

Issued and signed MBNMS Permits, Amendments and Authorizations (4/2/2021 to 8/1/2021)

Report created for the August 20, 2021

Monterey Bay National Marine Sanctuary Advisory Council Meeting

MULTI-2019-009-A1

Permit Type: Research

Permit Holder Name (Affiliation): Jeremy Goldbogen (Hopkins Marine Station)

Project Title: Long-term ecological research on cetaceans in national marine sanctuaries.

Project Location(s): Discharge of tags is permitted throughout MBNMS, GFNMS, CBNMS, and CINMS; For UAS flights: The flights are permitted within the NROZs of MBNMS and GFNMS; The flights (including launch, operation, and landing) are only allowed outside of the National Park Service (NPS) boundaries and CINMS NROZ boundaries which extend 1 nm offshore Anacapa, Santa Cruz, Santa Rosa, San Miguel and Santa Barbara islands. UAS flights are not permitted within 1 nm of the Channel Islands; and note, there are no NROZs in CBNMS.

Permitted Activity: To gain understanding of the conservation physiology and ecology of cetaceans, the following activities are authorized by this permit: Flying unmanned aircraft systems (UAS) at a minimum elevation of 10 meters and an average elevation of 23 meters above sea level (ASL) for up to 10 flights per day within NOAA regulated overflight zones (NROZs) in MBNMS and GFNMS; Discharge and recovery of dart/barb tags: up to approximately 20 dart/barb tags for tagging minke whales; up to approximately 50 dart/barb tags for tagging humpback whales; up to approximately 50 dart/barb tags for tagging blue whales; and up to approximately 30 tags for tagging fin whales; Discharge and recovery for up to approximately 50 total suction-cup tags in MBNMS, GFNMS, CBNMS, and CINMS; and Take of marine mammals in federal marine reserves and marine conservation areas within CINMS.

Permitted dates: August 1, 2021 through July 31, 2024

Comments/Notes: Permitted take of marine mammals shall be consistent with NMFS permit number 21678 (expiration date is November 30, 2023) to Mr. Calambokidis of Cascadia Research Collective, NMFS permit number 20430 (expires March 31, 2022) to Dr. Harvey and NMFS permit number 19116 (expires June 30, 2022 based on extension letter 19116-01) to Dr. Southall.

MBNMS-2021-017

Permit Type: Research

Permit Holder Name (Affiliation): John Ugoretz (California Department of Fish and Wildlife (CDFW))

Project Title: Coastal Pelagic Species Near-shore Cooperative Survey (CPS-NCS) overflights

Project Location(s): The permitted activities are allowed within NOAA regulated overflight zones (NROZs) offshore of Moss Landing, Santa Cruz and Big Sur in MBNMS.

Permitted Activity: The following activities supporting the development of sampling methodologies for estimating coastal pelagic species (CPS) biomass are authorized by this permit: Approximately ten (10) low overflights at no less than 500 feet above sea level (ASL) by manned aircraft to identify and assist in capture of sardine and anchovy schools by seine vessels; and Flying unmanned aircraft systems (UAS) at no less than 50 feet ASL (except for launching and landing) during two one-week survey periods to evaluate the feasibility of using

aerial sensor-based imagery to determine the relative size of CPS schools in shallow waters not accessible by large research vessels.

Permitted dates: July 21, 2021 through June 30, 2022

Comments/Notes: NMFS issued a CPS Exempted Fishing Permit # EFP-08/06-2020-2021 authorizing take of Pacific sardine for this research by the California Wetfish Producers Association on September 1, 2020.

MBNMS-2021-0019

Permit Type: Research

Permit Holder Name (Affiliation): Marko Jaakkola and Bryce Kujat (ZIMKO Aeronautics and the Center for Interdisciplinary Remotely-Piloted Aircraft Studies (CIRPAS))

Project Title: Measuring meteorological conditions for boundary layer research

Project Location(s): The permitted activity is allowed within NOAA regulated overflight zones (NROZs) offshore of Moss Landing, Santa Cruz and Big Sur in MBNMS. The northern boundary of the permitted activity is Davenport and the southern boundary of permitted overflights is Bixby Bridge.

