

**Papahānaumokuākea Marine National Monument**  
EDUCATION 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:** Vincent A Collins

**Affiliation:** NOAA/NOS/ONMS/PMNM

**Permit Category:** Education

**Proposed Activity Dates:** 6/17/10 - 6/26/10

**Proposed Method of Entry (Vessel/Plane):** NOAA Ship Hi'ialakai

**Proposed Locations:** Nihoa, Mokumanamana, French Frigate Shoals

**Estimated number of individuals (including Applicant) to be covered under this permit:** 22

**Estimated number of days in the Monument:** 10

**Description of proposed activities:** (complete these sentences):

a.) The proposed activity would...

Provide an opportunity for educators, cultural experts, marine managers, scientists, and community leaders to visit Papahānaumokuākea Marine National Monument (Monument), habitats and wildlife, for the purpose of learning about management concerns for Papahānaumokuākea, and sharing their methods and expertise with each other and the experience with their respective students and communities. Through interacting with coral reef and terrestrial ecosystems in their natural state the group will be empowered to effect change in their local communities by sharing their personal experience, and working with the research focus teams on projects over the coming year. These projects will be developed by the participants during the two pre-cruise workshops.

Formal, informal, and traditional knowledge educators for this expedition would be selected from Hawai'i, and during the voyage would have ample opportunity to share the condition of marine resources and knowledge of traditional management practices in their home communities with other participants. The group would also have opportunities to share and exchange ways they educate students and local communities about natural resource conservation.

b.) To accomplish this activity we would ....

Choose several educators, cultural experts, marine managers, scientists, and community leaders from Hawaii. These individuals would be selected with input from their local communities. Well qualified individuals will have a demonstrable track record of leadership within their local communities and professions. Participants chosen for this expedition will be expected to share

their experience with their students, fellow educators, local communities, and peers, as well as initiate and/or support efforts for marine conservation and research in their communities.

Participants would attend two pre-cruise workshops to propose, structure and develop projects that they will work on with the researchers in the three primary focus areas (listed below). These projects will be of an interdisciplinary character and thus will integrate knowledge from the participants as well as the researchers to embrace traditional and Western scientific methods of understanding. The participants will also meet on O'ahu for three days prior to departure for training in safety, Best Management Practices in the Monument, and natural and cultural history of Papahānaumokuākea. This training would be conducted by Monument co-trustees as well as expedition partners such as Waikikī Aquarium, Hanauama Bay, the Office of Hawaiian Affairs (OHA), Monument research community and others. Participants would also meet with previous members of education expeditions to Papahānaumokuākea and be introduced to the "Alaka'i" or Ambassadors to the Monument who would share their experience and welcome this new group into the growing community of researchers and educators with kuleana of stewardship for this special ocean region. The Alaka'i program was born out of the Midway Education Program Visioning session held in January of 2008, and is a program that envisions a hui of education and community leaders who have taken on the personal goal of spreading awareness of the NWHI while utilizing the lessons these "kūpuna" islands have to teach us to enhance stewardship in our local communities.

While in the Monument activities conducted would include swimming and snorkeling at Nihoa, Mokumanamana and at French Frigate Shoals, possible shore access at Tern Island, Nihoa, and Mokumanamana, working with and learning from researchers with expertise in the NWHI, and learning from each other about marine and terrestrial conservation issues in the participant's respective regions. Participants would rotate between three western and cultural researcher pairs focusing around research currently undertaken in three areas: 1) 'Opihi (traditional cultural monitoring and observation and western scientific monitoring methods), 2) Shark biology (e.g. tagging and tracking) and cultural significance related to sites within Papahānaumokuākea and 3) Monitoring and mapping of Nihoa and Mokumanamana Native Hawaiian cultural sites.

Participants would be expected to write blogs of their experience, conduct interviews, communicate with media, collect imagery, and where possible interact with students and communities in their local areas. Tools for communication as well as training in use of these tools would be provided to participants prior to, and during the cruise.

