance on community priorities as they relate to a kelp management framework, restoration toolkit, community participation, harvest management, and prioritization of management efforts.

KRMP CWG Updates

CDFW shared that the KRMP process has continued advancing through regular KRMP Science Advisory Committee (SAC) and CWG subcommittee meetings since May 2025. The SAC will continue to convene in 2026, focusing on refining key technical elements such as spatial management units, decision thresholds using a “stoplight” framework, and incorporating community observations through an input tool. Updates on state-funded kelp research were provided via a November 2025 science webinar open to both the CWG and SAC. CDFW, in partnership with OPC, has provided updates on the KRMP’s progress to the Fish and Game Commission through the Marine Resources Committee (MRC) in November 2025, the Tribal Committee in April 2026, and will provide another update to the MRC in July 2026. Concurrently, a Tribal CWG subcommittee has advanced Tribally-focused input, which will be reviewed at a June 1 Tribal Community Forum and feedback from the Forum will be incorporated. CDFW has identified Tribal co-management as a high priority, and the final Tribally-focused input will be shared with CDFW and OPC separately via the CWG Tribal subcommittee.

Since their last meeting in May 2025, the CWG has refined over 40 draft recommendations across topics, including harvest, restoration, research, and outreach, through subcommittees and member input. The goal of this meeting was to finalize the recommendations to inform the initial KRMP draft and revisit progress in summer 2026 with the KRMP Project Team. There is potential for a joint SAC-CWG meeting in October.

CWG Process and Synthesis of Input to Date

The CWG is an advisory body whose input is intended to reflect community perspectives, along with those from the SAC and Tribes, to inform the final plan developed by CDFW and OPC. CWG recommendations were developed through full-group meetings and subcommittee discussions, then organized by the Project Team into three categories: (1) in scope and already under CDFW consideration, (2) in scope but needing further exploration, and (3) outside scope but documented for the public record. For decision-making, the [CWG-approved charter](#) outlines a structured, transparent approach using iterative discussion and voting: online informal straw polls were used to surface initial alignment, followed by group discussion to identify gaps or refinements, and then a final roll-call vote to confirm positions. This process emphasizes participation from all members, clear documentation of input, and efficiency in moving from broad input to finalized recommendations.

Action Item: Final Recommendations Deliberation & Voting

The recommendations below are organized in the order they were discussed and voted on during the meeting. However, the recommendation numbers correspond to their original numbering in the draft recommendations document for consistency and cross-reference purposes.

Recommendations were made using the process outlined in the [CWG-approved charter](#). Any vote that received $\frac{2}{3}$ affirmative from present CWG members is considered a “consensus” recommendation. Any vote that received more than two but less than $\frac{2}{3}$ affirmative from present CWG members is considered a “minority” recommendation. Those recommendations with less than two affirmatives will not be shared with CDFW and OPC for consideration in the KRMP.

Recommendation 1

The CWG reviewed a draft recommendation for a flexible kelp management framework. CWG members supported a management framework that emphasizes adaptive management, species-specific considerations (e.g., bull kelp vs. giant kelp), ecological indicators, integration of science, community input, and monitoring. The

discussion led to several additions and clarifications, including the need for better data collection on kelp loss from fisheries bycatch and beach wrack removal, recognition of incidental impacts like propeller cutting, inclusion/exclusion of key predator species that may impact kelp abundance (e.g., sea stars) in ecosystem dynamics, and refining language. Participants also noted the importance of kelp monitoring even when no human intervention (e.g., restoration) occurs. Some concerns were expressed about the recommendation being broad and lacking specificity, but it was acknowledged as a high-level values framework to guide agency decision-making. After discussing potential wording changes, the group moved toward a final vote with general alignment:

CONSENSUS RECOMMENDATION: (*Management Framework*) **Develop a flexible management framework that accounts for the dynamic nature of kelp ecosystems and changing ecological conditions to allow for adaptive management.** In no particular order, the framework should:

- A. **Define kelp forest health** by combining input from conventional/academic science, community perspectives/observations, and Traditional Ecological Knowledges. Indicators of "health" may vary between Giant Kelp (*Macrocystis pyrifera*) and Bull Kelp (*Nereocystis luetkeana*) systems, and shift over time due to seasonal, social, cultural, and environmental factors (e.g., climate change).
- B. Include **indicators** (e.g., kelp canopy loss, urchin density, loss of ecologically significant key predator spp) and identify the **direction of change** to signal when specific management actions are needed (e.g., research, restoration, harvest changes) — **or if no human intervention** or action is necessary (e.g., if recovery is underway).
- C. Consider the **ecological timing** and **stressor duration** (e.g., post-mudslide sedimentation impacts, changing climate) in determining when and how to act.
- D. Use a **range of management strategies**—including harvest regulations, restoration, habitat protection, invasive species control, real-world observations, and monitoring programs—to **promote species diversity, ecosystem resilience, and connectivity** among kelp beds.
- E. Include a **framework/process to help decision-makers evaluate and prioritize** management efforts (e.g. monitoring, restoration, research) based on factors such as ecological urgency, cultural value, feasibility, ecosystem connectivity, and risk.
- F. Support and integrate **community-based, long-term monitoring programs and partnerships** that integrate Traditional Ecological Knowledges and community-informed perspectives/observations/programs to strengthen management efforts, track kelp health, and inform adaptive management.
- G. Include opportunities for **rapid response** to guide timely action, as needed.
- H. Include a **regular review** of management strategies to reflect climate trends, ecological models, and restoration outcomes.
- I. Contain a plan for **designing effective restoration programs** that includes considerations such as the dynamics of why an area may or may not improve with/without human intervention (e.g., what density of urchins is optimal? What should grazer dynamics be? How should *Pycnopodia* dynamics be managed?).
- J. Create pathways for the **integration of new science, monitoring data, Traditional Ecological Knowledges, community feedback/input, new management strategies, and lessons learned** so that the KRMP remains **adaptive**.

