

Papahānaumokuākea Marine National Monument
CONSERVATION AND MANAGEMENT Permit Application

NOTE: This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).

ADDITIONAL IMPORTANT INFORMATION:

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.
- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.
- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:
NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
nwhipermit@noaa.gov
PHONE: (808) 725-5800 FAX: (808) 455-3093

SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.

**Papahānaumokuākea Marine National Monument
Permit Application Cover Sheet**

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Summary Information

Applicant Name: Michelle Barbieri Lino

Affiliation: NOAA Fisheries

Permit Category: Conservation and Management

Proposed Activity Dates: 7/1/2021-6/30/2022

Proposed Method of Entry (Vessel/Plane):

NOAA RVs Oscar Elton Sette, possibly Searcher, Imua, Kahana II, or US Coast Guard C130.

Proposed Locations:

Hawaiian monk seal research and recovery efforts will occur across all islands, islets and atolls in the Northwestern Hawaiian Islands. Work will be done predominantly on the shoreline of each island/islet.

Estimated number of individuals (including Applicant) to be covered under this permit:

25

Estimated number of days in the Monument:

150

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

support priorities identified in the Papahānaumokuākea Marine National Monument Management Plan (December 2008, hereinafter referred to as MMP); specifically Priority Management Needs: 3.2 Conserving Wildlife (Hawaiian monk seals), and 3.3

Reducing Threats to Monument Resources (Hawaiian monk seals), as well as the Co-Trustee's Conservation & Management Activity: Natural Resource Protection, as listed in section 6.3 of that Monument permit application.

NOAA aims to accomplish natural resource protection related to monk seals by conducting "...management actions to promote the conservation of Monument resources which includes activities necessary to carry out protection of species, such as carrying out existing recovery plans" to fulfill our obligations under the Endangered Species Act and the Hawaiian Monk Seal Recovery Plan (NMFS 2007).

b.) To accomplish this activity we would

be continuing three decades of effort to understand the biology, ecology and population trends of monk seals and identify threats to the species and implement actions to mitigate those dangers.

c.) This activity would help the Monument by ...

conducting population assessment and monitoring efforts across the NWHI archipelago in particular during the summer field camp season. Simultaneously we will collect information on the health, ecology and biology of monk seals and threats to the species and use these data to develop, implement and assess a multitude of recovery activities.

Recovery activities would include, but are not limited to, translocating seals away from danger and to areas of great survival, rehabilitation of undernourished seals, disentanglement from marine debris, mitigation of shark predation risks to pups at French Frigate Shoals, removal of marine debris, vaccination against morbillivirus, reuniting mothers and pups, and more.

Other information or background:

This is a brief summary of information relevant to monk seal research and recovery initiatives proposed here. More information can be found in the attached Recovery Plan for the Hawaiian Monk Seal.

- The Hawaiian monk seal is an endangered species numbering approximately 1,400 individuals, 1,100 seals reside in the NWHI.
- The Hawaiian monk seal has been the focus of research and recovery activities for over 30 years. This has resulted in one of the most robust population datasets for a large mammal species allowing the Program to develop and assess cutting edge recovery

actions.

- These recovery activities have resulted in the fact that a minimum of 28% of Hawaiian monk seals alive today are here because they directly benefited from an action or are the offspring of a female seal that benefited.
- In the PMNM, the key threats to the survival of the species include low birth rates combined with poor survival of juvenile Hawaiian monk seals to reproductive age. The majority of research activities are directed to understanding threats to the seals and mitigating those, particularly related to young female seals.
- All activities proposed here are permitted by the NOAA MMPA/ESA Permit 22677 (and associated NEPA docs etc.) and supported by the Revised Recovery Plan for Hawaiian Monk Seals.
- This permit also supports efforts conducted by our State and Federal partners that are directed towards monk seal research and recovery.
- To maximize the benefit from our limited time in this remote place, the Program will use a suite of methods to ensure that all areas are well-surveyed (including using technology to expand data collection, and requesting access to all monk seal haul-out areas).
- Unmanned aerial systems (UAS) will be used to conduct ecological surveys including surveying and monitoring monk seals, marine debris, and possibly other flora and fauna in the NWHI (as a by-product of habitat mapping or as requested by partners).
- UAS will be launched and recovered from land, NOAA ships, or small boats launched from those ships, and will be flown at altitude below 400 feet.
- UAS efforts will provide the ability to survey and map resources on the remote islands without (1) interference; (2) the potential for the introduction of invasive species; and (3) human disturbance to the natural resources. The UAS would increase the monitoring and surveying capacity in the Monument.
- While we work to minimize human presence on Mokumanamana, trained biologists familiar with the island may traverse Mokumanamana, using paths delineated by archaeologists and cultural practitioners familiar with the island, in the event that all seal haul-out areas cannot be surveyed through boat-landings or UAS flights at haul-out sites.
- This permit is comprehensive and includes ALL monk seal recovery activities that occur in the Monument including the mitigation of predation by Galapagos sharks on monk seal pups at French Frigate Shoals (FFS); the primary source of seal mortality at FFS.

- This is a continuation of permitted shark removal activities for monk seal conservation. The initial target of 20 sharks was determined based on data from the field whereby individually identifiable sharks (through tags or naturally acquired markings on their dorsal fins) that were engaged in predatory behavior on monk seal pups were enumerated. Shark biologists were consulted and ecosystem modeling efforts indicated that the Galapagos shark population, which is neither threatened nor endangered, was capable of sustaining this level of population reduction. Hence, the initial request of 20 sharks was based on an agreed upon minimum number of sharks that were exhibiting this behavior, paired with ecosystem based support.

Since the initial request of 20 made at the beginning of this project 7 Galapagos sharks have been caught and removed, leaving 13 remaining. The request for this year is for 13 Galapagos sharks. This is the balance of initially requesting removal of 20 sharks, minus the 7 that have been removed historically to-date. Fishing requires a great deal of effort, and catch-per-unit-effort is low, therefore we expect that reaching this initial target number is still a long-term goal.

Published data and consultation with Carl Meyer puts the population somewhere between 668 to just over 1000 sharks. The estimated removal would be between 1.3 – 1.9% of the population. Generally, we don't remove more than 1 shark per season or 0.1% of the population.

- Predation peaked in 1997-1999; it continues at a rate of 5-11 pups per year from 2000-2019 (usually 15-25% of the pup cohort each year). In 2019, 35 pups were born at FFS during the field season and Galapagos shark predation was confirmed in 3 pup deaths and strongly suspected in 6 additional disappearances, accounting for 25% of the pups born. Information from 2020 is not available because our field camps were not deployed due to COVID-19.
- Between 1997 and 2019, shark predation affected over 270 pups out of roughly 1150 born at FFS. Sharks have killed many pups and others were permanently maimed by severe shark bites and subsequently died.
- Since 1997, NMFS has engaged in a variety of actions to address this threat, including pre-weaning and translocating pups, predator deterrents, and targeted fishing activities to remove problem G. sharks. Translocating pups remains our most common intervention and in 2019, 14 pups were translocated.
- Removing the sharks exhibiting this behavior from the environment is the most effective means of preventing continued predation.
- NMFS has consulted numerous stakeholders including Native Hawaiians, animal welfare groups, conservation professionals, and the general public. Opinions and concerns are varied between individuals but no external group has requested NMFS cease this activity.

- This activity has been approved and undertaken safely and respectfully almost every year since 2010.
- Successful removal of these individuals could have a profound effect on the monk seal population at French Frigate Shoals while having negligible impact on the G. shark population.