

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

February 14, 2014

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Conservation and Management Permit to Mr. Eric King, Schmidt Ocean Institute, for Access to State Waters to Conduct Shipboard Support Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument conservation and management permit to Mr. Eric King, Director of Marine Operations, Schmidt Ocean Institute, pursuant to § 187A-6, Hawaii Revised Statutes (HRS), chapter 13-60.5, Hawaii Administrative Rules (HAR), and all other applicable laws and regulations.

The conservation and management permit, as described below, would allow entry and management activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Nihoa Island
- Necker Island (Mokumanamana)
- French Frigate Shoals
- Gardner Pinnacles
- Maro Reef
- Laysan Island
- Lisianski Island, Neva Shoal
- Pearl and Hermes Atoll
- Kure Atoll State Wildlife Sanctuary

The activities covered under this permit would occur between March 1, 2014 and February 28, 2015.

The applicant is new, but the proposed activities are a renewal of work previously permitted and conducted in the Monument.

INTENDED ACTIVITIES

The primary purpose of the application is to conduct vessel support operations aboard the RV FALKOR. The FALKOR would support a separate proposed research project currently under review (PMNM-2014-002; Applicant: Chris Kelley) to conduct bathymetric mapping using the FALKOR's multi-beam sonar technology within the waters of Papahānaumokuākea Marine National Monument (Monument). The proposed project would occur during two separate cruises, from March 7 to April 11, 2014 and from May 2 to June 7, 2014, for a total of seventy-two (72) days in the Monument.

The FALKOR would carry up to twenty-three (23) crew members into the Monument. In the Monument, the applicant expects only incidental discharges from deck washing, approved marine sanitation device effluent, cooling water, and vessel engine exhaust. Gray or waste water would not be discharged (see applicant response to MMB agency review question 1).

The activities proposed by the applicant directly support the Monument Management Plan's priority management – 3.6: Achieving Effective Monument Operations (PMNM MMP Vol. I, p.293, 2008).

The activities described above may require the following regulated activities to occur in State waters:

No regulated activities are applicable to this permit application.

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Pacific Islands NW Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application was posted on the Monument Web site on November 5, 2013 and revised application was posted on November 18, 2013, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Comments received from the scientific community are summarized as follows:

Scientific reviews support the acceptance of this application.

The following concerns were raised. Applicant responses are noted below.

- 1. Approximately what volume of grey water and waste water will be discharged within the Monument?**

The applicant does not intend to discharge grey and waste water. For more information on applicant's discharge activities see appended e-mail (E-mail dated October 24, 2013).

2. Images and maps of PMNM may contain locations and resources deemed culturally sensitive. With this in mind please respond to the following questions:

a. Who makes the determination on how the images are reviewed and used?

The applicant responds that while the MMB has the authority to condition a permit to ensure product outputs are appropriately controlled and/or managed, ultimately, the permittee determines how images will be reviewed and used.

b. Who owns the maps and images?

The applicant states that should the permit be approved, General Condition 23 of the permit states, "The permittee retains ownership of any data, (including but not limited to any photographic or video material), derivative analyses, or other work product, or other copyrightable works, but the Federal Government and the State of Hawai'i retain a lifetime, non-exclusive, worldwide, royalty-free license to use the same for government purposes, including copying and dissemination, and making derivative works."

c. Are the Monument Management Board (MMB) and Native Hawaiian Cultural Working Group (CWG) able to review the maps before they are made publicly available?

The applicant states that no formal review process has been established to review and provide input on products/results from permitted activities. The Monument managers have the authority to develop guidelines for reviewing products from various permitted projects.

COMMENTS:

1. The Native Hawaiian Cultural Working Group (CWG) is available to assist in the naming of any new seamounts discovered through your activities.

The applicant has noted this comment. There is no formal process established for a permittee to work with co-managing agencies to name a newly discovered area. As such, if new seamounts are discovered and it is deemed appropriate that the area be named - co-managers could establish such a process.

Comments received from the Native Hawaiian community are summarized as follows:

Cultural reviews support the acceptance of this application. No concerns were raised.

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g. MMPA, ESA, EA) Yes No

If so, please list or explain:

- The proposed activities are in compliance with the National Environmental Policy Act.
- A request to the National Marine Fisheries Service (NMFS) for a Section 7 informal consultation pursuant to the Endangered Species Act of 1973 is underway to analyze the effects of conducting multi-beam mapping activities within the Monument on protected species. The outcome of this consultation may require the applicant to adhere to other NMFS-prescribed conditions. Such conditions would be reflected in the PMNM permit, prior to issuance.
- The Department has made an exemption determination for this permit in accordance chapter 343, HRS, and Chapter 11-200, HAR. See Attachment (“DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAĪHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT CONSERVATION AND MANAGEMENT PERMIT TO MR. ERIC KING, SCHMIDT OCEAN INSTITUTE, FOR ACCESS TO STATE WATERS TO CONDUCT SHIPBOARD SUPPORT ACTIVITIES UNDER PERMIT PMNM-2014-004.”)

Has Applicant been granted a permit from the State in the past? Yes No
If so, please summarize past permits:

Have there been any a) violations: Yes No
b) Late/incomplete post-activity reports: Yes No

Are there any other relevant concerns from previous permits? Yes No

STAFF OPINION

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for his application and should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Conservation and Management Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION

The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by DAR staff.

