

Papahānaumokuākea Marine National Monument
CONSERVATION AND MANAGEMENT Permit Application

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

ADDITIONAL IMPORTANT INFORMATION:

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

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:

Papahānaumokuākea Marine National Monument Permit Coordinator

6600 Kalaniana'ole Hwy. # 300

Honolulu, HI 96825

nwhipermit@noaa.gov

PHONE: (808) 397-2660 FAX: (808) 397-2662

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

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. Kelly Gleason

Affiliation: Papahānaumokuākea Marine National Monument

Permit Category: Conservation and Management

Proposed Activity Dates: 7/31/2008-8/28/2008

Proposed Method of Entry (Vessel/Plane): Vessel

Proposed Locations: French Frigate Shoals (shallow water), Pearl and Hermes (shallow water), Midway (shallow water and land), Kure (shallow water and land), Nihoa (shallow water), Mokumanamana (shallow water)

Estimated number of individuals (including Applicant) to be covered under this permit: 8

Estimated number of days in the Monument: 28

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The annual PMNM maritime heritage resources cruise will conduct activities to fulfill Monument management activities including: 1) non-invasive wreck site assessment survey of selected maritime heritage sites; 2) non-invasive remote sensing survey (magnetometer and side scan sonar) and snorkeler towboard survey of high potential wreck site areas 3) recovery of three selected artifacts from shipwreck sites at Kure Atoll (Section 106 compliance complete, Navy permit pending) for the purposes of education, outreach and research and 4) the collection of high-definition film footage for an education and outreach video product. The first activity is a detailed investigation of a single wreck or archaeological site; the second is a broader search for previously un-located and undiscovered resources, the third contributes to Monument outreach activities to conserve and display potentially threatened artifacts from these maritime heritage sites at the Mokupapapa Discovery Center, and the fourth will visually engage the public with the shipwreck sites within the Monument and their incredible stories of survival at sea.

b.) To accomplish this activity we would

This project is part of a continuing effort to conduct maritime heritage management activities in the Monument including inventory, and documentation of sites. Comprehensive non-invasive assessment surveys of previously located wreck sites allow managers to compile an inventory of

critical and non-renewable historic resources. Of the possible 126 shipwreck and historic aircraft lost in the area, 24 have been confirmed by field investigation. To date inventory surveys of five of these 24 have been completed in the NWHI: bark Carrollton (1906), USS Macaw (1944), whaler Parker (1842), whaler Pearl (1822), and the “Oshima” wreck site (circa 1920). Maritime heritage summaries of site surveys are available at <http://sanctuaries.noaa.gov/maritime>. A simple low impact technique known as “baseline trilateration” is used to map wreck sites (see Methods). Sites selected for initiating non-invasive survey in 2008 include the British whaler Hermes (1822) at Pearl and Hermes Atoll, the large wooden schooner Churchill (1917) at French Frigate Shoals and the British collier Dunnottar Castle (1886) at Kure Atoll. Alternate site surveys include the Liberty ship Quartette at Pearl and Hermes Atoll (see Maps attached).

As part of a research design that allows for the accurate replication of the temporary baseline used in trilateration, archaeologists borrow methods developed by coral reef ecologists by setting permanent datums at selected maritime heritage resource sites. Permission was granted in 2005 for the establishment of datums at the whaler Hermes site at Pearl and Hermes Atoll (FWS SUP #05016). There is no need to establish any additional datum points at the Hermes site, though there may be a need to replace stainless steel pins at previously existing stations if any are missing (consistent with the original permits). The wreck of the Dunnottar Castle at Kure Atoll may have sufficient iron structure (iron hulled ship) to allow a replicable baseline to be attached to the structure itself with minimal impact. However, there may be a need for stainless steel pins to be placed into the substrate or sediment at the Dunnottar Castle site. There may also be a need to establish pins at the Churchill site at French Frigate Shoals.