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

Continuing to build upon the educational support base for Papahānaumokuākea and develop new ideas for integrating Western science, traditional knowledge and educational techniques. This permit application relates directly to the Monument Management Plan and is described in the Ocean Ecosystem Literacy Action Plan, Activity OEL 1.5: *Continue Teacher and Class-at-Sea programs on an annual basis*: "Annual expeditions will be planned in conjunction with education opportunities with state and FWS partners." (PMNM MMP Vol 1, p.288). It also helps to meet Activity MCS-3.3: *Include an educational component in marine research expeditions*, and MCS-3.4: *Use materials gathered and created through research to develop*

*orenhance education and outreach products* by connecting educators , community leaders and cultural experts with the three research focus areas onboard the expedition. Several additional MMP activities are also addressed by this expedition, they are:

Activity NHCH-3.1: *Assess Monument cultural resource capacity.*

Activity NHCH-3.2: *Increase knowledge base of Native Hawaiian values and cultural information through “in-reach” programs for research managers.*

Activity NHCH-4.2: *Develop and implement specific preservation and access plans, as appropriate, to protect cultural sites at Nihoa and Mokumanamana.*

Activity NHCH-5.3: *Integrate Native Hawaiian values and cultural information into the Monument permittee education and outreach program.*

These activities are also described in the Monument Management Plan EA, “The natural environment would be protected and the strong cultural and spiritual ties of Native Hawaiians to the NWHI would be maintained through educational expeditions to the NWHI. An example of this is activities that continue to provide educational opportunities for teachers and students at the NWHI (OEL-1.5, OEL 1.8). Through public outreach, the Monument could garner public support for protecting and properly managing cultural and historic resources. This could result in beneficial effects on cultural and historic resources. (PMNM MMP Vol 2, p. 197).

**Other information or background:** The structure for this expedition would be similar to previous education focused expeditions conducted in 2005 and 2008 for which the applicant (Collins) was also the Chief Scientist. The primary difference is that this expedition would emphasize interdisciplinary approaches to learning and sharing of information, with a tighter integration between Western science and Native Hawaiian methods of understanding, interpreting and managing natural resources.

## **Section A - Applicant Information**

### **1. Applicant**

Name (last, first, middle initial): Collins, Vincent, A

Title: NOAA/OMNS/Papahānaumokuākea Marine National Monument Education and Technology Coordinator

**1a. Intended field Principal Investigator (See instructions for more information):**  
Vincent A. Collins

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

[REDACTED]

For students, major professor's name, telephone and email address:

**3. Affiliation (institution/agency/organization directly related to the proposed project):**

National Oceanic and Atmospheric Administration (NOAA) / National Ocean Service (NOS) /  
Office of National Marine Sanctuaries (ONMS) / Papahānaumokuākea Marine National  
Monument (PMNM)

Department of Interior (DOI) / U.S. Fish and Wildlife Service (USFWS)

State of Hawaii, Department of Land and Natural Resources (DLNR)

Office of Hawaiian Affairs (OHA)

NOAA Office of National Marine Sanctuaries

NOAA Teacher At Sea Program

Phoenix Islands Protected Area (PIPA)

French Marine Protected Areas Agency

**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, Teacher; Jane Doe, Videographer):**

1. Vincent A Collins, PI, and Chief Scientist
2. Randall Kosaki Ph.D., Science Coordinator
3. Hokuāla Johnson, Assistant Coordinator
4. Pelika Bertelman, Educator (University of Hawaii at Hilo)
5. Michelle Kapana-Baird, Educator, Cultural Practitioner (Kaiser High School)
6. Jessica Carew, Educator (Hawaii School for Girls)
7. William Ailā, Cultural Practitioner, Researcher (State of Hawaii DLNR)
8. Chad Paishon, Educator, Navigator, Cultural Practitioner
9. Chris Bird Ph.D., Researcher (Hawaii Institute of Marine Biology)
10. Hank Eharis, Cultural Practitioner, Researcher (Na Mamo o Muole'a)
11. Walter Pu, Cultural Practitioner, Researcher (Na Mamo o Muole'a)
12. Carl Meyer Ph.D., Researcher (Hawaii Institute of Marine Biology)
13. TBN Assistant Researcher for Dr. Meyer
14. Keola Awong, Educator, Cultural Practitioner (Hawaii Volcanoes National Park)
15. Heidi Kai Guth, Marine Manager (Office of Hawaiian Affairs)
16. Russell Amimoto, Educator, Navigator (The Nature Conservancy)
17. Anan Raymond, Archaeologist, Marine Manager (U.S. Fish and Wildlife Service)
18. TBN Marine Manager, Phoenix Islands Protected Area
19. TBN Ethnographer, Marine Manager, French Polynesia
20. TBN Archaeologist, Marine Manager, French Polynesia

**Section B: Project Information**

**5a. Project location(s):**

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

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

Location Description:

Application is for land and ocean – based activities.