RECOMMENDATION

That the Board authorize and approve a Conservation and Management Permit to Mr. Eric King, Director of Marine Operations, Schmidt Ocean Institute, with the following special conditions:

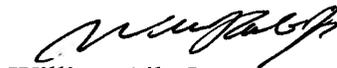
1. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
2. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge.
3. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.
4. If there is any Hawaiian monk seal or any other protected species in the area when performing any permitted activity, the activity shall cease until the animal(s) depart the area.

Respectfully submitted,



Frazer McGilvray
Administrator

APPROVED FOR SUBMITTAL



William Aila Jr.
Chairperson

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.

ITEM F-1a

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-July 1, 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

Estimated number of days in the Monument: 72

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...
provide vessel operations in support of Christopher Kelley's proposed research activities to map the seafloor of the monument using multibeam sonar.

b.) To accomplish this activity we would
Use the RV FALKOR to transport personnel to the Monument and act as a support platform to conduct proposed research activities as listed in Christopher Kelley's permit

application. This 72 day two-legged cruise will attempt to map as much of the presently unmapped seafloor in the monument as possible, the R/V Falkor's Simrad Kongsberg EM 302 and EM710 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.) providing vessel support for Christopher Kelley's proposed research activities and without vessel support from the RV FALKOR those activities would not occur. 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 from NOAA's Office of National Marine Sanctuaries.

Other information or background:

The research being supported by the proposed vessel activities 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.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): King, Eric, M

Title: Director of Marine Operations, Schmidt Ocean Institute (R/V FALKOR)

1a. Intended field Principal Investigator (See instructions for more information):
Captain Bernd Buchner, Schmidt Ocean Institute

2. Mailing address (street/P.O. box, city, state, country, zip):

Applicant's (ship operator) Address:
Schmidt Ocean Institute

[REDACTED]
[REDACTED]

Principal Investigator's Address:
Schmidt Ocean Institute

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] address: n/a

3. Affiliation (institution/agency/organization directly related to the proposed project):
Schmidt Ocean Institute - operator of R/V FALKOR

4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):

Ship's operating crew compliment is 23 persons. Updated crew list can be provided at time of departure sailing from Honolulu for PMNM. The science party persons are included in the Research Permit Application.

Section B: Project Information

5a. Project location(s):

- | | | | |
|--|-------------------------------------|---|--|
| <input checked="" type="checkbox"/> Nihoa Island | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Necker Island (Mokumanamana) | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> French Frigate Shoals | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Gardner Pinnacles | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Maro Reef | | | |
| <input checked="" type="checkbox"/> Laysan Island | <input type="checkbox"/> Land-based | <input checked="" type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Lisianski Island, Neva Shoal | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Pearl and Hermes Atoll | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Midway Atoll | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Kure Atoll | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Other | | | |

Ocean Based

Remaining ashore on any island or atoll (with the exception of Midway & Kure Atolls and Field Camp staff on other islands/atolls) between sunset and sunrise.

NOTE: There is a fee schedule for people visiting Midway Atoll National Wildlife Refuge via vessel and aircraft.

Location Description:

Shallowest mapping depth will be 50m around Necker, Gardner Pinnacles, and Laysan. All other mapping will take place in depths greater than 150m.

5b. Check all applicable regulated activities proposed to be conducted in the Monument:

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
- Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands
- Anchoring a vessel
- Deserting a vessel aground, at anchor, or adrift
- Discharging or depositing any material or matter into the Monument
- Touching coral, living or dead
- Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- Attracting any living Monument resource
- Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)
- Subsistence fishing (State waters only)
- Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

6. Purpose/Need/Scope *State purpose of proposed activities:*

The proposed project activities are vessel support operations for Christopher Kelley's proposed research, which have as a goal the complete mapping of the monument's seafloor. A significant amount of that goal will be realized during this 72 day two-legged cruise. Of particular note are the syntheses that will be created from this project by merging the new data with existing data collected on previous cruises. These syntheses will better define existing features and locate new ones to inspire ideas for future research projects, and as a guide of existing coverage that could be shared and updated. They will generate interest for other uses such as physical oceanographic modeling of internal tides, investigation of reef evolution, subsidence and sea level changes using fossil reef terraces, and identify geological features such as seamounts and rift zone ridges that likely harbor extensive biological communities.

*Considering the purpose of the proposed activities, do you intend to film / photograph federally protected species? Yes No

For a list of terrestrial species protected under the Endangered Species Act visit:

<http://www.fws.gov/angered/>

For a list of marine species protected under the Endangered Species Act visit:

<http://www.nmfs.noaa.gov/pr/species/esa/>

For information about species protected under the Marine Mammal Protection Act visit:

<http://www.nmfs.noaa.gov/pr/laws/mmpa/>

7. Answer the Findings below by providing 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 Monument:

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?

This project only involves multibeam mapping sonar and therefore will have no effect on the cultural, natural, and historic resources and ecological integrity of the monument. Multibeam mapping has already taken place in the monument with no detected effects on the monument resources. The majority of the mapping will take place in deep water and at considerable distance from emergent land. There are no plans to anchor or access any of the land masses within the Monument. The FALKOR's grey water and waste water systems have sufficient holding capacity during the periods when the FALKOR is in the designated areas of the Monument where discharges of grey and waste water are prohibited.