Remote sensing survey, the second basic method proposed for the 2007 survey, locates anomalies and potential maritime heritage resources for subsequent “ground-truth” site assessments. Generally areas in the seaward vicinity of the reef crest are chosen for initial remote sensing survey due to the high potential for wreck remains in those areas. Specific reef crest zones are determined by historical records of wreck events. The 2008 remote sensing survey will be conducted with a Klein Model 3000 side scan sonar and Marine Magnetics Explorer Mini Magnetometer. The side scan sonar will be used during searches for sunken aircraft sites at Midway and Kure, and will effectively image the sandy seafloor areas explored in the atoll. The magnetometer will be used for shallow (<100 ft.) surveys investigating shipwreck sites at French Frigate Shoals, Midway and Kure. Alternatively, snorkeler tow boarding may be used to locate potential heritage resource sites in a similar manner. Magnetometer and side scan sonar activities are contingent upon funding.

Diagnostic artifacts are helpful for wreck site identification. Additionally, artifacts become invaluable means of education and outreach for the public, particularly for remote sites that visitors may never get to visit. Recovery, conservation and display of two ship’s bells and a sounding lead will assist maritime heritage managers in confirming the identity of the shipwreck sites and provide an important artifact to be shared with the public, adding to interpreting the site and history of the Monument. Removal consists of collecting the three artifacts from the surface of the hard bottom substrate, placing them into a padded container underwater and carefully transporting them to the dive boat and main vessel. No sediment or substrate will be moved or disturbed in the process (artifacts are not buried). All artifact recovery activities will be

conducted according to strict protocol and with the highest level of sensitivity to natural, cultural and historic resources.

A short video will be created for education and outreach purposes only. A NOAA filmmaker will be contracted for the purposes of this project, and conduct filmmaking activities alongside the maritime archaeology team. Film footage will be collected and edited into a short educational film piece by the contracted government filmmaker. This project is contingent upon grant funding.

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

2008 maritime heritage project data (site survey and remote sensing) will contribute to the management inventory for the PMNM and the Pacific Islands Regional Office, as well as provide the program material for education and outreach efforts. Certain data generated by the survey is sensitive and will be protected from unregulated public distribution as determined by the PMNM (also see NHPA section 304). Maritime heritage survey will be conducted in compliance with the appropriate preservation regulations (National Historic Preservation Act, Archaeological Resources Protection Act, Antiquities Act, Sunken Military Craft Act et al) and satisfies federal and state mandates for heritage resource inventory of controlled waters. For the artifact recovery portion of the 2008 project, the opportunity to recover, conserve and display these artifacts in the main Hawaiian Islands will give the Monument a unique opportunity to bring this "place to the people" and share the seafaring history of the NWHI with the people of Hawaii. The video project further serves this outreach purpose.

Other information or background: Beginning long ago with Native Hawaiian and Pacific Islands open-ocean voyaging, seafaring in the remote atolls was the basis for all human interaction with the NWHI. For all seafaring cultures, sailing the NWHI has been inherently dangerous, resulting in numerous shipwrecks and stories of survival. The 2008 survey examines some of the consequences of these hazards, a portion of the seafaring heritage of the NWHI, and shares these findings with the public in a responsible manner.

Maritime archaeology emerged relatively recently as an academic discipline in the 1960's. The systematic study of submerged archaeological sites can reveal unique information of ship construction, historical events, and past human behavior. Today maritime archaeology involves anthropology, oceanography, history, and even biology (site/environment interactions). The common link between these disciplines is understanding the physical artifacts as unique records of the maritime past. NOAA initiated its Maritime Heritage Program in 2002. Today NOAA's Maritime Heritage Program is the only agency engaged in this study in the PMNM.

Over 60 potential shipwrecks have been recorded occurring in the PMNM, some dating back to 1805. Many of these wrecks may be important cultural or historical resources, capturing information about the maritime history of the region. Sites may furnish information about western seafaring, as well as Native Hawaiian seafaring, for many historic ships (such as whalers) recruited Native Hawaiians as skilled crew members. However, there are very few completed site assessments for the NWHI; the compilation of the resource database has just

begun. Due to the time required for careful site survey and the logistical constraints of research cruises, often only portions of the required mapping/survey work at each site can be completed during each season. Completed site assessments are the most effective heritage resource survey tool.