**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 activities would provide an opportunity for educators to experience Papahānaumokuākea and learn about the resources of the Northwestern Hawaiian Islands through Native Hawaiian and western research perspectives. Groups of educators and marine managers (formal and informal) would rotate between three western and cultural researcher pairs focusing around ongoing Monument research efforts in the following areas: 1) ‘Opihi (traditional cultural evaluation and western scientific monitoring methods), 2) Shark biology (tagging, tracking) and cultural significance of manō and 3) Monitoring and mapping of Nihoa and Mokumanamana cultural sites.

The proposed activities would aim to bridge the gap between research methodologies and approaches from a western perspective and from a Native Hawaiian perspective. For example, in order to assess ‘opihi populations; the cultural research team might use visual assessments of nearshore areas where ‘opihi are located, whereas the western scientists would more be more likely to use a transect line and count and size each animal encountered. In order to expose educators to western and cultural methodologies, they would be involved in both practices and learn the benefits and drawbacks of different methodologies. In addition, when appropriate, western and traditional scientists would assist on each others’ respective projects in order to gain insight and exposure to different methodologies and perspectives.

Through experiencing Papahānaumokuākea and the different approaches cultural and western researchers bring to their projects and their similarities and differences these educators (and the researchers themselves) would be empowered to bring new dimensions of learning and ideas into their classrooms and communities.

Formal, informal, and traditional knowledge educators for this expedition would be selected from Hawai‘i, and during the voyage would have ample opportunity to share the condition of marine resources and knowledge of traditional management practices in their home communities with other participants. The group would also have opportunities to share and exchange ways they educate students and local communities about natural resource conservation.

**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?

All activities contained in this permit application were permitted over prior years and have demonstrated no impact on Monument cultural, natural and historic resources. All consultations (e.g. Section 106 NHPA) and compliance requirements would be completed prior to departure.

There will be a group of Native Hawaiian practitioners / researchers on this voyage who are experienced in proper protocol and will help to ensure the entire group enters Papahānaumokuākea with proper intent and that all resources are treated with respect and care. The Papahānaumokuākea Native Hawaiian Cultural Working Group will be consulted on this permit application to ensure everything is properly planned and implemented.

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?

This activity seeks to provide a truly interdisciplinary experience to educators / community leaders by allowing them to interact with western scientists and cultural researchers studying and monitoring the same resources (e.g. ‘opihi, sharks, and cultural sites) in the field.

This activity is part of the following Monument Management Plan Action Plans:

- NHCH 2.3: Facilitate cultural field research and cultural education opportunities annually;
- NHCH 2.6: Continue to facilitate Native Hawaiian cultural access;
- NHCH-3.1: Assess Monument cultural resource capacity;
- NHCH-3.2: Increase knowledge base of Native Hawaiian values and cultural information through “in-reach” programs for research managers;
- NHCH-4.2: Develop and implement specific preservation and access plans, as appropriate, to protect cultural sites at Nihoa and Mokumanamana;
- NHCH-5.3: Integrate Native Hawaiian values and cultural information into the Monument permittee education and outreach program;
- MCS 3.3: Include an educational component in marine research expeditions;
- MCS 3.4: Use materials gathered and created through research to develop orenhance education and outreach products
- OEL 1.5: Continue Teacher and Class-at-Sea programs on an annual basis; and
- CBO 3.3: Continue to sseek out and support partnership opportunities that focus on Oceania-related issues.

This permit application relates directly to the Monument Management Plan and is described in the Ocean Ecosystem Literacy Action Plan, Activity OEL 1.5: *Continue Teacher and Class-at-Sea programs on an annual basis*: “Annual expeditions will be planned in conjunction with educations oppourtntieis with state and FWS partners.” (PMNM MMP Vol 1, p.288).

These activities are also described in the Monument Management Plan EA, “The natural environment would be protected and the strong cultural and spiritual ties of Native Hawaiians to the NWHI would be maintained through educational expeditions to the NWHI. An example of this is activities that continue to provide educational opportunities for teachers and students at the NWHI (OEL-1.5, OEL 1.8). Through public outreach, the Monument could garner public

support for protecting and properly managing cultural and historic resources. This could result in beneficial effects on cultural and historic resources. (PMNM MMP Vol 2, p. 197).