The RV Falkor’s two multibeam systems use 30 kHz and 70-100 kHz frequencies. These frequencies have not been directly attributed to mammal strandings. The higher frequency Kongsberg EM710 system should be virtually inaudible to all cetaceans, or at least most species, while the frequency of the Kongsberg EM302 system is at the very upper limit of the optimal range for many species. Both systems have a special flexible “soft start” mode which can be used when entering areas of known cetacean activity. The soft start mode is a delay function, starting the sonar transmissions at a low output level and then gradually increasing to the level required for optimal bathymetry data collection. The two multibeam systems can also be operated with less than maximum power if required. We believe that the Falkor’s multibeam systems pose minimal risk to cetaceans in the Monument. Both multibeam systems will be turned on before the ship enters into the Monument and will remain on for the duration of the mapping cruise as a precautionary measure avoid possible startling of the animals. In addition to utilizing the systems’ soft start operating modes, we will create a plan whereby as much of the shallow water mapping as possible will be conducted during daylight hours when observers in the Falkor’s bridge, or on the mammal observation deck, can be on the lookout for the presence of cetaceans in the vicinity of the ship. If cetaceans are spotted ahead along the track the ship will stop and wait for the animals to pass.

The specifications of the Kongsberg EM302 system are:

Operating frequency	30 kHz
Depth range	10-7000 m
Swath width	5.5xDepth, to approx 8 km
Pulse forms.....	CW and FM chirp
Swath profiles per ping	1 or 2
Motion compensation:	
- Yaw	± 10 degrees
- Pitch	± 10 degrees
- Roll	± 15 degrees
Sounding pattern	Equi-distant /equiangular
Depth resolution of soundings	1 cm
High resolution mode	High Density processing
Sidelobe suppression	> 25 dB
Suppression of sounding artefacts.....	9 frequency coded transmit sectors
Beam focusing	On transmit (per sector) and on reception (dynamic)
Beamforming method	Time delay
Gain control	Automatic
Swath width control	Manual or automatic, soundings intact when reduced swath width
Seabed imagery/sidescan sonar image	Standard
Water column display.....	Standard
Mammal protection	Standard
Multi frequency operation	Yes, by integration with EM 3002 and/or EM 710
Sub bottom profiling	Yes, by integration with SBP 300
Transmit array (deg).....	150 x 1

Recevei array (deg).....	1 x 30
Number of beams per swath.....	288
Maximum number of sounding per swath.....	432
Maximum number of swaths per ping.....	2
Maximum number of soundings per ping.....	864
The specifications sheet is attached.	

The specifications of the Kongsberg EM710 system are:

Frequency range.....	70 to 100 kHz
Max ping rate.....	30 Hz
Swath coverage sector.....	Up to 140 degrees
Min depth.....	3 m below transducer
Max depth.....	2000 m
CW transmit pulses.....	0.2 to 2 ms
FW sweep pulse.....	Max 120 ms
Roll stabilized beams.....	Yes, ±15°
Pitch stabilized beams.....	Yes, ±10°
Yaw stabilized beams.....	Yes, ±10°
Sounding patterns.....	Equiangular, Equidistant, High Density
Mammal protection	Standard
Max number of soundings per ping.....	800
The specifications sheet is attached.	

The multibeam mapping activity is planned to occur around-the-clock. While operating during periods of darkness and when entering all areas of the monument the multibeam systems' "soft start" mode will be utilized. The sonar transmissions will start at a low output level and then gradually increasing to the level required for optimal bathymetry data collection. Furthermore, we will try as much as possible to work further offshore at night. It is our understanding that the only documented report of a whale grounding event that could possibly have been caused by multibeam mapping took place close to shore, where the animals may have been startled by a sudden full start of the system. It is our further understanding that the whales related the aforementioned incident made a wrong turn and wound up in a lagoon system and were unable to find their way out. Using a "soft start" mode, if and when the systems need to be turned on and off, and mapping most nights well offshore should ensure that the multibeam mapping activities from the Falkor do not result in a similar incident.

The soft start modes of the EM302 and EM710 multibeam systems can either be set at -10 or -20 decibels with a 0 to 15 minute ramp up time to the desired power. We can select -10 dB, -20 dB or maximum transmit power. Maximum transmit power is recommended by Kongsberg for maximizing the mapping swath coverage. In the deepest operating mode the EM302 is 237 dB while the EM710 is 229 dB. When operating in shallow modes the decibels are 232 dB and 225 dB respectfully.

b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects? We are aware of the significance and cultural importance of the NWHI to Native Hawaiians. As a sacred place, and especially in the realm of Po (beyond Mokumanamana), our hope is to tread lightly and leave no footprint from our activities. Recognizing that natural resources are, in fact, cultural resources for Native Hawaiians, it is our hope that the information and data generated by this project will assist PMNM by providing a base map which may then be populated with what is known about the rich and unique biological resources of this region. This knowledge will contribute directly to the documentation of these natural/cultural resources, and it is this understanding that allows for enhanced protection of these resources. No specimen collections are requested under this permit, and all proposed activities are non-invasive. Thus, there are no anticipated impacts to the cultural resources or the integrity of NWHI ecosystems. We believe this proposed activity is consistent with the spirit of Proclamation 8031, and specifically with Finding 1.b.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument. Multibeam sonar mapping is the current state of the art technique used to map in depths below 50m. No better alternative methods exist to acquire high resolution imagery of the seafloor. A major objective of the project is to benefit the management of the monument by revealing the nature of the seafloor within its boundaries. Of the many individual islands, seamounts, atolls, ancient volcanic ridges, isolated pinnacles, and submerged banks within and crossing the PMNM boundaries, some are delineated only by the low resolution global dataset, others are sparsely mapped with just postage stamp-sized dive site summit surveys over them, while numerous other features are simply incomplete in coverage with gaping holes. Much of the existing data came from the transit swaths of opportunity which lack quality, resolution, and the proper acquisition orientation for the features being surveyed. In addition, the sidescan backscatter component is missing from many of the older systems. The project will result in new higher quality data useful to both the monument and to ongoing research efforts. The RV FALKOR is an at sea research platform to transport scientists and support proposed research activities under Chris Kelley's permit application. Without this vessel support the multi-beam mapping research project could not occur.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity? The information gathered will directly contribute to a better understanding of marine habitats in the NWHI, thereby improving our understanding of NWHI habitats and ecosystems. The potential value of this information on previously unmapped habitats is tremendous. As noted in 7.b. (above), there are no anticipated impacts to PMNM

