

**MONTEREY BAY NATIONAL MARINE SANCTUARY  
ADVISORY COUNCIL**

**Member Announcements  
April 2021**

**Non-Governmental seats**

**At-Large (southern region)**

*PJ Webb (primary)*

It has been quite awhile since I have attended a SAC meeting but I am getting back into the swing of things. Miss seeing you all and meeting in person. The Southern Region has struggled with Highway 1 and Hearst Castle closures. It appears that due to some road instability at Hearst Castle, the popular state park will remain closed through the summer. The Coastal Discovery Center remains closed but according to Michele Roest, reopening plans are being developed. Volunteer enrichment programs and virtual education and outreach continues through the CDC. Our tourism and recreation businesses are seeing a return of visitors along with the risks and benefits they bring.

Wildlife harassment continues to be a problem during times of spring pupping, food supply issues and high tourism. Emaciated Northern Elephant Seal weaners are stranding at a high rate. The California State Parks Elephant Seal Advisory Group met to collaborate on harassment issues, what worked this season and what didn't work, and updating interpretive signage needs.

Thrilled that Snapshot day water sampling will return on May 1st and be held in San Mateo, Santa Cruz, Monterey and San Luis Obispo counties.

**Business & Industry**

*Tom Rowley (alternate)*

This past week on Wed April 7th, the three Monterey Bay regional counties all moved into a tier that allows for more meetings and public gatherings + expanded economic activities... The announced target date of June 15th is the goal for removing the last of the limits on pre-vaccination activities.

The two major industries of the Central Coast -- Agriculture and Tourism -- continue to struggle with the Ag industry moving into the Summer months... Planning for mass vaccinations for essential farm workers started in earnest for the Salinas Valley. Unfortunately, many tourist-related businesses and other small business Owners have now temporarily closed / suspended operations or even closed permanently. Mass inoculations expanded significantly in the March-April time period as more vaccines became available.

Lack of new water allocations for housing and for business development remains a fact of life on the Monterey Peninsula (MP). Cal-Am Water (CAW) company has re-submitted its appeal to the California Coastal Commission (CCC) for a permit to use a slant-well feed water system at its proposed desalination plant at the site of the former CEMEX sand plant north of Marina. CAW faced a September 30, 2020 deadline from the State Water Resources Control Board (SWRCB) for starting construction of a water supply project, OR face reductions in annual water usage. The SWRCB has already ordered a 1,000 AF reduction for the Water Year ending

September 30, 2021, which was agreed to by CAW... Another reduction of 1,000 AFY looms as of September 30, 2021! Under the Cease and Desist Order (CDO) by the SWRCB -- these reductions of allowed water use on the MP could potentially lead to imposition of future water rationing on CAW customers -- both businesses and residences. The date when the CAW appeal before the CCC will be heard is not known at this time.

## **Education**

*Pamela Neeb Wade (primary) and Felicia Van Stolk (alternate)*

### Current Seat Activities

The Education seat will share a newsletter with constituents to keep them apprised of Sanctuary activities and topics of interest.

### Upcoming Activities

There are many online and outdoor programs that are continuing to be offered for students and teachers within the sanctuary. This report highlights some of them.

- Exploring New Horizons- outdoor after school and virtual science camp programs
- Santa Cruz County Outdoor School
- Seymour Center - virtual events and programs
- O'Neill Sea Odyssey - Distance learning
- Santa Cruz Museum of Natural History- Digital resources
- Monterey Bay Sanctuary Exploration Center - Distance learning

### Your Constituent Challenges and Concerns

- The main challenge and concern continues to be due to the effect COVID-19 is having on students' education and social and emotional wellbeing. The focus is on the safe reopening of schools, equity within education and the digital divide.
- Santa Cruz County elementary schools (grades TK-6) are eligible to plan for in-person hybrid instruction. Santa Cruz schools are working on a phased reopening of elementary schools this spring once educators are vaccinated.
- Monterey County elementary schools are also eligible for reopening once they have a COVID safety plan that has been approved by the Health Department and the Safe Schools for All team.

