

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

May 24, 2019

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 Dr. Pualani Kanaka'ole Kanahele,
University of Hawaii at Hilo, Kipuka Native Hawaiian Student Center for Access to State
Waters to Conduct Summer Solstice Cultural Research 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 Dr. Pualani Kanaka'ole Kanahele, 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 activities to occur in the Papahānaumokuākea Marine National Monument (Monument), including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Necker Island (Mokumanamana)

The activities covered under this permit would occur from June 1, 2019 – May 31, 2020.

The proposed activities are a continuation of work previously permitted and conducted in the Monument.

INTENDED ACTIVITIES

Dr. Pualani Kanahele proposes to conduct cultural research activities and protocols during the summer solstice on Mokumanamana in Papahānaumokuākea Marine National Monument (PMNM). Research methods involve five groups of three persons (scholar, practitioner and a celestial expert) who will record observations of celestial movements during the summer solstice in relation to terrestrial focal points on island and elsewhere in the Hawaiian archipelago and Pacific Ocean over the course of three nights. This work will be in conjunction with separately permitted individuals under the direction of Ms. Keomailani Case (PMNM-2019-009). Researchers will also use handheld camera equipment to document celestial movements and archaeological sites. The total group of 20 researchers and vessel crew would access the Monument aboard M/V Searcher operated by non-profit foundation, The Medical Foundation for the Study of the Environment; the traditional voyaging canoe Makali'i and her escort vessel Alaka'i owned and operated by the Nā Kālai Wa'a (separately permitted PMNM-2019-009). Proposed activity dates are from June 20, 2019 – June 23, 2019.

owned and operated by the Nā Kālai Wa‘a (separately permitted PMNM-2019-009). Proposed activity dates are from June 20, 2019 – June 23, 2019.

While in the Monument activities would consist of conducting cultural research and protocols (offering ho‘okupu (gifts of liquid ‘awa), oli (chants) and pule (prayers) in the near shore waters of both Nihoa and Mokumanamana and on land on Mokumanamana in order to strengthen cultural connections to the place; swimming and snorkeling activities to compare the MHI and NWHI marine reef systems; sustenance (federal waters) and subsistence (state waters) fishing, and anchoring overnight on sandy substrate only at Nihoa and Mokumanamana. Similar cultural research expeditions have taken place on Mokumanamana in 2007, 2009, 2011, 2015 in conjunction with the summer (2007 and 2015) solstice, winter solstice (2009), the autumnal equinox (2011).

In order to reduce human impacts to Mokumanamana, the applicant would abide by Monument Special Conditions and Rules for Moving Between Islands/Atolls and Packing for Field Camps (BMP #007). No cooking or fires will be utilized on island. Permitted personnel would be escorted on land at all times by an approved Monument appointed resource monitor, experienced and trained to safely access Mokumanamana with no adverse impact to native species or cultural sites. No more than 17 personnel from both the Kanahale and Case permits (15 researchers and 2 resource monitors) would be present on land at any time. Each team of three individuals will be escorted to their study location and set up camp after determining that no protected species will be adversely affected. Each team will have a radio to maintain communications with remaining participants and the M/V Searcher. All solid wastes will be removed from the island. Landing on the island would only occur when no Hawaiian monk seals and sea turtles are present at the landing sites. Furthermore, all personnel would avoid all areas where Hawaiian monk seals and sea turtles haul out.

Fishing activities would be conducted by trolling a lure on a single monofilament handline and fishing poles for 20 meters. The four lines would be monitored at all times and personnel would abide by – Seabird Protocols Necessary for Conducting Trolling Research and Monitoring (PMNM Best Management Practice #008) to reduce impacts to seabirds. All fishing gear would be removed from the water if any Hawaiian monk seals or sea turtles are observed. All fish caught would be consumed within the Monument.

All activities will be non-intrusive and performed in a culturally appropriate manner while adhering to Monument Best Management Practices (BMP). To safeguard Monument resources the applicant would abide by the following BMPs while conducting the aforementioned activities within the PMNM: Best Management Practices for Boat Operations and Diving Activities (BMP #004); Disease and Introduced Species Prevention (BMP #011); Minimizing Impacts to Land Birds (BMP # 012).

The activity would help the Monument to better understandings of the historical cultural usage of Mokumanamana while also supporting Native Hawaiian cultural access to reconnect with natural and spiritual resources. The activities directly support the Monument Management Plan (MMP), and is described in the Native Hawaiian Culture and History (NHCH) Action Plan under activities, NHCH-2.2: *Support Native Hawaiian*

cultural research needs, NHCH-2.3: Facilitate cultural field research and cultural education opportunities annually, and NHCH-2.6: Continue to facilitate Native Hawaiian cultural access (PMNM MMP Vol. 1, p. 135-136).

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

- Anchoring a vessel
- Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- Subsistence Fishing

REVIEW PROCESS

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 has been posted on the Monument Web site since March 20th, 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:

1. How many/what type of structures are intended to be constructed while on Mokumanamana?
0 structures are to be constructed while on Mokumanamana. The researchers will take tarps, sleeping bags, and bevy sacks to sit on. The researchers will find their point of observations prior to sunset and still on that site for the entire night. The research will occur throughout the entire night.
2. How will human waste be handled on land?
EKF is planning to utilize WAG bags while on the island and will take waste off of the island to be deposited with the vessel trash.
3. The research includes a mixed methods approach and includes traditional knowledge (both archival and empirical data), field studies, and more. It seems that the proposed research methods are employing multiple triangulations. In regards to the overnight activities, you express five (5) groups of three (3) researchers/field technicians. Can you share more about the roles of each researcher/field technician and how that contributes to the success of the proposed project?

Our previous research data indicates that each hill on Mokumanamana contains more than a single site. Each site aligns and triangulates with different celestial activities and locations. As a safety measure and to limit movement at night, each individual will be assigned to a specific site and will situate themselves at their assigned site to accomplish their observations and data collection. Within the team of three will be a former researcher who participated in at least two of our research expeditions; a navigator/crew member who understands star names, declinations, degrees and can plot rhumb lines based on celestial movement; and a photographer who has been trained to recognize and capture celestial activity over a site. Each researcher will depart the island an hour after sunrise to meet, share data and rest on the vessel. Each researcher will return to the island a few hours prior to sunset to return to their assigned sites for the evening observations.

Our aim is to collect as much alignment data as possible. The EKF has made significant findings throughout the ten-year's of research on Mokumanamana, however it wasn't until the last three years of conducting research on Maunaloa with similarly constructed sites that information was discovered within chants. The detailed information provided the rationalization for the construction of sites on Maunaloa and connected particular chiefly lineages to those sites. The research team is excited to be able to make similar findings on Mokumanamana.

