

***Issued MBNMS Permits, Amendments and Authorizations  
(10/1/2019 to 11/26/2019)***

***Report created for the***

***December 13, 2019***

***Monterey Bay National Marine Sanctuary Advisory Council Meeting***

**MBNMS-2019-031**

**Permit Type:** SUP

**Permit Holder Name (Affiliation):** Shotsie Kramer (Shotsie Productions)

**Project Title:** Low overflights in Big Sur by a helicopter for the project "Poseidon"

**Project Location(s):** Big Sur NOAA Regulated Overflight Zone: Launch and landing location: Grimes Ranch and Capturing of aerial photography around Garrapata State Park and State Beach, Rocky Point and Rocky Creek and Partington Point

**Permitted Activity:** Low overflights at a minimum of 700 feet Above Sea Level (ASL) with one (1) helicopter within the Big Sur NOAA Regulated Overflight Zone in MBNMS to capture aerial photography at three (3) permitted activity locations along Highway 1 for up to 12 flights (see below and Special Terms and Conditions for further details) and launching and landing the helicopter at Grimes Ranch.

**Permitted dates:** November 4 through 7, 2019

**Comments/Notes:** Fee assessed

**MULTI-2019-020**

**Permit Type:** Research/Education

**Permit Holder Name (Affiliation):** Barbara Block and Taylor Chapple (Stanford University, Hopkins Marine Station)

**Project Title:** Ecology and Population Dynamics of White Sharks in the Northeastern Pacific

**Project Location(s):**

WHITE SHARKS

**Within GFNMS:** White shark attraction activities are permitted outside of 300 feet and within two (2) nautical miles of the Southeast Farallon Islands; and Filming activities may occur in the same regions of the sanctuaries as all permitted White shark research activities listed above. Filming white sharks attracted to the vessel will only occur in conjunction with the authorized research activities in the authorized locations listed in this amended permit. Filming activities shall occur above the water; no diving or use of cages is allowed.

**Within MBNMS:** White shark attraction activities are permitted offshore of Año Nuevo Island only; White shark attraction should not be conducted along the northern shoreline of Monterey Bay; Filming activities may occur in the same regions of the sanctuaries as all permitted White shark research activities listed above. Filming White sharks attracted to the vessel will only occur in conjunction with the authorized research activities in the authorized locations listed in this amended permit. Filming activities shall occur above the water; no diving or use of cages is allowed; and VR2AR acoustic release receivers may be deployed at two locations: 1) nearshore

in northern Monterey Bay between La Selva Beach and Capitola; and 2) within 500 meters of the U.S. Coast Guard Pier in Monterey Harbor (outside of the Edward F. Ricketts SMCA).

OTHER PELAGIC SHARK SPECIES: Daily oceanographic conditions will dictate where efforts will be made. As these animals are pelagic species, research efforts will likely be in offshore waters where conditions are optimized for interactions with target animals. However, on some occasions, oceanic conditions can present closer to shore. Attraction or tagging will not occur closer than 1 nm from the main shoreline.

**Permitted Activity:**

VR2AR Acoustic Release Receivers

1. Altering the submerged lands of the sanctuaries for the installation, maintenance, and removal (when feasible) of the anchors for a total of two (2) bottom-mounted VR2AR acoustic release receivers (approx. 397 mm x 342 mm) attached to a small float (buoy) suspended approximately 1.5 meters off the seabed in MBNMS.
2. Abandoning into the sanctuaries up to six (6) iron anchors (consisting of unpainted 25-35 kg biodegradable iron plates) that are used to anchor the VR2 receivers. All receivers and releases (lugs attached to receivers) will float the surface upon release and the small buoy and receivers will be recovered.

