

**MBNMS Research Activity Panel  
Meeting Summary  
November 4, 2022**

**Host:** Kerstin Wasson – Estuarine Environment (Elkhorn Slough NERR and Foundation)

**Location:** Virtual Meeting (information available upon request; erica.burton@noaa.gov)

**Date:** Friday, November 4, 2022; 9:00 am to 12:00 pm

**Members:**

	<b>Discipline</b>	<b>Primary/ Alternate</b>	<b>Name</b>	<b>Institution</b>
X	Research Coordinator		DeVogelaere, Andrew	Monterey Bay National Marine Sanctuary
	Biological Oceanography	primary	Ruhl, Henry	Central and Northern California Ocean Observing System
	Biological Oceanography	alternate	Kudela, Raphael	University of California, Santa Cruz
X	Deep-Sea Environment	primary	Cailliet, Greg	Moss Landing Marine Laboratories (retired)
	Deep-Sea Environment	alternate	<b>Haddock, Steve</b> †	Monterey Bay Aquarium Research Institute
X	Estuarine Environment	primary	Clark, Ross	Central Coast Wetlands Group
X	Estuarine Environment	alternate	Wasson, Kerstin	Elkhorn Slough NERR and Foundation
X	Fisheries	primary	Lindley, Steve	NOAA Fisheries Service
X	Fisheries	alternate	Owens, Brian	California Department of Fish and Wildlife
	Marine & Coastal Geology	primary		
X	Marine & Coastal Geology	alternate	Wagner, Amy	California State University, Sacramento
	Marine Conservation Biology	primary	Goldbogen, Jeremy	Hopkins Marine Station
	Marine Conservation Biology	alternate	Micheli, Fiorenza	Hopkins Marine Station
X	Nearshore Environment	primary	Southall, Brandon	Southall Environmental Associates, Inc.
	Nearshore Environment	alternate	Carr, Mark	University of California, Santa Cruz
	Physical Oceanography	primary	Cheriton, Olivia	United States Geological Survey
X	Physical Oceanography	alternate	Orescanin, Mara	Naval Postgraduate School
	Shelf & Slope Environment	primary	Lindholm, James	California State University, Monterey Bay
X	Shelf & Slope Environment	alternate	Sogard, Susan	NOAA Fisheries Service (retired)
X	Social Sciences	primary	Pomeroy, Carrie	University of California, Santa Cruz
	Social Sciences	alternate	Scorse, Jason	Middlebury Institute of International Studies
X	Water Quality	primary	<b>Hunt, John</b> *	University of California, Davis
X	Water Quality	alternate	Hoover, Bridget	Monterey Bay National Marine Sanctuary

\*Sanctuary Advisory Council Member: Research (Primary)

†Sanctuary Advisory Council Member: Research (Alternate)

**RAP Coordinator:**

X	Burton, Erica	Monterey Bay National Marine Sanctuary
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**GUESTS:**

Angerer, Keegan	Monterey Bay National Marine Sanctuary
Behl, Robert	Monterey Marine Innovation Project
De Beukelaer, Sophie	Monterey Bay National Marine Sanctuary
Hayes, Dawn	Monterey Bay National Marine Sanctuary
Lonhart, Steve	Monterey Bay National Marine Sanctuary
ZoBell, Vanessa	Dr. Nancy Foster Scholar/Scripps Institution of Oceanography

**CONSENT ITEMS**

## Introductions/Modifications to the Agenda (John Hunt)

- Andrew DeVogelaere recounted the Monterey Bay National Marine Sanctuary Foundation’s September 17<sup>th</sup> Sea Star Gala at Cocoanut Grove Ballroom, Santa Cruz, and 2022 Sea Star Research Award recipient, Dr. Kerstin Wasson.
- Erica Burton thanked John Hunt for his tenure as RAP chair and RAP vice-chair (aka Sanctuary Advisory Council Research seats; since 2008), and highlighted his RAP leadership contributions including:
  - Key advisor and committee member of the Sanctuary Water Quality Protection Program;
  - Led RAP discussion and letter to Advisory Council on prioritization of long-term monitoring of Sanctuary resources; and
  - Led RAP to update list of “Major Marine Science Facilities in the Monterey Bay Region,” including research focus, number of faculty/researchers and students, and annual budgets of each.

**HOST PRESENTATION AND DISCUSSION**

## Building a climate-ready tidal marsh for tomorrow: update on Hester Marsh restoration (Kerstin Wasson)

- Kerstin presented summary of strategic planning of Elkhorn Slough through the Tidal Wetland Program, and the various options considered for restoration of Hester Marsh.
- Decision makers selected option to add thick sediment to the marsh; raising former salt marsh to an elevation that allows marsh plants to return and keep pace with projected sea level rise; thereby transforming a formerly diked, degraded site to a high, climate-ready marsh.
- For more information: see [Hester Marsh Tidal Marsh Restoration](#).