The first survey of maritime heritage resources in the NWHI occurred in 2002 (Maritime Cultural Resources Survey Northwestern Hawaiian Islands 2002). Subsequent work continued at Midway and Kure Atolls in 2003 (Kure and Midway Atoll Maritime Heritage Survey 2003) and French Frigates Shoal, Pearl and Hermes Atoll, and Kure Atoll in 2005 (“USFWS Activity Report: Maritime Heritage Resources Assessment 2005 SUP# 05016”). Survey work in 2006 focused on Kure and Pearl and Hermes Atoll (“USFWS Activity Report: Maritime Heritage Resources Assessment 2006 SUP# 06038”). Survey work in 2007 focused efforts on Pearl and Hermes Atoll and French Frigate Shoals due to vessel maintenance issues truncating the research cruise plans. The planned survey work to be conducted in 2008 will continue these efforts, focusing on non-invasive non-excavation data recording at selected heritage sites at Kure, Midway, Pearl and Hermes Atoll, and French Frigate Shoals, as well as the recovery of three artifacts from two shipwreck sites at Kure Atoll (Section 106 compliance complete, Navy permit pending). Work in 2008 will also include collaboration with cultural resource practitioners for an education project following up on work conducted at Nihoa and Mokumanamana.

Without an understanding of the resource base, without an accurate inventory of significant heritage material, maritime heritage resource management is impossible. Historic shipwrecks are subject to natural deterioration as well as intentional or inadvertent damage (dredging, looting, re-use). The first step in management is to create a resource inventory by confirming identification of sites. The next step is to conduct site assessment, characterizing the nature of the resource. Inventory and assessment are heritage preservation actions common to a number of federal and state programs. The 2008 research therefore supports cultural and historical management efforts on behalf of the different agencies of the Monument Management Board. This survey specifically addresses mandates for maritime heritage resource inventory as stated in the the draft PMNM Management Plan. 2008 work will also include a significant education and outreach effort.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Gleason, Kelly, A.

Title: Maritime Archaeologist, Papahānaumokuākea Marine National Monument

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

Dr. Kelly Gleason

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

Phone:

Fax:

Email:

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

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

NOAA/NMSP

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):

- 1) Dr. Hans Van Tilburg (NOAA/NMSP), maritime archaeologist
- 2) Tane Casserley (NOAA/NMSP), maritime archaeologist
- 3) Sean Corson (NOAA/NMSP), research diver
- 4) Cathy Green (NOAA/NMSP), maritime archaeologist
- 5) To be determined (research diver/maritime archaeologist)
- 6) To be determined (research diver/maritime archaeologist)
- 7) To be determined (research diver/maritime archaeologist)

Section B: Project Information

5a. Project location(s):

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

1) Permit Locations: Proposed activities will take place at Kure, Midway, Pearl and Hermes Atolls, French Frigate Shoals, Nihoa and Mokumanamana. Note—at each atoll more activities than can be completed in on season are proposed, ensuring productive use of time given unpredictable sea states and coordination with other onboard missions.

- 1) Kure Atoll project work
- 2) Midway Atoll project work
- 3) Pearl and Hermes Atoll project work
- 4) French Frigate Shoals project work

5) Nihoa

Plans at Nihoa include access for a collaborative effort with cultural practitioners participating in the research cruise. The visit to Nihoa will depend on weather and sea conditions, and will include a small party (2-3 people) potentially visiting sites on land. All FWS protocol will be followed including securing FWS permission and escort.

6) Necker (Mokumanamana)

Plans at Mokumanamana include access for a collaborative effort with cultural practitioners participating in the research cruise. This visit will depend on weather and sea conditions, and

will include a small party (2-3 people) potentially visiting sites on land. All FWS protocol will be followed including securing FWS permission and escort.

Special note: specific location (latitude/longitude) for historically significant heritage resources is sensitive data—not to be distributed publicly. See maps (attached) for proposed 2007 survey locations..

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:*

Over 60 shipwrecks have been recorded in the NWHI, some dating back to 1805. Many of these wrecks are important cultural resources, capturing the maritime history of the region. Furthermore, state and federal preservation legislation mandate the surveying of historic shipwreck sites and the production of submerged cultural resource management plans for historically significant material. Due to time constraints in the NWHI, surveys of any sites can only be partially completed during any single season. The work to be conducted in 2008 will continue upon investigation from 2006 and 2007, conduct remote sensing survey and towboard surveys for the possible discovery of new historic resource sites, and recover three historic artifacts to be conserved and later displayed as part of a maritime heritage themed exhibit at the Mokupapapa Discovery Center in Hilo, Hawaii.