- K. Establish clear guidelines and policies related to continuing and emerging issues/methodologies** (e.g., kelp genetics, the use of genetic technologies, kelp translocation, DNA editing, morphological alteration, etc.) in restoration, research, and management.
- L. Prioritize management strategies that maintain (and, as appropriate, restore) ecological function** across kelp ecosystems.
- M. Use ecosystem-based management strategies** to recognize that managers should consider the broader kelp forest ecosystems since kelp forests are shaped by a whole web of interactions. Ecosystem-based management can help address root causes of kelp decline, improve durability of management efforts, reduce unintended consequences of a management action, and have broader impacts on other endemic kelp species (e.g., Feather Boa Kelp (*Egregia menziesii*), Stalked Kelp (*Pterygophora californica*), and Southern Stiff-Stiped Kelp (*Laminaria setchellii*)).
- N. Contain management strategies that consider the range of interests across California**, including Tribal, commercial, recreational, non-consumptive ocean users, conservation, etc.
- O. Consider the significant differences in the ecology and growth habits** of Giant Kelp and Bull Kelp in the management strategies (e.g., harvest regulations, restoration) for these two species.
- P. Streamline permitting pathways**, including operationalizing the [Restoration Management Permit](#), improving regulatory clarity, and creating tools to help applicants better understand the permitting process.
- Q. Prioritize improved data collection and assessment** to understand kelp loss from fishery-related bycatch (e.g., propellers, etc) and the ecological impacts of removing drift kelp (including wrack and water-column algae).
- R. Include a glossary of definitions**

Summary of vote:

Thumbs up (20)	Thumbs Down (0)	Abstained (0)	Absent (3)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh Grant Downie for Anna Neuman Sage Ono, for Patrick Webster	No votes	No votes	Severino Gomes, Maria Elena Lopez, Tyler McKinney

Recommendation 2

The CWG discussed the idea of recommending a public-facing kelp observation tool that would allow stakeholders to submit data on kelp health to be developed as part of the KRMP. There was general conceptual support, but some uncertainty about implementation, funding, and long-term maintenance. Participants raised questions about integrating or improving existing tools rather than creating a new tool, ensuring the definition of “kelp” is inclusive, and addressing data accuracy. A significant portion of the conversation focused on the need to protect sensitive cultural information, particularly Tribal data, by incorporating protocols for data confidentiality that recognize Tribal sovereignty, and potentially, develop a separate tool for Tribal data. A CWG member stated that they could not support a tool that did not require all data to be made public. Some members also suggested including best practices for data sharing and agreements, while others cautioned against overcomplicating the recommendation or debating broader co-management issues. CWG members agreed to keep the recommendation high-level, incorporate language acknowledging data sensitivity considerations, and proceed toward a final vote.

CONSENSUS RECOMMENDATION: (*Kelp Observation Tool*) To keep the public and local communities engaged as partners in kelp forest management, develop **public-facing kelp observation tool(s)** that enable stakeholders to submit observations of kelp health.¹

Rationale/Context: Public-facing kelp observation tools—such as mobile apps, websites, report cards, hotlines, and other reporting platforms—can serve as two-way communication channels between communities and managers. These public engagement tools would allow community members to share on-the-ground observations that can inform CDFW’s kelp monitoring efforts. To ensure consistency and clarity, the tools should include outreach materials that use shared language and criteria for assessing kelp health, such as presence or absence, color, beach wrack, sediment transport, species shifts, predator sightings, and water clarity. Data confidentiality considerations should be addressed for Tribes and other participants.

Summary of vote:

Thumbs up (19)	Thumbs Down (1)	Abstained (0)	Absent (3)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel	Doug Bush	No votes	Severino Gomes, Maria Elena Lopez, Tyler McKinney

¹ A pilot public-facing kelp observation tool is under development by SAC members. The CWG is anticipated to pilot the tool in 2026. Tribal data will need to be addressed through a different process.

