

**MBNMS Research Activity Panel  
Meeting Summary  
March 12, 2021**

**Host:** Mara Orescanin – Physical Oceanography (Naval Postgraduate School)

**Location:** Virtual Meeting

**Date:** Friday, March 12, 2021; 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
X	Biological Oceanography	alternate	Kudela, Raphael	University of California, Santa Cruz
X	Deep-Sea Environment	primary	Cailliet, Greg	Moss Landing Marine Laboratories (retired)
X	Deep-Sea Environment	alternate	<b>Haddock, Steve</b> †	Monterey Bay Aquarium Research Institute
X	Estuarine Environment	primary	Clark, Ross	Central Coast Wetlands Group
	Estuarine Environment	alternate	Wasson, Kerstin	Elkhorn Slough NERR and Foundation
X	Fisheries	primary	Lindley, Steve	NOAA Fisheries Service
	Fisheries	alternate	Owens, Brian	California Department of Fish and Wildlife
	Marine & Coastal Geology	primary	Golden, Nadine	United States Geological Survey
	Marine & Coastal Geology	alternate		
	Marine Conservation Biology	primary	Goldbogen, Jeremy	Hopkins Marine Station
X	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
X	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
	Shelf & Slope Environment	alternate	Sogard, Susan	NOAA Fisheries Service (retired)
X	Social Sciences	primary	Pomeroy, Carrie	California Sea Grant Extension Program
	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

Behl, Robert	Monterey Marine Innovation Project
Brown, Jennifer	Monterey Bay National Marine Sanctuary
De Beukelaer, Sophie	Monterey Bay National Marine Sanctuary
Galasso, George	Monterey Bay National Marine Sanctuary
Hayes, Dawn	Monterey Bay National Marine Sanctuary

## CONSENT ITEMS

Introductions/Modifications to the Agenda (John Hunt)

- Steve Haddock provided information on needle/syringe debris at Santa Cruz beaches.
- Olivia Cheriton shared a couple aerial images of coastal zone near sand mining plant in Marina; RAP would like presentation by USGS at future meeting.

## HOST PRESENTATION AND DISCUSSION

Processes Driving Bar-built Estuary Morphodynamics (Mara Orescanin)

- Mara provided summary of research activities at Carmel River State Beach to better understand sediment transport, seasonal beach morphology, and how changes relate to ephemeral Carmel River and bar built estuary.
- Seasonal trends in sediment transport include:
  - Wet years with high discharge and longshore wave radiation stress show migration of the breach northward (sediment loss).
  - Dry years with low river discharge (and less wave energy) do not show migration (sediment gain).
  - Sediment budget is likely balanced by migratory and non-migratory years, yielding a stable system.

## SANCTUARY ADVISORY COUNCIL UPDATE

Summary of February 19<sup>th</sup> Advisory Council Meeting (John Hunt)

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

## PRESENTATION REQUESTED BY RAP

Updating “Major Marine Sciences Facilities in the Monterey Bay Crescent” (John Hunt)

- John introduced the issue; need to update the 2017 document by Gary Griggs.
- John emailed 2017 document to RAP members prior to meeting.
- Present RAP members were willing to retrieve information from their institutions and provide to John Hunt and Andrew DeVogelaere.
- **ACTION**: John and Andrew will work together to update the document.

## SANCTUARY RESEARCH UPDATE

Overview of ONMS Science Needs Assessment (Chad King/Erica Burton)

- Chad King was unable to attend meeting, and Erica Burton provided Chad’s presentation.
- ONMS Science Needs Assessment is an evaluation of the science and information requirements (capability, information, and products) of the ONMS as defined by the management issues facing each sanctuary in the National Marine Sanctuary System (NMSS).

- This evaluation defines current science needs for each national marine sanctuary and supports requirements defined in each Sanctuary Management Plan.
- Office of National Marine Sanctuaries (ONMS) is currently updating the format of site-specific Science Needs (2-pagers). Majority of MBNMS issue-based Science Needs were last updated in 2012; with three updated in 2017 and 2020.
- ONMS uses several key planning and evaluation documents to support the management of each National Marine Sanctuary, including:
  - Sanctuary Management Plan
  - Sanctuary Condition Report
  - Strategic Science Plans
  - Regional and local reports identifying existing and emerging issues in ocean conservation.
- The purpose of this assessment is to provide targeted information on the science requirements of the ONMS based on the management issues defined in these documents.
- Audience includes:
  - Potential partners and organization (particularly those in the research community)
  - Federal, state and local legislative officials interested in the management issues and science requirements
  - For the general public, the assessment will provide information on the current management issues and science needs of MBNMS and promote understanding.
- MBNMS staff will be updating approximately 19 issue-based Science Needs.
- Timeline for updating Science Needs, is as follows:
  - April 30: Finalize list of science needs (consider suggestions from RAP and others)
  - September 30: All needs edited/written and finalized for public dissemination.
- RAP members may find Science Needs useful for grant proposals related to applied science
- See Science Needs Assessment at: <https://sanctuaries.noaa.gov/science/assessment/>
- **ACTION:** RAP members may be consulted, or asked to review Science Needs.