### Related Web Links to Member Report

- Exploring New Horizons (ENH) – <https://www.exploringnewhorizons.org/>
- ENH Outdoor After School Program - <https://www.exploringnewhorizons.org/exploring-new-horizons-outdoor-after-school-program/>
- ENH Virtual Science Camp - <https://www.exploringnewhorizons.org/enh-virtual-science-camp/>
- Santa Cruz County Outdoor School- <https://osp.santacruzcoe.org/>
- Seymour Marine Discovery Center - <https://seymourcenter.ucsc.edu/>
- <https://www.oneillseaodyssey.org/kids-zone/>
- Santa Cruz Natural History Museum- <https://www.santacruzmuseum.org/education/the-museum-at-your-side/>

- Monterey Bay Sanctuary Exploration Center- <https://montereybay.noaa.gov/vc/sec/distance.html>
- Santa Cruz Schools- [https://sccs.net/community/news/coronavirus\\_covid19\\_update](https://sccs.net/community/news/coronavirus_covid19_update)
- California Department of Public Health- Safe Schools for All Plan <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Safe-Schools-for-All-Plan-Summary.aspx>

## **Recreation**

*Bart Selby (alternate)*

The pandemic continues to stress the shore and nearshore environment. Pillar Point is being especially traumatized, as pointed out in a recent story in Bay Nature .

<https://baynature.org/2021/01/12/packed-at-pillar-point/>

In addition to the onslaught by harvesters, the near epic swell season and an ongoing virtual surf contest at Mavericks brought in mobs and two low flying jet helicopters documenting the surfing. One of them was filming for an amusement park ride, social media has images of surfers flipping off the helicopters who were so low they had to change their lines on the waves. This week we had three harbor seal (HS) births in the harbor. Harbor seals have few places to shelter on our coast, off leash (illegal in SMC but not enforced) dog walkers are found on nearly all the HS safe (sheltered) beaches. Unlike sea lions, who could scale El Capitan, seals have limited mobility out of the water, they need a surf protected gently sloping beach with barriers limiting access to terrestrial predators. There is only one “safe” location for them to give birth in the harbor, that is the rope ferry connecting the YC dock to the beach, all other HS accessible areas have humans and dogs present constantly. The ferry is the only space that newborn pups can climb onto. Other regional pupping sites have solved this problem- PG has a beach isolated by a cliff on one side a research institute on the other and a chain link fence preventing walkers on the coastal trail from trespassing, Elkhorn limits access via land, Alameda has a purpose-built float for harbor seal haul outs. Moss Beach, just up the coast from PP has cliffs, limited access and status as a state park as barriers. Pillar Point harbor has nothing other than the YC ferry and the good will of residents.

I am also hearing more and more from paddle boarders and kayakers fearing for their lives, threatened by speeding boats. I see propeller scarred harbor seals every week in the harbor. We have an ongoing problem with some commercial boats leaving or entering the harbor with extremely high intensity lights disturbing both wildlife and human residents. No pelicans are here yet, so the gear entanglement season has yet to begin. Kris Liang (GFNMS SAC) and I formally relayed these concerns to harbor management with no success.

On Monday a harbor seal gave birth on the dock around dawn, and the pup stranded on the beach at 9 AM, twenty feet from the riprap the county had just minutes before posted a notice that heavy equipment would be constructing a ramp through the next day. Fortunately, the sanctuaries (MB and GF) responding quickly, were able to reach county public works and inform them of MMPA conflicts, the work is for now on hold.

At some point we need to have a Come-to-Jesus and try to resolve the ever-increasing conflicts arising from a growing and diverse list of people and animals utilizing the littoral.