Thumbs up (19)	Thumbs Down (1)	Abstained (0)	Absent (3)
<i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster			

Recommendation 3

The CWG discussed a restoration-focused recommendation centered on creating a comprehensive, adaptive “toolkit”. While there was broad support for the overall concept, significant debate arose around how specific the recommendation should be, particularly regarding detailed grazer suppression strategies (e.g., urchin removal and predator reintroduction; a draft Recommendation 20 was developed in response). CWG members highlighted that restoration work should be informed by existing research that has been documented over many years (e.g., research funded by California Sea Grant, meta-analyses by graduate student Ivan Serratos-Navarro, and others). Some participants favored specificity to guide action at the Fish and Game Commission related to marine protected area (MPA) management, while others cautioned against overemphasizing one method or listing tools since each tool should be considered regionally and specific to the cause of kelp decline. Many CWG members aligned on keeping the recommendation higher-level, emphasizing flexibility, local tailoring, and inclusion of multiple restoration approaches without prescribing specific methods; therefore, recommendation 20 was removed from consideration. Some CWG members expressed that when grazer suppression techniques are used, disposition of removed grazers (e.g., sea urchins) should be prioritized — which may also include leaving broken urchins on the ocean floor to serve as food for marine organisms. Additional themes included ensuring equitable participation, minimizing barriers (without removing necessary permits), and maintaining adaptability as new science emerges. The recommendation was approved with strong support. Some CWG members expressed that CDFW should recognize volunteer and community networks, with trained recreational divers and community-based restoration groups, as critical partners in restoration, rather than stakeholders. Additionally, responsible recreational access and stewardship are compatible with kelp recovery and should remain part of the conversation.

CONSENSUS RECOMMENDATION: (*Restoration*) **Use science, community priorities, and Traditional Ecological Knowledges to develop a comprehensive restoration toolkit.** In no particular order, the toolkit should:

- A.** Be incorporated into the **KRMP management framework**.
- B.** Ensure restoration techniques included in the toolkit consider the **ecological, cultural, ethical, and logistical factors** while **maintaining ecological balance** and preventing unintended harm.
- C.** Base restoration efforts on a **clear understanding of the drivers** of kelp decline, including environmental, biological, and anthropogenic factors, at each site and informed by a combination of data sources.
- D.** Contain an **action selection framework for restoration** (e.g., grazer suppression, green gravel, kelp outplanting, defending remnant kelp forests, etc) with the goal of enhancing kelp ecosystem structure and function **tailored** to local conditions by identifying site-specific drivers of kelp loss.
- E.** Include clear **action indicators, feasibility indicators, and best practices**, including restoration approaches that consider species interactions (including **invasive species**), genetics, energy dynamics,

and culturally appropriate methods (e.g., pairing urchin removal with *Pycnopodia* restoration, sustainable harvesting, and nature-based solutions).

F. Support innovation in restoration.

G. Remain adaptive and allow for the integration of new restoration techniques and technologies in the toolkit, including new science, accessibility, labor and economic considerations, and insights from community networks and ongoing research that evolves over time. While also considering lessons learned from research in CA and centuries of work around the world to maximize algal growth.

H. Ensure robust safeguards that prevent changing environmental and ocean conditions from hindering management efforts.

I. Incorporate metrics and monitoring standards to evaluate the success of restoration efforts.

J. Maximize participation and inclusion in kelp restoration by citizen scientists, community groups, researchers, Tribes, and all willing and interested parties by removing obstacles and barriers to participation.

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	No votes	No votes	Maria Elena Lopez, Tyler McKinney

Recommendation 4

The CWG discussed recommendations related to MPAs, focusing on whether the KRMP should simply avoid hindering restoration or more actively support restoration in MPAs. While there was general agreement that restoration should be allowed within MPAs, participants debated how far the recommendation should go—particularly whether to endorse specific MPA policy changes or petitions (e.g., for urchin removal), which some felt was outside the CWG’s scope. Concerns were raised about overstepping into Fish and Game Commission processes, leading to opposition to a more prescriptive recommendation proposal. The CWG ultimately aligned around simpler, more general language emphasizing that the KRMP should support restoration in MPAs without

getting into regulatory specifics, recognizing both the ecological need (e.g., kelp loss in existing MPAs) and the importance of staying within the group’s advisory role.

CONSENSUS RECOMMENDATION: (*Restoration and Marine Protected Areas*) Ensure the KRMP supports restoration in MPAs.

Rationale/Context: As MPAs are adaptively managed, all MPA management partners and agencies should collaborate with CDFW’s KRMP team to ensure that research, monitoring, and restoration efforts continue to align and support the goals of both programs.

