

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

May 9, 2014

Board of Land  
and Natural Resources  
Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Native Hawaiian Practices Permit to Shauna Kēhaunani Springer, Nā Maka o Papahānaumokuākea and Conservation International - Hawai‘i Fish Trust, for Access to State Waters to use Traditional Ecological Knowledge to Examine Intertidal Ecosystems Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument Native Hawaiian practices permit to Shauna Kēhaunani Springer, Nā Maka o Papahānaumokuākea and Conservation International - Hawai‘i Fish Trust, pursuant to § 187A-6, Hawaii Revised Statutes (HRS), chapter 13-60.5, Hawaii Administrative Rules (HAR), and all other applicable laws and regulations.

The Native Hawaiian practices 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

The activities covered under this permit would occur between June 1, 2014 and May 31, 2015.

The applicant and the proposed activities are a renewal of work previously permitted and conducted in the Monument. New proposed activities include consumption of additional intertidal resources harvested in the Monument.

INTENDED ACTIVITIES

The applicant proposes to examine the basic ecology of ‘opihi populations and intertidal ecosystems with the NWHI by making keen observations of the environment and

interactions by understanding connections with atmospheric and seasonal cycles from the Native Hawaiian prospective.

This applicant would use Native Hawaiian protocol and practice, based on traditional knowledge, to assess the environment, which would be integrated with scientific ecological data. Native Hawaiian observations include using all senses to note activities in the sky, land, and ocean. A standard opihi monitoring protocol that is inclusive of Hawaiian methods of monitoring has been developed, and would continue to be refined, to monitor opihi populations in the Monument, and selection locations on Hawaii Island and Maui. Documenting activities and recording connections between observations would highlight relationships and possible dependencies between reoccurring events and activities. Observations may focus on the following:

1. Sky observations would include looking at cloud formations, noting wind direction/strength and what time it changes, visibility of the horizon, bird activity, other weather related observations such as rain or rainbows, the rising and setting of the moon and sun, the moon phase, and the stars.
2. Land observations would include observing what plants are flowering, seeding, or fruiting; new growth; what animals are reproducing; precipitation; soil moisture; bird arrival and departure; and any other animal behaviors.
3. Ocean observations would include noting the tide level and time; waves and currents; identify behavior of invertebrates, macroalgae (limu), and fish in the intertidal environments; noting any spawning or aggregation of species; and noting any juveniles and newly recruited species.

Harvest and consumption (within the Monument) of intertidal invertebrates and limu would occur under this permit application. The following table outlines harvest/consumption details at all four island locations:

Intertidal Invertebrate Resource Consumption List

Common name	Hawaiian name	Scientific name	Number or volume collected <sup>1</sup>	Size
Thin-shelled rock crab	'a'ama	<i>Grapsus tenuicrustatus</i>	22 per island / 88 total	3 inches or larger
Spotted drupe	makaloa	<i>Drupa ricina</i>	22 per island / 88 total	½ inch or larger
Black nerite	pipipi	<i>Nerita picea</i>	22 per island / 88 total	½ inch or larger
Open drupe	pūpū'awa	<i>Thais aperta</i>	22 per island / 88 total	½ inch or larger
Helmet urchin	hā'uke'uke	<i>Colobocentrotus atratus</i>	22 per island / 88 total	2 inches or larger

<sup>1</sup> A maximum of 176 'opihī shells may be removed from the Monument with the consumption of makaiauli and 'ālinalina.

Common name	Hawaiian name	Scientific name	Number or volume collected <sup>1</sup>	Size
Black-foot 'opihi	makaiauli	<i>Cellana exarata</i>	22 per island / 88 total	1 ¼ inch or larger
Yellow-foot 'opihi	'ālinalina	<i>Cellana sandwicensis</i>	22 per island / 88 total	1 ¼ inch or larger
None, <i>Bonnemaisoniaceae</i> family	limu kohu	<i>Asparagopsis taxiformis</i>	Up to 1 small "snack size" ziplock bag (approx. 100g)	Not applicable
Sea lettuce, <i>Ulveae</i> family	pālahalaha	<i>Ulva fasciata</i>	Up to 1 small "snack size" ziplock bag (approx. 100g)	Not applicable

This project would be a collaboration of efforts from Na Mamo o Muole'a, The Nature Conservancy, Hawai'i Institute of Marine Biology, Na Maka o Papahānaumokuākea, Conservation International-Hawaii Fish Trust, Texas A&M and the NOAA Papahānaumokuākea Marine National Monument. This activity would benefit the management of the Monument as it facilitates cultural access, use, and understanding of the place. This proposal serves as an international model for the integration of traditional ecological knowledge base with that of western "scientific method" approach. This highly integrated trans disciplinary approach lies at the core of the Monument management; these proposed activities provide knowledge and experience that moves the Monument management forward and allows for comprehensive decision making.

The activities proposed by the applicant directly support the Monument Management Plan's priority management need under 3.1 – Understanding and Interpreting the NWHI, 3.1.2 - Native Hawaiian Culture and History Action Plan (NHCH), Activities NHCH-2.2: Support Native Hawaiian cultural research needs and NHCH-2.3: Facilitate cultural field research and cultural education opportunities. Both Activities encourage partnerships and the facilitation of research and educational opportunities with Native Hawaiian organizations (PMNM MMP Vol 1, p. 135).

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

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving monument resource
- Discharging or depositing any material or matter into the Monument
- 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

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 March 17, 2014, 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. The applicant checked "filming/photography of protected species;" but does not discuss this activity in the application or reference the BMPs for wildlife viewing. NMFS requests that the applicant confirm they will remain within the BMP distances for any filming or photography of protected species.**

*The applicant would remain within BMP distance for any filming or photography of protected species.*

- 2. How are the activities requested in this permit linked those in the Bertelmann application, as mentioned in the summary and in response to question 14?**

*The applicant states that Pelika is listed as a participant this year. If her permit amendment is issued and if there is time to conduct activities under her permit, the applicant will do so.*

- 3. The publication list only includes 1 publication, from 2011 work outside the Monument. What publications/presentations have been made on the results of the 2012/2013 work?**

*The applicant states that each year a presentation is given to the CWG and local fishing communities about the findings from our research and a summary of activities conducted on the expedition.*