Per 7a above, all activities obtained in this permit application were permitted over prior years and have demonstrated no impact on Monument cultural, natural and historic resources. All consultations (e.g. Section 106 NHPA) and compliance requirements would be completed prior to departure. All personnel named in this permit would have ample pre-access training and tests (e.g. snorkeling and hiking on steep, rugged terrain) prior to entering Papahānaumokuākea. Activities proposed in this application would have no cumulative effect.

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.

There is no practicable alternative to conducting the activity within the Monument. Papahānaumokuākea provides sharp contrast to the Main Hawaiian Islands and the communities in which the participants live. The pristine nature of Papahānaumokuākea and the interdisciplinary approach to this voyage would serve to inspire and empower educators, practitioners, and researchers alike to complement their current education / leadership styles with new, innovative ideas which could include comparing and contrasting western / cultural approaches to looking at the health of difference species and ecosystems and the definition of “healthy” from western vs. cultural perspectives.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?

Educational expeditions are necessarily limited to reduce impact of human presence, but a minimal level of presence by individuals who have demonstrable track records as change agents in their communities is acceptable given that the cumulative beneficial impact of sharing of their experience would help improve overall human relations to their natural environments. This human connection is important to help build a contingent of advocates for ongoing protection of the Monument, and to affect changes in how we relate to our local environments. There would be no adverse impacts incurred as a result of the proposed activities and the educators making personal connections to Papahānaumokuākea and it is required that they return from this experience and share what they learned.

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

Ten days is just enough to experience a diversity of habitats in Papahānaumokuākea – from basalt marine ecosystems (Nihoa and Mokumanamana) to nearly pristine coral reef and native terrestrial areas (Nihoa, Mokumanamana and French Frigate Shoals) and for some, land-based observations and monitoring Native Hawaiian cultural sites.

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

The Chief Scientist and Principal Investigator (PI) on this permit application (Collins) conducted similar expeditions during three previous trips to the Monument, and has worked for the Monument for the last eight years. The PI has also been engaged in developing many of the protocols designed to limit impact and has partnered with other groups to help conduct safety training for participants to help evaluate their comfort level in the water and physical ability.

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.

This is a fully-funded NOAA activity and conducted under the Federal government. The federal government is self-insured.

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.

The PI is fully capable of leading a team of educators to Papahānaumokuākea to experience research and management of natural resources through interacting with interdisciplinary teams (cultural and western researchers). As previously stated, the aforementioned projects (shark monitoring and tagging, 'opihi traditional and western monitoring and monitoring and mapping of cultural sites on Nihoa and Mokumanamana), were undertaken in the past with no impact on cultural, natural or historic resources. All personnel named in this permit would have ample pre-access training and tests (e.g. snorkeling and hiking on steep, rugged terrain) prior to entering Papahānaumokuākea.

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

This activity would be undertaken aboard NOAA Ship HIIALAKAI which is outfitted with a type-approved, working vessel monitoring system.

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

There are no factors that would make the issuance of a permit for this activity inappropriate. The PI is a repeat permittee and has complied with all permit conditions and reporting requirements in the past.

## **8. Procedures/Methods:**

### Shark Education / Research

Participants would accompany shark scientist Dr. Carl Meyer (permit application pending) and cultural research experts into the field on tagging, monitoring and observation activities. Methods for capturing and tagging sharks and fishes are outlined in Dr. Meyer's permit

application (application number PMNM-2010-019: PDF version located at: [http://papahanaumokuakea.gov/resource/app/pmnm\\_2010\\_019a.pdf](http://papahanaumokuakea.gov/resource/app/pmnm_2010_019a.pdf)). All activities would be conducted off small boats (Ambar or Safeboats) and would allow participants to be briefed on topics ranging from the movement patterns of top predators to mo‘olelo and cultural significance of certain areas in Papahānaumokuākea related to sharks and other fishes.

#### ‘Opihi Education / Research

Participants would accompany ‘opihi scientist Dr. Chris Bird and cultural researchers Hank Eharis and Walter Pu aboard small boats to observe and snorkel around ‘opihi monitoring sites on Nihoa, Mokumanamana and La Perouse Pinnacle while the research team conducts its monitoring activities (see methodology below). Participants would observe the researchers conducting monitoring activities (e.g. taking measurements and observations of ‘opihi habitat), but not access the nearshore areas for the ‘opihi project. Participants would receive briefings by researchers on both traditional cultural ‘opihi monitoring techniques and the cultural significance of ‘opihi and western monitoring / genetic research activities.