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	No votes	No votes	Maria Elena Lopez, Tyler McKinney

Recommendation 5

Recognizing CDFW will have limited funding and resources to manage kelp, the CWG discussed how the state should prioritize limited funding for KRMP implementation, moving away from a detailed, prescriptive table in the draft recommendations (which many members found overly prescriptive and would not allow flexibility in implementation) toward simpler, more flexible language. There was general support for prioritizing research and restoration based on kelp conditions, but debate over how to frame this—particularly whether research should focus only on thriving systems or occur across all kelp states. The group largely aligned on supporting research across all conditions and prioritizing restoration in degraded (and potentially intermediate) systems, while emphasizing the need for adaptability given changing conditions. Additional discussion focused on whether to explicitly include priorities such as tribal co-management and interagency coordination; some supported naming these due to their importance and resource needs, while others felt they were already established priorities and did not need special emphasis, or did not support some of the identified management priorities (e.g., Tribal co-management). A CWG recreational fishing representative stated his understanding that the recreational fishing community generally believes that California resources should be managed by the state for all Californians

equally. CWG members worked toward concise language, balancing clarity, inclusivity, and flexibility before moving to a vote.

CONSENSUS RECOMMENDATION: *(CDFW Management Priorities)* While all of CDFW’s identified management strategies, including Tribal co-management and inter/intra-agency coordination, are important, the CWG generally supports prioritizing research, including Tribally-led science and knowledge, across kelp states and restoration in the degraded, not depleted, kelp states.

Summary of vote:

Thumbs up (20)	Thumbs Down (1)	Abstained (0)	Absent (2)
Claire Arre, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	Cpt. David Bacon	No votes	Maria Elena Lopez, Tyler McKinney

Recommendations 6, 9, 10, 15, and 18

In the interest of time and efficiency, CWG members reviewed a set of recommendations that were broadly supported during the pre-meeting straw poll. While noting that some items (like permitting reform) may extend beyond the direct scope of the KRMP, participants agreed it was still important to formally express these priorities. With no major objections or amendments raised, the group aligned on proceeding with a single vote across these recommendations.

6. CONSENSUS RECOMMENDATION: *(Funding/Capacity)* To maximize available resources, the CWG recommends that the KRMP outline how **CDFW will strengthen partnerships** to support monitoring, research, restoration, etc.

9. CONSENSUS RECOMMENDATION: *(Outreach/Education)* **Develop tools to help the public understand the consultation and pre-approval protocols across permitting agencies** to reduce permitting delays, which will improve project readiness to help communities act quickly and effectively without unnecessary administrative burdens.

Additional detail/Context: There continues to be confusion around the roles of state, federal, and local agencies in kelp forest management, research, and restoration. Including clarity in the KRMP around the roles of each agency will improve accountability, support more efficient project implementation (i.e., research and restoration), and enable communities to better navigate the permitting landscape. Additionally, the CWG believes that dedicated kelp restoration staff member(s) should be identified to provide coordination, technical assistance, and learning support to the public.

10. CONSENSUS RECOMMENDATION: *(Agency Coordination + Outreach/Engagement)* Promote coordination, alignment, and information sharing among agencies, academic institutions, researchers, community science groups, and local communities involved in kelp monitoring, restoration, and management.

Additional detail/Context: Improved coordination ensures that kelp management efforts are science-informed, efficient, and responsive to on-the-ground conditions, while maximizing resources, reducing duplication, and strengthening trust in decision-making. To support these efforts, enhance transparency, and integrate diverse knowledge systems, CDFW could consider developing a centralized, publicly accessible platform or map for real-time data exchange and tracking research and restoration sites. In addition, stronger coordination among agencies, academic partners, and community science groups will reinforce the scientific foundation needed for adaptive kelp restoration and stewardship.

15. CONSENSUS RECOMMENDATION: *(Management Response & Harvest):* When kelp forests are in decline, CDFW should address the cumulative impacts to kelp forests (e.g., water quality, boat propeller damage) by coordinating with other management agencies (e.g., CA Dept of Water Resources) before implementing harvest closures, since minimal levels of kelp are thought to be harvested by commercial and non-commercial harvesters.

18. CONSENSUS RECOMMENDATION²: *(Agency Coordination)* Coordinate with other state and federal agencies to streamline permitting processes (including, but not limited to, research and restoration).

Additional detail/Context: Research and restoration program leads and volunteers continue to be confused about the processes for obtaining permits and beginning work. CDFW should coordinate internally across departments and work with other agencies (e.g., Coastal Commission, State Lands Commission, National Marine Sanctuaries, State Parks, etc.) to streamline permitting processes and support coordinated response planning.

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris,	No votes	No votes	Maria Elena Lopez, Tyler McKinney

² Out of scope

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Rietta Hohman, James Jungwirth, Andrea Pax- Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster			

Recommendation 7

The CWG discussed a recommendation to create an ongoing, inclusive engagement strategy for Tribes, local communities, user groups, nongovernmental organizations (NGOs), and other stakeholders to support awareness, stewardship, and community-driven kelp research and restoration. Overall, there was strong support for the recommendation, with only minor concerns and suggested refinements. For example, some participants noted that due to CDFW’s limited resources, engagement efforts should not detract from core priorities like management and restoration which may include research efforts. Especially when resources or expertise are limited, CDFW should leverage external partners, such as community organizations and the Department of Education, for outreach and education, especially for areas like K–12 engagement where CDFW lacks expertise. Some CWG members emphasized using existing platforms and venues (e.g., public meetings, commissions, collaboratives) to reduce engagement costs and improve efficiency. The recommendation was refined to reflect interagency coordination, partnerships, and practical implementation constraints. After strengthening the recommendation with added context emphasizing collaboration, resource efficiency, and reliance on existing networks to carry out engagement efforts effectively, the CWG moved to a final vote.