- 4. The application states "in previous applications/amendments and cruises (2012 & 2013 intertidal), organisms harvested under Dr. Chris Bird's research permit have been consumed by Native Hawaiian practitioners, which may also apply to the 2014 permit. We will update the consumption list if this applies to the 2014 cruise." At this time, no updates to the consumption list have been received by MMB Agency reviewers. Could the**

**applicant confirm that no organisms collected under Dr. Bird's permit will therefore be consumed?**

*The applicant states that no organisms collected under Dr. Bird's permit will be consumed.*

**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.
- The proposed activities are in compliance with the National Historic Preservation Act.
- An ESA section 7 consultation was completed July 8, 2011 and remains valid through 2015. On July 3, 2012, consultation was re-initiated to account for the presence of hawksbill turtles, update BMPs, and highlight new aspects of the joint Toonen/Bird permit application and S. Kēhaunani Springer's permit application. A NMFS letter of concurrence was issued on August 27, 2012, to remain valid through 2015.
- 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 PAPA HĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT NATIVE HAWAIIAN PRACTICES PERMIT TO MS. SHAUNA KĒHAUNANI SPRINGER, NĀ MAKA O PAPA HĀNAUMOKUĀKEA AND CONSERVATION INTERNATIONAL - HAWAI'I FISH TRUST, FOR ACCESS TO STATE WATERS TO USE TRADITIONAL ECOLOGICAL KNOWLEDGE TO EXAMINE INTERTIDAL ECOSYSTEMS UNDER PERMIT PMNM-2014-020.")

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

- Monument permits have been issued to the applicant for similar activities in 2011 and 2012 (PMNM-2011-040 and PMNM-2012-052, respectively).
- Similar activities, including cultural monitoring activities on land and intertidal areas, have been previously permitted in the Monument for different applicants (PMNM-2007-024 Kanahale, PMNM-2008-041 Kikiloi-Graves, PMNM-2009-021 Kikiloi-Graves, PMNM-2009-023 Kanahale, PMNM-2009-047 Kawelo, PMNM-2011-036 Kanahale, PMNM-2011-039 Kikiloi-Graves, PMNM-2011-040 Tom, PMNM-2012-038 Anthony, PMNM-2012-052 Springer, and PMNM-2013-026 Anthony). Personnel that would be participating in these activities have participated in past approved permitted activities previously listed.

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 Research 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 Native Hawaiian Practices Permit to Shauna Kēhaunani Springer, Nā Maka o Papahānaumokuākea and Conservation International - Hawai'i Fish Trust, with the following special conditions:

1. This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized research activities must be for noncommercial purposes not involving the use or sale of any organism, by-products, or materials collected within the Monument for obtaining patent or intellectual property rights.

2. The permittee may not convey, transfer, or distribute, in any fashion (including, but not limited to, selling, trading, giving, or loaning) any coral, live rock, or organism collected under this permit without the express written permission of the Co-Trustees.
3. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.
4. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
5. 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.
6. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

Respectfully submitted,



Frazer McGilvray  
Administrator

APPROVED FOR SUBMITTAL



William Aila Jr.  
Chairperson

**Papahānaumokuākea Marine National Monument**  
NATIVE HAWAIIAN PRACTICE 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-2a



## **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:** Shauna Kēhaunani Springer  
**Affiliation:** Nā Maka o Papahānaumokuākea & Conservation International – Hawai'i Fish Trust

**Permit Category:** Native Hawaiian Practices  
**Proposed Activity Dates:** June 2014, still determining exact dates  
**Proposed Method of Entry (Vessel/Plane):** Vessel  
**Proposed Locations:** Nihoa, Mokumanamana, Mokuapapa (French Frigate Shoals / La Perouse Pinnacle), Puhahonu (Gardner Pinnacles)

**Estimated number of individuals (including Applicant) to be covered under this permit:**  
Eleven (11) individuals are to be covered under this permit, co-listed under the Research application submitted by Dr. Chris Bird and Ms. Pelika Bertelmann's Native Hawaiian Practices permit #PMNM 2013-023 (Na Mo'olelo o Papahanaumokuakea) for cultural observations on Nihoa.

**Estimated number of days in the Monument:** 12 days

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

a.) The proposed activity would...

The proposed activity aims to examine the basic ecology of 'opihi populations and intertidal ecosystems within the NWHI by making keen observations of the environment and interactions by understanding connections with atmospheric and seasonal cycles from a Native Hawaiian perspective and to reconnect kanaka maoli to these resources. Through a collaboration with Na Mamo o Muole'a, The Nature Conservancy, Hawai'i Institute of Marine Biology, Nā Maka o Papahānaumokuākea, Conservation International-Hawaii Fish Trust, Texas A&M and the NOAA Papahānaumokuākea Marine National Monument; a standard 'opihi monitoring protocol which is inclusive of Hawaiian methods of monitoring, has been developed (and is continuously being refined) to monitor populations within select locales on Hawai'i Island, Maui,

Kaho'olawe, Moloka'i, Kaua'i and the NWHI. This would be the sixth year collecting data at locations within the NWHI. Consistent with proclamation 8031, these activities will strengthen cultural and spiritual connections to the Northwestern Hawaiian islands and foster the expansion and perpetuation of Native Hawaiian ecological knowledge and research methodologies. This knowledge may be critical as it is observed by local Hawaii residents that 'opihi stocks are generally diminishing in size and number in the main Hawaiian islands, therefore more data in this area may help to curb the decline. In addition, comprehensive surveys of the intertidal zone within the NWHI have never been conducted. The continuation of 'opihi data collection, and comprehensive intertidal surveys (including fishes, algae and invertebrates) using Native Hawaiian ecological knowledge and methodologies coupled with western science will help to contribute to the overall health of Papahānaumokuākea.

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

To accomplish this activity we will utilize Native Hawaiian protocol and practice, based on traditional knowledge and methodologies, to assess the environment, which will be integrated with the scientific ecological data. Native Hawaiian observations include using all senses by using your "eight eyes" makawalu (Kanahele) to note activities in the sky, land, and ocean and to connect these elements to our daily lives. Not only is it important to make observations of these elements and how they relate to natural resources, it is also vitally important to reconnect to our cultural spirituality by consuming intertidal resources that are critical to the survival of kanaka maoli. Documenting activities and recording connections between these events will highlight relationships and possible dependencies between reoccurring events and activities over seasons and between years.