White Shark Attraction, Tagging, ID, Sampling and Filming

1. Attracting White sharks (*Carcharodon carcharias*) for the purposes of tagging, obtaining photographic and video images, and taking biopsy samples of White sharks in the following locations with the following limitations (please see pre-survey notification requirements in Special Terms and Conditions):
  - a) No more than 45 external acoustic tags (approx. 15 per each year this permit is valid) and 45 pop-up satellite archival tags (PAT) (approx. 15 per each year this permit is valid) may be deployed on the sharks' dorsal musculature throughout all locations authorized in this permit.
  - b) No more than 9 internal stomach tags (approx. 3 per each year this permit is valid) may be deployed by means of feeding sharks the tags embedded in a small piece of marine mammal blubber (less than 3 kilogram [kg]).
  - c) No more than 21 biologging clamp tags (approx. 7 per each year this permit is valid) may be deployed by using non-invasive dorsal fin clamps.
  - d) No more than 150 tissue samples (approx. 50 per each year this permit is valid) shall be taken using a small biopsy punch. These samples shall be taken in conjunction with the acoustic and satellite tagging.

White shark attraction, tagging and biopsy activities can be conducted near Southeast Farallon Island and around Año Nuevo Island.

2. Discharging into the sanctuaries scent from marine mammal blubber for attracting White sharks.
3. Temporarily discharging into the sanctuaries PAT tags, stomach tags, and clamp tags (intended to be retrieved although some may be lost to the marine environment) and permanently discharging acoustic tags (not intended to be retrieved) into the sanctuaries.
4. Filming of White sharks for documentary and educational films by the permittees is authorized in conjunction with the White shark research activities being conducted by Dr. Barbara Block and Dr. Taylor Chapple, and authorized personnel in accordance with permit number MULTI-2019-020.

White shark attraction methods are limited to use of a decoy made of a soft material shaped into the silhouette of a local marine mammal and use of a small (i.e., less than 3 kg) piece of pinniped or cetacean blubber as specified in the Special Terms and Conditions of this permit. Attraction of white sharks is authorized only by these means and solely for the purpose of scientific research (e.g., sport, recreational viewing, and unauthorized film making are prohibited).

#### Attracting and Tagging Other Pelagic Shark Species

1. Discharging chum to attract blue sharks (*Prionace glauca*), common thresher (*Alopias vulpinus*) and shortfin mako sharks (*Isurus oxyrinchus*).
2. Discharging and recovering no more than 27 pop up satellite archival tags (three PAT tags on each shark species listed above per each year this permit is valid).
3. Discharging no more than 27 SPOT tags (three SPOT tags on each species listed above per each year this permit is valid).
4. Discharging and recovering 27 daily diary biologging camera tags on blue sharks (three clamp tags on each species listed above per each year this permit is valid).

**Permitted dates:** October 25, 2019 and December 31, 2022

**Comments/Notes:** GFNMS lead; The permittee has been issued a scientific collection permit (SCP) from the California Department of Fish and Wildlife (CDFW). S-191290003-19129-001 is valid through 9/15/2022.

### **MBNMS-2019-032**

**Permit Type:** Research

**Permit Holder Name (Affiliation):** Laura Rogers-Bennett (California Department of Fish and Wildlife (CDFW))

**Project Title:** The Role of Crustose Coralline Algae in Sea Urchin and Invertebrate Settlement

**Project Location(s):** Coral Street, Lovers Point, Breakwater

**Permitted Activity:** Alteration of submerged lands of the sanctuary for collection and replacement of loose cobbles to study the dynamics of recruitment in marine invertebrate populations.

**Permitted dates:** October 30, 2019 through September 30, 2022

**Comments/Notes:** California Department of Fish and Wildlife does not issue permits to itself for scientific collecting therefore a Scientific Collecting Permit (SCP) will not be required.