Figure 1 Photo credit: Bart Selby



Figure 2 Photo credit: Bart Selby

## **Recreational Fishing**

*Jose Montes (primary) and Adam Helm (alternate)*

### Current Seat Activities

- Monitoring and relaying updated 2021 fishing regulations through various fishing websites and blogs
- Working on creating a live public forum to answer public questions and concerns
- Keeping up with current recommendations for minimizing whale entanglements with recreational gear. Efficacy vs reasonable costs.
- Monitoring final decision making on Salmon fishing seasons by Pacific Fisheries Management Council

### Upcoming Activities

- RCG Season Opened 4/1/21
- Final Salmon season/regulations to be determined April 14, 2021

### Your Constituent Challenges and Concerns

- Bird entanglement mitigation, e.g., breakaway leaders.
- Urchin Barrens (see link below)
- Fishing waste left over in public spaces

### Miscellaneous Information:

Salmon season got off to a better-than-expected start. Lots of limits and numbers of salmon are being caught. The bite has been shallow, 25-100' down. Bite started along the beaches Monterey to Moss Landing and the majority of the schools are now in the Soquel Hole area.

Personal catches showed salmon were initially eating small squid. Currently they are being found stuffed with anchovies and smaller amounts of squid.

Research results indicate Sheepshead and Wolf Eels contribute to health of reefs and kelp beds by eating urchins. Consideration should be given to educating fishing and diving community to not keep mature sheepshead. See link below.

[https://l.facebook.com/l.php?u=https%3A%2F%2Froyalsocietypublishing.org%2Fdoi%2F10.1098%2Frspb.2014.1817%3Ffbclid%3DIwAR0elqe9XbAEeZksiUTGdtsD1Q6i57bUu35wDKTQt9LDq18Rq1Yodxtbivw%23%3A~%3Atext%3DAs%2520mentioned%2520previously%252C%2520sheepshead%2520are%2C22%25E2%2580%259324%252C37%255D&h=AT3xYOZ1BFfIZFo6fUwT7dgA4MyCr109IDMCwQNKroNB8F95d2E21TKGPoEZrrvV4rOrF\\_srdVt6Fgb8SzrrItCDQB0llgkH0K\\_vfOZnEHkMorJ3mq-h25mvjSXYdEI2-ddaARedeYyD2NDIO-fPb7hs](https://l.facebook.com/l.php?u=https%3A%2F%2Froyalsocietypublishing.org%2Fdoi%2F10.1098%2Frspb.2014.1817%3Ffbclid%3DIwAR0elqe9XbAEeZksiUTGdtsD1Q6i57bUu35wDKTQt9LDq18Rq1Yodxtbivw%23%3A~%3Atext%3DAs%2520mentioned%2520previously%252C%2520sheepshead%2520are%2C22%25E2%2580%259324%252C37%255D&h=AT3xYOZ1BFfIZFo6fUwT7dgA4MyCr109IDMCwQNKroNB8F95d2E21TKGPoEZrrvV4rOrF_srdVt6Fgb8SzrrItCDQB0llgkH0K_vfOZnEHkMorJ3mq-h25mvjSXYdEI2-ddaARedeYyD2NDIO-fPb7hs)

## **Governmental Members - Voting**

### **California Department of Fish and Wildlife**

*Paul Reilly (primary) and Chelsea Protasio (alternate)*

#### **Recreational Salmon Fishing**

California's recreational salmon fishery opened in ocean waters on Saturday, April 3 in the Monterey management area, from Pigeon Point (37° 11' 00" N. latitude) south to the U.S./Mexico border, with a minimum size limit of 24 inches. The salmon opener at Moss Landing averaged a little more than a fish per rod.

Although the San Francisco and the Fort Bragg management areas were originally scheduled to open in April, on the advice of salmon fishery representatives, the Pacific Fishery Management Council (PFMC) made the decision to delay the openers in these areas to limit ocean fishery impacts due to poor stock forecasts. Both Klamath River fall Chinook and Sacramento River fall Chinook have reduced ocean abundance forecasts for the 2021 season compared to long term averages, and the PFMC is taking steps to ensure that enough salmon will return to rivers this fall to meet spawner abundance goals.