Permitted Activity: Conducting approximately 10 low overflights below 1,000 feet above sea level (ASL) daily for up to one hour per day with a Twin Otter aircraft to collect air samples for boundary layer research.

Permitted dates: July 11, 2021 through November 30, 2021

Comments/Notes: previous permits: MBNMS-2020-024, MBNMS-2018-016, MBNMS-2016-012, MBNMS-2011-020 (A1 through A4), MBNMS-2005-005 and MBNMS-2002-045; MBNMS-2021-019 indicates the permittee should receive a Sea Otter Refuge Flyover Authorization from California Department of Fish and Wildlife (CDFW) to fly below 1,000 feet over the Sea Otter Game Refuge in Big Sur; The tail number of the CIRPAS Twin Otter is 762256. Communications with the airplane may be established on the 123.475 MHz frequency.

MBNMS-2020-002-A2

Permit Type: Education

Permit Holder Name (Affiliation): Sarah Conner (Wild Space Productions)

Project Title: Low overflight activities conducted in Monterey Bay National Marine Sanctuary under National Marine Fisheries Service (NMFS) or United States Fish and Wildlife Service (USFWS) permits issued to Wild Space Productions and bolt installation for the Netflix series on National Parks

Project Location(s): NOAA Regulated Overflight Zones in MBNMS as indicated in the "Permitted Activity Description" and "Special Terms and Conditions" in this permit.

Permitted Activity: Flying Unmanned Aircraft Systems (UAS) at no less than 50 feet Above Sea Level (ASL) within all four of the NOAA Regulated Overflight Zones in order to collect aerial images of wildlife and landscapes in MBNMS as authorized by National Marine Fisheries Service (NMFS) or United States Fish and Wildlife Service (USFWS) permits issued to Wild Space Productions and Alteration of submerged lands to place up to two (2) bolts outside of California state Marine Protected Area (MPAs) to mark the center of the time-lapse camera tripod consistently.

Permitted dates: Jul 14, 2021

Comments/Notes: Footage will be provided to use as educational materials by NOAA; MBNMS amended expiration date to end earlier (July 14, 2021), see accompanying letter

MBNMS-2019-029-A2

Permit Type: SUP

Permit Holder Name (Affiliation): Sarah Conner (Wild Space Productions)

Project Title: Netflix series on National Parks

Project Location(s): NOAA Regulated Overflight Zones in MBNMS as indicated in the "Permitted Activity Description" and "Special Terms and Conditions" in this permit.

Permitted Activity: Flying Unmanned Aircraft Systems (UAS) at no less than 50 feet Above Sea Level (ASL) within all four of the NOAA Regulated Overflight Zones in order to collect aerial images of landscapes in MBNMS. Overflights with UAS can be conducted for up to 8 days and Placement and recovery of tripods on the submerged lands to collect underwater time-lapse imagery for up to 21 days.

Permitted dates: Jul 14, 2021

Comments/Notes: MBNMS amended expiration date to end earlier (July 14, 2021), see accompanying letter

MBNMS-2021-023

Permit Type: Research

Permit Holder Names (Affiliations): Rick Starr (Moss Landing Marine Laboratories) and James Lindholm (California State University Monterey Bay)

Project Title: In situ video lander surveys of demersal fishes, deep-sea corals and sponges and other selected invertebrates

Project Location(s): in depths ranging from 40 to 350 meters deep within MBNMS between the Del Monte Shale Beds in Monterey Bay and Piedras Blancas

Permitted Activity: Placement of the Benthic Observation Survey System (BOSS) video lander and the mini-landers on the submerged lands of the Sanctuary to gather information about the fine-scale microhabitat associations between key fish and invertebrate species and specific seafloor attributes. Discharge and recovery of buoys and line associated with the mini-landers for up to one hour for each deployment. Discharge of locally caught bait in a subset of the mini-lander deployments.

Permitted dates: July 1, 2021 through December 31, 2022

Comments/Notes: California Department of Fish and Wildlife (CDFW) issued Scientific Collecting Permit (SCP) to Rick Starr from May 4, 2020 to May 4, 2023 (Specific Use Permit ID: S-191210007-19308-001).