COMMENTS:

1. NMFS appreciates the special cultural significance Nihoa and Mokumanamana have to the Hawaiian people. Our agency must make it clear that Nihoa and Mokumanamana are also important areas to protected species, most importantly the critically endangered Hawaiian monk seal and the green sea turtle. For this reason, our agency provides the following comments which we hope will allow the permit applicants to take full advantage of the opportunity to explore their cultural heritage, but at the same time avoid or minimize interactions between the applicants and monk seals and turtles.

Understood

2. Permit applicants should be advised to avoid areas on Nihoa and Mokumanamana that have been historically monk seal haul-out areas as much as possible. These areas are sector 1 and 2 on Nihoa (if applicants land due to bad weather) and sectors 2, 4, and 5 at Mokumanamana (please refer to the attached map).

The EKF will adhere to this and all applicable Best Management Practices and instructions from the

Monument resource monitor while traversing and visiting the Papahānaumokuākea Monument.

3. Permittees should be required to submit a report on any Hawaiian monk seal takes. Takes include anything that has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, feeding, or sheltering. A report on takes should be submitted to the PMNM Permit POC who can forward it to NMFS/PIRO (see the provided example).

We will.

4. NMFS wants stress that the viewing guidelines for seals are to stay at least 150 feet away from any animals to decrease the chance of disturbance. However, this is may not be possible in many areas. To otherwise reduce the risk of disturbance:

- a. Permittees should maintain a low profile and remain out of the seal's line of sight by remaining behind it. Use rocks as visual barriers and do not walk between the seal and the water unless the seal is extremely high up the beach/shelf and there is no other route. If the seal reacts, increase distance from the seal and get out of the seal's line of sight.
- b. Permittees should not snorkel or swim if a mother-pup pair is in the area. Mothers have attacked swimmers and several of these attacks have resulted in severe injuries. Mothers may depart a beach to attack a perceived threat in the water and can swim at a fast rate.

Understood

5. If gear is placed on the shoreline and a seal hauls out next to it – the gear should stay in place until the seal departs the area. No attempt should be made to retrieve gear while a seal is hauled out next to it.

Noted

6. For turtles, the guiding principles for turtles is to stay 3 meters (10ft) away; if turtles are responding to human presence then increase distance from turtles. If it's night time and turtles are present (basking or nesting) do not use white lights, maintain a low profile close to the beach/shore line (water / sand interface), and keep a 50ft distance from nesting turtles.

Understood

7. NMFS recommends at least two resource monitors for these three permit (2019-007, 009, 010). NMFS also requests that the resource monitors assigned to these permits meet with the NOAA Fisheries Pacific Islands Fisheries Science Center staff for a short training and discussion regarding best practices around seals and turtles. NMFS PIRO staff can facilitate this meeting.

We support this suggestion and would like to request that Brad Wong from OHA and Kalani Quioco from NOAA be our monitors. They have already participated in one of our two mandatory trainings.

8. While the applicant has asked for permission to fish while in the Monument, NMFS recommends that the permit conditions should include a restriction on shore-based fishing and fishing at anchor, due to the risk of hooking and entanglement of protected species. Trolling while in the Monument does not pose an unacceptable risk, and should be allowed.

EKF supports this condition.

9. USFWS appreciates the cultural significance of Mokumanamana and recognizes the importance of this journey to enhance the knowledge of Mokumanamana as well as its link to the rest of the archipelago.

Mahalo

10. It should be noted that any emergency procedures are typically handled with the Coast Guard and are not added into a permit.

Noted

11. There is a high degree of concern with the number of people (15) proposed to stay on the island. An unusually high degree of care must be taken to minimize the impact to this fragile environment.

Agreed and Noted

12. While the importance of 'awa is recognized, it also poses specific biosecurity concerns. Any

'awa brought to Mokumanamana must be fully cleaned, processed, and frozen beforehand. We recommend freezing the 'awa for as long as reasonably possible beyond the 48hr requirement.

Noted. The EKF does not offer 'awa on the island. Our offering goes into the ocean.

13. USFWS recommends at least two resource monitors be assigned between the three permits (2019-007, 009, 010) with at least one remaining on land. At least one will represent a co-managing agency. Resource Monitors should have experience in terrestrial ecosystems, experience in seabird colonies, experience digging out burrows, ability to identify native and non-native plants of the NWHI, and experience implementing quarantine procedures.

Agreed. Please note our request on comment #7.

14. Ecologically speaking, Mokumanamana is arguably the most pristine island in Papahānaumokuākea. Please follow quarantine protocols explicitly to prevent unintended damage to the sensitive marine and terrestrial environments.

Noted

15. We request the crew planning to stay on Mokumanamana work directly with a Resource Monitor from a managing agency while preparing gear for this trip to ensure proper biosecurity measures are in place. We fully trust the intent of the crew, though PMNM biosecurity protocols can be very detailed on a trip of this magnitude. Coupled with the sensitivity of this environment, we feel close collaboration with a Resource Monitor in the planning/preparation stages of this expedition is warranted.

Noted

16. Due to the rarity of expeditions made to Mokumanamana, it would be very valuable if the resource monitor and/or other crew could record seabird species, seabird breeding phenology, plant species observed, and any invasive plants

(especially *Cenchrus echinatus*, common sandbur, which is spreading on Nihoa).
Thanks!

Will defer to the respected montiors to conduct this data collection.

17. It may be challenging to find an area clear of nesting or burrowing birds for the central camp, but efforts should be made to reduce impacts and document birds disturbed. June is a peak time for breeding seabirds, and efforts should be made to avoid walking through or camping in sooty tern or gray-backed tern colonies. In the hot sun, eggs can be baked quickly, and small chicks can be separated from parents and die from exposure.

Acknowledged

18. Anchoring off Mokumanamana should avoid areas of hard benthic substrate, as those areas are often colonized by live marine organisms. All anchors should be placed in sand.

Noted

19. Fishing with a spear or net can damage the reef and benthic environment should not be allowed in the monument. Fish can be injured and get off of the spear and get away only to die elsewhere, while nets are indiscriminant and have high amounts of bycatch with near total mortality. Laynets are very harmful and throw nets can also damage the benthic substrate. Fishing from the boat while at anchor with pole and line or handlines is also not a good idea, as they will catch reef fish and potentially sharks. Trolling with handlines while underway will do the least amount of harm, and has been permitted in the past.