Traditionally, fishing in the Monterey management area is better early in the season, prompting recreational fishing representatives to prioritize its opening ahead of areas to the north. Although seasons for the San Francisco, Fort Bragg and Klamath management areas are not yet known, the season alternatives that are currently under consideration prioritize opportunity later in the summer, when catch rates are typically better. Final season dates will be decided during the virtual PFMC meeting on April 6-9 and 12-15.

Anglers are advised to check for updated information when planning a salmon fishing trip. Season dates, bag/possession limit information and gear restrictions can be found on CDFW's ocean salmon web page at [www.wildlife.ca.gov/oceansalmon](http://www.wildlife.ca.gov/oceansalmon) or by calling the Ocean Salmon Regulations Hotline at (707) 576-3429. Public notification of any in-season change to conform state regulations to federal regulations is made through the National Marine Fisheries Service ocean salmon hotline at (800) 662-9825.

#### **Whale Safe Fisheries**

CDFW conducted a marine life entanglement risk assessment under the Risk Assessment Mitigation Program (RAMP) on April 1, 2021. Recent survey data indicated low presence of

Humpback and Blue whales within Dungeness crab fishing grounds. Based on that assessment, the fishery remained open statewide under a Fleet Advisory.

When operating under a Fleet Advisory, CDFW encourages the fleet to implement fishing best practices (e.g. minimizing knots, line scope) and to immediately remove all gear from ocean waters when an operator no longer intends to fish. Vessels fishing in Zone 4 (Monterey Bay) should pay particular attention to the location of set gear and foraging whales and minimize entanglement risk by adhering to the [Best Practices Guide](#).

CDFW will conduct the next risk assessment on April 15, 2021. Available data supporting each risk assessment, recommendation memos from the California Dungeness Crab Fishing Gear Working Group, and other relevant documents are available on CDFW's Whale Safe Fisheries webpage.

#### Crab Trap Gear Retrieval Program

CDFW is now accepting applications for the 2021 Lost or Abandoned Commercial Dungeness Crab Trap Gear Retrieval Program. Removal of lost or abandoned trap gear reduces marine life entanglement risk during the summer months when large numbers of whales are present off California. Removal also reduces navigational hazards which pose safety risks and can impact other fishing operations.

The program allows permitted individuals to collect lost or abandoned commercial Dungeness crab gear after the close of the season and to receive compensation for retrieved gear. Permit applications are limited to sport or commercial fishing organizations, non-profit organizations, and local government entities such as ports or harbor districts. Up to 10 commercial trap fishermen can be listed on each permit and conduct retrieval activities. Additional information about the 2021 program, and a summary of outcomes from the 2020 program, can be found on [CDFW's Whale Safe Fisheries webpage](#).

#### Coastal Pelagic Species

Very few Coastal Pelagic Species landings were made during February in the Monterey Bay area. There were several Pacific sardine landings that occurred under the authority of a federal exempted fishing permit and all offloads were sampled by the Department. Most of the month featured cloudy weather, light winds, and small waves on sampling days. There was a general lack of activity during this time, and a day of strong winds with larger waves near the end of the month. Vessels began to anchor outside of Monterey harbor near the end of February.

Throughout March, vessels continued to anchor outside of Monterey harbor, and a handful of market squid landings came in at the start of the season in central California. Overall, March featured a gradual return to fishing activity. This return to active fishing was briefly interrupted by harsher weather conditions that kept many of the vessels in their slips. April 2021 began with a handful of squid landings in Monterey. Over the early weeks of spring, large groups of seiners and light boats have become a regular sight on the south end of the bay and along the coast of the Monterey peninsula.



