

**Monterey Bay National Marine Sanctuary
Research Activity Panel (RAP)
Activities & Accomplishments
(1993-2022)**

1993

- Shared updates on regional research institution activities
- Wrote the Sanctuary Research Plan (1st in the Nation)
- Promoted hiring a Sanctuary Research Coordinator
- Organized a regional research symposium

1994

- Formalized membership
- Advised SAC on ATOC
- Advised staff on a request for proposal to develop a MBNMS Site Characterization
- NOAA Ship *McArthur* - recruited and facilitated research projects, including a multi-institution assessment of the marine exclusion zone off of Ft. Ord
- Shark Chumming - subcommittee formed - produced report for SAC on scientific issues surrounding shark chumming
- Jade Cove - discussed geological issues surrounding controversy and arranged USGS geologist to make presentation to SAC
- Participated in regional discussions of integrated GIS
- Advised staff on the value of scientific data from volunteer programs

1995

- Advised staff on development and authored sections of the MBNMS Site Characterization
- Advised staff on wildlife harassment from over flights
- Reviewed a series of research proposals requesting sanctuary endorsement
- Provided comments to SAC and others on scientific collecting in the proposed underwater park at San Carlos Beach
- Promoted the concept of institutional sanctuary research permits
- Promoted support for the Mussel Watch program

1996

- Assisted staff with the development of a searchable on-line database of literature, associated with the MBNMS Site Characterization
- Selected and coordinated projects for Sanctuary ship time on the NOAA Ship *McArthur*
- Organized the annual regional research symposium
- Began a report on the impacts of ROV lights on deep-sea organisms
- Advised SAC on elephant seal population growth near Pt. Piedras Blancas, relative to user group conflicts and Highway 1 realignment

1997

- Provided input for Assemblyman Fred Keeley concerning the Sea Life Recovery Act and the Coastal Bond Act

- Advised SAC on the proposed Edward F. Ricketts Underwater Park
- Received numerous research project institution updates
- Completion of the report to characterize the Ft. Ord marine exclusion zone

1998

- Advised staff on monitoring and understanding water quality impacts in the coastal waters and deep ocean (in addition to watersheds)
- Completed a report on the impacts of ROV lights on deep-sea organisms
- Completion of the Sanctuary USGS project to map and characterize the sediments of the MBNMS
- Advised SAC on the impacts of divers to kelp communities
- Advised SAC on potential impacts of the live-fish fishery

1999

- Provided input to regional discussions of human impacts to tide-pools
- Commented on the National Research Plan for Sanctuaries
- Continued coordination on multi-institutional collaborative grant proposals
- Advised staff on the development of *Ecosystem Observations*
- Continued support of *Sanctuary Currents* Symposium: theme, planning, awards

2000

- Reviewed and commented on staff kelp plan, in relation to updating CDFG kelp harvest regulations
- Assisted staff and local officials in development of studies to assess impacts of humans to rocky shores
- Participated in the development and regional support for the Sanctuary Integrated Monitoring Network (SIMoN)

2001

- Assisted staff with development of a RAP web page: history, policies, meetings notes, members, objectives, activities
- Continued research project and institution updates
- Provided support for the development of SIMoN
- Participated in the initial stages of the Joint Management Plan Review
- Wrote a letter to the Conservation Working Group in response to requested information on the conservation implications of marine reserves
- Advised the SAC on impacts of deep-sea cables
- Continued participation in organization of the *Sanctuary Currents* Symposium

2002

- Provided review comments on a NOAA sponsored Biogeographic Assessment and Ecological Linkages report
- Continued participation in the Joint Management Plan Review process

2003

- Continued research project and institution updates

- Supported regional institution participation in sharing project information over the SIMoN web site
- Continued participation in the Joint Management Plan Review process

2004

- Continued research project and institution updates
- Continued participation in the Joint Management Plan Review process
- Continued support of Sanctuary Currents Symposium: theme, planning, awards
- Provided review comments on a NOAA sponsored Biogeographic Assessment and Ecological Linkages report
- Began evaluation of RAP protocols and policies for improvement/restructure

2005

- Continued research project and institution updates
- Continued evaluation of RAP protocols and policies for improvement/restructure
- Continued support of Sanctuary Currents Symposium: theme, planning, awards

2006

- Continued research project and institution updates
- Finalized "RAP Purpose and Protocols"
- Membership reorganized to include representative disciplines and institutions
- RAP Information Binders created for each RAP member
- Continued support of Sanctuary Currents Symposium: theme, planning, awards
- Suggested long-term monitoring programs that could help assess damage during a major oil spill (Safe Seas exercise)
- Subset of RAP members reviewed and commented on specific draft JMPR action plans

2007

- Continued research project and institution updates
- Provided comments on Sanctuary Condition Reports: Supporting System-Wide Monitoring (SWiM), and participated in workshops
- Created a list of acronyms commonly used when addressing research issues of the MBNMS ([PDF available here](#))
- Continued support of Sanctuary Currents Symposium: theme, planning, awards
- Provided new Superintendent (Paul Michel) with input on critical research issues of the RAP