### **Letter of Authorization (LOA) under MBNMS-2019-001**

**Permit Type:** Authorization

**Permit Holder Name (Affiliation):** Chad King (MBNMS)

**Authorized Activity Description:** Alteration of the submerged lands of the Sanctuary by making bottom contact while using a remotely-operated vehicle (ROV) to complete initial surveys of the unexplored rocky habitat to characterize the area and document distribution and abundance of deep water corals, sponges, and fishes; Possessing any Sanctuary resource the source of which is more than 3,000 feet below the sea surface within the Davidson Seamount Management Zone to collect biological specimens to accurately describe and study the species observed. Samples may include some or all of the following: coral branches, sponges, other invertebrates, fishes; Alteration of the submerged lands to collect benthic sediment samples for analyzing PCBs and organochlorine pesticides; Alteration of the submerged lands to collect hard rock samples for geological analyses; Temporary incidental placement of sample funnels on the submerged lands over hydrothermal flows and Oxygen Optode Probe; Placement on the submerged lands to deploy long term equipment, including two (2) OSMO samplers in milk

crates, one (1) dissolved oxygen/ temperature logger and two (2) long term temperature loggers until Fall of 2020; Discharge and recovery of loggers; Discharge and abandonment of up to 25 XBTs in Southern area of MBNMS and within the Davidson Seamount Management Zone in support of multibeam mapping which is a backup objective if weather or other events prevent ROV dives at Davidson Seamount; The discharge of no more than eight (8) steel ballast plates (each weighing 20 pounds and 12 x 9 x 0.5 inches in size) from the ROV to maintain proper buoyancy when collecting rock samples; and Small scale manipulation or removal of sanctuary resources for sanctuary research purposes, consistent with and benefiting the sanctuaries' goals and purposes.

**Authorized Activity Location:** Within MBNMS and Davidson Seamount Management Zone of MBNMS

**Permitted dates:** October 12, 2019 through November 1, 2020

### **MBNMS-2019-027**

**Permit Type:** Research/Education

**Permit Holder Name (Affiliation):** Amanda Kahn (Moss Landing Marine Laboratories)

**Project Title:** Long-term changes to deep infaunal community structure in northern Monterey Bay: use of Van Veen grabs to enhance student learning and revive a long-term dataset in Monterey Bay National Marine Sanctuary

**Project Location(s):** 11 Stations within northern Monterey Bay

**Permitted Activity:** Alteration of soft submerged lands to annually collect up to 24 liters of soft sediment from each of the 11 proposed stations with a Van Veen sampler to support hands-on, experiential learning for Moss Landing Marine Laboratories (MLML) students while also contributing to long-term datasets of infaunal community structure.

**Permitted dates:** October 21, 2019 through October 20, 2022

**Comments/Notes:** n/a

### **MBNMS-2019-025**

**Permit Type:** Research/Education

**Permit Holder Name (Affiliation):** Scott Hamilton (Moss Landing Marine Laboratories)

**Project Title:** Moss Landing Marine Laboratories (MLML) class collections of fish and invertebrates for Marine Ecology and Ichthyology classes

**Project Location(s):** Trawls offshore of Moss Landing Harbor in locations near Monterey Canyon from depths of 20-200 m depth and outside of State Marine Protected Areas; Beach seines at Stillwater Cove and Elkhorn Slough; and Deployment of cages and cable ties in Stillwater cove.

**Permitted Activity:** Alteration of the seafloor (submerged lands) within the sanctuary for the purpose of up to 18 bottom trawl surveys annually to examine whether diversity, abundance, and assemblage structure of fishes and invertebrates differs across a depth gradient in soft bottom habitats in the Monterey Bay; Alteration of the seafloor (submerged lands) within the sanctuary to conduct beach seines; Placement of cages as artificial kelp holdfasts as an educational class project; and Discharge and recovery of the cages and associated cable ties.

**Permitted dates:** October 2, 2019 through October 1, 2024

**Comments/Notes:** The permittee has been issued a scientific collection permit (SCP) from the California Department of Fish and Wildlife (CDFW). S-191050002-19126-001 is valid through 7/22/2022.