cultural, natural, or historic resources. No specimens will be collected, no project gear will touch the benthos, and no shore access is required. In our estimation, the end value of this activity far outweighs any potential impacts (which are assumed to be negligible/nonexistent), thus meeting the criteria noted under Finding 1.d. in Proclamation 8031.

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.

Even with 72 ship days, this project may fully be able to complete the huge task of mapping the entire seafloor within the monument boundaries. However, this is long enough to map most of the seamounts and most of the volcanic platforms of the islands and therefore will provide a significant contribution to achieving the task.

f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

The RV FALKOR is a globally operated oceanographic research ship outfitted with the latest scientific sonar systems. The ship's crew is specifically trained to operate the multibeam mapping sonars as recently demonstrated by mapping the protected waters of the United States off the coast of Florida and the protected waters of Honduras off the coast of Roatan Island. Additionally, in 2012 and 2013 R/V FALKOR utilized its multibeam mapping systems for a variety of collaborative projects with the US organizations' Woods Hole Oceanographic Institute, Monterey Bay Aquarium and Research Institute, University of Texas, University of Mississippi, University of New Hampshire, and NOAA. The FALKOR's mapping sonars are tested annually by The Center for Coastal and Ocean Mapping. The technicians operating the sonars have lead experience operating the multibeam mapping sonar systems aboard NOAA survey ships and ships of the UK's Natural Environment Research Council.

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct. Schmidt Ocean Institute (SOI), a US nonprofit operating institution, has agreed to provide the ship, the multibeam sonar systems, and their own multibeam technicians required for this cruise. The ship and ancillary support was made available through a competitive proposal review process directly from SOI. The Principal Investigator / Chief Scientist Christopher Kelley has requested the NOAA Office of National Marine Sanctuaries provide \$50,000 of salary support for three of the participants, John Smith, Joyce Miller, and himself, which the University of Hawaii required. This has been approved and the funds are currently in process to be passed to UH. The other participants have all agreed to arrange for their own salary support through their respective employers. The FALKOR carries both Hull and Machinery insurance as well as Protection and Indemnity coverage. A Certificate of Financial Responsibility is on file with the US Coast Guard. Oil spill management team ECM is on retainer.

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.

Multibeam mapping is the state of the art technique for mapping seafloor deeper than 50m. The FALKOR's multibeam systems are the most up-to-date systems being produced and sold by SIMRAD / Kongsberg. To reiterate, that the proposed activities are for vessel operations to support proposed research activities under Christopher Kelley's permit application.

i. Has your vessel been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?

No, but arrangements have been made to borrow a transceiver from the monument and install it on the FALKOR when it arrives in the Hawaiian Islands later this Fall / Winter 2013-2014.

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.

There are no other factors that would make the issuance of a permit for the activity inappropriate. Ship's waste water and grey water are processed through a sewage treatment system (aka marine sanitation device) that produces no more than 100/100 ml of coliform count. The sewage treatment system type has been approved by the Federal Republic of Germany in accordance with MARPOL 73/78, Annex IV and Helsinki Convention, tested based on IMO Resoluton MEPC.159(55).

8. Procedures/Methods:

The Monument will be accessed directly from the FALKOR. The FALKOR will depart from Honolulu and return to Honolulu at the completion of the mapping survey. There are currently no plans to anchor or access any of the land masses within the Monument. The ship will be operating 24 hours a day and is equipped with a forward looking sonar. The FALKOR's grey water and waste water systems have sufficient holding capacity during the periods when the FALKOR is in the designated areas of the Monument where discharges of grey and waste water are prohibited.

Instead of using expendable bathythermographs (XBTs are small single-use instruments deployed over the side of the ship to record sea temperature relative to depth and typically used several times a day when conducting multibeam mapping projects as part of assuring data quality) the FALKOR will lower into the water column, by ship embedded scientific winch and wire, two other instruments called CTD and SVP. The CTD measures conductivity, temperature and depth, while the SVP is a sound velocity profiler which collects sound velocity data. Neither CTD or SVP instruments will touch the seafloor or remain in the PMNM after use, unlike XBTs which typically remain on the seabed after their single use deployment.

A complete track plan of all of the survey lines will be created and installed into the ship's navigation computers and multibeam systems. All data from previous cruises will also be incorporated into their real time multibeam displays to provide guides for minimizing seams between old and new data. The survey lines will be numbered in the order in which they should be done and the ship will run each line at 7 nm/hr. Multibeam mapping is carried out around the clock and as a result, participants will man the processing and watch stand computers in two person teams for 8 hr shifts. The processing teams hope to finish with all or almost all of the data processing prior to the ship returning to Honolulu Harbor. Whatever raw data remains will be processed back in port as quickly as possible. A synthesis of the old and new data will be created by the PI after the cruise.

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary):

Common name:

N/A

Scientific name:

N/A

& size of specimens:

N/A

Collection location:

N/A

Whole Organism Partial Organism

9b. What will be done with the specimens after the project has ended?