MULTI-2021-008

Permit Type: Research

Permit Holders Names (Affiliation): Julia Clemons (NOAA Fisheries, Northwest Fisheries Science Center)

Project Title: Integrated Ecosystem and Pacific Hake Acoustic-Trawl Survey; Investigations of hake ecology, survey methods, and the California Current ecosystem (summer research cruise)

Project Location(s): Within OCNMS, GFNMS, CBNMS, MBNMS, and CINMS, except as listed under the Special Terms and Conditions and in Attachment 1 with "Areas to Avoid Trawling and Contact with the Submerged Lands."

Permitted Activity: Alteration of the submerged lands of the sanctuaries incidental to conducting biennial integrated acoustic and trawl (IAT) surveys to assess the abundance, distribution, and biology of Pacific hake (*Merluccius productus*), except as specified in the Special Terms and Conditions of this permit and in Attachment 1; and Take in CINMS Federal Reserves of Pacific hake (*Merluccius productus*), juvenile fish, larvae and zooplankton.

Permitted dates: June 9, 2021 through June 1, 2026

Comments/Notes: CINMS was lead for this MULTI

MBNMS-2021-016

Permit Type: Special Use Permit

Permit Holders Names (Affiliation): Edward Dyer (Silverback Films)
Project Title: Life on Our Planet: Rainbow Nudibranchs - Monterey Bay
Project Location(s): the north side of the breakwater wall of Monterey Harbor
Permitted Activity: Deployment, placement and recovery of one (1) quadpod on the submerged lands during daytime hours. Discharge and recovery of associated equipment including a camera in an underwater housing, lights, weights, collars for the quadpod legs, if necessary, and a lift bag.
Permitted dates: during up to twelve days between June 20, 2021 and August 31, 2021
Comments/Notes: Fee assessed

MBNMS-2021-020

Permit Type: Research
Permit Holders Names (Affiliation): John Colosi (Naval Postgraduate School)
Project Title: Naval Postgraduate School (NPS) Ocean Acoustic Observatory, Point Sur acoustic record
Project Location(s): On soft substrate approximately 40 km west of Point Sur, California (36 17.948'N, 122 23.631' W, 1359 m depth) which is the location of the now decommissioned U.S. Navy Sound Surveillance System (SOSUS) receiver of the Point Sur hydrophone array.
Permitted Activity: Placement on the submerged lands of the sanctuary, discharge and recovery of one passive acoustic subsurface mooring (i.e. a High-Frequency Acoustic Recording Package (HARP) instrument deployed on a short (30m) mooring) for approximately two months to evaluate current noise levels and compare those levels to the historical record at the same location. Abandonment of up to 240-pound iron plates used as an anchor and 3.4m of 3/8" chain.
Permitted dates: June 4, 2021 through December 31, 2021
Comments/Notes: N/A

MULTI-2021-006

Permit Type: Research
Permit Holders Names (Affiliation): Kimberly Reed and Paul Joyce (Sea Education Association)
Project Title: Sea Education Association (SEA)
Project Location(s): On soft substrate of the submerged lands at up to 20 stations in CINMS, MBNMS, GFNMS and CBNMS during the SEA Summer Session (June 25 to August 6, 2021); and on soft substrate of the submerged lands at up to 20 stations in CINMS during the Oceans & Climate cruise (November 15 to December 23, 2021).
Permitted Activity: Alteration of the submerged lands to collect sediment samples using a Shipek grab (spring-loaded sampler collecting samples 20cm x 20cm x 5cm depth), Fisher scoop (small 20ml surface sediment samples collected while the ship is underway), and/or gravity core (samples 10cm in diameter by 1.5m depth).
Permitted dates: June 25, 2021 through December 23, 2021
Comments/Notes: N/A

MBNMS-2019-010-A1

Permit Type: Research
Permit Holder Name (Affiliation): Craig Gelpi (Catalina Marine Society)
Project Title: Monterey Bay Thermograph Array
Project Location(s): In water depths at 30 and 60 feet by the Santa Cruz Pier, around 36 57' 31.3"N, 122 01' 29.0"W, offshore of Moss Landing, around 36 48' 38.9"N, 121 47' 35.1"W, offshore of Breakwater Cove, around 36 36' 35.7N, 121 53' 38.5"W (within Edward F. Ricketts