CONSENSUS RECOMMENDATION: (*Outreach/Engagement*) Develop a **comprehensive, ongoing strategy for engaging Tribes, local communities, recreational and commercial users, NGOs, and other stakeholders** to promote awareness, foster stewardship, and cultivate community-supported research and restoration programs.

Additional detail/Context: Community outreach and education (get community groups and others (e.g., the Dept of Education) involved such as community groups to support the state’s community education) are crucial for the successful implementation of the KRMP since the community serves as liaisons to the state managers for sharing updates on the health and status, supporting research and restoration, and encouraging stewardship of kelp resources. Engagement efforts should include structured opportunities (e.g., public meetings, town halls, listening sessions) to support education and outreach programs (e.g., school partnerships) that increase knowledge of kelp forests and awareness of sustainable harvest practices, and empower diverse stakeholders to participate meaningfully in the stewardship of kelp forests. If resources are limited, should leverage existing platforms (e.g., MRC, community meetings).

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	No votes	No votes	Maria Elena Lopez, Tyler McKinney

Recommendations 8 and 11

The CWG broadly supported prioritizing and integrating long-term community and Tribal-led monitoring and restoration, with minor refinements emphasizing the inclusion of both ecological and socioeconomic monitoring and recognizing the value of volunteer-led efforts grounded in the best available science. Recommendation 11, which proposes developing a best practices guide for non-commercial kelp harvesting, generated more discussion. Participants generally agreed that such a guide could be beneficial in helping people harvest responsibly and better understand existing regulations, but raised concerns about who would develop it. Some CWG members stated that the guide should be developed by CWG in collaboration with harvesters and with respect for Indigenous practices. Some CWG members questioned whether a best practices guide would be accessible and widely used with some members suggesting distributing information through enforcement officers, bait shops, and handouts rather than relying solely on a website. While commercial harvest is already regulated, this guide would target voluntary best practices for non-commercial users. Ultimately, the group agreed to move forward with voting on Recommendations 8 and 11 together, but as separate items.

CONSENSUS RECOMMENDATION: *(Community and Tribal Networks to support KRMP implementation)*

Prioritize and integrate long-term community- and Tribal-led monitoring (ecological and socioeconomic) and restoration reinforced by the best available science to inform kelp management. The CWG recommends that the KRMP recognize value in **volunteer networks** to support the state’s management, research, and restoration efforts.

Additional detail/Context: Kelp restoration is labor-intensive, and scaling it to the ecosystem level will require a substantial, skilled workforce. Currently, CDFW lacks the staffing capacity and infrastructure to mobilize such a labor force. Community networks offer a cost-effective and efficient foundation to support the KRMP. Existing community-based programs that have trained participants and already have the expertise, provide sustained capacity and deeper engagement. Supporting these efforts with

training, coordination, quality assurance, and systems for sharing data back with communities will help strengthen trust and maintain momentum. Assessing community readiness and capacity can also guide prioritization of restoration and monitoring efforts.

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	No votes	No votes	Maria Elena Lopez, Tyler McKinney

CONSENSUS RECOMMENDATION: *(Best Practices for Harvest)* **Develop a best practices guide for non-commercial Bull and Giant kelp harvest** to communicate existing regulations and promote voluntary, sustainable harvesting behaviors, while creating opportunities for engagement and leadership within the harvest community. CDFW should develop the guide in collaboration with the commercial and recreational harvest community.

Summary of vote:

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie,	No votes	No votes	Maria Elena Lopez, Tyler McKinney

Thumbs up (21)	Thumbs Down (0)	Abstained (0)	Absent (2)
Javier Silva, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster			

Recommendations 12a, b, and c

The CWG discussed whether and how to track non-commercial (recreational) kelp harvest, and revealed clear divisions in perspective. Some participants supported data collection to better understand impacts and inform management decisions, while others argued that recreational harvest is minimal and does not justify the added burden of tracking. A compromise option was introduced, proposing temporary tracking to gather data for a limited period before reassessing the need for ongoing monitoring. The discussion raised several practical challenges, including the absence of an existing licensing or reporting system, potential difficulties with compliance and outreach, and questions about how data collection would be enforced. Participants also considered how data would be managed, noting it would likely be aggregated and used for decision-making, with attention to privacy concerns. Tribal members emphasized that tribal harvest should be exempt from this process and governed through Tribal systems. Many noted that establishing a tracking program could require significant resources relative to the small scale of harvest. The group moved to a vote across three options: requiring tracking, not tracking, or implementing temporary tracking to assess impact.