N/A

9c. Will the organisms be kept alive after collection? Yes No

N/A

• General site/location for collections:

N/A

• Is it an open or closed system? Open Closed

N/A

- Is there an outfall? Yes No

N/A

- Will these organisms be housed with other organisms? If so, what are the other organisms?

N/A

- Will organisms be released?

N/A

10. If applicable, how will the collected samples or specimens be transported out of the Monument?

N/A

11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:

N/A

12. List all specialized gear and materials to be used in this activity:

SIMRAD / Kongsberg EM302 and EM710 multibeam sonar systems as well as CTDs and SVPs for calibrating the systems at different locations within the monument.

13. List all Hazardous Materials you propose to take to and use within the Monument:

none

14. Describe any fixed installations and instrumentation proposed to be set in the Monument:

none

15. Provide a time line for sample analysis, data analysis, write-up and publication of information:

Every effort will be made to complete the data processing by the end of the cruise. Once that is completed, the data products will be distributed to the monument, UH-SOEST, SOI, MBARI, and other interested parties for publication on their websites.

16. List all Applicant's publications directly related to the proposed project:

Schmidt Ocean Institute will work to Google Earth's Ocean division to populate the Ocean product with the bathymetry data results. This approach follows the recent data sharing publication initiative with NOAA where the bathymetry data collected from the protected marine areas, collected on behalf of and in collaboration with NOAA, was embedded into Google Earth's Ocean product. The data will also be shared for public access through the National Geophysical Data Center.

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as “confidential” prior to posting the application.

Signature

Date

SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE BELOW:

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
FAX: (808) 397-2662

DID YOU INCLUDE THESE?

- Applicant CV/Resume/Biography
- Intended field Principal Investigator CV/Resume/Biography
- Electronic and Hard Copy of Application with Signature
- Statement of information you wish to be kept confidential
- Material Safety Data Sheets for Hazardous Materials

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant):

Science Party

Christopher Kelley, Chief Scientist & Multibeam processing team, Hawaii Undersea Research Laboratory (HURL), ckelley@hawaii.edu, 808-956-7437

John R Smith, Co-Chief Scientist & Multibeam processing team, Hawaii Undersea Research Laboratory (HURL), jrsmith@hawaii.edu, 808-956-9669

Joyce Miller, Multibeam processing team, UH Mapping Research Group (HMRG), joycemil@hawaii.edu, 808-956-9395

Jason Leonard, Multibeam watch stand team, Papahānaumokuākea Marine National Monument (PMNM), jason.leonard@noaa.gov, 808-469-1148

Daniel Wagner, Multibeam watch stand team, Papahānaumokuākea Marine National Monument (PMNM), Daniel.Wagner@noaa.gov, 808-694-3961

Jeremy Taylor, Multibeam processing team, Pacific Islands Fisheries Science Center,
Kewalo Research Facility, 1125B Ala Moana Blvd, Honolulu, HI 96814,
jeremy.taylor@noaa.gov, 983-3776

Frances Lichowski, Multibeam processing team, Pacific Islands Fisheries Science Center, Kewalo Research Facility, 1125B Ala Moana Blvd, Honolulu, HI 96814, frances.lichowski@noaa.gov, 983-3776

Belinda Dechnik, Multibeam watch stand team, Geocoastal Research Group, School of Geosciences, The University of Sydney,
bdec4339@uni.sydney.edu.au, 61 407 396 861

Jonathan Tree, Multibeam water stand & processing team, Dept of Geology and Geophysics, UH, , jtree@hawaii.edu, 719-510-1896

Rachel Orange, Multibeam watch stand team, Hawaii Undersea Research Laboratory (HURL), rachel.orange@hawaii.edu, 808-956-6183

ITEM F-1b

Brian Boston, Multibeam watch and processing teams, Dept of Geology and Geophysics, UH, bboston@hawaii.edu, 423-432-2224

Kim Binsted, Multibeam watch and processing teams, Geology & Geophysics and Information & Computer Science Depts, UH, binsted@hawaii.edu, 808-398-1300

Brian Shiro, Multibeam watch and processing teams, Dept of Geology and Geophysics, UH, bshiro@hawaii.edu, 808-265-1415

Harrison Togia, Multibeam watch and processing teams, Dept of Geology and Geophysics, UH, togiah@hawaii.edu, 253-208-8162

Alex Rice, Multibeam watch and processing teams, Dept of Geology and Geophysics, UH, anrice@hawaii.edu, 808-956-2581

Lauren Harrison, Multibeam watch and processing teams, Dept of Earth, Ocean, Atmospheric Sciences, 2020-2207 Main Mall, Vancouver, BC V6T-1Z4 Canada, lharriso@eos.ubc.ca, 307-760-6582

Shellie Linn Habel, Multibeam watch and processing teams, Dept of Geology and Geophysics, UH, 808-286-2586, skey@hawaii.edu

Anne Madhavi Patterson, Multibeam watch and processing teams, School of Geosciences, University of Sydney, 0405 732 015, apat4516@uni.sydney.edu.au

Stephanie Jane Duce, Multibeam watch and processing teams, School of Geosciences, University of Sydney, 0422251377, stephanie.duce@sydney.edu.au

Nicky Margaret Wright, Multibeam watch and processing teams, School of Geosciences, University of Sydney, 0405 335 423, nwri5277@uni.sydney.edu.au

