

Papahānaumokuākea Marine National Monument
RESEARCH Permit Application

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

ADDITIONAL IMPORTANT INFORMATION:

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

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
nwhipermit@noaa.gov
PHONE: (808) 397-2660 FAX: (808) 397-2662

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

Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

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

Summary Information

Applicant Name: Kekuewa Kikiloi and Dr. Michael Graves

Affiliation: Doctoral Candidate at the University of Hawai'i Department of Anthropology, Department Chair University of New Mexico.

Permit Category: Research

Proposed Activity Dates: not determined yet

Proposed Method of Entry (Vessel/Plane): vessel

Proposed Locations: Nihoa and Mokumanamana

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

1-2 people for on island access for research, with additional 1-2 people additionally requested from vessel for shuttling buckets and gear on Mokumanamana upon landing (due to difficulty of getting gear up hill side to campsite).

Estimated number of days in the Monument: dependent upon ship timing

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The proposed activity would help further cultural research initiatives that are a priority for the Papahānaumokuākea Marine National Monument by answering unresolved questions about the timing and settlement of two remote islands Nihoa and Mokumanamana. This research will serve management needs by creating a clear baseline of documentation for cultural sites on Nihoa and Mokumanamana (all maps will be digitalized and incorporated in the Monument GIS database). It will also allow us to assess the condition of these sites, which have not been monitored for over twenty years.

b.) To accomplish this activity we would

To accomplish this activity we would need to get approval for this Monument access permit. Since this constitutes single research project has required a number of field seasons and accesses (due to the remote nature, short duration of field seasons, and infrequency of ship visits), we've already obtained a multi-year Archaeological Resources Protection Act (ARPA) Permit and a multi-year National Historic Preservation Act (NHPA) Section 106 Consultation Approval that

extends until 2010. We hope this permit will match that extension to allow us the ability to go up to Nihoa and Mokumanamana to finish this project. We'll continue discussion with NOAA (and also USFWS) about possible ship berths for this upcoming research season.

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

This activity would help the Monument enhance their understanding of their cultural resources. Both Nihoa and Mokumanamana are listed on the National Register for Historic Places and are a critical component of the Monument's push towards World Heritage designation under cultural criteria. The research would help us better understand the history of Native Hawaiian voyaging, exploration, and colonization in the region. Overall, the dissertation project in its entirety has already helped renew interest in traditional cultural practices (the voyages of the Hokule'a) and protocol, the development of a education curriculum and outreach materials (Center for Hawaiian Studies, Navigating Change, NOWRAMP), and informed management policy (NWHICRER and Monument Management Plan)

Other information or background: none

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Kikiloi, Scott T. (Kekuewa), and Graves, Michael W.

Title: Doctoral Candidate, Department of Anthropology at the University of Hawai'i at Manoa, Cultural Assets Manager for the Kamehameha Schools Land Assets Division.

Chair of the Department of Anthropology at the University of New Mexico, Committee Chair for Kekuewa Kikiloi (Doctoral candidate at the University of Hawai'i Manoa)

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

Kekuewa Kikiloi, Graduate Student, University of Hawai'i at Manoa Department of Anthropology.

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

[REDACTED]

[REDACTED]

Phone: [REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

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

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

University of Hawai'i at Manoa Department of Anthropology and University of New Mexico
Department of Anthropology.

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

Unknown at this time and dependent upon approval of a ship berths during the Summer research season. Two personnel requested:

- (1) Field Principal Investigator: [REDACTED]
- (2) Staff Archaeologist: Anan Raymond USFWS Regional Archaeologist will be requested.

Section B: Project Information

5a. Project location(s):

<input checked="" type="checkbox"/> Nihoa Island	<input checked="" type="checkbox"/> Land-based	<input type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Necker Island (Mokumanamana)	<input checked="" type="checkbox"/> Land-based	<input type="checkbox"/> Shallow water	<input 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
<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:

Nihoa and Mokumanamana (Necker) are the two most southerly islands of the NWHI. Nihoa (23° 03' N latitude, 161° 56' W longitude) is located 220 km northwest of Kaua'i (Fig 2). The island comprises only 0.70 km² of land area, with a length of 1.35 km and a width of 0.45 km (Fig 3). A broad swale extends between Miller's Peak (269 masl) in the northwest and Tanager Peak (256 masl) in the northeast. Virtually all faces of the island are characterized by sheer sea cliffs: 110-256 masl in the north, 10-245 m on the east and west, and 15-30 m on the south. The cliff areas are largely devoid of vegetation, while the south slopes are covered with several varieties of grasses, and several valleys are densely carpeted with shrubs including the edible 'āweoweo (*Chenopodium oahuense*), 'ilima (*Sida fallax*), 'ōhai (*Sebania tometosa*), pōpolo (*Solanum nelsonii*) and stands of endemic loulu palms (*Pritchardia remota*) (Evenhui and Eldredge 2004). The island's surface exhibits a steep southward slope of 23°. Ephemeral streams carved six major south-flowing drainages across the island with three fresh water seeps at the bottom of the stream channels. Groundwater circulates through fissures in the basalt substrate or collects above relatively impervious basalt layers. Minimal sediment is deposited on Nihoa except in the drainages due to steep topography (Bishop 1885 A,B; Clapp and Kridler 1977; Clapp et. al 1977; Emory 1928; Palmer 1927).

Mokumanamana (Necker) (23° 35' N latitude, 164° 42' W longitude) lies northwest of Nihoa and about 510 km. from Kaua'i (Figure 4). The island comprises of about 0.19 km² of land that measure about 1370 m. long, by 150 m. wide at its widest point with a maximum elevation of 82 m. Steep sides define the perimeter of Necker which consists of two parts. Five peaks extend along the east-west island ridge, which extends 1200 m. long and varies in width from 60-80 m. Shallow saddles separate the peaks except for the peak to a gap about 0.5 m. above sea level. The smaller portion of Mokumanamana, the northwest cape, extends about 246 m. northeast from the gap (Clapp and Kridler 1977; Clapp et. al 1977; Emory 1928; Palmer 1927). The

island's surface slopes gently to the north. The slopes are sparsely covered with a variety of common coastal plants such as 'āweoweo (*Chenopodium oahuense*), and smaller succulents like ihi (*Portulaca lutea*), 'ākulikuli (*Sesuvium portulacastrum*) (Evenhui and Eldredge 2004). There are twenty four bird species that have been documented on the island. There are no well defined stream channels as rainwater either sinks into the rock or runs off through unorganized channels. One of two small seeps of groundwater occurs about 15 m. above sea level a little to the west of Bowl Cave (Site NK). The second seep is about 10 m. above sea level on the north side of the westernmost saddle of the main island (Bishop 1885 A,B; Clapp and Kridler 1977; Clapp et. al 1977; Emory 1928; Palmer 1927).

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:*

This proposed research is a continuation of Kikiloi's dissertation research that looks at the dynamics of traditional Polynesian voyaging, exploration, settlement, and interaction in the Hawaiian archipelago as it extends into the remote the 'Northwestern Hawaiian Islands,' an expansive oceanic region that spans for more than 1,759 kilometers to the northwest of the 'main' Hawaiian islands. It is here that two small rugged islands, Nihoa and Mokumanamana, are located. Though quite barren and seemingly inhospitable, these two islands contain over 140 archaeological sites, including residential features, agricultural terraces, ceremonial structures, shelters, cairns, and burials, that bear witness to a pre-contact occupation and use of these islands. While these islands have seen previous archaeological research and these projects have documented numerous cultural sites on the islands, there have been few contemporary studies focused on how human colonization process works in the most marginal limits of Oceania.

It is important to point out that this proposal is the final phase of a six year dissertation research project that began in 2002. From 2002-2005, a comprehensive research project was conducted to compile oral traditions and ethno-historical records concerning the NWHI Hawaiian Islands. This research has played a major role in the revitalization of traditional cultural practices in the area and the renewed interest in traditional voyaging. Its also helped in providing historical guidance in the naming of the newly designated Papahānaumokuākea Marine National Monument in 2007. In August 2005, October 2006, and October 2008 we conducted three field work expeditions to Nihoa. Last year July 20008, we completed our first field season at Mokumanamana. Currently, we are awaiting two loan requests from Bishop Museum to move forward with utilizing cultural materials curated in collections to further these research initiatives.