Please note that the EKF is not visiting the Mokumanamana to go spear, net or reef fishing. There is no reason why this type of fishing should even be allowed to occur during our trip. Please note that our fishing permit is only for trolling while underway.

20. It is recommended to have a dehooker on board (and someone who knows how to use it) so they can release any sharks or other un-wanted fish caught while sustenance fishing.

Noted. Mahalo.

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.
- National and State Historic Preservation Act Section 106 consultation (pending)
- 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 HANAUMOKU AKEA MARINE NATIONAL NATIVE HAWAIIAN PRACTICES PERMIT TO DR. PUALANI KANAKA'OLE KANAHELE, UNIVERSITY OF HAWAII AT HILO, KIPUKA NATIVE HAWAIIAN STUDENT CENTER, FOR ACCESS TO STATE WATERS TO CONDUCT SUMMER SOLSTICE CULTURAL RESEARCH ACTIVITIES UNDER PERMIT PMNM-2019-007”).

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

- Applicant was granted permit PMNM-2007-024, PMNM-2009-023, PMNM-2011-036, for similar activities in 2007 and 2009; 2011 and 2015.

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 her 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 Native Hawaiian Practices 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:

Based on the attached proposed declaration of exemption prepared by the department after consultation with and advice of those having jurisdiction and expertise for the proposed permit actions:

1. That the Board declare that the actions which are anticipated to be undertaken under this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.
2. Upon the finding and adoption of the department's analysis by the Board, that the Board delegate and authorize the Chairperson to sign the declaration of exemption for purposes of recordkeeping requirements of chapter 343, HRS, and chapter 11-200, HAR.
3. That the Board authorize and approve a Native Hawaiian Practices Permit to Dr. Pualani Kanaka'ole Kanahale, University of Hawaii at Hilo, Kipuka Native Hawaiian Student Center, for Papahānaumokuākea Marine National Monument, with the following special conditions:
 - a. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocols attached to this permit.
 - b. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
 - c. 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

Respectfully submitted,



MARIA CARNEVALE

Papahānaumokuākea Marine National Monument

APPROVED FOR SUBMITTAL



SUZANNE CASE
Chairperson

Papahānaumokuākea Marine National Monument
NATIVE HAWAIIAN PRACTICES Permit Application

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

ADDITIONAL IMPORTANT INFORMATION:

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

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:

NOAA/Inouye Regional Center

NOS/ONMS/PMNM/Attn: Permit Coordinator

1845 Wasp Blvd, Building 176

Honolulu, HI 96818

nwhipermit@noaa.gov

PHONE: (808) 725-5800 FAX: (808) 455-3093

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

Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

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

Summary Information

Applicant Name: Dr. Pualani Kanaka'ole Kanahele

Affiliation: Edith Kanaka'ole Foundation (EKF)

Permit Category: Native Hawaiian Practices

Proposed Activity Dates: June 14 - 23, 2019, Mōhalu to 'Olekūkahi in Ka'aona

Proposed Method of Entry (Vessel/Plane): 1 Vessel

Proposed Locations: Mokumanamana & Nīhoa

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

13 + 6 crewmembers on board the Searcher.

Estimated number of days in the Monument: 10

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

Our research would bring light to the main functions of Mokumanamana for Hawaiians historically, presently and potentially through the methodologies and frameworks established by Hawaiians and re-established by the EKF and NKW's work.

The EKF has been the only native Hawaiian research entity that has continuously studied the manamana sites on Mokumanamana for over 10 years, then subsequently expanded the learning acquired from the Mokumanamana methodologies to the restoration and studies of other sites in the main Hawaiian Islands. The fieldwork on Mokumanamana has allowed the researchers the ability to gain great insight into the profoundly deep knowledge and accuracy of the ali'i and kāhuna's concept of time, space, geological creation of islands, and Universal relativity. On the previous trips the researchers were able to establish baseline data utilizing the sun's movement between the Ala Polohiwa a Kāne, Piko o Wākea and Ala Polohiwa a Kanaloa. A three-year study of manamana located on Mauna Loa has granted the research team the unique opportunity to study the function of manamana for a longer period of time. With the newly acquired skills the EKF would like to further that knowledge into star, planet and Milky Way alignments during the Summer solstice in June 2019. The EKF has

partnered with Nā Kālai Wa‘a (NKW) who will be sailing with the Makali‘i to Mokumanamana bringing two Pwo navigators and their apprentices as a rite of passage for the younger crew. The star expertise that Nā Kālai Wa‘a will be bringing will greatly assist the EKF with the star to site alignments. Both the EKF and NKW will be bringing the next generations of Hawaiian practitioners/scholars to assure that the continuance of the great work of rediscovery continues.

This will be the first trip to Mokumanamana by Makali‘i and her crew. The Master Navigators of Na Kalai Wa‘a and their students have over 100 years of accumulated studying of celestial bodies movement over the Pacific Ocean. In addition to assisting with knowledge of these bodies as they move over the manamana on Mokumanamana, Makali‘i is also making this voyage in order to secure the next generations of voyagers to for the Na Kalai Wa‘a organization.

According to the traditions of kupuna of Na Kalai Wa‘a, navigators were trained at Ko‘a Holomoana, a heiau site with manamana that faces Mokumanamana in Mahukona. These navigators were tested by being taken to Mokumanamana and needing to return successfully home to Mahukona and heiau Ko‘a Holomoana.

This voyage to Mokumanamana allows Makali‘i to be the cultural vessel to carry the research team to Mokumanamana, while allowing the next generation of captains and navigators the opportunity to continue traditions of voyaging, connecting Ko‘a Holomoana with Mokumanamana.

b.) To accomplish this activity we would

Similarly to the previous field research activities, the team would assign five groups of three individuals on five separate locations for the purpose of observing the celestial activities in connection to the sites. The research will begin an hour prior to the sunset and will end about two hours after sunrise. Each group will consist of at least a scholar, a practitioner and a star person. Near sunset, the teams will be situated on designated areas and stay in the same location for the entire night recording observations of celestial to terrestrial alignments, compass and GPS fixes, as well as site to site alignments back towards Hawai‘i (southeast), down south, northwest or beyond. The methods and technologies of observation and recording used over the years of the Mokumanamana studies combined with the newly acquired techniques from our Maunaloa studies will be applied to this research. The team is confident that new data will be acquired that will support our theories about the function of Mokumanamana's sites. The methodologies and framework used will support that Hawaiians kept track of the time by the celestial movements for geological activities, ceremonial/religious processes, political decisions, and practical benefits. It will also demonstrate that the Hawaiians already had an understanding of the movement of the sun from that point of the world and universe. That’s what Mokumanamana is about. Trails of the sun, trails of the stars, these are primary sources of knowledge.