R/V FALKOR Crew
 7 March – 11 April 2014

NAME	SURNAME	Position	email
Bernd	Buchner	Captain	bernd.b@soi-team.org
Paul	Shepherd	2nd Officer	paul.s@soi-team.org
Jason	Garwood	2nd Officer	jason.g@soi-team.org
James	Wright	Senior Bosun	james.w@soi-team.org
Michael	Utley	Lead Deckhand	michael.u@soi-team.org
Mateuzs	Wroblewski	Deckhand	mateusz.w@soi-team.org
Wendel	Virrey	Deckhand	wendel.v@soi-team.org
Taigh	MacManus	Deckhand	taigh.m@soi-team.org

Miroslav	Mirchev	Chief Engineer	miro.m@soi-team.org
Douglas	Hay	2nd Engineer	douglas.h@soi-team.org
Ramon	Tabaque	3rd Engineer	ramon.t@soi-team.org
Martin	Burgdorff	ETO	martin.b@soi-team.org
Edwin	Pabustan	Fitter	edwin.p@soi-team.org
Albert D	Barcelo	Motor Man	albert.b@soi-team.org
Verena	Neher	Purser	verena.n@soi-team.org
Gerra	Daffon	Nurse/Stewardess	gerra.d@soi-team.org
New		Stewardess	
Grzegorz	Kuberski	Chef	greg.k@soi-team.org
Carlos	Waihich	Chef	carlos.w@soi-team.org
Colleen	Peters	Marine Tech	colleen.p@soi-team.org
Paul	Duncan	Marine Tech	paul.d@soi-team.org
Mario	Sagrستاني	Fitter TEMP	mario.s@soi-team.org

2 May – 6 June 2014

Heiko	Volz	Captain	heiko.v@soi-team.org
Philipp	Günther	Chief Officer	philipp.g@soi-team.org
Helge	Jürgensen	2nd Officer	helge.j@soi-team.org
Lars	Tönsfeldt	Bosun	lars.t@soi-team.org
Michael	Utlej	Lead Deckhand	michael.u@soi-team.org
Wendel	Virrey	Deckhand	wendel.v@soi-team.org
Allan	Watt	Chief Engineer	allan.w@soi-team.org
Dan	Bühler	2nd Engineer	dan.b@soi-team.org
TBN	TBN	ETO	TBA
Dante	Sarzuelo	Fitter	dante.s@soi-team.org
Edwin	Pabustan	Fitter	edwin.p@soi-team.org
Adriana	Zamudio	Purser	adriana.z@soi-team.org
TBN	TBN	Stewardess	TBA
Grzegorz	Kuberski	Chef	greg.k@soi-team.org
Arkadiusz	Ochocki	Chef	arek.o@soi-team.org
Justin	Smith	Marine Tech	justin.s@soi-team.org
Paul	Duncan	Marine Tech	paul.d@soi-team.org
Leny	Pancito	Stewardess	leny.p@soi-team.org
Josh	Oliphant	3rd Engineer	josh.o@soi-team.org
Allan	Doyle	2nd Officer TEMP	allan.d@soi-team.org
Luke	MacNutt	Cadet TEMP	luke.m@soi-team.org

2. Specific Site Location(s): (Attach copies of specific collection locations):

We will be mapping throughout the monument, targeting depths between 50-4000 m (please see the attached map). Our goal is to complete the multibeam coverage of

monument waters within that depth range. The highest priority areas that we want to be sure to complete are:

1) Deep Water Priorities

- a) The entire northern end of the monument from south of Pearl & Hermes to the end of the NW boundary.
- b) Rift zone ridges extending off the platforms of Lisianski, Pioneer, and North Hampton
- c) Seamounts throughout the monument, particularly northern half
- d) The Gardner Pinnacle Platform

2) Shallow Water (50-150 m) Priorities

- a) 50-150 m around Pearl and Hermes Atoll
- b) 50-150 m in the south of FFS

3. Other permits (list and attach documentation of all other related Federal or State permits): None

3a. For each of the permits listed, identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation. N/A

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information): Schmidt Ocean Institute is providing 72 days of shiptime on Falkor and the monument itself through NMSP is providing \$50,000 in salary support for 3 of the UH participants (Kelley, Smith, and Miller). Schmidt Ocean Institute is a 501c(3) nonprofit operating foundation based in Palo Alto, California and fully supports the operation of R/V FALKOR without external funding resources. SOI is providing the FALKOR to the University of Hawaii at no cost.

5. Time frame:

Activity start: March 7, 2014

Activity completion: June 6, 2014

Dates actively inside the Monument:

From: March 7, 2014

To: April 11, 2014

From: May 2, 2014

To: June 6, 2014

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application: R/V FALKOR schedule

Personnel schedule in the Monument:

The first 9 participants listed above will be in the monument from March 7 to April 11, 2014 during the first leg of this cruise. Three of these (Kelley, Smith, and Tree) will also be in the monument on the second leg from May 2 to June 6, 2014. All of the other participants (the remaining 11) will be only in the monument during the second leg of the cruise from May 2 to June 6, 2014.

There will be a few R/V FALKOR crewmembers changing for the second leg of the cruise when the FALKOR is back in Honolulu between leg one and leg two. This is noted above in Section 1.

6. Indicate (with attached documentation) what insurance policies, bonding coverage, and/or financial resources are in place to pay for or reimburse the Monument trustees for the necessary search and rescue, evacuation, and/or removal of any or all persons covered by the permit from the Monument: The science cruises aboard the R/V FALKOR into the Monument will not involve port calls or landings of personnel onto any islands or atolls. All personnel will remain aboard the ship during the entire cruise periods. Schmidt Ocean Institute maintains standard marine insurance which includes Protection and Indemnity insurance as well as Hull insurance. Copies of both coverages are attached.