- Sky observations include looking at cloud formations, noting wind direction/strength and what times it changes, visibility of the horizon, bird activity, other weather related observations such as rain or rainbows, the rising and setting of the moon and sun, the moon phase, and stars.
- Land observations include looking at any plants that are flowering, seeding or fruiting, new growth, animals reproducing, precipitation and soil moisture, bird arrival and departure and any other animal behaviors. Land observations from the main Hawaiian Islands during the expedition may also be useful to help remember activities in the NWHI during that time. For example, we notice hala fruiting here on the main islands and can relate that in the Northwestern Hawaiian Islands, this is the season when juvenile iwa are still in the nest.
- Ocean observations include noting the tide (high/low and time), waves and currents, identifying and looking at the behavior of invertebrates, limu (algae) and fish in the intertidal environments, noting any spawning or aggregation of species, and noting any juveniles and newly recruited species. (see observation datasheet).

Through these types of observations, one can discover how different the intertidal zone changes between seasons (Kauwela-summer/Ho'oilō-winter). At sites in the MHI, the limu (Crustose Coralline Algae (CCA) and macoalgae) zone expands during the winter, due to the large waves that are generated by winter storms, and decrease during the calm summer months. This allows other organisms such as 'opihi and ha'uke'uke to expand their habitable zone as well. New recruits for 'opihi and ha'uke'uke were observed during the winter season about 1-2 months after a peak spawning event, but wasn't observed during the summer season. The peak spawning period was determined by conducting a gonad study for both 'opihi and ha'uke'uke. These are just a few examples that demonstrate how both western and traditional knowledge can complement each other to obtain both quantitative and qualitative data.

The scientific research methods include laying belt transects to assess class size, population density, community structure, species range, distribution, and rugosity for all organisms within the intertidal zone. A minimum of 20 'opihi population/ intertidal surveys at each island / atoll will be conducted. Statistical analysis of the data will be analyzed at the Hawai'i Institute of Marine Biology & Texas A&M labs. Data analyzed will be useful to local and governmental managers to make effective decisions on managing the resources. See Bird's 2014 Research application for reference.

Consumption of intertidal resources including invertebrates, limu will further support cultural practice and relationship between participants and our islands. Consumption feeds physical, spiritual, and cultural health rooting us in our ancestral ties and customary practices. Consumption allows us to be nurtured and nourished by place and genealogy. Our islands and the resources thriving here are older siblings and customary relationships are based on the reciprocal practice of being fed and cared for by our older siblings while we care for and "feed" them in return. Our presence, activities, oli, observations, surveys, etc feed and care for place further supporting the physical, spiritual and cultural health of our islands and ourselves. Consumption also allows us to interact with place and understanding the network involved to produce a meal, which feeds a community.

Prior to departure to NWHI, the Nā Maka o Papahānaumokuākea will conduct a cultural orientation which will include the harvesting, preparation and consumption of food to introduce and ground all the participants to the importance of feeding a community and the relationship between the natural environment (genealogy) and ourselves.

The research team will work together to apply this integrated monitoring approach. The research team will be comprised of cultural researchers / practitioners, scientists, and managers. To ensure the success of these field studies, the team will conduct appropriate protocol and offer ho'okupu (cultural offerings) to maintain the spiritual integrity of the sites that are visited.

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

This activity will not only add to the current knowledge of the marine environment in the NWHI, it will help to gain a better understanding of the resources by looking at the resources through a Native Hawaiian cultural lens ensuring a holistic approach to interaction and care. It will also help the monument by continuing to re-establish Native Hawaiian ancestral consciousness and awareness with regard to the health and condition of the marine resources. Native Hawaiian protocol and methodology is integrated with western scientific protocol and methodology to better understand the status of intertidal marine resources and helps the Monument strengthen its management of cultural resources and ensures the strong participation of Native Hawaiians in the region's long-term protection. By providing opportunities to conduct cultural research, (cultural) researchers will assist in the recovery of important Native Hawaiian marine management practices and support the use of Native Hawaiian traditional ecological knowledge. Additionally, the permitted cultural practitioners and researchers will be key to the development of an eventual cultural access and monitoring plan for the NWHI.

**Other information or background:**

Additionally this project is also supported by the following activities in the Monument Management Plan, (NHCH-2.1, 2.2, 2.3, 2.5, 2.6, 3.4 and NHCI – 3.1 and 3.2) all of which call for the identification of Native Hawaiian research priorities and access opportunities.

**Section A - Applicant Information**

**1. Applicant**

Name (last, first, middle initial): Springer, Shauna Kēhaunani

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

S. Kehau Springer, Patrick Charles Springer

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

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

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

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

Nā Maka o Papahānaumokuākea & Conservation International – Hawai'i Fish Trust

**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, Diver):**

A maximum of 11 TBD (will be named in the compliance information sheet) individuals comprised of researchers from Hawaii Institute of Marine Biology (HIMB), Texas A&M, cultural researchers / practitioners from the communities of Hana, Kalapana, and Kalaemanō, Nā Maka o Papahānaumokuākea, Monument management staff, and non-governmental partners including The Nature Conservancy & Conservation International-Hawaii Fish Trust would conduct work under this permit

**Section B: Project Information**

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

- |  |  |   |                                     |
|--|--|---|-------------------------------------|
| <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 checked="" type="checkbox"/> Gardner Pinnacles            | <input checked="" type="checkbox"/> Land-based | <input checked="" 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                                   |  |   |                                     |

**Ocean Based**

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

**Location Description:**

Surveys would be conducted below the splash zone within intertidal areas on all basaltic islands that contain 'opihi habitat. The monitoring team would not access any sites beyond the splash zone on all islands.

**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 central purpose of the expedition is to expand and advance traditional Native Hawaiian knowledge in the field of marine conservation and management and continue to bridge the gap between cultural and western research methodologies. The primary objectives of the cultural expedition are to: (1) collect environmental data related to traditional Native Hawaiian marine management; (2) expand the application of traditional Hawaiian environmental monitoring tools and methodologies; (3) increase the knowledge base pertaining to intertidal ecosystems, including 'opihi / ha'uke'uke / limu abundance, health, and reproductive cycles and (4) re-establishing and strengthening cultural ties through feeding and being fed by our environment (genealogy).

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

I don't intend to "target" federally protected species, however through our daily observations we document both land features, living creatures and their behavior that occurs naturally around us.

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?