## **Governmental Members – Non-Voting**

### **Elkhorn Slough National Estuarine Research Reserve**

*Dan Brumbaugh (alternate)*

Elkhorn Slough Natl. Estuarine Research Reserve (ESNERR) is continuing the ambitious 100-acre Hester Marsh tidal-marsh restoration project. Phase 1 was completed in 2018 and has been revegetating, Phase 2 construction is almost complete, and Phase 3 near the Seal Bend portion of the estuary is set to launch next year. The Reserve was recently awarded \$1 million from the USFWS National Coastal Wetlands Conservation Program and \$1.3 million from the Ocean Protection Council, which brings total funding for all phases to approximately \$12 million (~\$7.5 M for construction, and ~\$4.5 M for plantings, research and monitoring, education, and admin support). The latest OPC grant includes seagrass and oyster restoration in the tidal creeks of the new marsh, and includes participation by Native Stewards of the Amah Mutsun Land Trust.

### **Greater Farallones National Marine Sanctuary**

#### **LiMPETS**

The Long-term Monitoring Program and Experiential Training for Students (LiMPETS) Network continues to deliver distance learning activities that bring the field to students across California during the global pandemic. Providing engaging discovery of marine ecosystems through an online format, LiMPETS continues to connect students to nature through the collective actions of community science programs to conservation issues facing us today. The Network served over 1000 students from California schools online in fall 2020. More information on the LiMPETS program can be found here: <https://limpets.org/>.

LiMPETS staff have also begun winter data collection on February 09, 2021 under California's Marine protected area monitoring program 2019-2021 funded by the Ocean Protection Council in collaboration with researchers at the University of California Santa Cruz. Following the end of a regional shelter in place order, and abiding by local public health and safety guidelines, staff have resumed monitoring at 10 sites in California from San Pedro to Moss Beach. Data will be reported to the Multi-Agency Rocky Intertidal Network (MARINe) for inclusion in their database and incorporated in California's 10-year Marine Protected Area monitoring network report. More information on the MPA monitoring effort can be found here:

<https://caseagrants.ucsd.edu/project/assessment-of-rocky-intertidal-habitats-for-the-california-marine-protected-area-monitoring>.

The LiMPETS Network reaches as many as 6,000 students annually statewide, exposing them to California's national marine sanctuaries and engaging them as ocean stewards. During the pandemic, staff continue to collect data that will be used by students to learn how LiMPETS contributes to statewide efforts to understand the importance of Marine Protected Areas in California. LiMPETS has become a significant member of West Coast wide intertidal monitoring efforts, contributing to understanding the status and trends of our intertidal ecosystems. For more information, contact [rosemary.romero@noaa.gov](mailto:rosemary.romero@noaa.gov).

#### **Conservation Science**

Conservation science staff from GFNMS were invited to attend a workshop hosted by the Pacific Fisheries Management Council to review vulnerability of protected species and commercial fisheries from climate impacts. This meeting followed two workshops in 2020, with PFMC staff.

Over 20 people participated from northern California, state and federal marine resource agencies, science and marine resource protection NGOs, commercial fishermen and their associations, tribes, socio-economic experts, commercial fish processing and consumer stakeholders. The goal of the workshop was to review four climate change scenarios to identify challenges resulting from climate change effects and formulate potential solutions and actions that the Council and other stakeholders could take. The results of these workshops were tentatively scheduled to be reported to the Council in March 2021. Information from the scenarios will be integrated into our next Condition Report and climate vulnerability assessments. For more information, contact [jan.roletto@noaa.gov](mailto:jan.roletto@noaa.gov)

Conservation science staff met with staff from NOAA Office of Response and Restoration, Assessment and Restoration Division (ARD) to determine future tools to collect legally defensible data through the Beach Watch project and database programming to transfer data into ARD archives and Environmental Response Management Application (ERMA) platforms. ERMA has been designated as the spatial analysis tool to be used in the incident command center during an oil spill. Therefore, it is essential to have the most up-to-date database programming so that baseline and damage assessment data can be easily transferred to ARD staff for natural resource damage assessment during an emergency response event, such as an oil spill. The Beach Watch project currently collects long-term data sets that can be used for: ecosystem services, observation rates and distribution of live and dead seabirds and marine mammals, status of streams and lagoons across outer coast beaches, oil pollution, and beach profiles as indicators of climate change impacts by beach erosion and deposition, seasonality and range extensions of birds and mammals, and violations and illegal discharges. For more information contact [Jan.Roletto@noaa.gov](mailto:Jan.Roletto@noaa.gov), Kirsten Lindquist, [KLindquist@farallones.org](mailto:KLindquist@farallones.org) or [Sage.Tezak@noaa.gov](mailto:Sage.Tezak@noaa.gov).