Option A: MINORITY RECOMMENDATION: (*Tracking Harvest*) Develop a system to **track and collect information on the recreational harvest** of Bull Kelp and Giant Kelp. Improved data availability will enable the state to evaluate whether harvest regulations are sustainable and achieving their intended outcomes and ensure that management decisions are grounded in comprehensive and real data.

Summary of vote 12a:

Thumbs up (5)	Thumbs Down (14)	Abstained (2)	Absent (2)
Claire Arre, Kathryn Beheshti, Andrea Pax-Lacavex, Javier Silva, Marc Shargel	Cpt. David Bacon, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, James Jungwirth, Dave Rudie <i>Alternates:</i> Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	Rietta Hohman <i>Alternates:</i> Paige Berube for Tristin McHugh	Maria Elena Lopez, Tyler McKinney

Option B: CONSENSUS RECOMMENDATION: (*Tracking Harvest*) Because non-commercial kelp harvest is thought to be so low and there would be low compliance from non-commercial harvesters on data collection efforts, the CWG **does not recommend CDFW require reporting from non-commercial harvesters.**

Summary of vote 12b:

Thumbs up (14)	Thumbs Down (5)	Abstained (2)	Absent (2)
Cpt. David Bacon, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, James Jungwirth, Dave Rudie <i>Alternates:</i> Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	Claire Arre, Kathryn Beheshti, Andrea Pax-Lacavex, Javier Silva, Marc Shargel	Rietta Hohman <i>Alternates:</i> Paige Berube for Tristin McHugh	Maria Elena Lopez, Tyler McKinney

Option C: MINORITY RECOMMENDATION: (*Tracking Harvest*) Develop a system to **track and collect information on the recreational harvest** of Bull and Giant Kelp for **a period of time to assess the impact** of the recreational/non-commercial harvest. Improved data availability will enable the state to evaluate whether harvest regulations are sustainable and achieving their intended outcomes and ensure that management decisions are grounded in comprehensive and real data.

Summary of vote 12c:

Thumbs up (5)	Thumbs Down (14)	Abstained (2)	Absent (2)
Claire Arre, Kathryn Beheshti, Jess Gravelle, Andrea Pax-Lacavex, Marc Shargel	Cpt. David Bacon, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jacob Harris, James Jungwirth, Dave Rudie, Javier Silva <i>Alternates:</i> Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	Rietta Hohman <i>Alternates:</i> Paige Berube for Tristin McHugh	Maria Elena Lopez, Tyler McKinney

Recommendations 13 and 14

The CWG discussed two recommendations, which address non-commercial kelp harvest limits and limiting commercial harvest and harvest permits. For Recommendation 13, which proposed increasing non-commercial harvest limits for subsistence use, members raised concerns that the current 10-pound daily limit restricts

families and subsistence harvesters, with some supporting an increase to better meet food needs, while others questioned the necessity of expanding non-commercial harvest; the group also clarified that this recommendation does not cover Tribal-specific provisions, which the state will handle separately. For Recommendation 14, which considered limiting commercial harvest permits and/or biomass, the group engaged in a more technical debate: some participants pushed for stricter limits on the number of commercial harvest permits in each administrative kelp bed to prevent the potential for too much pressure on a single area. Other members pointed out that existing regulations already manage harvest through administrative kelp beds, harvest plans, and commission oversight. Participants warned that limiting permits alone could create speculation or inequitable access and suggested that biomass-based limits would better prevent the potential for over-harvest; they also flagged potential impacts on industries like abalone aquaculture that rely on kelp supply if biomass restrictions were implemented. The CWG did not reach consensus on either recommendation.

FAILED RECOMMENDATION: *(Increase Non-Commercial Harvest)* **Increase the non-commercial harvest of Giant and Bull kelp** to help support subsistence harvest.

Summary of vote:

Thumbs up (1)	Thumbs Down (11)	Abstained (9)	Absent (2)
Cpt. David Bacon	Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Severino Gomes, Jess Gravelle, Jacob Harris, Dave Rudie, Marc Shargel, Javier Silva <i>Alternates:</i> Grant Downie for Anna Neuman	Claire Arre, Kathryn Beheshti, Jan Friewald, Peter Guinosso, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex <i>Alternates:</i> Paige Berube for Tristin McHugh, Sage Ono for Patrick Webster	Maria Elena Lopez, Tyler McKinney

MINORITY RECOMMENDATION: Recommendation. *(Commercial Harvest)* CDFW should restrict the **number of commercial harvest permits and maximum harvest biomass allowed** in each administrative bed to help ensure that harvest does not exceed sustainable thresholds.