## **MBNMS-2019-026**

**Permit Type:** Research

**Permit Holder Name (Affiliation):** Colleen Hansel and Bruce Strickrott (Woods Hole Oceanographic Institution)

**Project Title:** Submersible Oceanic (chemi) Luminescent Analyzer of Reactive Intermediate Species (SOLARIS): A novel sensor with a window into reactive oxygen species within deep sea coral communities.

**Project Location(s):** Landing of HOV Alvin: on non-sensitive habitats within federal waters of central MBNMS, on the ridge and flanks of Davidson Seamount; Abandonment of HOV Alvin ballast weight on non-sensitive habitat (preferably soft sediment); AUV Sentry deployments: within federal waters of central MBNMS, and Abandonment of ballast weights for the AUV Sentry on non-sensitive habitat (preferably soft sediment) within MBNMS.

**Permitted Activity:** to help MBNMS better understand the resources and the deep sea environment of MBNMS, including at Davidson Seamount:

- Alteration of submerged lands of the sanctuary for landing the Human Occupied Vehicle (HOV) Alvin.
- Abandonment of HOV Alvin ballast weight of no more than 13,500 pounds of mild steel total for approximately 9 dives within MBNMS (including 4 within Davidson Seamount Management Zone).
- Discharge and recover of AUV Sentry for approximately five (5) dives in MBNMS.
- Abandonment of up to three (3) small ballast weights (each 64 pound in water) per dive with the AUV Sentry.
- Collection and possession of sponge and coral fragments after consultation with the lead scientist by the watch lead or HOV pilot.

**Permitted dates:** October 9, 2019 through October 22, 2019

**Comments/Notes:** Original application was MULTI-2019-015 but withdrew the application because the CINMS research sites were not viable (not deep enough and within an SMR).

## **MULTI-2019-018**

**Permit Type:** Research

**Permit Holder Name (Affiliation):** Tom Laidig and Elizabeth Clarke (NOAA National Marine Fisheries Service)

**Project Title:** West Coast Deep-Sea Coral Initiative (WCDSCI), *Lasker* October 2019

**Project Location(s):** CBNMS: beyond the line representing the 50-fathom isobath surrounding Cordell Bank coordinates for that line listed in 15 CFR, Appendix B to Subpart K of Part 922), in the following areas - the slope west of Cordell Bank, in waters deeper than 500m; the Essential Fish Habitat (EFH) biogenic area; and the Rockfish Conservation Area (RCA); GFNMS: within the Point Arena North EFH Conservation Area and the Point Arena South EFH Conservation Area (aka the "Point Arena Biogenic Area South"); MBNMS: within proposed EFH Conservation Areas named: Cabrillo Canyon EFH Reopen, West of Carmel Canyon EFH Reopen, and Sur Canyon Slot Canyons; CINMS: South side of Santa Cruz Island and SE side of Anacapa Island

**Permitted Activity:** The following activities are authorized by this permit to characterize deep-sea habitats and deep sea coral biology, ecology, life history and responses to human impacts to better protect and conserve deep-sea coral and sponge ecosystems: Alteration of submerged lands of the sanctuaries for collection of biological and geological samples and landing the ROV, Collection of sponges and corals after consultation with the lead scientist by the watch lead or ROV pilot, Collection of invertebrates, other than sponges and corals, and shells, Collection of 1 scoop of up to 500 ml of sediment each, per ROV dive, Collection of 1 push

cores per ROV dive, and Collection for up to 2 small rocks per ROV dive; Discharge and recovery of one (1) NMFS Seabed AUV for daytime operations to survey the seafloor, Abandonment of drop weight with a timed release if AUV does not surface due to loss of communication or lack of response by the AUV, and Take and possession of sanctuary resources within CINMS Federal Marine Reserves, Collection of deep sea corals after consultation with lead scientist by the watch lead or ROV pilot

**Permitted dates:** October 5, 2019 through November 9, 2019

**Comments/Notes:** Permittee holds NMFS LOA for incidental take; previous permit for similar activities in the same sanctuaries was MULTI-2018-007, MBNMS lead

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

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