The teams will go through 5 vigorous trainings prior to the arrival to be prepared with all of the information gathered from the last 10 years.

In addition, voyagers will depart from Mahukona in early June on Makali'i, making their way using traditional navigation skills and technology to Mokumanamana by Summer Solstice. Their successful arrival to Mokumanamana using the elements and then their successful return will complete one training cycle for the next generation of leaders for Na Kalai Wa'a, validated in the processes of our ancestors. Navigators need to pull Mokumanamana out of the sea the same way they pull the stars and the sun out every day. This voyage will be the first time that apprentice voyagers will complete the trip from Ko'a Holomoana at Mahukona, Kohala to Mokumanamana in over 200 years.

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

1. Fill in the missing historical gaps of the function of Mokumanamana,
2. Directly correlate historical native Hawaiian visits to the island,
3. Relate migration chants and Pule 'Aha Lanalana to Mokumanamana,
4. Link Haho, Līloa, 'Umi and other ali'i to Mokumanamana,
5. Re-establish a relationship between modern kāhuna with ancient kāhuna,
6. Pass on the last 10 years of field data to the next generation of researchers, &
7. Complete the process of research and navigation, use of celestial bodies for alignment utilizing a traditional voyaging canoe for this purpose.
8. Go in partnership with Nā Kālai Wa'a who will be doing similar multi-generational voyaging & celestial knowledge exchanges.

Other information or background:

On this permit there will be a total of 19 people. This number also includes the necessary crew of 6 for the Searcher and an individual who will be representing the NOAA/DoFAW monitor.

The large numbers of individuals are to allow for a few crew changes during the Makali'i sail legs. Members in the EKF research group will be traveling with the Makali'i, while some Nā Kālai Wa'a crewmembers will be traveling on the Searcher. Another escort vessel will be following Makali'i for safety purposes. NKW intends on sailing from Hawai'i Island to Mokumanamana and back to Hawai'i Island. The EKF intends on joining NKW on route from O'ahu, with researchers traveling on the Searcher as well as Makali'i canoe, and WILL travel together from there to Mokumanamana. At the arrival of Mokumanamana a crew of 15 individuals will be embarking upon the island while the rest of the crews will be anchored safely offshore. The land crew will stay on the island for 3 nights and will disembark early in the morning to begin the return back to Hawai'i. At this point the individuals on the Searcher will return directly to O'ahu while Nā Kālai Wa'a and its escort vessel will sail back to Hawai'i Island.

Vessel name: Searcher

Vessel owner: the medical foundation
Captain's name: jon littenberg
IMO#:8981884
Vessel ID#:1103056
Flag: us
Vessel type: steel trawler
Call sign: wda6100
Embarkation port: honolulu
Last port vessel will have been at prior to this embarkation: hnl
Length: 96ft
Gross tonnage: 105
Total ballast water capacity volume (m3): n/a
Total number of ballast water tanks on ship: 0
Total fuel capacity: 9600 us gal
Total number of fuel tanks on ship: 6
Marine Sanitation Device: yes, headhunter marine
Type: II

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Kanahele, Pualani

Title: Doctor

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

Kalei Nu'uhiwa, PhD candidate will be the principal field investigator.

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

[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):
Edith Kanaka‘ole Foundation, Nā Kālai Wa‘a, and Kawehiokalani INC.

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):

1. Dr. Pualani Kanahale - Will remain on the Searcher vessel
2. Leighton Tseu - Will remain on the Searcher vessel
3. John Littenberg - Captain of Searcher
4. Kalei Nu‘uhiwa - EKF Research team
5. Huihui Kanahale-Mossman - EKF Research Team
6. ‘Ulu mau Keali‘ikanaka‘ole - EKF Research Team
7. ‘Ulalia Woodside - EKF Research Team
8. Pualani Lincoln-Mai‘elua - Apprentice Navigator for Makali‘i, EKF Research Team
9. Hi‘ilei Kawelo - EKF Research Team
10. Ku‘ulei Higashi Kanahale - EKF Research Team
11. Kala Mossman - Crew for Makali‘i, Research Team for EKF, Onboard First Responder
12. Keala Kanaka‘ole - Crew for Makali‘i, Research Team for EKF
13. Lanihuli Kanahale - Passenger on Searcher and Crew on Makali‘i
14. Resource Monitor (If Needed)
15. Crew for Searcher - TBD
16. Crew for Searcher - TBD
17. Crew of Searcher - TBD
18. Crew for Searcher - TBD
19. Crew for Searcher - TBD
20. Crew for Searcher - TBD

EKF Searcher passengers going to Mokumanamana:

Pualani Kanahale - Applicant & Principle Investigator. To remain onboard the Searcher.
Leighton Tseu - Quartermaster. To remain onboard the Searcher
Kalei Nu‘uhiwa - Field Principal Investigator
Ulalia Woodside - Field Investigator
Ku‘ulei Kanahale - Field Investigator
Huihui Mossman-Kanahale - Field Investigator
Hi‘ilei Kawelo - Field Investigator
Ulu Keali‘ikanaka‘ole - Field Investigator

EKF Makali‘i passengers going to Mokumanamana:

Pualani Mai‘elua Lincoln - Makali‘i crewmember & Field Investigator
Kealaka‘i Kanaka‘ole - Makali‘i crewmember & Field Investigator
Kalā Mossman - Makali‘i crewmember & Field Investigator

Lanihuli Kanahahele - Makali'i crewmember

EKF Mokumanamana Field Researchers:

Kalei Nu'uhiwa
Pualani Lincoln-Mai'elua
Huihui Mossman-Kanahahele
Kalā Mossman
Kealaka'i Kanaka'ole
Ulalia Woodside
Ku'ulei Kanahahele
Hi'ilei Kawelo
Ulu Keali'ikanaka'ole

EKF Searcher passengers from Mokumanamana back to O'ahu:

Pualani Kanahahele
Leighton Tseu
Kalei Nu'uhiwa
Ulalia Woodside
Ku'ulei Kanahahele
Huihui Mossman-Kanahahele
Hi'ilei Kawelo
Ulu Keali'ikanaka'ole
Pualani Mai'elua Lincoln
Kealaka'i Kanaka'ole
Kalā Mossman
Lanihuli Kanahahele

***Please note that this research project is a joint venture with Nā Kālai Wa'a. This permit only reflects the individuals who are the Edith Kanaka'ole Foundation's research personnel.**

Section B: Project Information

5a. Project location(s):

- | | | <u>Ocean Based</u> | |
|---|-------------------------------------|--|--|
| <input type="checkbox"/> Nihoa Island | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| X Necker Island (Mokumanamana) | X Land-based | X Shallow water | <input checked="" type="checkbox"/> Deep water |
| <input type="checkbox"/> French Frigate Shoals | <input type="checkbox"/> Land-based | <input 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 |
| 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: Shallow water is defined by water less than 100 meters in depth.