7. Check the appropriate box to indicate how personnel will enter the Monument:

- Vessel
 Aircraft

Provide Vessel and Aircraft information: R/V FALKOR (Monument Permit number to be assigned)

8. The certifications/inspections (below) must be completed prior to departure for vessels (and associated tenders) entering the Monument. Fill in scheduled date (attach documentation):

- Rodent free, Date: scheduled as confirmed 25 February 2014
 Tender vessel, Date: no tendering from FALKOR to islands or atolls
 Ballast water, Date: scheduled as confirmed 29 January 2014

- Gear/equipment, Date: n/a
 Hull inspection, Date: scheduled as confirmed 13 February 2014

9. Vessel information (NOTE: if you are traveling aboard a National Oceanic and Atmospheric Administration vessel, skip this question):

Vessel name: FALKOR

Vessel owner: Schmidt Ocean Institute

Captain's name: Bernd Buchner and Heiko Volz

IMO#:7928677

Vessel ID#:741436

Flag: Cayman Islands

Vessel type: Research

Call sign: ZCYL5

Embarkation port: Honolulu

Last port vessel will have been at prior to this embarkation: Honolulu

Length: 82.9m

Gross tonnage: 2024

Total ballast water capacity volume (m3): 203.8m3

Total number of ballast water tanks on ship: 5

Total fuel capacity: 422m3

Total number of fuel tanks on ship: 15

Marine Sanitation Device: Yes, produces no more than 100 thermotolerant coliforms/100ml

Type: DVZ – JZR 50 BIOMASTER (MARPOL 73/78, Annex IV and Helsinki-Convention; tested to IMO Resolution MEPC.159(55))

Explain in detail how you will comply with the regulations regarding discharge in the Monument. Describe in detail. If applicable, attach schematics of the vessel's discharge and treatment systems:

While in the Monument the FALKOR will only have discharges incidental to vessel use such as deck wash, approved marine sanitation device effluent (for sewage and gray water), cooling water, and vessel engine exhaust. All sewage and gray water discharges pass through the approved marine sanitation device. While the FALKOR is within the Monument's Special Preservation Areas and the Midway Atoll Special Management Area the FALKOR will only discharge engine cooling water, weather deck runoff, and vessel engine exhaust. The FALKOR will not discharge sewage and gray water. There is sufficient reserve tank capacity to temporarily store sewage and gray water during the periods when FALKOR is operating within the Monument's Special Preservation Areas and the Midway Atoll Special Management Area.

Other fuel/hazardous materials to be carried on board and amounts: none

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type: estimated date of installation by Navtech aboard FALKOR is 24 February 2014 at the coordination of NOAA

VMS Email: tbd
Inmarsat ID#: tbd

* Individuals MUST ENSURE that a type-approved VMS unit is installed and that its automatic position reports are being properly received by the NOAA OLE system prior to the issuance of a permit. To make sure your VMS is properly configured for the NOAA OLE system, please contact NOAA OLE at (808) 203-2503 or (808) 203-2500.

* PERMITS WILL NOT BE ISSUED TO INDIVIDUALS ENTERING THE MONUMENT VIA VESSEL UNTIL NOAA OLE HAS CONTACTED THE MONUMENT PERMIT COORDINATOR WITH A 'POSITIVE CHECK' READING.

10. Tender information:

On what workboats (tenders) will personnel, gear and materials be transported within the Monument? List the number of tenders/skiffs aboard and specific types of motors: n/a

Additional Information for Land Based Operations

11. Proposed movement of personnel, gear, materials, and, if applicable, samples:

n/a

12. Room and board requirements on island: n/a

13. Work space needs: n/a

DID YOU INCLUDE THESE?

- Map(s) or GPS point(s) of Project Location(s), if applicable
- Funding Proposal(s)
- Funding and Award Documentation, if already received
- Documentation of Insurance, if already received
- Documentation of Inspections
- Documentation of all required Federal and State Permits or applications for permits

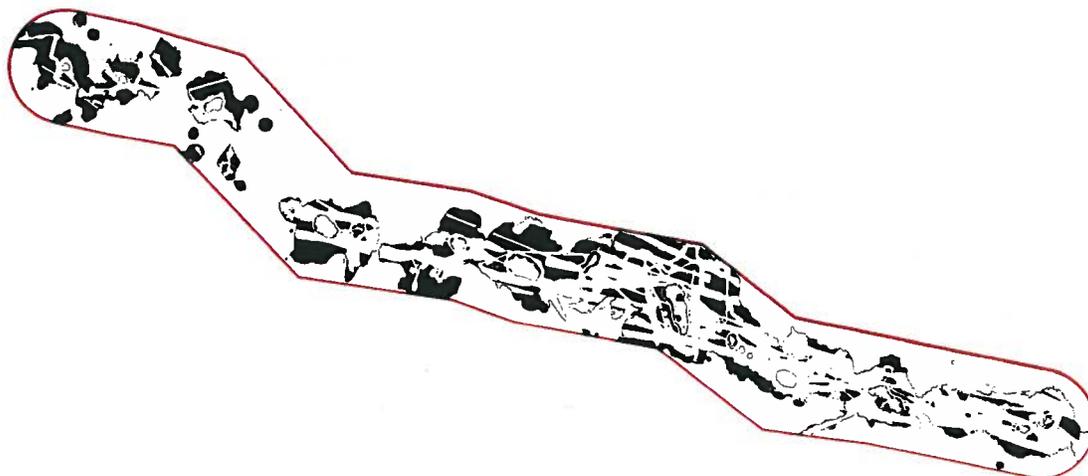
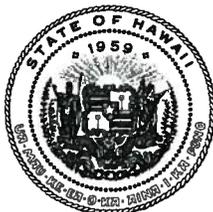