#### Maritime Heritage Program and MBNMS Resources (Erica Burton)

- Erica provided summary of recent Maritime Heritage activities and outreach
- Reorganization of ONMS divisions is currently under review. As proposed, a newly named “Science and Heritage Division” will be composed of the following:
  - Environmental Sciences
  - Economic and Social Sciences
  - Maritime Heritage
  - Marine Operations
- Erica provided information on the following, as related to Maritime Heritage:
  - ONMS mandates and definitions
  - Maritime Heritage Action Plan Strategies in draft Management Plan
  - Maritime Heritage resource inventory
  - New MBNMS web pages named “Shipwreck Profiles”
  - Maritime Cultural Landscape approach
- List of 463 vessel losses (e.g., shipwrecks) within or adjacent to MBNMS boundary, can be viewed at: <https://montereybay.noaa.gov/maritime/losses.html>

- In an effort to expand public-facing website, detailed information for 5 historic wrecks, plus one modern wreck (of recent discovery by MBARI) is now displayed on website.
- Shipwreck Profiles for six wrecks are available on vessel losses web page, including:
  - *Carrier Pigeon* (1852-1853): clipper ship
  - *Gipsy* (1868-1905): steam schooner
  - *Harlech Castle* (1867-1869): bark
  - *JB Stetson* (1905-1934): steam schooner
  - *Sierra Nevada* (1851-1869): side-wheel steamer
  - *Umpqua 11* (1970-1982): freight barge
- West Coast Regional (WCR) Office has identified Maritime Cultural Landscape (MCL) approach as a FY2021-2022 priority. WCR working group will develop a FY22 funding request for conducting MCL at one or more sanctuary.

### **SANCTUARY UPDATE**

Management Plan Update (Dawn Hayes/MBNMS)

- Dawn provided summary of public comments received on draft MBNMS Management Plan, including proposed regulatory changes.
- Dawn thanked the RAP for their engagement during public comment period, and their technical suggestions on research related action plans.

### **ED RICKETTS AWARD AND LECTURE**

2021 Ricketts Award (Erica Burton)

- Erica thanked RAP for their participation in the nomination and voting processes for the 2021 Ricketts Award
- Erica announced the 2021 awardee: Mark Silberstein (Elkhorn Slough Foundation)
- The award ceremony and lecture will occur in October 2021.
- If COVID restrictions are lessened, event will occur at Sanctuary Exploration Center, and live-streamed and recorded.
- If COVID restrictions do not allow in-person event, lecture will be held via webinar as part of National Marine Sanctuary Office Educational Series.
- Additional information available at: <https://montereybay.noaa.gov/research/ricketts.html>

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

- No decisions or actions

### **SUGGESTED FUTURE AGENDA ITEMS**

- Update on research and restoration activities related to closing of the Marina sand mining plant (USGS and others)

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

- **May 2021:** Soundscape focused RAP meeting (Southall)
- **Sept 2021:** Microplastics: How an under-funded marine science community deals with a significant new problem
  - Microplastics and seabirds (chemical cues; Matt Savoca/Hopkins Marine Station)
  - Choy et al (MBARI)
  - NOAA's Marine Debris Program (Sherry Lippiatt)
  - Monterey Bay Aquarium (Kyle Van Houtan)
  - Watersheds (Bridget Hoover has preliminary data)
  - Davidson Seamount (MBNMS office)
- **Nov 2021:** California Collaborative Fisheries Research Program (CCFRP), and MPA monitoring and synthesis of historic data sets in MBNMS (Mark Carr and Rick Starr)
- **Nov 2021:** Development of a Marine Protected Area monitoring program for California estuaries (Ross Clark)
- MBA's Conservation and Science Program update (Kyle Van Houtan)
- MPAs as monitors/buffers of climate change (e.g., recent OPC presentation at SAC; Micheli's recent newspaper article)
- EPA funding to document water quality enhancement projects in the watershed capacity to reduce harmful algal blooms (Ross Clark)

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### **2021 RAP Meeting Schedule and Locations**

<b>Date</b>	<b>Hosts</b>	<b>Location</b>
January 8	Cailliet	Virtual Meeting (until further notice)
March 12	Orescanin	Virtual Meeting (until further notice)
May 14	Southall	Virtual Meeting (until further notice)
September 10	Ruhl	Virtual Meeting (until further notice)
November 12		Virtual Meeting (until further notice)