State Marine Reserve (SMCA) and offshore of Monastery Beach, around 36 31' 26.1"N, 121 55' 44.1"W (within Point Lobos State Marine Reserve (SMR)) and Point Lobos State Reserve (State Park Unit)

Permitted Activity: Alteration of the submerged lands of the Sanctuary to attach up to eight (8) thermographs using a sand screw or anchor in soft substrate or a small eye-bolt on hard substrate. Discharge and recovery of up to eight (8) associated subsurface floats to mark the thermographs to investigate internal-wave behavior in coastal regions of the bay, measure ocean stratification, determine seasonal fluctuations, quantify across-bay temperature gradients, and discover episodic temperature events.

Permitted dates: July 1, 2021 through July 1, 2026

Comments/Notes: Has permits from California Department of Fish and Wildlife (CDFW) and California State Parks.

MBNMS-2021-015

Permit Type: Research

Permit Holder Name (Affiliation): Nicholas Seabaugh (Liquid Robotics Inc.)

Project Title: Meteorological and Oceanographic (METOC) Sampling and Wave Glider Dynamics

Project Location(s): The permitted activity is allowed throughout MBNMS, collecting data outside of California state waters and outside of the vessel traffic lanes including the Traffic Separation Scheme (TSS) off San Francisco and the International Maritime Organization (IMO) Recommended Tracks in MBNMS.

Permitted Activity: Temporary discharge of up to 12 Wave Gliders for six (6) surveys of approximately 120 days each and for two (2) long-term surveys up to 180 days each to conduct engineering tests to understand Wave Glider mechanical performance and ballasting in a variety of sea states.

Permitted dates: May 28, 2021 through May 27, 2023

Comments/Notes: Previous permits: MBNMS-2018-011 (and MBNMS-2018-011-A1), MBNMS-2017-046, MULTI-2012-004 (A1 and A2)

MBNMS-2021-010

Permit Type: Education

Permit Holder Name (Affiliation): James Beissel (James Beissel Photography LLC, DBA Just Float Films)

Project Title: Sea Otter 360

Project Location(s): Elkhorn Slough

Permitted Activity: Placement on the soft submerged lands of MBNMS and temporary discharge of for deploying up to 12 cameras (eight underwater and four surface) for up to ten days over three weeks to collect video of sea otters, other marine wildlife and scenery.

Permitted dates: May 7, 2021 to July 31, 2021

Comments/Notes: The permittee will inquire with California Department of Fish and Wildlife (CDFW) to determine if buoy/mooring deployments within California State Marine Protected Areas require authorization by CDFW since the proposed locations overlap with Elkhorn Slough State Marine Conservation Area (SMCA) and Elkhorn Slough State Marine Reserve (SMR). James has been in touch with Mike Harris, sea otter biologist from CDFW, and Lilian Carswell, Southern Sea Otter Recovery & Marine Conservation Coordinator from US Fish and Wildlife Service, and both agencies indicated he would not need a permit from them.

MBNMS-2021-012

Permit Type: Authorization

Permit Holder Name (Affiliation): Susan Craig (California Coastal Commission); Julie Packard (Monterey Bay Aquarium)

Project Title: Authorization MBNMS-2021-012 for the California Coastal Commission (CCC) approved Emergency Coastal Development Permit (ECDP) 3-21-0019 for the Monterey Bay Aquarium Great Tide Pool Repairs Project

Project Location(s): Monterey Bay Aquarium Great Tide Pool

Permitted dates: May 14, 2021 to August 19, 2021

Permitted Activity: ONMS is authorizing the ECDP-3-21-0019 for discharge and construction of structures on submerged lands of MBNMS.

Comments/Notes: Added additional Terms and Conditions in the authorization

MBNMS-2021-008

Permit Type: Research

Permit Holder Name (Affiliation): Fiorenza Micheli (Hopkins Marine Station of Stanford University)

Project Title: Kelp Forest Array (KFA) and Free Ocean CO₂ Enrichment (FOCE) system

Project Location(s): in the sand channel at approximately 15 meters depth and 220 meters offshore of Boatworks Beach, Hopkins Marine Station, Pacific Grove, CA (36.6212 N, 121.9005 W).