The principal investigators of the Applied California Current Ecosystem Studies (ACCESS) project began planning their first ACCESS cruise in over year. The cruise is scheduled for April 21-May 5 on NOAA ship *Bell M. Shimada*, allowing for an extended survey area from Mendocino to Santa Cruz Counties and continuous work in higher sea states than our smaller sanctuary research vessel. The cruise will sample density and distribution of seabirds, marine mammals, zooplankton and fish, as indicators of climate change impacts in seasonality, range extensions, and forage fish. ACCESS also collects water column data on salinity, temperature, thermoclines and ocean acidification. ACCESS investigators are working with NOAA Fisheries to deploy two to four drifting acoustic arrays to capture data on the presence of fin, blue and sei whales in the western portions of three sanctuaries. This long-term monitoring project is designed to directly address status and trends information needs by working to understand ocean conditions, prey, predator distribution, and abundance as indicators of ocean health. The project also addresses management information needs such as ocean acidification status and monitoring, harmful algal blooms, and fishing gear entanglements. For more information, contact [Danielle.lipski@noaa.gov](mailto:Danielle.lipski@noaa.gov) or [Jan.Roletto@noaa.gov](mailto:Jan.Roletto@noaa.gov).

Greater Farallones brings science program to 2,416 students in 70 classes, three months:

The Sanctuary education team has expanded their K-12 virtual marine science programs to eight different engaging and dynamic “virtual classrooms” to ensure continuity of science education within the communities served. Sanctuary educators coordinated and conducted one-hour ocean science programs for 70 classes serving 2,416 students during the last quarter between October 1 and December 16, 2020. Program elements included virtual sanctuary tours, salmon dissections,



student participation in crab “dances,” ocean acidification demonstrations, transects of sanctuary deep-sea coral communities, interactive quizzes, marine mammal soundscapes, and live-streaming of plankton samples. Classes ranged from kindergarten to high school level and communities served ranged from rural schools along the sanctuary boundary to urban schools in San Francisco.

#### 155 Students participate in Ocean After School 18-Hour Virtual Program:

Despite the challenge of pivoting in-person, the education team provided nine hours of engaging and interactive after school programs virtually that covered topics such as sharks, salmon, seabirds, whales, squid, and plankton. These enrichment programs are dynamic and integrated into state standards. We delivered the programs to 8 schools over 9 weeks between October and December to primarily serve low-income, under-served students. 155 students completed the program this quarter. Oceans After School is a partnership between the sanctuary and City of San Francisco’s Department of Children, Youth, and Their Families.

#### Greater Farallones guides families in end-of-year tide pool exploration:

Sanctuary education staff offered a one-hour "distance" family workshop on December 21 to a total of 38 participants. The Farallones naturalist and instructors led a virtual tour of the rocky intertidal, highlighting local sites in the sanctuary and proper tide pool etiquette. The workshop focused on four groups of animals (crustaceans, molluscs, sea anemones, echinoderms) and seaweeds commonly found in the four zones of the intertidal. The instructors used videos, interactive polls, and live artifacts to demonstrate relevant points. Lastly, participants were sent a hand-drawn template of the intertidal zones and encouraged to draw organisms they observed during the workshop to create their own guide to take on their next tidepooling trip.

#### Bolinas Program Afternoon at the Lagoon Online Series

In December, the Bolinas Program launched its new online event series, *Afternoon at the Lagoon*. They have hosted two successful events: One in December, and one this past week on February 11<sup>th</sup>. Attendees learn from our expert staff about the habitats, wildlife, and geology of Bolinas Lagoon, and hear about some of the challenges facing the ecosystem and our efforts to protect and enhance its important resources. Along with engaging presentations, the events include trivia, polls and prizes. We will share upcoming event announcements with the SAC.