X Remaining ashore on any island or atoll (with the exception of Sand Island at Midway Atoll and field camp staff on other islands/atolls) between sunset and sunrise.

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

Location Description:

Mokumanamana is a small, isolated island remnant at the northwestern end of the main Hawaiian Island chain, within what is now called Papahānaumokuākea Marine National Monument (or the Northwestern Hawaiian Islands). Mokumanamana is located 240 km NW of Kaua‘i and have numerous cultural sites that are significant to the Hawaiian identity.

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

- X 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
- X 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
- X Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- Attracting any living Monument resource

- X Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)
- X Subsistence fishing (State waters only)
- X 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 purpose of this trip is to confirm and complete the reconnection of Native Hawaiian cultural practitioners with this important part of Papahānaumokuākea. Through this experience the researchers hope to confirm techniques and methods learned that are specific to manamana and pahu manamana, which are sites that contain uprights connecting ali'i/kāhuna to the site, to the upright, and to a celestial entity as a form of binding, essential to both an ali'inui and kahuna nui's existence. If the ali'i or kāhuna could not be consistently present, a stone stood in place of the individual as a proxy. The research team will draw upon extensive mo'olelo (stories), pule (incantations), mele (chants), 'ōlelo no'eau (proverbs), mo'okū'auhau (genealogies), ko'ihonua (creation chants), and 'aha rituals to inform our research. Within the last 3 years, the EKF was contracted by the Volcanoes National Park Service to conduct similar studies of sites called Pahu Manamana o 'Umi at Pu'u 'Alikā on the southeastern slope of Maunaloa. Where Mokumanamana is located near the Ala Polohiwa a Kāne, Pahu Manamana o 'Umi is oriented towards Nīhoa and Mokumanamana. During the celestial studies of Pahu Manamana o 'Umi the researchers' observations lead the team to some astonishing facts about the construction, alignment and orientation that particular site on Mauna Loa has with particular star constellations, historical ali'inui, and the Hale Poki found in the 'Aha Lanalana ceremonies. At Pahu Manamana o 'Umi, the research team was able to make a direct link to both ali'inui 'Umialilio and Haho. The team is now ready to apply those same skills and techniques to Mokumanamana to finally bring all the loose pieces of information previously acquired to Mokumanamana.

As we continue to access the sites on Mokumanamana, clarity and understanding of the possible functions of the manamana can be ascertained. On this particular trip, celestial navigators and sailors will be joining the research team to provide expertise to the observations and alignments through rhumbines and wayfaring skills, which can be applied to the pānānā to manamana to celestial entities.

There will be one vessel (Searcher) traveling to Mokumanamana and back, a traditional Hawaiian double-hulled canoe (Makali'i) sailing up and back down, and a radon (Alaka'i) an escort to assist the canoe. Currently, there are no plans to go to Nīhoa unless it is necessary to take shelter on the lee of the island due to inclement weather.

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

If so, please list the species you specifically intend to target.

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

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

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 participants will be participating in 3 in-depth orientations, which includes boat safety, vessel procedures, hazardous open water procedures, emergency procedures on the vessels and Mokumanamana, cultural protocols, ceremonies and religious rituals, celestial and terrestrial orientation. Site description and research/study procedures, detailed camera use and on island procedures, traditional Hawaiian measurements, previous documentation of sites, compass use and compass procedures on island, GPS, rhumb lines, other alignment techniques. Also included in the trainings will be biological and ecological resource orientation, egg/chick avoidance, subsistence fishing while underway in the designated approved areas, gear preparation and packing procedures.

****The group would like to request that one or two of our members be designated the USFAW monitor. Both will be willing to participate in training and other requirements. If this is not possible, we would like to request a Native Hawaiian OHA or NOAA trained monitor.**

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 is aligned with the management direction of the Monument and with Presidential Proclamation 8031. The proposed activities are designed to enhance educational opportunities and will not to be used for commercial purposes. All proposed

knowledgeable and respected Native Hawaiian cultural practitioners, two navigators, and open ocean voyagers would conduct activities. The information gleaned by this joint venture will benefit the historical and resource study materials for Papahānaumokuākea. None of the proposed activities will deliberately cause harm or disruption to any resources on the island.

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.

Mokumanamana is a source of the Hawaiian origins, volcanology and migrational knowledge. It is the only moku of its kind where many original concepts of time, starlore, heiau site construction in relationship to stars and volcanoes exists. For these reasons, it is why Hawaiians must go to reconnect with that knowledge and connect it to Hawai'i. Hawaiians do not have a lot of places that can be accessed that provides primary information. Sites have been built on Hawai'i which function similarly, however they are all based on what the ancestors discovered and studied from Mokumanamana. Another primary source of knowledge is Voyaging, which includes navigating, star movement, the northern and southern movement of the sun, etc. Mokumanamana has also traditionally been the testing point for traditional navigation studies conducted at Ko'a Holomoana, the piko site for Na Kalai Wa'a and the 'ohana Makali'i in Mahukona, Kohala. Our joint venture is bringing two primary sources of knowledge together to reformulate the Hawaiian universe of erudition.

To become a functioning and prosperous ali'i nui, the primary sources of knowledge had to be maintained. The hint that maintaining primary sources is the necessity of tracking volcanic movement because the ali'i nui and kāhuna knew where they had come from and also where they were going. Pele's migration from the NW islands is a narrative that reminds us that primary sources are memorialized through chants and stories.

Storytellers weave the story to keep the story alive. However, the scientific mind had to put up manamana to get a fix on star locations to actually make the alignments with the volcanoes.