Permitted Activity: Alteration of the submerged lands of the sanctuary for the installation and removal of the Kelp Forest Array (KFA) and Free Ocean CO₂ Enrichment (FOCE) system, which includes the powered data cable, associated primary node and approximately seven cabled subnodes, carbon dioxide (CO₂) enriched seawater delivery hose, scientific research equipment and instrumentation, anchoring equipment to explore the connections of small-scale physical and biological processes affecting nearshore ecosystems; discharge of surface buoy, and the discharge of CO₂ enriched seawater used to study the local impacts of global climate change. Discharge and recovery of an associated mooring marking the location of the KFA. Anchors weighing 500 pounds or more can be abandoned if necessary.

Permitted dates: May 5, 2021 through May 5, 2026

Comments/Notes: MBNMS-2010-002 to MBNMS-2010-002-A4 were issued to Fiorenza Micheli for the KFA and FOCE.

MBNMS-2018-003

Permit Type: Authorization

Permit Holder Name (Affiliation): Susan Craig (California Coastal Commission); Julie Packard (Monterey Bay Aquarium)

Project Title: Authorization MBNMS-2018-003 for the California Coastal Commission (CCC) approved Coastal Development Permit (CDP) 3-89-040-A4 for the Monterey Bay Aquarium Pipeline Support Retrofit Project

Project Location(s): Offshore of the Monterey Bay Aquarium

Permitted dates: March 1, 2021 through March 1, 2026

Permitted Activity: The proposed action included retrofitting 41 of the intake pipeline's existing concrete support blocks, installing up to 13 new post-and-beam support structures, and removing up to 23 support blocks. To address ongoing and future scour of the sand and loose rock below 41 of the pipelines' existing blocks, the Aquarium proposes to install a series of retrofits to secure them to the more stable underlying bedrock. Retrofits would be composed of stainless steel brackets or collars which would encircle the ends and center of the blocks and would be bolted to the underlying bedrock with stainless steel anchor rods. The Aquarium would install 13 new post-and-beam support structures in other locations along the pipelines, and remove 23 existing support blocks. The new structures would be composed of pairs of stainless

steel pipes socketed into the underlying bedrock connected by a cross beam which would support the pipelines. In order to ensure the intake pipelines remain secure and functional during construction, and to facilitate access to the drill sites, a 288-square-foot, temporary underwater work platform would be constructed. The work platform would facilitate the pipeline hoisting, basement rock coring/drilling, and sand/gravel relocation efforts. The Aquarium also would complete removal of existing concrete sacks it had put in place around the support structures for reinforcement purposes in 2012.

Comments/Notes: In accordance with National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.), an Environmental Assessment (EA) was prepared, titled "Monterey Bay Aquarium Pipeline Support Retrofit Project," to analyze the potential environmental impacts of the proposed action. Based on the information presented in the EA and the Finding Of No Significant Impact (FONSI), NOAA concludes issuing an Authorization of the CCC's CDP-3-89-040-A4 will not significantly impact the quality of the human environment.

MBNMS-2021-005

Permit Type: Research

Permit Holder Name (Affiliation): Margaret Daly (Stanford University)

Project Title: Temperature measurements and wave monitoring in Monterey Bay

Project Location(s): 36 36'55.94"N, 121 53'47.07"W; 36 36'46.02" N, 121 57'05.77" W; and 36°33'31.46"N, 121°57'6.79"W

Permitted Activity: Placement on the soft submerged lands of MBNMS for deploying three (3) buoys and associated moorings and anchors (up to 200 pounds of weights connected by chain) at the permitted locations (see details below in Permitted Activity Location and Special Terms and Conditions) in MBNMS and temporary discharge of subsurface buoy, mooring components, anchors, chains and line to measure water temperature.

Permitted dates: May 3, 2021 and May 3, 2023

Comments/Notes: The permittee will inquire with California Department of Fish and Wildlife (CDFW) to determine if buoy/mooring deployments within California State Marine Protected Areas require authorization by CDFW.