There will be four research questions to be investigated at Mokumanamana:

1. Where was/were the origin(s) of the group(s) who settled Mokumanamana? Cleghorn (1987:31) suggests that understanding the origin of the human population that settled Mokumanamana is the first research question that should be answered. Emory (1928: 106-111; 1970) had hypothesized that the ritual structures he located on Nihoa are of Polynesian origin but represent an earlier period of construction style, similar to that found in the Marquesas and Tahiti. Other researchers (Cleghorn 1987: 9; Cleghorn 1988: 46-48) suggest there was a cultural connection between Nihoa and Mokumanamana, and the closest main Hawaiian Islands such as Kaua'i and Ni'ihau. This research aims to answer this question by collecting detailed data on stylistic attributes associated with the dry-laid masonry architecture of ceremonial sites on Mokumanamana. Because most the architectural sites on Mokumanamana appear to have been occupied for relatively short durations, we will use stylistic data to develop seriations of the sites. This will generate a relative chronology for the construction of these sites. This should, in turn, provide us with a comparative framework with which to analyze similar features found elsewhere in the main Hawaiian Islands (e.g., Mauna Kea, Pōhakuloa, and Mauna Loa) and other places in the Pacific. We expect to track the spatial scale of interaction that these stylistic architectural traits measure. By this means, we should be able to ascertain some of the likely origin(s) of the pre-contact settlers on Nihoa and Mokumanamana.

2. When was the Island first settled and how long was it occupied? Generating chronometric dates to estimate the timing and duration of settlement of Mokumanamana Island is listed as a high priority for archaeological research in the Cultural Resource Management Plan (Cleghorn 1987:31). However, because of the poor preservation of organic materials in the soil due to high acidity and the post-depositional disturbances caused by burrowing birds, obtaining datable material has been a challenge to researchers in the past. Our research attempts to resolve this by two means. As indicated above, we will employ stylistic traits associated with ceremonial sites to generate a hypothesized relative chronology. We will then test this chronology by collecting small samples of coral for radiometric dating. This new technique has recently been successfully applied in Hawai'i (Kirch and Sharp 2005a). It involves measurements of thorium-230, rather than carbon-14, to date specimens collected from living reefs and left as offerings at Hawaiian heiau (ritual sites). Coral offerings are well attested to on Nihoa (see Emory 1928: 13, 17-38) and at least four other pieces of coral were collected by Hunt (1992) during his fieldwork. These offerings occur on the surface of these sites, making it unnecessary to conduct excavations to recover datable material containing carbon. During this field work on Mokumanamana, we'll be able to ascertain whether coral samples exist as dedicatory offerings on Mokumanamana and we would like to propose the collection of these samples to continue the dating work. The 2005-2006 field work on Nihoa has produced 16 Th-230 dates for the island, and we are hoping to do the same for Mokumanamana to understand the timing of colonization and settlement for the area.

Prior to this work the only dates for the occupation of Nihoa and Mokumanamana came from one sample at one site (Site 50-Nh-60) that produced two relatively divergent radiocarbon dates (Rainwater 1958). This single sample of charcoal is the sole source from which archaeological estimates on prehistoric occupation are based. Obviously, this is problematic for understanding the timing and duration of occupation of this island. To help delineate the terminal date for occupation on Nihoa, Emory (1928:8) suggested it was abandoned sometime prior to A. D. 1789. It remained, of course, known to Hawaiians after this time and so it may have been visited from time to time.

3. What was the size of and nature of the human settlement on the island? Understanding if the population on Mokumanamana was permanent or seasonal is an important priority in research. Emory (1928: 12-13) noted the considerable lack of variety of features there, which was limited to temporary habitations and ceremonial features. He reasoned that it was unlikely that there was ever a long-term permanent population once living on Mokumanamana. Emory also implied that once permanently occupied, voyaging to Nihoa and Mokumanamana would have declined, so that ultimately the human group on both islands simply died out. Other researchers (Cleghorn 1988: 46-48) question Emory's views, and suggest there may have been recurrent voyaging to and from Nihoa and Mokumanamana, with multiple periods of occupation on the island. This research question cannot be answered without more reliable dates and a more precise chronology (as would be afforded by seriation) that can track the timing and duration of settlement of the island. Although not directly a part of this field research project, oral traditions may also be employed to inform on the issues of recurrent voyaging and long term occupation of Nihoa.