#### NOAA GFNMS Climate Program

Our Ocean Climate Program Coordinator, Sara Hutto, participated in and helped facilitate a 3-day workshop, organized by the NOAA Climate Program Office and the Office of National Marine Sanctuaries, to identify climate data needs and discuss opportunities to meet those needs by working across NOAA line offices and with partners. Over 100 people participated in the workshop, and the needs identified will help inform a ONMS-NOAA climate research agenda and funding priorities.

Sara Hutto is also nearing the completion of a blue carbon inventory and literature review for GFNMS. We have mapped and calculated the amount of carbon stored in the sanctuary's seagrass and saltmarsh habitats, as well as annual sequestration by these habitats, using data collected from Tomales Bay. In addition, working with local researchers at UCSC and UCLA, a new method has been developed to use satellite imagery to estimate kelp biomass in the sanctuary, and paired with published data on sequestration rates of kelp biomass to the deepsea, we will also estimate the blue carbon benefit of our bull kelp forests. Finally, using published

data on carbon flux to the deep sea from whale dead falls, we have estimated the carbon benefit of NE Pacific populations of 5 whale species. This report will be published and cleared in time to present at an international blue carbon conference in Scotland in November of this year, a side event of the COP26 climate meetings.

Staff joined panel on climate change and marine life hosted by the American Cetacean Society  
Sara also participated in a panel discussion on climate change and the marine environment for the San Francisco Bay Chapter of the American Cetacean Society on January 26, 2021. This virtual event had 65 attendees, and staff shared the latest regional climate trends, the critical work of the Ocean Climate Program to address climate change impacts, and a call to action for participants to reduce their carbon emissions and advocate for solutions to the climate crisis.

#### Sediment Committee Highlighted as Success Story

The North-central California Sediment Coordination Committee, supported by the GFNMS/GFA Ocean Climate Program staff, was highlighted in the latest issue of the journal *Shore and Beach* for taking leadership and action on the California coast. A paper in the issue lays out coastal management challenges facing California and points to the Committee and its efforts to increase coastal resiliency as a model for applying regional-scale sea level rise adaptation in the state. Receiving recognition in the primary peer-reviewed journal for coastal decision-making encourages agencies and coastal managers worldwide to adopt natural solutions to sea level rise that benefit and protect coastal habitats.

The SAC recommendations for sediment management provided the framework for GFNMS' Coastal Resilience Sediment Plan and the formation of the Committee. First-of-its-kind, the North-central California Coastal Sediment Coordination Committee, is a group of 17 federal, state, and local agencies committed to collaborating on coastal resilience initiatives across the region.

#### Request for new Ship Strike Working Group

The GFNMS and CBNMS have established a new ship strike working group with the goal to reduce the risk of lethal ship strikes to endangered and threatened blue, humpback, and fin whales by 50%. Vessel strikes are a leading cause of death to endangered and threatened blue and humpback whales. With 95% cooperation GFNMS/CBNMS voluntary vessel speed reduction and incentive program is estimated to reduce the risk to target whale species by 25%. The working group hopes to provide input on 3 conceptual designs to reduce the risk of ship strikes beyond 25%. A total of 3 meetings are planned from April 2021-September 2021. Final recommendations will be presented at Present recommendations at the November 2021 Advisory Council meeting. GFA has received funding support from The Marine Mammal Commission to support this working group.

#### The Seabird Protection Network presented on fishing line recycling program

Staff presented at the 6th Annual Central California Coastal Wildlife Disturbance Symposium. The goal of the symposium is to bring together organizations and agencies working on wildlife disturbance campaigns to encourage collaboration, share best practices, and align messaging. Staff gave a presentation titled "Reel In and Recycle", which discussed efforts to reduce seabird entanglement via Seabird Protection Network's fishing line recycling program.