Summary of vote:

Thumbs up (2)	Thumbs Down (9)	Abstained (10)	Absent (2)
Marc Shargel, Javier Silva	Cpt. David Bacon, Doug Bush, Grant Downie, Tom Ford, Severino Gomes, Jess Gravelle, Jacob Harris, James Jungwirth, Dave Rudie	Claire Arre, Kathryn Beheshti, Gary Fleener, Jan Friewald, Peter Guinosso, Rietta Hohman, Andrea Pax-Lacavex <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant	Maria Elena Lopez, Tyler McKinney

Thumbs up (2)	Thumbs Down (9)	Abstained (10)	Absent (2)
		Downie for Anna Neuman, Sage Ono for Patrick Webster	

Recommendation 16

While artificial reefs are outside the scope of the KRMP, some CWG members requested a vote for the public record to showcase the CWG’s support for artificial reefs as a kelp restoration strategy. With minimal discussion due to time constraints, the group moved quickly to a vote.

CONSENSUS RECOMMENDATION: (*Artificial Reefs as a restoration tool*) Explicitly **address artificial reefs** as a restoration method or clearly explain their exclusion from the KRMP.

Additional detail/Context: The KRMP should recognize the overlap between kelp restoration and the California Artificial Reef Program (CARP). The KRMP should consider how artificial reefs can support kelp regrowth, habitat complexity, and recreation, especially in the face of a changing climate. Artificial reefs should be evaluated for their ecological and social value in kelp recovery efforts. Recreational anglers and other interest groups have identified artificial reefs as particularly important to support marine ecosystems. The CWG recommends fully integrating artificial reefs into the KRMP and enhancing CARP to include kelp restoration as a desirable factor in the design and placement of artificial reefs.

Summary of vote:

Thumbs up (17)	Thumbs Down (1)	Abstained (3)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Doug Bush, Grant Downie, Gary Fleener, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh Grant Downie for Anna Neuman Sage Ono, for Patrick Webster	Javier Silva	Jess Gravelle, Jacob Harris, Rietta Hohman	Maria Elena Lopez, Tyler McKinney

Recommendations 17, 17a, and 17b

Ensuring there is adequate funding and capacity to implement the KRMP has been a CWG concern since their conversation began in 2023. The CWG generally believes that there should be calls for additional state funding to support kelp management efforts, such as monitoring, restoration, outreach, and education. Although CDFW cannot directly lobby for funding, a CWG recommendation could still signal funding priorities in the public

record. Members chose to vote separately on three components: a general request for increased funding (17), funding to continue the CWG (17A), and funding for a volunteer reimbursement program (17B). Due to limited time, the group kept the discussion brief, though one participant emphasized that effective restoration requires substantial labor and resources, reinforcing the need for funding.

OPTION 17. CONSENSUS RECOMMENDATION: (*Increased State Funding*) The CWG requests that **state appropriators allocate more funding to support CDFW’s implementation kelp management as outlined by the KRMP**, including funds for research and long-term monitoring, restoration, innovation, outreach/education, and staff capacity to support these priorities.

Summary of vote 17:

Thumbs up (19)	Thumbs Down (0)	Abstained (2)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Grant Downie, Tom Ford, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Marc Shargel, Javier Silva <i>Alternates:</i> Paige Berube for Tristin McHugh, Grant Downie for Anna Neuman, Sage Ono for Patrick Webster	No votes	Doug Bush, Gary Fleener	Maria Elena Lopez, Tyler McKinney

OPTION 17a. MINORITY RECOMMENDATION: (*CWG Continuation*) **Maintain a kelp-focused CWG to inform CDFW’s decisions on harvest regulations, restoration, and management after the KRMP is completed and implemented.**

Additional detail/Context:. Continued, regular engagement between members of the community, CDFW, and scientists is important. This CWG, in its current form, should continue to serve as the key conduit between agencies and coastal communities. The CWG understands that additional resources from state appropriators would be required for CDFW staff to support and maintain the CWG beyond 2026. In the near term, and until funding is available, CDFW should leverage existing community networks to inform management, assessment of kelp forest health, and restoration activities.

Summary of vote 17a:

Thumbs up (13)	Thumbs Down (5)	Abstained (3)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Grant Downie, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Marc Shargel	Tom Ford, Rietta Hohman <i>Alternates:</i> Paige Berube for Tristin McHugh Grant Downie for Anna Neuman Sage Ono, for Patrick Webster	Doug Bush, Gary Fleener, Javier Silva,	Maria Elena Lopez, Tyler McKinney

OPTION 17b. CONSENSUS RECOMMENDATION: (*Volunteer Funds*) The CWG requests the California Legislature establish a “**Kelp Restoration Volunteer Reimbursement Fund**” to support paid-volunteer networks in their restoration activities.

Additional detail/Context: A large contingent of kelp monitoring and restoration work has been done through a network of volunteers donating their time and bearing the cost of travel and supplies (e.g., compressed air, training, transportation, boat time, personal equipment). A funding source should be established to reasonably compensate volunteers for out-of-pocket costs incurred to fulfill the state’s kelp monitoring and restoration priorities. For divers doing urchin collecting or culling, a CWG member estimates the cost might amount to \$30 to \$60 per dive. To calculate an appropriate reimbursement rate for other activities, the state can and should establish appropriate “proof of activity” criteria, such as detailed dive logging, witness signatures, or even digital photos.