4. How and from where did inhabitants of the island provision themselves with resources and cultural materials? Islands such as Mokumanamana tend to be impoverished in certain key resources and materials. Humans, then, are responsible for introducing artifacts and needed resources and materials to the island that cannot be produced locally. Archaeological research elsewhere in Polynesia and the Pacific has documented the considerable transport of resources and artifacts between islands, some quite distant from each other (Weisler 1993, 1997). Such research is especially productive on islands that have few rock resources for use as artifacts, building materials, or cooking stones (Weisler 1996). More than 200 basalt artifacts and eco-facts have already been removed from Nihoa and Mokumanamana and are in collections at the Bishop Museum and the University of Hawai'i at Mānoa. These artifacts provide archaeologists with an opportunity to conduct geochemical analyses to identify similarity in source materials and perhaps the sources of the rocks themselves. A preliminary study has already been completed by Johnson (2002 unpublished manuscript) and Lebo and Johnson (2007). We propose to conduct a systematic non-destructive geochemical analysis of basalt artifacts in the two collections, sampling different forms (e.g., bowls, adzes, whetstones) and material types (dense basalt, porous basalt, dikestone). We are in the process of making arrangements with the UH Hilo geochemical laboratory and will seek permission from the Bishop Museum and University of Hawai'i to submit a sample of artifacts for analysis. The goal will be to estimate the number of sources that may have supplied rock materials to the Nihoa and Mokumanamana inhabitants and to see if the locations of any of these sources have been previously identified. If rock sources can be identified, this would provide another means to document the origins and extent of interaction between Nihoa and Mokumanamana groups and groups living elsewhere in Hawai'i.

The objectives of this fieldwork are to collect information and add to the body of data to help in understanding the timing, nature, and duration of settlement of Mokumanamana Island. Ancillary analyses will be focused on sourcing lithic materials already collected from the island to document transport and movement of artifacts and people to Mokumanamana. No human remains, funerary objects, or objects of cultural patrimony will be involved in this research. We present below the types of data that will be collected while on island:

1. Recording of Site Information. Detailed recordings will be done targeting specific attributes of the stone masonry architecture of ceremonial and residential sites for a later comparative analysis. These data will draw upon the work of Graves and Cachola-Abad (1996), O'Connor (1998), Graves et al. (2002). A number of traits can be relatively quickly observed and recorded during visits to the sites. While most of the archaeological sites on Mokumanamana have been mapped and recorded by previous researchers, they have done so at varying degrees of accuracy and precision. Our fieldwork should fill missing gaps in the maps and in the recording of basic architectural information need for seriation. These maps and data will serve as a baseline for future fieldwork on the island and to assist in cultural resource management.

2. Collection of artifacts and coral samples. If present, intact pieces of branch coral will be collected from a number of archaeological sites, primarily the ceremonial features, to date their construction(s) and dedication(s), as well as to possibly identify the species of corals and their

origin. No more than 5-7 coral samples will be collected as part of this fieldwork from at least 3-5 different sites. These samples are critical in establishing a chronology for the occupation and religious use of the island in pre-contact times. This work will likely not be culturally offensive to native Hawaiians, as materials used in traditional Hawaiian religious practices typically are relinquished of their spiritual essence once given to the akua (gods), or ancestors, and their spiritual function has been fulfilled. In the 2005 fieldwork on Nihoa this type of collection and analysis was approved and letters (emails) of support were given by different practitioners in the NWHI Native Hawaiian cultural working group for this work.

Artifact collections will be limited to basalt artifacts and manuports that have a macroscopic appearance of being exotic in origin. In the 2005, cultural access by Na Kupu'eu Paemoku for ceremony a number of stones were observed that looked to originate from an outside source. We will limit our collection to no more than 10 samples.

3. Monitoring of impacts to historic sites. The condition of all sites on Mokumanamana will be recorded during this fieldwork with particular attention paid to cultural impacts from visitors to the island and from the resident bird populations. Our evaluation of these sites and their condition will be submitted to the U. S. Fish and Wildlife to aid in their responsibility to monitor and protect these historic sites. Previous fieldwork conducted in 2005 and 2006 has already aided USFWS, the Papahānaumokuākea Marine National Monument, and OHA in an issue concerning Site 20 Ceremonial Feature on Nihoa this past year. In order to manage these cultural resources effectively more research needs to be done to create a baseline for the condition of these sites, and to actively monitor them in the future.

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?