#### *Monitoring Methodology:*

- Visual assessments of nearshore areas (intertidal areas, nothing beyond the “splash zone”) where ‘opihi are located;
- Placement of temporary belt transects in 10 foot increments;
- Assess, count, and record number, species, and class size, population density, rigosity, species range, community structure and distribution, substrate type, limu type/density, crustose/turf/marcoalgae proportions, other species proportions/ratio (e.g. ha‘uke‘uke), presence of natural predators, freshwater input, etc.;
- Use of digital camera and wet/dry notes to record observations.

To complete this project, the research team(Bird, Eharis, and Pu) would require access to nearshore areas that contain ‘opihi habitat (e.g. La Perouse Pinnacle). The research team would adhere to all Monument requirements (e.g. cessation of work if Hawaiian monk seals are encountered, adhering to Monument quarantine requirements and gear disinfection protocols) while undertaking this project.

#### Archaeology Education / Research

Participants including international archaeologists and an ethnographer from Phoenix Islands Protected Area and the French Marine Protected Areas Agency would accompany Hawaiian cultural researchers and a U.S. Fish and Wildlife Service archaeologist (Raymond) on Nihoa and Mokumanamana to observe cultural sites on both islands for a comparison between cultural sites located on the aforementioned islands to cultural sites in their home communities.

Subject to further consultation with the Monument’s Native Hawaiian Cultural Working Group and Monument Management Board, the following projects might be appropriate on Nihoa and Mokumanamana and are part of this permit application with the understanding that further consultation and discussion is required:

1. Nihoa: Nk-20/Campsite restoration, stabilize/restore the retaining wall, remove sign/debris, and identify nearby but alternate camping tent/cot locations;
2. Nihoa: Remove weather stations at Site NK-8 and site NK-90 and reinstall in alternate off-site locations;
3. Nihoa: Record, infield analyze, map artifacts and features at site Nk-18, 19;
4. Nihoa: Map, infield analyze, record site complex Nh-56, 57, 58, 59, 60, 61, 62 in East Valley;
5. Mokumanamana: Remove debris (lumber, wire, old battery) at Site Nh-1 and others;
6. Mokumanamana: Document astronomical alignments and make solstice observations at select sites (requires overnight stay); and
7. Mokumanamana: Map and record in more detail ki'i workshop site, artifacts.

Personnel would abide by all quarantine protocols while on both islands including freezing new gear 72 hours prior to accessing either island, and walking in single-file (on each other's footprints) to avoid interaction with ground nesting seabirds. Personnel authorized to access Nihoa and Mokumanamana would be "tested" on their hiking abilities, as well as ability to follow directions, such as staying together in one tight group while hiking, and also avoiding any bird or egg disturbance, prior to accessing the Monument by hiking up and down the Makapu'u tide pool trail. This activity is also subject to successful completion of a Section 106 National Historic Preservation Act consultation.

#### Informal Presentations, and Discussion

Nightly informational presentations and informal discussions would be held aboard NOAA Ship HI'IALAKAI for further interaction between educators and researchers and between the western and cultural researchers themselves.

**NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding, as a customized application will be needed. For more information, contact the Monument office on the first page of this application.**

#### **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: No collections are necessary to accomplish these activities.

Scientific name:

# & size of specimens:

Collection location:

Whole Organism  Partial Organism

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

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

• Specific site/location:

• Is it an open or closed system?  Open  Closed

• Is there an outfall?  Yes  No

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

• Will organisms be released?

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

**11. Is your proposed activity based on a State Department of Education Standards Based Curriculum? If so, describe:**

**12. If applicable, describe how you are collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere?**

Activities conducted during this voyage are not duplicative of any other activities.

**13. What materials, products or deliverables will be developed as a result of your proposed activity? Provide a time line for write-up and publication of information or production of educational materials:**

Blogs and other communications will be posted from the ship during the expedition. These will be posted to [www.hawaiianatolls.org](http://www.hawaiianatolls.org) among other sites. Educators will create lesson plans and activities while onboard. Images and video will be collected while onboard. All participants will be required to produce appropriate products and conduct at least 3 presentations.

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

Laptops  
Digital microscopes  
Underwater camera and video equipment  
MP3 recorders  
Videoconferencing equipment

**15. List all Hazardous Materials you propose to take to and use within the Monument:**  
N/A

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

**17. List all Applicants' publications/references directly related to the proposed project:**  
Primary publications can be found on:  
[www.hawaiianatolls.org](http://www.hawaiianatolls.org)

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.

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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