Summary of vote 17b:

Thumbs up (15)	Thumbs Down (3)	Abstained (3)	Absent (2)
Claire Arre, Cpt. David Bacon, Kathryn Beheshti, Jan Friewald, Severino Gomes, Peter Guinosso, Jess Gravelle, Jacob Harris, Rietta Hohman, James Jungwirth, Andrea Pax-Lacavex, Dave Rudie, Marc Shargel <i>Alternates:</i> Paige Berube for Tristin McHugh, Sage Ono for Patrick Webster	Grant Downie, Tom Ford <i>Alternates:</i> Grant Downie for Anna Neuman	Doug Bush, Gary Fleener, Javier Silva,	Maria Elena Lopez, Tyler McKinney

Recommendation 19

The CWG did not have an opportunity to vote on draft recommendation 19 and Project Team members reached out to the member who proposed the recommendation, which read:

19. Draft Recommendation.³ (Permitting) The Working Group recommends that the State of California **maximize participation and inclusion in kelp restoration projects by removing permitting as a barrier to entry.** Specifically, the Working Group recommends that:

- Any permits or licenses required to conduct kelp restoration activities be issued at no cost to appropriately vetted organizations, their staff or members, and qualified individuals.
- Where specialized skills or training are required for a given restoration project, CDFW determines and communicates those requirements clearly. Applicants — whether individuals or organizations — be responsible for obtaining any requisite skills or training prior to conducting restoration activities.

Looking Forward and Next Steps

The KRMP CWG is anticipated to meet again in summer 2026, where the recommendations from this meeting will be reflected in components of the KRMP that the CWG will review. There may be an additional CWG meeting in Fall 2026, depending on capacity and funding. This meeting summary and the CWG's final recommendations report will be shared with CDFW, OPC, and the SAC to ensure community perspectives inform the KRMP and maintain alignment across groups. CWG members may continue to share written input to kelp@wildlife.ca.gov. Those seeking government-to-government Tribal consultation should 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](#). The KRMP Project Team is grateful for the CWG's participation and contributions.

Preparation Notice

Zoom AI Companion and Fathom were used to support meeting recording and transcription for this meeting. Human-generated notes taken during the meeting formed the basis of this summary. ChatGPT and Claude were used in a limited editorial capacity to support document organization, readability, and flow. All content was reviewed, edited, and finalized by the Project Team, comprised of Strategic Earth, CDFW, and OPC staff members. The final document was also reviewed by the CWG.

³ Regardless that this recommendation didn't receive a vote from the CWG, CDFW is working to implement/integrate these concepts through the [Restoration Management Permit](#) and its connections to the KRMP. All of this Draft Recommendation 19 is already inherent in the RMP application and issuance processes.

Appendix
Kelp Restoration & Management Plan Community Working Group
Meeting #6 Agenda

Monday, April 27, 2026
12:00 pm - 4:00 pm PST

Zoom: <https://us02web.zoom.us/j/84144792330>

Meeting ID: 841 4479 2330

One tap mobile: +14086380968

Meeting Goals

- Discuss and vote on the suite of recommendations for the California Department of Fish and Wildlife (CDFW) to inform the development of the Kelp Restoration and Management Plan (KRMP).
- Identify next steps for the CWG and receive updates on the broader KRMP process and timeline.

Intended Meeting Outcomes

- A final set of CWG-supported recommendations for CDFW and OPC to consider in drafting the KRMP
- Clearly document consensus, support levels, and any differing perspectives

Welcome, Introductions, and Community Building

Confirm meeting goals and intentions and walk through today's agenda. Receive an overview of decision-making process and voting procedures (per CWG Charter).

KRMP CWG Updates

California Department of Fish and Wildlife (CDFW) and Ocean Protection Council (OPC) to provide updates on the KRMP process, future CWG meetings, connections with Tribal engagement efforts and the SAC, updates to FGC committees, OPC, etc.

Synthesis of CWG Input to Date

Ground participants in the CWG's work with a presentation of the draft recommendation synthesis — informed by CWG meetings and subcommittee discussions — and review of straw poll results and how they inform today's discussion.

Action Item: Final Recommendations Deliberation & Voting

Refine and vote on recommendations in accordance with CWG Charter guidelines. Use results from the online CWG straw poll to guide prioritization of voting. Recommendations that do not meet Charter criteria will be captured in the meeting summary. Final votes will be taken via roll call. Each member's vote will be captured and shared in the public-facing summary, including their names (see [Charter p.5-6](#) for more details).

Looking Ahead and Adjourn

Review key takeaways, actionable next steps for finalizing recommendations, and opportunities for ongoing communication and engagement.

Available Resources

- Draft CWG Recommendations
- [CWG Charter](#)
- CWG Master Resource Sharing Document
- [CWG and SAC Meeting Agendas and Summaries](#)