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 National Historic Preservation Act) and compliance requirements would be completed prior to departure. The activities would adhere to all rules and regulations established by the Monument including adherence to all quarantine requirements, wildlife viewing guidelines, and entry/exit notification procedures where applicable.

The intertidal monitoring / 'opihi team consists of Native Hawaiian practitioners / cultural 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. Native Hawaiian protocols, including oli and mele, will be conducted to re-establish an awareness between people and place. It will also serve to reconnect the Northwestern Hawaiian Islands into the Hawaiian consciousness and worldview. This ceremony/protocol is very important because it establishes a sense of respect and reverence for the environment and all things it encompasses. It also supports a cultural interaction between people (younger siblings) and the islands & resources (older siblings) and prepares participants for that interaction. These protocol and ceremony are necessary to tap into an elevated state of awareness which will support cultural research and participants' openness to "see" properly.

A pre-trip cultural orientation will also be conducted by the Na Maka o Papahānaumokuākea to introduce all participants to the cultural practice of harvesting, preparing and feeding a community. The objective of this orientation is to demonstrate the cultural importance of food and environment, the network and investment of time and community into food, and how it feeds us physically, spiritually, and culturally. The consumption of intertidal resource invertebrates, limu will be conducted with adequate safeguards by not taking more than what is needed to allow participants to practice their culture but without compromising the ecological integrity and natural resources. For example, when harvesting 'opihi we will be mindful to harvest individuals that are larger than the legal size limit of 1 ¼ inch as well as to leave larger 'opihi alone as they are believed to be more fecund. We will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. 'Opihi are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus we are confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting the branches off and leaving the holdfast will be utilized to ensure continual growth after it is harvested. We believe that two traditionally harvested and prepared individuals of each invert species (see appendix 1) per person and a total of one "mini snack-sized zip lock bag" approximately 100 grams of limu (see appendix 2) is appropriate to harvest per island. The Papahānaumokuākea Native Hawaiian Cultural Working Group will be consulted during their meeting about 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?

Per 7a above, all activities obtained in this permit application were permitted over prior years and have previously 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 are experienced with conducting surveys in the intertidal zone and are aware of the risks associated with working in nearshore areas with high wave action. Activities proposed in this application would have no cumulative effect as the applicant is proposing short (1-3 day) survey days at each island, and no negative effects have resulted from previous years surveys within the NWHI.

In addition, 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;

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. There is no other place within the Hawaiian archipelago that can serve as a baseline of abundance for local community-based marine managers due to its remote locale and legal protection status. Because the Northwestern Hawaiian islands are remotely managed, this area serves as an optimal measure to determine expected abundances- as these cultural researchers are engaged in community-based near shore marine management in the main Hawaiian islands. A field study was attempted on Kaho’olawe, however, due to fishing pressures and run-off, the study site was determined to be sub-optimal.

The consumption of intertidal inverts and limu can be conducted outside of Papahānaumokuākea, however there is no alternative to consuming an important cultural resource at a place like Papahānaumokuākea because it allows one to connect to a place on a spiritual level which cannot be done by consuming it elsewhere. This is the reason kanaka maoli can connect to the place they live, because they have a deep and intimate connection to their land, their oceans and to their resources. We cannot whole heartedly connect to Papahānaumokuākea without practicing our culture like we do in other parts of Hawai’i, this is an extension of our daily lives and make up who we are. We will only consume two traditionally harvested and prepared individuals of each invert species (see appendix 1) per person and a total of one “mini snack-sized zip lock bag” approximately 100 grams of limu per island (see appendix 2). The intent is to

malama Papahanaumokuakea by re-connecting ourselves to the place, being present, observe & listen to what she tells us and to allow her to spiritually and physically malama us by consuming resources found there and by giving us 'ike and showing us ho'ailona and experiences found no where else on this planet.

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 end value of the activity outweighs any adverse impacts by safeguarding against the loss of opportunity to expand Native Hawaiian knowledge and re-connect kanaka maoli culturally, physically, and spiritually to Papahanaumokuakea. There is a great need to recover traditional Native Hawaiian marine ecosystem management practices, and as such, the Monument provides an unparalleled venue to accomplish this.

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

Twelve days is the shortest possible duration to conduct intertidal surveys. Twelve days would allow 1-2 days at each island/atoll to conduct surveys and adequate transit time for the vessel.

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

The applicant, Shauna Kēhaunani Springer is qualified to conduct both traditional and scientific surveys because of her knowledge using both methods in prior research projects. Her knowledge of ocean conditions and environments started at a young age, as she would go to the beach to fish, surf and swim. She continued this connection with the ocean through high school and college where she learned more about Hawaiian protocol and culture along with marine biology. In the past five years she has been a part of larger group, Nā Maka o Papahanaumokuakea, that aims to conduct integrated monitoring using traditional knowledge and western science to explore land and ocean environments. Her studies as a master's student looking at the cultural use and ecology of 'opihi densities at Kalaupapa National Historical Park trained her to conduct intertidal and near shore surveys. Her fellowship with the National Park Service not only gave her hands on experience in research and monitoring, she also learned aspects of fisheries management. She has extensive knowledge about traditional knowledge of ocean conditions from the relationships she established with many respected elders that taught her about seasonal cycles and sustainable resource management. In addition to these relationships, Kehau has spent the last six years looking at two systems on the MHI of Hawaii conducting integrated monitoring and assessment. These past six years is the foundation for Kehau to know her environment as her kupuna have so she can make decisions that relate to these places today.

The cultural researchers that will perform various research activities are all trained in traditional near-shore marine management, fishery management, traditional weather observations and working in dangerous near-shore, high wave action areas.

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.

The proposed field activities are funded in full by NOAA, Papahānaumokuākea Marine National Monument. The data workup for all the information collected through this project would also be supported by the Monument Texas A&M and the Hawaii Institute of Marine Biology.

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 methods and procedures employed are widely accepted methods for acquiring data in the marine environment by Native Hawaiian marine practitioners and research scientists. The proposed methodology would not require specialized equipment and would also take into full account the fragility of the Monument's resources.

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

It is highly likely that this activity would be carried out aboard the M/V SEARCHER. SEARCHER is outfitted with a mobile transceiver unit approved by OLE and therefore complies with the requirements of Presidential Proclamation 8031.