In the last quarter, Seabird Protection Network has given three online presentations to over 200 boaters in the SF Bay Area, and is working with the FAA to plan presentations for civilian pilots across California.

SPN is hosting an intern from Operation Warfighter, which gives active military personnel waiting to be discharged the opportunity to build skills at government agencies. DeNeshia McClendon is an experienced Navy air traffic controller, and will be developing and launching a strategy to educate military aviators on how to avoid disturbing seabirds and wildlife on the California Coast.

### Key kelp recovery sites mapped in Greater Farallones National Marine Sanctuary

In the fall of 2020, the Greater Farallones Kelp Recovery Program led a collaborative kelp canopy mapping project along the Sonoma coastline and teamed up with partners to map over 4,000 acres of coastal ocean habitat using Unmanned Aerial Vehicles (UAVs) in Sonoma and Mendocino counties. The areas mapped are identified in the Sonoma-Mendocino Bull Kelp Recovery Plan as regions of high kelp forest recovery potential. The project is the largest marine mapping project using aerial drones to ever take place in California. The project was led by Greater Farallones Association and carried out in partnership with NOAA's Center for Coastal and Marine Ecosystems Program, The Nature Conservancy and several academic institutions. This is the second year of mapping kelp recovery sites in the Bull Kelp Recovery Plan and will contribute to a west coast kelp assessment study supported by the National Marine Sanctuary Foundation. We are planning for a presentation on the kelp mapping results at the May GFNMS SAC meeting.

## **Working Groups**

### **Research Activity Panel**

#### RAP Meeting

The RAP held an online meeting March 12, 2021. There were 12 RAP members and 7 guests in attendance. Presentations and discussions covered the following topics:

#### *Host Presentation and Research Update*

The host presentation was a given by Mara Orescanin, Assistant Professor of Oceanography at the Naval Postgraduate School. Mara provided a 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.

#### *Major Marine Science Institutions in the Monterey Bay Crescent*

The report "Major Marine Sciences Facilities in the Monterey Bay Crescent" was created by Dr. Gary Griggs of UCSC to document the number of marine institutions and their impact on local

employment and economic activity. The report was last updated in 2017 and showed that marine science institutions provide 2,418 jobs and \$346,850,000 to the local economy. The RAP is working on a 2021 update of this report.

### *Sanctuary Research Update*

#### Overview of ONMS Science Needs Assessment

Erica Burton provided a presentation on the ONMS Science Needs Assessment.

- 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.
- Audiences 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/>

#### *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.

### *Management Plan Update*

Dawn Hayes provided a summary of public comments received on the draft MBNMS Management Plan, including proposed regulatory changes. This was similar to the presentation Dawn gave the Advisory Council in February.

### *Ed Ricketts Award and Lecture*

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 Ed Ricketts Memorial Lecture was created to honor scientists who have exhibited exemplary work throughout their career and advanced the status of knowledge in the field of marine science. The award ceremony and lecture will occur in October 2021. If COVID restrictions are lessened, the 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>

### Items of Interest contributed by RAP Members

As usual, there are some fascinating and up-to-date stories, photos, and video on the sanctuary SIMoN website:

- Seeing Sur Ridge: Transforming deep-sea mapping data to reveal the majesty of an underwater oasis

<https://sanctuariesimon.org/2021/03/seeing-sur-ridge-transforming-deep-sea-mapping-data-to-reveal-the-majesty-of-an-underwater-oasis/>

- Young white sharks tell the story of a changing Monterey Bay  
<https://sanctuariesimon.org/2021/02/young-white-sharks-tell-the-story-of-a-changing-monterey-bay/>
- New study links cancer in sea lions to exposure to persistent contaminants and disease  
<https://sanctuariesimon.org/2021/02/new-study-links-cancer-in-sea-lions-to-exposure-to-persistent-contaminants-and-disease/>
- California Harbor Porpoises Rebound After Coastal Gillnetting Stopped  
<https://sanctuariesimon.org/2021/02/california-harbor-porpoises-rebound-after-coastal-gillnetting-stopped/>