The proposed research will be compliant with all USFWS biological protocols as it pertains to island access. All gear and clothing will be brand new and frozen for two days. If an opportunity does arise where we can get a ship berth, both federal agencies (NOAA, USFWS) are mandated to have the adequate safeguards as to ensure that no invasive species are introduced into the NWHI chain. In terms of cultural protocol, Kekuēwa Kikiloī is a native Hawaiian cultural practitioner and he will be doing chants and protocols learned from Aunty Pua Kanahele through his learning in Na Kupu'eu Paemoku. As cultural resource manager, we've adopted methods for this research that has the lowest impact possible and enables me to move quickly across the island and effectively record and map utilizing- tape and compass, hand held trimble GPS, preset forms to document attribute information, printed site maps to record areas of disturbance.

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? Proclamation 8031, which established the NWHI Marine National Monument, "seeks to preserve access for Native Hawaiian practices." With a considerable lack of cultural information concerning the history and practices in this remote area, research initiatives such as the one proposed here should be supported in order to understand the significance of this area to Native Hawaiian people. This research builds upon our previous ethno-historical study, two cultural protocol trips on the Hokule'a, two archaeological field seasons on Nihoa, a preliminary analysis of basalt artifacts in the U.H. collection gathered in 1992, and a current loan request to Bishop Museum to conduct non-destructive EDXRF analysis on their collections and conduct AMS dating on carbon materials. Almost all the cultural research initiatives for the NWHI in the past five years has had overlap with this dissertation research. Ultimately, this has helped serve Monument management needs in a variety of ways.

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.

This research project is about Nihoa and Mokumanamana and their unique cultural resources and the role those resources play within the broad patterns of Hawaiian pre-contact history. In order to minimize time in the field we have used other data sets (existing archaeological artifact collections already in the Museum and archival records of the islands' sites). We've also limited our request to make new field collections, utilized non-intrusive methods (no excavations, relative dating methods- seriation techniques), and laboratory analyses of limited impact (non destructive EDXRF sourcing and AMS dating).

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 archaeological and cultural resources on Mokumanamana need to be documented and monitored adequately. Since Cleghorn's 1984 field season, over twenty years ago, there has been no assessment of the cultural sites on Mokumanamana by any qualified archaeologists or cultural resource managers. Field work on Nihoa in 2005-06 by the applicants demonstrated that many of the sites there have been significantly impacted from age and the destabilization of stone masonry foundations by burrowing migratory sea birds. An assessment of Mokumanamana should be a management priority for the newly designated Monument.

Also, archaeological and cultural research should be a higher priority. This would help the management agencies as well as the Native Hawaiian community in increasing their understanding of the area. Greater cultural knowledge of this little known area would help with the all aspects of management including- Native Hawaiian practices, review of Native Hawaiian permit applications, Education and Outreach efforts, Management of Cultural Resources, the designation of these areas for greater cultural protection (i.e. possible TCP designation, World Heritage Cultural Designation, etc.).

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

Overall the time durations proposed in this proposal and previous access requests are less than adequate from a research and management perspective for islands that cover 171 acres (Nihoa) and 46 acres (Mokumanamana) respectively, yet we are willing to work within these constraints and to focus on priority data. Most access requests are limited by ship's schedules and can be as short as a few days to at most a few weeks. To put this in perspective, everything we know about the cultural resources for both these islands come from less than 2 months of overall field research from 1923-24 Tanager (Emory 1928), 1984 Bishop Museum (Cleghorn 1987), Hunt (1992), and Kikiloi (in prep 2009). Projects in Hawai'i that cover this much area and arguably have less significance are often given higher considerations for field time.

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

Please see attached CVs for both Kekuewa Kikiloi and Dr. Michael Graves.

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 research has required a relatively low budget for personal costs for new gear for going on-island. The real costs have come post-field work during the analysis phase of the research. All the necessary equipment needed to conduct mapping and surveying of cultural sites will be utilized from the U.H. Mānoa Archaeological Laboratory. In the past both NOAA and USFWS have been extremely supportive in finding berth space on their research vessels to go up to the NWHI. Without their commitment to find space on a ship none of this research could ever be accomplished. So far the following funds have been appropriated for this project: ship berths (NOAA's Hi'ialakai August 2005, USFWS October 2006); EDXRF analysis of basalt artifacts (\$3000 total provided by U.H. Social Sciences Grant) digitalization of Nihoa maps (\$1200.00 total provided by Monument), Th-230 dating of coral samples from Nihoa (and Mokumanamana) (\$16,000 total provide by Monument). Other costs for gear have been covered through scholarships provided by 'Aha Pūnana Leo Lamakū, Kamehameha Schools 'Imi Na'auao, and Hawai'i Community Foundation. This Spring 09 Semester we'll be submitting a research proposal to the National Science Foundation for funding to complete this dissertation research.