Also, in the Polynesian Triangle, Mokumanamana is the only island within our Hawaiian Island chain that sits on the Ala Polohiwa a Kāne, the Tropic of Cancer. As a people who historically used the sun to navigate, make political decisions, and conduct religious ceremonies, Mokumanamana would have been a significant location. It makes sense that the first voyagers and later on kāhuna travelled to Mokumanamana intentionally to build sites upon it to track major celestial and volcanic cycles. Being able to sail to Mokumanamana and back to Hawai'i utilizing the stars, then utilizing those same stars to track time and conduct special ceremonies is extremely significant. Sailing there with Makali'i and being able to study the movements and alignments of the stars, planets and Milky Way provides an unprecedented opportunity to align chants, stories and native Hawaiian cultural remnants with one another to gain missing information from native Hawaiian history. Makali'i's successful voyage to Mokumanamana and back to Mahukona will also re-engage modern day voyagers with

navigational practices that haven't been successfully conducted for over 200 years. To become navigators, traditions in the Makali'i 'ohana state that the apprentice needed to voyage to and return successfully from Mokumanana leaving from Ko'a Holomoana in Mahukona. It is pertinent that the information acquired from these field visits is then restored and practiced remaining relevant to the youth of today. The solitude, lack of light, distance and human challenge to travel to the inhospitable island allows for potential growth of experience and expertise that is specific to the Hawaiian Islands. On this next site visit, specific stars, planets and Milky Way alignments to the various manamana will be part of the on-island studies conducted by the field team.

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

Adverse impacts are always a possibility, however the field researchers will try to minimize negative impacts. Voyaging activities to Mokumanamana and Nihoa are mainly ocean based and, with the exception of crew that are a part of the selected research team, the rest of the crew will remain onboard the vessels to minimize impact to the island itself. Continuing traditions of Mokumanamana as a place for practitioner testing and ascension of skills is necessary to the cultural relevance of voyaging, wayfinding and tracking of the movements of the skies and the islands themselves. Within the EKF's 10-year research, the field team has seen significant degradation of the manamana due to bird activity, hurricane/storms, marine debris, and human activity through the changing climate and other movement. There is a sense of urgency to collect as much empirical data as possible before the sites are significantly changed or gone. Shapes of the manamana have changed over the years, which then changes the alignments and information acquired through observation.

It is a privilege to visit Mokumanamana, which to the team is a moku akua, a place for the gods. Humans should not go there often and only on special occasions.

All proposed activities will occur in the later afternoon and mid morning. The landing team plans to stage a base camp in a centralized area that is clear of nesting or burrowing birds. The base camp will be the point where the food and water will be staged. 5 teams of 3 individuals will camp in 5 locations and movement will be very minimal. To minimize impact the teams will stay in the designated locations to conduct the main observations.

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

The three evening time allotment requested for the on-island research in this application is sufficient to complete the activities intended for the duration of the summer solstice.

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

The Kanaka'ole family has maintained unbroken through the impact and onslaught of colonization, decades of generational practices of hula, forest management, wa'a

traditions, Pele rituals, kuahu and heiau ceremonies. All of the members from the EKF research team have accessed Mokumanamana four or more times. The applicant group also possesses one hundred and eight years of combined cultural involvement between them. All participants have also been involved in both the Western & Hawaiian philosophies of academia through complex and extensive training & practice conducting ceremonies, research, collection of cultural, scientific, and historical data, translated literature from Hawaiian to English and were specifically chosen for their intelligence, passion, knowledge, physical endurance and ability to coexist while on long distanced and close quarter projects. All of the members of this participant group have been involved with Kaho‘olawe and are aware of the special protocols surrounding extremely sensitive and protected areas. Combined with the expertise and generational knowledge that NKW will bring with them, the potential to learn and collect more data is paramount to Mokumanamana's value to Hawaiians and to the peoples of Polynesia and Oceania.

Na Kalai Wa'a has been voyaging and training voyagers and community members since 1995. Master Navigator Shorty Bertelmann, president of Na Kalai Wa'a, was Papa Mau Piailug's first student in navigation and has been navigating since 1976. Master Navigator Chadd Paishon has been voyaging since the 1980s and was inducted as a Pwo (Master Navigator) with Shorty Bertelmann by Mau Piailug in 2007. Voyagers of Na Kalai Wa'a have sailed on Makali'i and other traditional voyaging canoes to Tahiti, Cook Islands, Micronesia, Japan, Aotearoa, and throughout the state of Hawai'i.

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 EKF has some funding from various projects and donors, Nā Kālai Wa'a has some funding from the Administration of Native Americans under the US Department of Health and Human Services (the voyage to Mokumanamana is the capstone in the 3 year long grant), and both organizations have started procedures to acquire the remaining funding from the Office of Hawaiian Affairs. Our OHA contacts are Keola Lindsey and Brad Wong.

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

All members of the research team are intimately familiar with various types of cultural sites throughout the Hawaiian Islands, Maupiti & Mo'orea islands in Tahiti, and Mokumanamana. The research team has studied the uses, functions and positions to the respective environment, horizontally and vertically, and will conduct their studies on the island with the same method of familiarity. Previous visits by the research team to the islands have recorded cultural sites and these records will be used as a study tool to accessing the islands. Compass points will be established, and data will be collected on the rising and setting of the sun, moon and stars and will be measured according to the

manamana at the times of the summer solstice. The proposed methods and procedures are in-line with accepted cultural behaviors and scientific methodologies and procedures.

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

The proposed vessels will comply with all regulations and be outfitted with a type-approved Vessel Monitoring System prior to the proposed departure date.

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

No

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.

This is an educational and Native Hawaiian culture joint venture. The access is strictly for educational purposes. No organisms or natural materials will be collected on this access.

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. From June 14-23, 2019, the joint venture intends to go to Mokumanamana Island for the purposes of conducting Hawaiian cultural and spiritual practices and to acquire knowledge from the site as was done in its historical past. We seek to improve the quality of the relationship Native Hawaiians have with the environment on the ocean and on Mokumanamana. The team goes to honor Kāne worship, specific to the sun, moon and star movement. The joint venture will sail a traditional double hulled canoe to the island utilizing the stars, the landing party will align the stars to the sites on the island, the researchers will connect those alignments to the various akua, ali'i and kāhuna, and the team hopes to connect all those alignments back to the main Hawaiian Islands. The information gleaned will then be recorded into a document, which will be available for all future visitors to Papahānaumokuākea.

The successful voyage to Mokumanamana and return to Ko'a Holomoana in Mahukona, Kohala will also complete the the process of assessment and evaluation for apprentice captains and navigators for Makali'i. This process has not been conducted from Ko'a Holomoana for over 200 years.

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

As stated previously, making Mokumanamana's value relevant to today's Hawaiians and the peoples of Hawai'i is vital.

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

As stated previously, the information gained will benefit both the Western & Hawaiian philosophies of academia. The research will combine native Hawaiian ceremonies, research, collection of cultural, scientific, and historical data, with translated literature from Hawaiian to English. Combining western study with generational knowledge has the potential to further the learning paramount to Mokumanamana's value to Hawaiians and the peoples of Polynesia and Oceania.

