

Kelp Recovery Working Group



J. Hilderling



NATIONAL MARINE
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**Greater Farallones
National Marine
Sanctuary**

**Cordell Bank
National Marine Sanctuary**

Cordell Bank

Pt. Reyes

**Greater Farallones
National Marine
Sanctuary**

Farallon Islands

**Monterey Bay
National Marine Sanctuary**

**Cordell Bank National
Marine Sanctuary Headquarters**

**Greater Farallones National Marine Sanctuary
Headquarters and Visitor Center**

San Pablo
Bay

San Francisco

124°00'W

124°00'W

123°00'W

123°00'W

ESRI

Bull Kelp = essential nearshore habitat

Compounding multiple regional and large-scale stressors have led to dramatic changes in the nearshore ecosystem of Sonoma and Mendocino counties.



Chad King/NOAA MBNMS

Kelp Recovery Focus Region Sonoma & Mendocino County Nearshore Habitat



Scope

- Sonoma and Mendocino Counties (though other regions will be discussed)
- Multidisciplinary, multi-stakeholder approach to develop:
 - Management
 - Education/Community Engagement
 - Research/Monitoring

Recommendations for the Sanctuary

- Regional trends in kelp forest dynamics, critical links between kelp abundance and fisheries metrics, specific pathways for implementation of restoration and recovery efforts, potential future impacts of regional and large-scale stressors, partnerships, future research needs and a plan of action for management and policy outcomes for kelp forests along the Sonoma and Mendocino coastlines

Final Report

A comprehensive report detailing:

- Available data on the kelp decline
- Science priorities to advance the state of knowledge regarding kelp loss and drivers of loss
- Socioecological impacts of kelp loss and fisheries decline
- Management recommendations to protect and grow persistent kelp beds and restore lost kelp beds
- Response mechanisms put in place to efficiently and quickly address future stressors that may result in losses in kelp biomass.

Why?

- Establish lines of communication, share information and data, gain different perspectives and insight, identify pathways for partnerships and collaboration
- A comprehensive and collaborative approach is needed for kelp forest recovery
- Sanctuary Advisory Council process ensures public engagement



GFNMS Kelp Recovery Project

- Phase 1: Working Group formation and management recommendations
- Phase 2: Support collaborative short-term recovery efforts and long-term resilience of kelp ecosystems based on management recommendations.
- Long-term goal: restore bull kelp ecosystems through multi-phase, science-based research and restoration efforts.



GFNMS Kelp Recovery Project Goals

Promote the recovery of bull kelp forests to a sufficient extent that allows them to support the nearshore ecosystem and healthy fisheries.

Improve bull kelp forest resiliency.

Put mechanisms in place for effective recovery and restoration methods through the development of a long-term comprehensive climate adaptation plan.

Continue to support healthy bull kelp habitat through the implementation of management actions by state and federal resource agencies to.

Establish long-lasting, interdisciplinary partnerships conducive to informing management, future research, kelp restoration and ecosystem recovery.

Kelp Recovery Working Group

Working Group Goal:

Develop research, education/outreach, and management recommendations for the recovery of bull kelp populations along the North-central California coastline. These recommendations will be presented to the Sanctuary Advisory Council in November 2018 for discussion and approval before being forwarded to the Sanctuary for consideration and inclusion in a final Kelp Recovery Plan.



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Working Group Operating Guidelines

Cell phones and timeliness: Working Group participants will arrive to meetings on time and turn off cell phones when meeting commences.

Respect

- Working Group members will respect the personal integrity, values and legitimacy of interests of each participant and GFNMS staff. Comments should always be respectful and will not be made out of turn. **Please wait to be acknowledged by the Working Group Chair before speaking.**
- **Be a problem-solver:** When pointing out a problem, include or suggest an alternative where possible. Working group members should view disagreements as problems to be solved (or challenges to overcome) rather than battles to be won.

Timeline

Meeting 1: Orientation and Science/Recovery Learning

April 25, GFNMS Offices (San Francisco)

Review project scope, goal, and working group objectives; review existing data and information that will inform the working group's recommendations; learn about current restoration and recovery efforts from guest speakers; confirm future meeting schedule and locations.

Webinar: Kelp Monitoring Methods and Technologies

June 6, 10am – 12:30pm

Learn from guest speakers various efforts for surveying kelp beds; discuss implications for our region

Rebecca Flores-Miller (CDFW), Tom Bell (UCSB), Meredith McPherson (UCSC), Maycira Costa (UVic), Helen Berry (UW)

Meeting 2: Making the Recommendations

August 2, location TBD

Working in three rotating topic teams (science, management, education/outreach) and drawing from what was learned from meeting 1 and the webinar, develop recommendations to support the recovery of bull kelp populations along the North-central California coast.

Timeline

Meeting 3: Finalizing Recommendations

September 13, location TBD

Finalize recommendations; discuss financial and implementation needs, as well as required permitting for recommended projects.

Sanctuary Advisory Council Meeting to Approve Recommendations

November 14, San Francisco

Working Group Chairs will present recommendations to the advisory council for discussion and approval.

Sanctuary Review of Recommendations and Development of Kelp Recovery Plan

November – January

Sanctuary staff will develop a summary report including background information, data synthesis, recommendations, case studies, recovery characteristics, etc. to guide bull kelp management into the future.

Sanctuary Advisory Council Meeting to Discuss Kelp Recovery Plan

February 2019

Today's Objectives

- Outline working group expectations, objectives, deliverables, and timeline
- Review the state of the science for bull kelp and help identify knowledge gaps
- Review restoration and recovery methods used elsewhere and begin discussion of possible options for the north coast region
- Discuss next steps moving forward

Today's Agenda (morning)

Time	Item
8:30 – 9:00	Sign-in and Coffee
9:00 – 9:10	Welcome <i>Maria Brown, Sanctuary Superintendent</i>
9:10 – 9:30	Introductions <i>Francesca Koe, Working Group Co-Chair</i>
9:30 – 10:30	Project Orientation <i>Francesca Koe, Working Group Co-Chair</i> <i>Sara Hutto and Rietta Hohman, GFNMS</i>
10:30 – 10:45	Break
10:45 – 12:00	State of the Science <i>Cynthia Catton, Working Group Co-Chair</i>

Today's Agenda (afternoon)

Time	Item
12:00 – 1:00	Lunch break (lunch provided)
1:00 – 2:45	Kelp Restoration and Recovery <i>Rietta Hohman, GFNMS</i> <i>Tom Ford, The Bay Foundation</i> <i>Braeden Schiltroth, Simon Fraser University</i> <i>Cynthia Catton, CDFW</i>
2:45 – 3:45	Reflections Roundtable <i>Working Group members are invited to reflect on what was discussed today, their individual perspectives, and priorities moving forward. Coffee and refreshments will be provided; please break as needed.</i>
3:45 – 4:00	Wrap-up and next steps <i>Sara Hutto, GFNMS</i>
4:00	Meeting adjourns