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.

As stated before we've tried our best to minimize time in the field and to utilize other data sets (existing archaeological artifact collections already in the Museum). We've also limited our request for surface collections while in the field, utilized non-intrusive field methods (limiting ourselves to no subsurface excavations as to preserve the integrity of subsurface deposits and avoid encountering human burials). We are proposing the use of relative dating methods such as seriation that utilizes observational data about architectural attributes. Also in terms of laboratory analyses we are using non-destructive EDXRF sourcing that preserves the integrity of the basalt artifacts and AMS dating techniques that utilize only exceeding tiny samples of carbon.

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

We currently do not have a vessel, but are hoping to get a ship berth on a NOAA ship this summer. We're currently in discussion with Randy Kosaki from the Papahanaumokuakea Marine National Monument about this. We applied for a permit in order to anticipate any opportunities that may arise during the course of the research season.

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

With the exception of this permit request, all permits required for access and conducting archaeological field work have already been obtained in October 2008 for this research. A multi-year Archaeological Resources Protection Act permit was obtained from USFWS, and the we've obtained approval for a National Historic Preservation Act Section 106 Consultation- consulting with SHPD, OHA, PNMN Native Hawaiian Cultural Working Group, Hui Malama I Na Kupuna O Hawai'i Nei, and Kamakakuokalani Center for Hawaiian Studies to ensure that everything is pono (culturally appropriate).

8. Procedures/Methods:

All research activities will take place during the day. The location of most of the archaeological and cultural sites are along the ridgeline of Mokumanamana. No outside assistance from the Monument staff will be needed.

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

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

Common name:

Scientific name:

& size of specimens:

Collection location:

Whole Organism Partial Organism

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

Any coral samples or artifacts collected will be held in curation at the U.H. Mānoa Archaeological Laboratory.

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

• 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?

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

There are no other collaborative activities running concurrently to this research project. After analysis of the collected materials is complete they will be retained and curated by the U.H. Archaeological Laboratory. The applicants have been in contact with Anan Raymond, Archaeologist with the USFWS and have had discussions about formalizing a curation agreement with both the U.H. Archaeological Laboratory and Bishop Museum to emphasize that all collections derived from the Northwestern Hawaiian Islands are part of the jurisdiction and property of the NWHI Marine National Monument. Currently there no document that clarifies this jurisdiction and loan transactions are at the sole discretion of curating facilities. The lack of process for making a loan request, no developed loan criteria, and no timeline for the duration of a loan, has created a complicated situation with very little accountability and uncertain stewardship of the NWHI artifact collections. Because of this, a number of studies have been conducted with no consultation with the Monument and responsible agencies (USFWS, State of Hawai'i, OHA). We've urged all parties involved (USFWS, Papahanaumokuakea Marine National Monument, U.H. Department of Anthropology, and Bishop Museum) that this is something that needs to be looked at and resolved soon. We've tried to be as proactive as possible and have at minimal a written approval by USFWS to move forward with utilizing previously gathered collections. We are open to further dialogue and consultation on this matter.

For this project, any cultural materials collected for analysis will be returned to the island to their original provenience and context after analysis and publication of the dissertation research unless requested to do so otherwise by the Monument.

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

Trimble handheld GPS, Clipboard, Tape Measures

12b. List all Hazardous Materials you propose to take to and use within the Monument:

none

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

none

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

We'd be able to get the analysis done within a year and a half of collection of materials. A basic write up will be done for the results, but the final interpretation will be the part of Kekuewa Kikiloi's dissertation for graduation.

15. List all Applicants' publications directly related to the proposed project:

Kikiloi, K. (2006). Reconnecting with Ancestral Islands: Examining the historical relationship between kānaka maoli and the Northwestern Hawaiian Islands. A Report to the National Oceanic Atmospheric Administration and the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, January 2006.

Graves, Michael and Kekuewa Kikiloi. in prep. Preliminary Reconnaissance of Archaeological Sites on Nihoa Island, August 2005 and October 2006. Prepared for U. S. Fish and Wildlife Service, Honolulu.

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

Signature

Date

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

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

DID YOU INCLUDE THESE?

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