MBNMS-2021-006

Permit Type: Research

Permit Holder Name (Affiliation): Heather Liwanag (California Polytechnic State University)

Project Title: California Department of Public Health (CDPH) Marine Biotxin Monitoring

Project Location(s): The UAS shall be launched/landed at 5 sites (see below) near the Piedras Blancas Light Station (PBL; 35° 40' N; 121° 17' W) and the UAS operations areas will be within visual line of sight of the flight team, at lateral distances of up to 1000m (4280 feet) from the launch site.

Permitted Activity: Flying an Unmanned Aircraft System (UAS) at no less than 40 meters (130 feet) above ground level (AGL) (except for take-off and landing) within the NOAA regulated overflight zone along the Big Sur coast in order to collect images and video of the Piedras Blancas elephant seal rookery in San Simeon, CA.

Permitted dates: April 30, 2021 to March 31, 2024

Comments/Notes: Dr. Liwanag was issued a California Sea Otter Game Refuge Flyover Authorization by CDFW on April 8, 2021. The authorization is for flying UAS over the Piedras Blancas elephant seal rookery twice per week for five years using a DJI Phantom 4 V2 at 40 meters. The permittee will work with California State Parks and start flights at a 250' minimum altitude with observers present and determine if lowering the altitude is possible. MBNMS-2021-006 set the minimum altitude to 40 m (120') to align with the NMFS permit 22187 while the permittee works with State Parks.

MULTI-2021-005

Permit Type: Research

Permit Holder Name (Affiliation):Vanessa Zubkousky-White (California Department of Public Health)

Project Title: California Department of Public Health (CDPH) Marine Biotoxin Monitoring

Project Location(s): Sampling within MBNMS, at the following locations: Pescadero, Bean Hollow, Soquel Pt., San Simeon, Santa Cruz Beach, Natural Bridges, Point Pinos, Davenport, Mori Point, and Pillar Point; and Mussel bags and/or cages will be temporarily deployed and retrieved from the following locations: Bodega Bay, USCG Dock, Drakes Bay, Life Boat Station Pier, and the Santa Cruz Wharf (UC Santa Cruz deploys and maintains these sentinel bags).

Permitted Activity: The applicant is authorized to alter the seabed in order to collect shellfish samples at 14 sites within GFNMS and MBNMS. All encrusting organisms (mussels and rock scallops) will be collected using hand tools (i.e. abalone iron or dive knife) only. Samples will be collected once a month for an estimated total of 35 samples during the effective permit period. Razor clams, Washington/butter Clams, gaper clams, and pismo clams are permitted to be dug by hand or using hand tools only. Crabs and lobster will be retrieved by hand by divers or using hoop nets. For these species, sampling would be much less frequent (and may not even happen). An approximation would be 16 sampling events per species over the life of the permit. Discharge and recovery of up to 4 cages and bags and associated ropes per site annually.

Permitted dates: April 8, 2021 to December 22, 2023

Comments/Notes: The permittee has a scientific collecting permit ((SCP) #S-200980001-20141-001) for the sampling activities, which is effective until December 22, 2023.

MBNMS-2020-035

Permit Type: Education

Permit Holder Names (Affiliation): Lucy Meadows (Titan Productions)

Project Title: Low overflight activities conducted in Monterey Bay National Marine Sanctuary (MBNMS) under National Marine Fisheries Service (NMFS) or United States Fish and Wildlife Service (USFWS) permits

Project Location(s): offshore NOAA regulated overflight zones in MBNMS

Permitted Activity: Flying Unmanned Aircraft Systems (UAS) within the offshore NOAA regulated overflight zones to collect aerial images of wildlife in MBNMS as authorized by National Marine Fisheries Service (NMFS) or United States Fish and Wildlife Service (USFWS) permits issued to Titan Productions; and Discharge, if needed, and recovery of the drop cam and the attached cable and float.

Permitted dates: April 10, 2021 through December 31, 2022

Comments/Notes: Acquired or is acquiring other agency permits

If you are interested in learning more about a specific permit, amendment or authorization action, please contact:

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