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

No.

8. Procedures/Methods:

Papakū Makawalu & Open Ocean Wayfinding

Papakū Makawalu is a paradigm that comes from the cosmogonic chant called the Kumulipo that systematically organizes the accumulated knowledge obtained through observations and interactions with the natural world and the natural systems over many generations. All knowledge and understanding of the Hawaiian environment was categorized into three distinct houses of learning: Papahūhūhū, Papahūhūhū and Papanūhūhū. Papahūhūhū covers all natural earth phenomena and cycles; Papahūhūhū covers all natural atmospheric phenomena and cycles; and Papanūhūhū covers all organisms, and any practices and relationships necessary to their survival. As an analytical methodology, Papakū Makawalu affords the modern Hawaiian researcher the ability to thoroughly investigate any subject or topic of Hawaiian epistemologies from multiple perspectives. As a pedagogy, Papakū Makawalu provides the educator with a holistic approach to teaching any Hawaiian topic, practice, or phenomena, which in turn, offers the learner deeper insight into the meaning of the Hawaiian Universe. Mele, Mo'olelo, Pule, and 'Ōlelo No'eau are deconstructed, analyzed and then reconstructed from each house of learning to examine the multiply faceted and holistic approach to understanding the mind of the ancients. Papakū Makawalu has become the methodology that the research team has been utilizing to understand Mokumanamana and the Pahu Manamana o 'Umi on Maunaloa. We intend to use it again and will be training the new research and crewmembers this methodology for our fieldwork.

Open Ocean Wayfinding utilizes knowledge of the celestial bodies, and other natural elements to guide voyagers, and allow navigators to pull islands out of the ocean. The concept of navigation is that the navigator is the center of the universe and that the elements move around them. Navigators practice the magic of elemental relationships

to assist in successfully pulling islands out of the ocean. Their ability to commune with marine and bird life, along with the clouds, winds, ocean swells, rain, and celestial bodies allows them to always know where they are in relationship to the world that surrounds them.

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): N/A

Common name:N/A

Scientific name:

Hawaiian name:

& size of specimens:

Collection location:

Whole Organism Partial Organism

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

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

• General site/location for collections:

• 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 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:

Tarps and bevi bags will be used for temporary structures. 'Awa will be the only offering that will be left in the ocean and on the land. Cordage offerings will be made far out to sea before reaching the island. This cordage is symbolic of the piko that connects Hawai'i Island with Mokumanamana.

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

Aside from gps, laser pointers, cameras, compasses, ropes, tarps, and water jugs, there will be no other specialized gear or materials utilized.

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

N/A

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

The EKF research team will generate a report with the assistance of NKW.

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

X Yes No

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


June 2020.

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

N/A at this time

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities

under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as “confidential” prior to posting the application.


Signature _____ Date 27 December 2018

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

NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
FAX: (808) 455-3093

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

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant): Dr. Pualani Kanahale, Principle Investigator; Captain Jonathan Littenberg and Crew of 3; Kalā Mossman, Medical responder & researcher; Kalei Nu'uhiwa, researcher & resource monitor; Huihui Kanahale-Mossman, researcher; Keala Kanaka'ole, researcher; Ulalia Woodside, researcher; Hi'ilei Kawelo, researcher; Pualani Lincoln-Maielua, researcher; Ulumauahi Keali'ikanaka'ole, researcher; and Ku'ulei Higashi Kanahale, researcher.

2. Specific Site Location(s): (Attach copies of specific collection locations): Each pu'u/hill of Mokumanamana will be studied.

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

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.

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 work is to be supported by OHA.

5. Time frame:

Activity start: June 14, 2019

Activity completion: June 24, 2019

Dates actively inside the Monument:

From: June 15, 2019

To: June 24, 2019

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application:

Personnel schedule in the Monument: A float plan will be created by Captain Jon Littenberg.

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:

Each participant has signed up for the Divers Alert Network insurance policy.
The Edith Kanaka'ole Foundation

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

- Vessel
 Aircraft

Since 1989 MFSE has been a 501 (C)(3) non-profit, dedicated to assisting researchers and research throughout the United States. With the purchase of the Searcher in 1997, MFSE began to expand its marine research program. Initial projects included open ocean pollutant assays, sampling for the presence of endocrine disrupting chemicals around Hawaii and in the open Pacific. Since then, Searcher has worked on fisheries projects throughout the Hawaiian Islands in conjunction with the Hawaii Institute of Marine Biology (HIMB) the Joint Institute for Marine and Atmospheric Research (JIMAR) and US Fish & Wildlife. The Searcher has circumnavigated all of the main Hawaiian Islands studying bottomfish (Ehu and Onaga) as part of a breeding program and for DNA population analysis, as well as tagging and tracking various pelagic species. In addition MFSE has filmed with the BBC, Scripps Institute, and Jean-Michel Cousteau. Searcher has served with the US Air Force and U.S. Army on projects at Johnston Island, and Cetacean tagging with the Cascadia Research organization.

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):

These inspections will be scheduled through Pua Borges-Smith and Justin Rivera of NOAA. Documentation will be provided upon completion.

- 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: The Searcher

Vessel owner: **Medical Foundation for the Study of the Environment, the Searcher**

Captains' name: Jonathan Littenberg

IMO#: 366837840

Vessel ID#:

Flag: USA

Vessel type:

Call sign:

Embarkation port:

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

Length: 96'

Gross tonnage:

Total ballast water capacity volume (m3):

Total number of ballast water tanks on ship:

Total fuel capacity:

Total number of fuel tanks on ship:

Marine Sanitation Device:

Type:

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: **TANK WILL BE EMPTIED PRIOR TO ENTERING AND AFTER EXITING**

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

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type: Scott Godwin & Justin Rivera have scheduled to install the until on June 3, 2015.

VMS Email:

Inmarsat ID#:

* 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:

Additional Information for Land Based Operations

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

Walking

All equipment, canvas gear and materials will be brand new, packed in Ziploc bags and frozen for 48 hour, followed by the final packing in airproof bags which will not be opened until landing on Mokumanamana.