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

All permits required for access and conducting cultural observations of the marine environment will be obtained. Also, several members from the Native Hawaiian cultural working group have been consulted regarding the activities to be permitted under this application. Similar to all previous Intertidal Cruise's (2011-2013), a presentation will be provided to the working group both before and after the trip.

#### ADDITIONAL FINDINGS FOR PROPOSED NATIVE HAWAIIAN PRACTICES

k. Explain how the activity is non-commercial and will not involve the sale of any organism or material collected.

The activity is non-commercial. The end-value of the activity is informational and is intended to provide local and governmental managers the information critical to the conservation of these cultural resources.

l. Explain how the purpose and intent of the activity is appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono), and demonstrate an understanding of, and background in, the traditional practice and its associated values and protocols.

The purpose and intent of the proposed activity is appropriate and pono by traditional standards in the Native Hawaiian culture in that the expedition is centered on enhancing traditional marine resource management skills through careful observation. The ability to increase or maintain productivity of a particular kai (fishery) is integral to maintaining traditional Native Hawaiian knowledge and marine management systems; and is therefore consistent with pono marine stewardship tenets.

m. Explain how the activity benefits the resources of the Northwestern Hawaiian Islands and the Native Hawaiian community.

The data collected from these field studies will better enable these cultural researchers / practitioners to understand the biological, spiritual and cultural connections between the NWHI and the main Hawaiian islands. In doing so, researchers will be better equipped to manage their areas in the main Hawaiian islands from which the Northwestern Hawaiian islands will ultimately benefit. Outreach & Education opportunities will be offered and presented to the Native Hawaiian communities and students.

n. Explain how the activity supports or advances the perpetuation of traditional knowledge and ancestral connections of Native Hawaiians to the Northwestern Hawaiian Islands.

The group of cultural researcher / practitioners being selected for this expedition possess intricate knowledge of traditional Native Hawaiian marine management practices in the near shore fishery area within their own ahupua'a. Of equal importance, knowledge gained will be utilized to inform local marine management and conservation education within their home communities. Each practitioner will reflect upon traditional concepts like 'aina momona (bountiful lands), ho'omalu (regulated activities) and kapu (prohibited activities) which are fundamental in traditional Native Hawaiian marine management.

o. Will all Monument resources harvested in the Monument be consumed in the Monument? If not, explain why not.

Yes, all resources harvested for cultural purposes under this Native Hawaiian Practices permit will be consumed in the monument.

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

The cultural research team would make visual assessments of intertidal areas where 'opihi and ha'uke'uke are located. The research team would record substrate type, limu type/density, crustose/turf/macro algae proportions, other species proportions/ratio, clumping of 'opihi, ha'uke'uke, and other intertidal species, presence of natural predators, freshwater input, etc. The team would take wet/dry notes and use digital cameras to record observations. At the end of each day, a discussion will be held to share observations and relationships made with the group. One person will be designated and write all the observations made by the group on one data sheet in order to facilitate the analysis process while observations are still fresh and can be clarified. To complete all of these activities, cultural practitioner / researchers would require access to nearshore areas (below the splash zone) that contain 'opihi habitat (e.g. intertidal zone at Mokumanamana). Cultural practitioners / researchers would adhere to all Monument requirements while undertaking this project.

Cultural harvesting protocols for intertidal invertebrates and limu will be conducted with adequate safeguards by not taking more than what is needed to allow participants to practice their culture but without compromising the ecological integrity and natural resources. Appropriate oli/mele will be conducted prior to arrival and departure on each island to introduce ourselves and our pono intentions as well as to thank each island for their contributions. We believe that two traditionally harvested and prepared individuals of each invert species (see appendix 1) per person and a total of one "mini snack-sized zip lock bag" approximately 100 grams of limu (see appendix 2) is appropriate to harvest per island. Harvesting will supplement meals and may consist of 'opihi, ha'uke'uke, limu, 'a'ama, pipipi, makaloa and pupu 'awa. 'Opihi will be gathered by hand using an 'opihi knife, and we will be mindful to harvest individuals that are larger than the legal size limit of 1 ¼ inch as well as to leave larger 'opihi alone as they are believed to be more fecund. We will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. 'Opihi are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus we are confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting/ pinching off the branches off and leaving the holdfast will be utilized to ensure continual growth after it is harvested. All other invertebrates will be gathered by hand. All inverts will be consumed raw, except pipipi and pūpū 'awa which will be boiled then consumed. Limu will be "cured" and prepared to supplement meals. In addition, 'opihi (*Cellana exarata*, *C. sandwicensis* and *C. talcosa*) collected from various places in the MHI will be brought on the cruise to allow participants the opportunity to connect with resources from the place in which they live

and to Papahānaumokuākea. All 'opihi brought into Papahānaumokuākea will be treated prior to departure to safeguard the PMNM from Alien Invasive Species. For example, the opihi will be shucked and frozen in the MHI, with only the frozen meat entering PMNM so that no invasive limu spores from the MHI would enter PMNM.

**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):**

Consumption of invertebrates (#6,7) and Limu (#8, 9) collected under Dr. Chris Bird's 2014 research permit may also be consumed by cultural practitioners under this Native Hawaiian practices permit. This has been accepted and approved in the past (2012 & 2013 Intertidal permits/cruises). Updates on total #'s will be provided when Dr. Bird confirms totals for his 2014 permit application.

Common name:

1. Thin-Shelled Rock Crab
2. Spotted Drupe
3. Black Nerite
4. Open Drupe
5. Helmet Urchin
6. Black-Foot 'Opihi
7. Yellow-Foot 'Opihi
8. None, Bonnemaisoniaceae Family
9. Sea lettuce, Ulvaceae Family

Scientific name:

1. *Grapsus tenuicrustatus*
2. *Drupa ricina*
3. *Nerita picea*
4. *Thais aperta* (formally *Purpura aperta*)
5. *Colobocentrotus atratus*
6. *Cellana exarata*
7. *Cellana sandwicensis*
8. *Asparagopsis taxiformis*
9. *Ulva fasciata*

Hawaiian name:

1. 'A'ama
2. Makaloa
3. Pipipi
4. Pūpū 'Awa
5. Hā'uke'uke

6. Makaiauli
7. 'Ālinalina
8. Limu Kohu
9. Pālahalaha

# & size of specimens:

1. 'A'ama:
  - a. Up to 22 per island/location for a total up to 88
  - b. 3 inches or larger
2. Makaloa
  - a. Up to 22 per island/location for a total up to 88
  - b. ½ inch or larger
3. Pipipi
  - a. Up to 22 per island/location for a total up to 88
  - b. ½ inch or larger
4. Pūpū 'Awa
  - a. Up to 22 per island/location for a total up to 88
  - b. ½ inch or larger
5. Hā'uke'uke
  - a. Up to 22 per island/location for a total up to 88
  - b. 2 inches or larger
6. Makaiauli
  - a. Up to 22 per island/location for a total up to 88
  - b. 1 ¼ inch or larger
7. 'Ālinalina
  - a. Up to 22 per island/location for a total up to 88
  - b. 1 ¼ inch or larger
8. Limu Kohu
  - a. Up to 1 small "snack size" ziplock full (approx. 100g)
9. Pālahalaha
  - a. Up to 1 small "snack size" ziplock full (approx. 100g)

Collection location:

Nihoa, Mokumanamana, Mokupapa and Puhahonu

Whole Organism for all invertebrates  Partial Organism for limu

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

All specimens will be consumed while in PMNM.

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

- 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?

no

- Will organisms be released?

no

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

n/a

**11. Describe any fixed or semi-permanent structures or installations, or cultural offerings you plan to leave in the Monument:**

Offerings of pa'akai(salt) and wai (water) may remain in the Monument.

**12. List all specialized gear and materials to be used in the proposed activities:**

Snorkeling gear, transect line, data sheets, 'opihi knives, etc.

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

none

**14. Describe collaborative activities to share samples, cultural research and/or knowledge gained in the Monument:**

This permit application has been submitted in conjunction with a joint permit application submitted Dr. Chris Bird of Texas A&M University, Corpus Christi. All samples and methodologies discussed in this permit application are directly related Dr. Bird's respective permit application. This project will continue to bridge the gap between cultural and western research.

This permit application has also been submitted in conjunction with Ms. Pelika Bertelmann's Native Hawaiian application #PMNM 2013-023 (Na Mo'olelo o Papahānaumokuākea). Methodologies to collect seasonal observation of Nihoa will help to add to our understanding of makua-makai environments and how activities in all sections of the environment influence each other and are inter-connected.



In addition, cultural researchers will present preliminary findings to their respective communities (Hana, Kalapana, Kipahulu etc.) and marine resource managers under this permit will continue to inform and update the public (e.g. at NWHI Coral Reef Ecosystem Reserve Advisory Council meetings) and the Native Hawaiian Cultural Working Group on all findings.

**15a. Will you produce any publications, educational materials or other deliverables?**

Yes  No

**15b. Provide a time line for write-up and publication of information or production of materials:**

A summary and annual report from this cruise will be provided to Monument management upon conclusion of the cruise.

**16. If applicable, list all Applicant's publications directly related to the proposed project:**

Tom, S.K. An investigation of the cultural use and population characteristics of 'opihi (Mollusca: Cellana spp.) at Kalaupapa National Historical Park. University of Hawaii MS Thesis. May 2011.

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.



March 7, 2014

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
- n/a Statement of information you wish to be kept confidential
- n/a Material Safety Data Sheets for Hazardous Materials

Appendix 1 Intertidal Invertebrate Resource Consumption List

Species	Hawn Name	Type	Nihoa	Moku mana mana	Mokupapapa	Puhahonu	Total
1. <i>Grapsus tenuicrustatus</i>	'A'ama	Crab	22	22	22	22	88
2. <i>Drupa ricina</i>	Makaloa	Snail	22	22	22	22	88
3. <i>Nerita picea</i>	Pipipi	Snail	22	22	22	22	88
4. <i>Purpura aperta</i>	Pupu 'awa	Snail	22	22	22	22	88
5. <i>Colobocentrotus atratus</i>	Ha'uke'uke	Urchin	22	22	22	22	88
6. <i>Cellana exarata</i>	Makaiauli	Limpet	22	22	22	22	88
7. <i>Cellana sandwicensis</i>	'Alinalina	Limpet	22	22	22	22	88
<b>Total</b>			154	154	154	154	616

\* These are totals for all 11 participants. Also, In previous applications/amendments and cruises (2012 & 2013 Intertidal), organisms harvested under Dr. Chris Bird's research permit have been consumed by cultural practitioners under Native Hawaiian permit which may also apply for 2014 activities. We will update consumption list if this applies to 2014 cruise. Some of the shells from these organisms will be collected and brought back for traditional, cultural and educational purposes.

Appendix 2 Intertidal Macro-algae Resource Consumption List

Species	Hawn Name	Type	Nihoa	Moku mana mana	Mokupapapa	Puhahonu	Total
8. <i>Asparagopsis taxiformis</i>	Limu Kohu	Seaweed	100 g	100 g	100 g	100 g	400 g
9. <i>Ulva fasciata</i>	Palahalaha	Seaweed	100 g	100 g	100 g	100 g	400 g
<b>Total</b>			200 g	200 g	200 g	200 g	800 g

\* These are totals for all 11 participants to share amongst each other (1 bag of 100g per island for each species). Also, In previous applications/amendments and cruises (2012 & 2013 Intertidal), organisms harvested under Dr. Chris Bird's research permit have been consumed by cultural practitioners under Native Hawaiian permit which may also apply for 2014 activities. We will update consumption list if this applies to 2014 cruise.

## **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):**

- 1) Hoku Johnson (Chief Scientist)
- 2) Shauna Kehaunani Springer (PI for NH Cultural Permit)
- 3) Christopher Bird (PI for Research Permit)
- 4) Patrick Springer (Field PI for NH Cultural Permit)
- 5) Pelika Bertelmann (PI for NH Cultural Permit #PMNM 2013-023)
- 6) Limu Expert (Researcher)
- 7) Na Maka o Papahanaumokuakea Rep (Researcher)
- 8) Hana Rep (Researcher)
- 9) Kalapana Rep (Researcher)
- 10) Kipahulu Rep (Researcher)

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

Nihoa Island, Necker Island (Mokumanamana), French Frigate Shoals (Mokupapapa), Gardner Pinnacles (Puhahonu)

**3. Other permits (list and attach documentation of all other related Federal or State permits):**

This permit will be conducted alongside Research Permit Number PMNM-2014-XXX (Bird) and PMNM-2013-023 (Bertelmann: Na Mo'olelo o Papahanaumokuakea)

**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.**

None

**4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information):**

This trip is fully supported by NOAA / NOS / Office of National Marine Sanctuaries, Papahanaumokuakea Marine National Monument and the Hawaii Institute of Marine Biology.