Fig 1: Map showing multibeam 50-4000m mapping targets (black polygons) inside the monument.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813
Telephone: 587-0100

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

February 14, 2014

TO: Division of Aquatic Resources File

THROUGH: William J. Aila Jr., Chairperson *W. J. Aila Jr.*

FROM: *F. McGilvray*
Frazer McGilvray
Division of Aquatic Resources

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT CONSERVATION AND MANAGEMENT PERMIT TO MR. ERIC KING, SCHMIDT OCEAN INSTITUTE, FOR ACCESS TO STATE WATERS TO CONDUCT CONSERVATION AND MANAGEMENT ACTIVITIES UNDER PERMIT PMNM-2014-004

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

Project Title:

Papahānaumokuākea Marine National Monument Conservation and Management Permit to Mr. Eric King, Director of Marine Operations, Schmidt Ocean Institute, for Access to State Waters to Conduct Conservation and Management Activities

Permit Number: PMNM-2014-004

Project Description:

The conservation and management permit application, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State waters between March 1, 2014 and February 28, 2015.

The primary purpose of the application is to conduct vessel support operations aboard the RV FALKOR. The FALKOR would support a separate proposed research project currently under review (PMNM-2014-002; Applicant: Chris Kelley) to conduct bathymetric mapping using the FALKOR's multi-beam sonar technology within the waters of Papahānaumokuākea Marine National Monument (Monument). The proposed project would occur during two separate cruises, from March 7 to April 11, 2014 and from May 2 to June 7, 2014, for a total of seventy-two (72) days in the Monument.

The FALKOR would carry up to twenty-three (23) crew members into the Monument. In the Monument, the applicant expects only incidental discharges from deck washing, approved marine sanitation device effluent,

cooling water, and vessel engine exhaust. Gray or waste water would not be discharged (see applicant response to MMB agency review question 1).

The activities proposed by the applicant directly support the Monument Management Plan's priority management – 3.6: Achieving Effective Monument Operations (PMNM MMP Vol. I, p.293, 2008).

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application was posted on the Monument Web site on November 5, 2013 and revised application was posted on November 18, 2013, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Exemption Determination:

After reviewing HAR § 11-200-8, including the criteria used to determine significance under HAR § 11-200-12, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit, including ship operations, have been evaluated as a single action. As a preliminary matter, multiple or phased actions, such as when a group of actions are part of a larger undertaking, or when an individual project is precedent to or represents a commitment to a larger project, must be grouped together and evaluated as a single action. HAR § 11-200-7. Since this permit involves an activity that represents a commitment to a larger project, i.e. conducting multibeam sonar mapping activities of the seafloor within the Monument, the categorical exemption determination here will treat all planned activities as a single action, to the extent possible.

2. The Exemption Class for Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. Chapter 343, HRS, and § 11-200-8, HAR, provide for a list of classes of actions exempt from environmental assessment requirements. HAR §11-200-8.A.5. exempts the class of actions which involve “basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.” The proposed activities appear to fall squarely under the exemption class #5, exempt item #2 as described under the division of Forestry and Wildlife exemption list published on June 12, 2008. This exemption class has been interpreted to include “game and non-game wildlife surveys, inventory studies, new transect lines, photographing, recording, sampling...”, such as those to be supported by the proposed activities. It has also been interpreted to include various modes of transportation to reach field areas necessary to carry out such surveys. As discussed below, no significant disturbance to any environmental resource is anticipated in the sampling of Monument resources. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if “the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” HAR § 11-200-8.B. To gauge

whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

Similar activities of this type, to conduct vessel support operations for sonar mapping studies, have been permitted and undertaken in the past. Ross Barnes was issued three permits from 2009 to 2011 to operate two University of Hawai'i vessels, the KAIMIKAI-O-KANALOA and the KILO MOANA, for similar activities within the Monument (PMNM-2009-057, PMNM-2010-049, and PMNM-2011-014). Since bathymetric mapping within the Monument is not complete, it is reasonable to expect future permit requests for vessel support work. No deleterious impacts resulted from similar previous activities. With this in mind, significant cumulative impacts are not anticipated as a result of this vessel support activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities would be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities.

The activities of the FALKOR would provide support for a proposed multibeam sonar mapping project under Dr. Christopher Kelley, Hawai'i Undersea Research Laboratory of the University of Hawai'i (proposed permit no. PMNM-2014-002). The proposed cruise dates for this project are March 7 to April 11, 2014 and May 2 to June 7, 2014 totaling seventy-two (72) days in the Monument. It is anticipated that activities on these cruises would occur throughout the Monument. The National Marine Fisheries Service plans to deploy monk seal field camps and personnel on Laysan Island, French Frigate Shoals, Kure Atoll, and Midway Atoll starting June 2014 for the field season. At this time, no other concurrent activities are known. The culmination of this permit, occurring throughout the Monument over a several month-long period, is not anticipated to have significant cumulative impacts.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably be Minimal and Insignificant Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all conservation and management activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures.

February 14, 2014

Page 4

Conclusion. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

William J. Aila Jr.
Chairperson, Board of Land and Natural Resources

Date