

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:

Papahānaumokuākea Marine National Monument Permit Coordinator

6600 Kalaniana'ole Hwy. # 300

Honolulu, HI 96825

nwhipermit@noaa.gov

PHONE: (808) 397-2660 FAX: (808) 397-2662

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: Eric King

Affiliation: Schmidt Ocean Institute

Permit Category: Conservation and Management

Proposed Activity Dates: March 7-April 11, 2014

Proposed Method of Entry (Vessel/Plane): Vessel, R/V Falkor

Proposed Locations:

Shallow water (50-150m) around: Nihoa, Twin Banks, Necker, St Rogatien Bank, W. St Rogatien Bank, Gardner Pinnacles, Maro Reef, Laysan, North Hampton Seamounts, Pioneer Bank, Bank 8 (Kilo Moana Seamount), Bank 9, Nero Seamount.

Deep water (>150m) around: Nihoa, Westpac Bank, Twin Banks, Keoia Seamount, Necker, French Frigate Shoals, Rogatien Banks (all), Gardner Pinnacles, Raita Bank, Maro Reef, Laysan, North Hampton Seamounts, Kaiuli Seamount, Pioneer Bank, Lisianski, Bank 8 (Kilo Moana Seamount), Bank 9, Pearl & Hermes, Ladd Seamount, Gambia Shoal, Midway, Nero Seamount, Kure, Wentworth Seamount, Woollard Seamount, Turnif Seamount, Bank 10 (Academician Berg Seamount), and several un-named seamounts

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

23 crew 12 scientists = 35 total

Estimated number of days in the Monument: 36

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...
map the seafloor of the monument using multibeam sonar.

b.) To accomplish this activity we would
This 36 day cruise will attempt to map as much of the presently unmapped seafloor in the monument as possible using the Schmidt Ocean Institute vessel, R/V Falkor, and their Simrad EM 302 and 710 multibeam sonar mapping systems. The mapping plan

has several focus areas that include seamounts and rift zone ridges, drowned reef terraces around Gardner Pinnacles, the mesophotic zone (50-150 m), completing the coverage of the ridge east of French Frigate Shoals (an important site for internal tide generation), and filling as many of the monument data gaps as possible above 3000 m depth.

- c.) This activity would help the Monument by ...
- d.) The acquisition of high-resolution seafloor mapping data is an essential precursor to making significant biological, geological, and oceanographic discoveries in the monument. To date, four dedicated mapping cruises have taken place in the monument (Kilo Moana 0206, Hi'ialakai 0501, 0508, and 0610). The first, which took place in 2002, was the only major one (Evans et al., 2004), a fact that has clearly restricted the pace by which discoveries are being made. Subsequent mapping that also took place on fishery and submersible cruises over the past ten years have added to the existing multibeam coverage during transits and in areas of specific interest. Even so, only 48% of the 366,631 km² of monument waters have been mapped, much of it as simple transit lines by a multitude of ships, and with the different mapping systems yielding data of varying quality. Approximately 190,000 km² of monument waters are yet to be mapped, which does not include the lower quality transit data, some of which should be re-mapped.

These data are both expensive and difficult to acquire in remote regions such as PMNM, generally costing upwards of \$35,000/day. The cost of this cruise is estimated to exceed \$2 million, of which the monument will be paying for only \$50,000.

Other information or background:

The research involves non-invasive sonar surveys that will neither remove nor add anything to the monument waters. The multibeam systems on the R/V Falkor are new and have only recently been used on cruises in the Atlantic and along the west coast. The data from these systems have been found to be of outstanding quality.