**5. Time frame:**

Activity start: June 2014

Activity completion: Ongoing

Dates actively inside the Monument:

From: 1 June 2014

To: 30 June 2014

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application: Need to confirm Vessel availability

Personnel schedule in the Monument:

A complete itinerary is forthcoming. The project is aiming to spend 1-3 days at each of the aforementioned sites (Nihoa, Mokumanamana, Mokuapapa, and Puhahonu) depending on weather conditions.

**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:**

This project is fully supported by the Monument. The Federal Government is self-insured. In addition the cruise participants will carry emergency evacuation insurance (e.g. DAN insurance or something comparable).

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

- Vessel  
 Aircraft

Provide Vessel and Aircraft information:  
Searcher

**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:

- Tender vessel, Date:
- Ballast water, Date:
- Gear/equipment, Date:
- Hull inspection, Date:

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

Vessel name: SEARCHER

Vessel owner: The Medical Foundation for the Study of the Environment

Captain's name: Jonathan Littenberg

IMO#:192

Vessel ID#:U.S. Coast Guard 1103056

Flag: U.S.

Vessel type: Steel Hull

Call sign: WDA 6100

Embarkation port: Honolulu

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

Length: LOA 96 ft/ Registered 78.1 ft

Gross tonnage: 197

Total ballast water capacity volume (m3): n/a

Total number of ballast water tanks on ship: n/a

Total fuel capacity: 9,600 gallons

Total number of fuel tanks on ship: 6

Marine Sanitation Device: Yes

Type: II

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:

All materials and fluids shall be properly stored in holding tanks while the vessel is in Monument waters and will be properly disposed of upon our exit from the Monument.

Other fuel/hazardous materials to be carried on board and amounts:

Approximately 30 gallons of unleaded fuel in jerry cans for use in the skiffs.

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:

Vessel Monitoring System - Thrane & Thrane Sailor TT-3606XP

VMS Email: 436998398@c12.stratoemobile.net

Inmarsat ID#: 4TT072E62B15

Contact: Jonathan Littenberg (808.225.8982) or Barbara Littenberg (808.221.6156)

\* 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:  
One 16 foot RHIB Zodiac with Yamaha 4 stroke engine or one new 16 foot inflatable Avon with Yamaha 4 stroke tiller engine.

**Additional Information for Land Based Operations**

**11. Proposed movement of personnel, gear, materials, and, if applicable, samples:**  
none

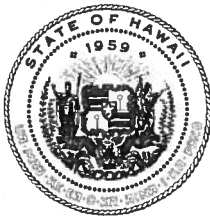
**12. Room and board requirements on island:**  
none

**13. Work space needs:**  
none

**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

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

May 9, 2014

TO: Division of Aquatic Resources File

THROUGH: William J. Aila Jr., Chairperson *[Signature]*

FROM: Frazer McGilvray  
Division of Aquatic Resources *[Signature]*

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHAUNAUMOKUĀKEA MARINE NATIONAL MONUMENT NATIVE HAWAIIAN PRACTICES PERMIT TO SHAUNA KĒHAUNANI SPRINGER, NĀ MAKA O PAPAHAUNAUMOKUĀKEA AND CONSERVATION INTERNATIONAL - HAWAII FISH TRUST, ACCESS TO STATE WATERS TO USE TRADITIONAL ECOLOGICAL KNOWLEDGE TO EXAMINE INTERTIDAL ECOSYSTEMS UNDER PERMIT PMNM-2014-020

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 Native Hawaiian Practices Permit to Shauna Kēhaunani Springer, Nā Maka o Papahānaumokuākea and Conservation International - Hawaii Fish Trust, for Access to State Waters to use Traditional Ecological Knowledge to Examine Intertidal Ecosystems Activities.

Permit Number: PMNM-2014-020

Project Description:

The Native Hawaiian practices permit application, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State waters between June 1, 2014 through May 31, 2015.

The primary purpose of the proposed project would be: (1) collect environmental data related to traditional Native Hawaiian marine management; (2) expand the application of traditional Hawaiian monitoring tools and methodologies; (3) increase the knowledge base pertaining to intertidal ecosystems, including 'opihi / hā'uke'uke / limu abundance, health, and reproductive cycles; and (4) re-establishing and strengthening cultural ties through feeding and being fed by our environment (genealogy).

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CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS



Surveys would be conducted below the splash zone within intertidal areas on all basaltic islands that contain 'opihi habitat. The monitoring team would not access any sites beyond the splash zone on all islands. Researchers would document and record sky, land, and ocean observations looking for connections and relationships between reoccurring events and activities over seasons and between years. Scientific research methods would include belt transects to assess size class, population density, community structure, species range, distribution, and rugosity for all organisms within the intertidal zone. Invertebrates and limu would be consumed in the Monument to further support cultural practice and the relationship between participants and the islands. Additional opihi would be brought into the Monument to compare resources from where the applicant lives to resources in the Monument. All opihi from the main Hawaiian Islands would be treated to safeguard the Monument from alien invasive species by being shucked and frozen so no invasive limu spores would enter the Monument. The time period requested, twelve (12) days, would allow one (1) to two (2) days at each island/atoll to conduct surveys and allow adequate transit time for the vessel. Permitted personnel would be escorted at all times by an approved US Fish and Wildlife (USFWS) escort, experienced and trained to safely access all four island locations with no adverse impact to native species or cultural sites.

Appropriate oli/mele would be conducted prior to arrival and departure on each island to introduce ourselves and our pono intentions as well as to thank each island for their contributions. The research team would record substrate type, limu type/density, crustose/turf/macro algae proportions, other species proportions/ratio, clumping of 'opihi, hā'uke'uke, and other intertidal species, presence of natural predators, freshwater input, etc. The team would take wet/dry notes and use digital cameras to record observations. At the end of each day, a discussion would be held to share observations and relationships made with the group. One person would be designated and would write all the observations made by the group on one datasheet in order to facilitate the analysis process while observations are still fresh and can be clarified. When harvesting 'opihi the applicant would be mindful to harvest individuals larger to the legal size limit of 1 ¼ inch as well as leave larger more fecund 'opihi alone. To harvest limu, the applicant would cut the branches off and leave the holdfast to ensure continual growth after harvest. Offerings of pa'akai (salt) and wai (water) may remain in the Monument.