**MBNMS RESEARCH UPDATE**

## Kelp Research and Restoration Review by RAP Subcommittee (Steve Lonhart/MBNMS)

- Steve continued topic discussion from previous RAP meeting, and provided overview of proposal, principal investigators/science team, variety/menu of ten projects for various funding opportunities and update on comments received from reviewers.
- Before the meeting, RAP members and/or other reviewers were asked two things:
  - Read the proposal and make any notes or comments on it, specifically on how to improve the proposed science; and
  - Recommend the addition of any new studies to the nine already proposed.
- RAP members in attendance provided additional discussion/comments for Steve Lonhart and Mark Carr.
- Next steps include:

- RAP and other reviewers to forward comments to Mark Carr.
- Mark Carr will respond to comments.
- Steve will present topic of iconic kelp forests at December Sanctuary Advisory Council meeting.
- If Advisory Council requests RAP opinion on need for kelp research and/or restoration, RAP will be prepared.
- This topic may again be on the January RAP meeting agenda.

## **SANCTUARY RESEARCH UPDATE**

### Sanctuary Sound Update

- Andrew DeVogelaere provided context and stressed the priority of sound research in national marine sanctuary system; and introduced two speakers.

### Ship Noise in the Ocean: Investigating a Chronic Ocean Threat and Identifying Biologically Meaningful Solutions (Vanessa ZoBell/Scripps Institution of Oceanography)

- Vanessa presented her research on ship noise and biologically important areas of blue and humpback whales in Santa Barbara Channel (Channel Islands NMS); and environmental variables (i.e., currents, SST) as related to blue and fin whale sounds/locations using directional vector sensor (MBARI hydrophone at MARS) in MBNMS.
- In CINMS, she will be validating noise map with in-situ HARP (High-frequency Acoustic Recording Package) recordings; extending noise map temporally to compare different seasons/years; identify regions/times for noise reduction efforts; and use tag data to identify noise exposure levels for individual animals.
- In MBNMS, she will solidify detection range of fin whales, compare blue and fin whale niches; and overlay anthropogenic threats with blue and fin whale niches.

### Bioacoustics Update - New Publication on Blue Whale Ecology and Tracking in Monterey Bay (Brandon Southall)

- Brandon summarized results of recent research and publication in Ecology Letters by Ryan et al. 2002, "[Ocean giants dance to atmospheric rhythms: Ephemeral wind-driven resource tracking by blue whales.](#)"

## **SANCTUARY ADVISORY COUNCIL UPDATE**

### Summary of October Advisory Council Meeting (John Hunt)

- John presented brief summary of Advisory Council Meeting
- For meeting minutes, see: <https://montereybay.noaa.gov/sac/sacma.html>

## **ED RICKETTS AWARD AND LECTURE**

### 2022 Ricketts Award and Lecture Event Summary (Erica Burton)

- Erica provided brief overview of the Award and Lecture event held October 26<sup>th</sup> at the Sanctuary Exploration Center, Santa Cruz.
- At the event, Andrew DeVogelaere provided history of the Ed Ricketts Award and Lecture, and the influence of Ed Ricketts in the Monterey Bay region. John Hunt provided introduction to Rick Starr and his accomplishments in the field of marine science.

- Dr. Rick Starr (Research Faculty, Moss Landing Marine Laboratories) provided a lecture entitled “Chasing Seascapes: Patterns of Scale and Connectivity in Coastal Oceans” that highlighted the science of seascape ecology and how it is advancing our understanding of coastal ocean habitats, species-habitat associations, and species connections.
- A virtual option was made available via GoToWebinar; and the recording will be posted on [MBNMS Ricketts web page](#).

**QUICK UPDATES ON NEW HIRES AT INSTITUTIONS, AND FACILITY UPDATES**

- No decisions or actions

**SUGGESTED FUTURE AGENDA ITEMS**

- No decisions or actions

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**Future Agenda Items (running list):**

- MBA’s Conservation and Science Program update
- MPAs as monitors/buffers of climate change (e.g., recent OPC presentation at SAC; Micheli’s recent newspaper article)
- Microplastics in Monterey Bay National Marine Sanctuary: Current and future research to guide management (Matt Savoca/Hopkins Marine Station)
- Funded project on kelp as ecological-social systems in Monterey and Mendocino areas (C.Pomeroy and M.Carr)
- Update on nitrogen loading in local watersheds (by Holly Bowers/Ross Clark; initially presented March 2022 RAP meeting)
- More offshore wind energy and mapping fishing grounds (requested by C.Pomeroy)
- Future updates on offshore wind energy (requested by J.Scorese)
- Update on seal bomb issue (requested by J.Scorese)

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**2023 RAP Meeting Schedule and Locations (TBD; meeting frequency under review)**

<b>Date</b>	<b>Hosts</b>	<b>Location</b>
January 13		Virtual Meeting (until further notice)
March 10		Virtual Meeting (until further notice)
May 12		Virtual Meeting (until further notice)
September 8		Virtual Meeting (until further notice)
November 3		Virtual Meeting (until further notice)