2008

- Continued research project and institution updates
- Subset of RAP members provided comments to US Army Corps of Engineers on report, "Regional Sediment Management - Offshore Canyon Sand Capture"
- Continued support of Sanctuary Currents Symposium: theme, planning, awards
- Since January 2001, Marine Protected Areas (MPA) has been the most agendized topic (more than 60 times). The nature of this agenda item has ranged from simple updates of recent developments to focused discussion and sharing of differing opinions. RAP

members most familiar with the science of MPAs (Drs. Rick Starr, Mark Carr, and Chris Harrold) were members of the sanctuary's MPA working group.

2009

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Provided monitoring information for MLPA monitoring interactive map and other SIMoN project pages
- Provided input on MBNMS Federal MPA Process
- Provided recommendations and advice to MBNMS regarding ocean acidification
- Contributed to, and reviewed, the MBNMS Condition Report
- Individual RAP member contributed throughout the year, for example:
 - Informed the SAC on Harmful Algal Blooms (Kudela)
 - Implemented MBNMS Trawling Action Plan in Morro Bay (Lindholm)
 - Led Action Plan strategies on tidal erosion in Elkhorn Slough (Wasson)
 - Incorporated MBNMS needs into USGS strategic planning (Storlazzi)
 - ...and many more

2010

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Defined list of RAP research focus topics

2011

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Provided input on sanctuary's Ecosystem-Based Management Initiative
- Provided input on regional Ocean Acidification research to develop a list of regional projects

2012

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Provided input on Sanctuary Sentinel Sites; an ONMS priority
- Provided input on Risk Assessment for the California Current Integrated Ecosystem Assessment
- Provided input on The Center for the Blue Economy's 3-5 year research agenda
- Subcommittee provided comments on Conservation Working Group white paper on "Forage Species Science and Management"

2013

- Continued research project and institution updates

- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Provided input on Sanctuary Ecologically Significant Areas (SESA)
- Established protocols to review issues requested by SAC and other working groups
- Provided input on California Current Integrated Ecosystem Assessment (IEA) Indicator Development and Conceptual Models
- Provided input to ONMS headquarters on system-wide monitoring and improving Condition Reports

2014

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session
- Provided input on assessing uncertainty ratings in Condition Reports
- Provided input to update a list of monitoring and impact assessment collaborators during an oil spill
- Provided input on updating Condition Report
- Provided input on California Current Integrated Ecosystem Assessment (IEA) Indicator Development and Conceptual Models

2015

- Continued research project and institution updates
- Continued support of Sanctuary Currents Symposium: theme, planning, awards, poster session

2016

- Continued research project and institution updates
- Provided input on Management Plan, including prioritization of topics received during public scoping process
- Initiated RAP Action Plan for Long-term Monitoring
- Provided input on sanctuary small boat mission needs and requirements
- Modified four former “Ecology” RAP disciplines to “Environment” disciplines

2017

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Continued discussion of RAP Action Plan for Long-term Monitoring
- Provided input on draft Research Program Action Plan (Management Plan Review)
- Provided coordinated comments on proposed Monterey Peninsula Water Supply Project (CalAM) Draft EIR/EIS

2018

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Provided input on Ocean Guardian School Program (Video Interviews with Scientists)

- Provided input on draft Management Plan Strategies and Activities

2019

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Provided input on [science needs](#) for usage of Unmanned Aerial Systems (UAS; e.g., drones) in MBNMS
- Individual RAP members contributed throughout the year, for example:
 - Incorporated BeachCOMBERS data into [CeNCOOS data portal](#) (Ruhl)
 - Contributed to hydrophone surveys and [Soundscape Exhibit at Sanctuary Exploration Center](#) (Southall)
 - Speaker at Whalefest Monterey Symposium (Haddock)
 - Panel member at public informational session about the effects of cruise ships on marine life in Monterey Bay (Southall)
 - Helped address Advisory Council's interests in microplastics with [research poster](#) (Goldbogen)
 - Contributed to ongoing Advisory Council priority of seal bombs with [white paper](#) and follow up discussions (Scorese)
 - ...and many more

2020

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Provided input on draft Management Plan Strategies and Activities
- Individual RAP members contributed throughout the year, for example:
 - Speaker at Whalefest Monterey Symposium (Southall)
 - ...and many more

2021

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Provided updated research institution information for document "Major Marine Sciences Facilities in the Monterey Bay Crescent"
- Individual RAP members contributed throughout the year, for example:
 - Led research and contributed to [SanctSound Project](#) (Southall, Ruhl, DeVogelaere)
 - Reviewed or provided updates to [science needs](#) documents

2022

- Continued research project and institution updates
- Continued support of Ricketts Lecture and Award
- Individual RAP members provided input on proposed kelp research and restoration