The activities proposed by the applicant directly support the Monument Management Plan's priority management need under 3.1 – Understanding and Interpreting the NWHI, 3.1.2 - Native Hawaiian Culture and History Action Plan (NHCH), Activities NHCH-2.2: Support Native Hawaiian cultural research needs and NHCH-2.3: Facilitate cultural field research and cultural education opportunities. Activities to support coordinated field operations in the NWHI are addressed in the Monument Management Plan Environmental Assessment (December 2008) which resulted in a FONSI, or a Finding of No Significant Impact. This EA recognizes that “identifying research needs, supporting Native Hawaiian cultural access, and incorporating Native Hawaiian traditional knowledge and associated practices into Monument management” could have beneficial effects on Monument resources (PMNM MMP Vol 2, p.192).

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 March 17, 2014 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 the use of traditional ecological knowledge in combination with western science methodologies to examine intertidal ecosystems, 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 undertaking and precedent to a later planned activity, i.e. the continuation of nearshore traditional and western based ecological monitoring and the associated gonad and genetic studies (application currently in review for Drs. Christopher Bird and Robert Toonen, PMNM-2014-026), the categorical exemption determination here will treat all planned activities as a single action, to the extent possible.

2. The Exemption Class for Basic Data Collection 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 "new transect lines, recording, sampling, and collection...", such as those to be supported by the proposed activities. It has also been interpreted to include Native Hawaiian natural resource observations, such as those proposed. As discussed below, no significant disturbance to any environmental resource is anticipated in observing and sampling of Monument resources. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

To mitigate any impacts of collection activities, the applicant would: When harvesting 'opihi the applicant would be mindful to harvest individuals larger to the legal size limit of 1 ¼ inch as well as

leave larger more fecund ‘opihi alone. To harvest limu, the applicant would cut the branches off and leave the holdfast to ensure continual growth after harvest. The applicant would follow Monument Best Management Practice (BMP) 016 – Activities on Nihoa and BMP 006 – General Storage and Transport to minimize any impacts from activities.

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.

Proposed activities would be a continuation of a proposed project in its sixth year. Activities directly under this permit would be observational and involve collections for consumption. No measurable impacts to the intertidal ecosystem have been observed in previous years and none would be expected from proposed activities.

The cumulative impacts of this permit, in conjunction with western ecological methodologies and collections (application currently in review for Drs. Bird and Toonen, PMNM-2014-026), and additional Native Hawaiian cultural monitoring activities (amendment to approved application for Ms. Pelika Bertelmann, PMNM-2013-023) are also considered. Past projects which have included similar collections and techniques have had no adverse impact. Similar nearshore biodiversity monitoring activities have been permitted and performed within the NWHI. The species targeted for collection in the associated project are ones identified as being abundant and common on every island surveyed to date, for which the estimated population sizes are so large that collection of less than one (1) percent of the population at any site would be sampled. Collections of this size would have no detectable impact. With this in mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected.

The proposed project would be supported by the NOAA contracted vessel, R/V SEARCHER (PMNM-2014-001), from June 19 to July 2, 2014. There would be two other proposed activities that are anticipated to take place on this vessel pending approval of these permit applications.

The other proposed activities, Bird-Toonen (PMNM-2014-026) and Bertelmann (PMNM-2013-023) would also take place in the intertidal areas of these islands at the same time. Bird-Toonen proposes to use western scientific methods to examine biodiversity of the Hawaiian intertidal and shallow subtidal ecosystem, and study the basic ecology of ‘opihi populations at the four island locations. Bertelmann proposes to conduct Native Hawaiian cultural monitoring and subsistence gathering,

focusing on the intertidal and near-shore zones. The three proposed activities, while differing in their approach to understanding this habitat, are the result of collaborations with the same goal of adding to a greater total knowledge base for this region. As such, there would be no duplicative sampling of resources or organisms.

There is the potential that two ships may be in the Monument during this time frame. The NOAA Ship HI'IALAKAI (PMNM-2014-001) (Table 1) and SSV MAKANI OLU (applications currently in review for Bonnie Kahapea-Tanner, PMNM-2014-013 and PMNM-2014-022) (Table 2). There is no anticipated overlap in activities and therefore no associated cumulative impacts between activities from the SEARCHER and activities from the two other vessels. At this time, no other concurrent activities are known. The culmination of this permit, occurring throughout the Monument over several months, is not anticipated to have significant cumulative impacts. The following tables outline the proposed activities on the two vessels:

Table 1: Concurrent projects aboard NOAA Ship HI'IALAKAI

<b>Permit</b>	<b>Purpose and scope</b>	<b>Location</b>
PMNM-2014-005 Ellis-Simon HI'IALAKAI (approved)	This permit allows the NOAA Ship HI'IALAKAI entry into the Monument. Personnel aboard the vessel would be permitted under separate permits	All locations
PMNM-2014-001 Co-Trustee (approved)	This permit allows monk seal field camp operations.	Kure Atoll, Midway Atoll, French Frigate Shoals
PMNM-2014-027 Jacobs (proposed)	The proposed action is to collect video data on marine mammal, marine turtle, seabird colony population dynamics using unmanned aircraft systems (UAS).	Nihoa, Necker Island (Mokumanamana), French Frigate Shoals
PMNM-2014-014 Meyer (proposed)	This proposed action is to conduct top predator research consisting of fishing for various shark and fish species.	All locations

Table 2: Concurrent projects aboard SSV MAKANI OLU.

<b>Permit</b>	<b>Purpose and scope</b>	<b>Location</b>
PMNM-2014-013 Kahape'a-Tanner (proposed)	The proposed action would allow Native Hawaiian youth enrolled in the Hālau Holomoana training program to participate in the voyage of the SSV MAKANI OLU to Mokumanamana and Nihoa.	Nihoa Island, Necker Island (Mokumanamana)
PMNM-2014-022 Kahape'a-Tanner (proposed)	The proposed action would capture still photograph and video footage of activities covered under proposed permit no. PMNM-2014-013 for education and outreach purposes.	Nihoa Island, Necker Island (Mokumanamana)

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.

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.

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

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Date