12. Room and board requirements on island: Tarp, Bivy Sack, blanket

13. Work space needs: Environment

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

DAVID IGE
GOVERNOR OF HAWAII



SUZANNE CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT MASUDA
FIRST DEPUTY

KALEO MANUEL
DEPUTY DIRECTOR - WATER

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



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

May 24, 2019

TO: Division of Aquatic Resources File

THROUGH: Suzanne Case, Chairperson

FROM: Maria Carnevale
Papahānaumokuākea Marine National Monument

SUBJECT:

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHAANAUMOKUĀKEA MARINE NATIONAL MONUMENT NATIVE HAWAIIAN PRACTICES PERMIT TO DR. PUALANI KANAKA'OLE KANAHELE, UNIVERSITY OF HAWAII AT HILO, KIPUKA NATIVE HAWAIIAN STUDENT CENTER, FOR ACCESS TO STATE WATERS TO CONDUCT SUMMER SOLSTICE CULTURAL RESEARCH ACTIVITIES UNDER PERMIT PMNM-2019-007

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 Dr. Pualani Kanaka'ole Kanahale, University of Hawaii at Hilo, Kipuka Native Hawaiian Student Center, for Access to State Waters to Conduct Autumnal Equinox Cultural Research Activities

Permit Number: PMNM-2019-007

Project Description:

Dr. Pualani Kanahale proposes to conduct cultural research activities and protocols during the summer solstice on Mokumanamana in Papahānaumokuākea Marine National Monument (PMNM). Research methods involve five groups of three persons (scholar, practitioner and a celestial expert) who will record observations of celestial movements during the summer solstice in relation to terrestrial focal points on island and elsewhere in the Hawaiian archipelago and Pacific Ocean over the course of three nights. This work will be in conjunction with separately permitted individuals under the direction of Ms. Keomailani Case (PMNM-2019-009). Researchers will also use handheld camera equipment to document celestial movements and archaeological sites. The total group of 20 researchers and vessel crew would access the Monument aboard M/V Searcher operated by non-profit foundation, The Medical Foundation for the Study of the Environment; the traditional voyaging canoe Makali'i and her escort vessel

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Alaka'i owned and operated by the Nā Kālai Wa'a (separately permitted PMNM-2019-009). Proposed activity dates are from June 20, 2019 – June 23, 2019.

While in the Monument activities would consist of conducting cultural research and protocols (offering ho'okupu (gifts of liquid 'awa), oli (chants) and pule (prayers) in the near shore waters of both Nihoa and Mokumanamana and on land on Mokumanamana in order to strengthen cultural connections to the place; swimming and snorkeling activities to compare the MHI and NWHI marine reef systems; sustenance (federal waters) and subsistence (state waters) fishing, and anchoring overnight on sandy substrate only at Nihoa and Mokumanamana. Similar cultural research expeditions have taken place on Mokumanamana in 2007, 2009, 2011, 2015 in conjunction with the summer (2007 and 2015) solstice, winter solstice (2009), the autumnal equinox (2011).

In order to reduce human impacts to Mokumanamana, the applicant would abide by Monument Special Conditions and Rules for Moving Between Islands/Atolls and Packing for Field Camps (BMP #007). No cooking or fires will be utilized on island. Permitted personnel would be escorted on land at all times by an approved Monument appointed resource monitor, experienced and trained to safely access Mokumanamana with no adverse impact to native species or cultural sites. No more than 17 personnel from both the Kanahale and Case permits (15 researchers and 2 resource monitors) would be present on land at any time. Each team of three individuals will be escorted to their study location and set up camp after determining that no protected species will be adversely affected. Each team will have a radio to maintain communications with remaining participants and the M/V Searcher. All solid wastes will be removed from the island. Landing on the island would only occur when no Hawaiian monk seals and sea turtles are present at the landing sites. Furthermore, all personnel would avoid all areas where Hawaiian monk seals and sea turtles haul out.

Fishing activities would be conducted by trolling a lure on a single monofilament handline and fishing poles for 20 meters. The four lines would be monitored at all times and personnel would abide by – Seabird Protocols Necessary for Conducting Trolling Research and Monitoring (PMNM Best Management Practice #008) to reduce impacts to seabirds. All fishing gear would be removed from the water if any Hawaiian monk seals or sea turtles are observed. All fish caught would be consumed within the Monument.

All activities will be non-intrusive and performed in a culturally appropriate manner while adhering to Monument Best Management Practices (BMP). To safeguard Monument resources the applicant would abide by the following BMPs while conducting the aforementioned activities within the PMNM: Best Management Practices for Boat Operations and Diving Activities (BMP #004); Disease and Introduced Species Prevention (BMP #011); Minimizing Impacts to Land Birds (BMP # 012).

The proposed activities are in direct support of the Monument Management Plan's priority management need 3.1 – Understanding and Interpreting the NWHI (through action plan 3.1.2 – Native Hawaiian Culture and History). This action plan calls for the conduct, support, and facilitation of Native Hawaiian cultural access and research of the NWHI. It specifically notes support for cultural research that helps in understanding ancestral connections related to the Monument. Activities to support “enhancing, incorporating, and perpetuating understanding of Native Hawaiian culture and knowledge”, such as those being proposed, are also addressed in the

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Monument Management Plan Environmental Assessment (December 2008) which resulted in a FONSI. In addition, this EA notes 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 has been posted on the Monument Web site since May 20th, 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 using Native Hawaiian practices to document summer solstice at Mokumanmana, 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. This permit does not involve an activity that is precedent to a later planned activity.

2. The Exemption Class for Basic Data Collection with no Serious or Major Environmental Disturbance Appears to Apply. Chapter 343, HRS, and section 11-200-8, HAR, provide for a list of classes of actions exempt from environmental assessment requirements. HAR § 11-200-8.A.5. specifically 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.” This exemption class has been interpreted to include natural resource observations, such as those being proposed.

The proposed sky, land, and ocean evaluation activities here appear to fall squarely under the exemption class #5, exempt item #4 as described under the former Fish and Game Division exemption list published in January 19, 1976. The Native Hawaiian practices of observing and documenting natural resource states are considered data collection. As discussed below, no significant disturbance to any environmental resource is anticipated through the act of observing the Monument resources. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption

appears to include a proposed action, the action cannot be declared exempt if “the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

This is the fifth project proposed to date by this Applicant aimed at documenting celestial alignments at Mokumanama during solstice or equinox time periods. The prior permits that have involved these activities have had no deleterious effects on Monument resources. No significant impacts are anticipated as a result of the proposed access and observation techniques especially since the techniques proposed are non invasive and do not involve the handling of resources to complete the activity. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities.

The culmination of these permits, occurring throughout the Monument over a 2-week period, is not anticipated to have significant cumulative impacts.

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

4. Overall Impacts will Probably be Minimal and Insignificant. Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all research 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.