The proposed work is part of the long term archaeological survey for maritime heritage resources in the Papahānaumokuākea Marine National Monument. Federal preservation initiatives mandate the inventory, assessment and protection of cultural, archaeological, and historical resources within federally managed waters. 2008 proposed survey features non-invasive recording techniques for the discovery, identification and assessment of submerged heritage resources as part of this mandate, and will conduct artifact recovery in accordance with all applicable standards (Conditions for the Custody and Care of Navy Historical Property, Annexed Rules of the UNESCO Convention on the Protection of Underwater Cultural Heritage) .

The purpose of the 2008 survey is to better understand the existing maritime heritage resources in the Monument. Inventory and site assessment are critical parts of resource management and ocean stewardship. The Maritime Heritage Survey team plans to continue the non-excavation survey of selected maritime heritage resource sites initiated in previous field seasons in the NWHI. The team will re-locate known sites (Churchill at French Frigate Shoals, Pearl, Hermes and Quartette at Pearl and Hermes Atoll, F-4U Corsair and USS Macaw at Midway Atoll, Dunnottar Castle, USS Saginaw and Parker at Kure Atoll) and document these sites using digital photography, baseline trilateration and/or GPS mapping methods. The objectives of the 2008 maritime heritage resources survey include two primary methods: 1) non-invasive wreck site assessment survey of selected resources; and 2) non-invasive remote sensing survey (magnetometer) of high potential wreck site areas. Additionally, the 2008 survey will include the recovery of three artifacts from two shipwreck sites at Kure Atoll and the collection of high definition video footage for the creation of a short documentary film piece for education and outreach purposes. Heritage survey may include secondary priorities of monitoring at previously mapped sites, and newly discovered sites. Secondary priorities are contingent on available time, sea conditions, etc. Remote sensing (magnetometer and side scan sonar) and the development of a short documentary video are both contingent upon grant funding.

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 activity will be conducted with adequate safeguards for the resources and ecological integrity of the Monument. This project is part of a continuing effort to identify, interpret and protect maritime heritage resources in the Papahānaumokuākea Marine National Monument. Proposed heritage work in the NWHI emphasizes a low-impact approach, to an extent consistent with the Monument's conservation goals and objectives. Section 106 NHPA compliance was submitted to the State Historic Preservation Office for review and found to have no adverse impact relative to the proposed artifact recovery at Kure Atoll. NEPA and Naval Historical Center Archaeological permits are pending for this activity.

All maritime heritage scientists will participate in a cultural briefing prior to entering the Monument. The team will respect all resources both natural and cultural. The primary permittee will consult with OHA and the Native Hawaiian Coordinator at the PMNM on cultural sensitivities, as well as the applicability of these activities to OHA and the Native Hawaiian Coordinator's efforts for the PMNM. No archaeological work will take place near any known native Hawaiian archaeological sites. If any native Hawaiian sites should be discovered, the proper experts will be notified and consulted immediately. Plans to collaborate with cultural practitioners on board the vessel will allow for further understanding and interpretation of the cultural significance of the Monument.

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? The proposed project will have minimal impact on the resources of the region. The research consists primarily of non-invasive visual surveys. This research is being conducted in concert with the priorities listed in the Maritime Heritage Action Plan of the Monument's Management Plan (inventory and assessment, as well as education and outreach). The strategies proposed are designed to increase our understanding of maritime heritage resources and foster effective and protective management in the Monument. This project will also include multidisciplinary and partnership efforts towards increasing stewardship and enhancement of Monument goals and resources.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.

There is no practicable alternative to conducting the activities in the Monument. Annual maritime heritage surveys are necessary to identify, document and protect the maritime heritage resources in the Papahānaumokuākea Marine National Monument. Additionally, these surveys contribute to education and outreach efforts regarding maritime heritage resources in the PMNM. These activities directly relate to activities in the Monument's draft management plan.

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 proposed activities have been identified as vital to the future management of the Monument and will have no adverse impact on the resources, qualities and ecological integrity of the Monument. Additionally, the opportunity to conduct important education and outreach activities through museum exhibits and a video project will assist in Monument's efforts to promote stewardship and protection of resources, both natural and cultural. Efforts to partner and collaborate with cultural practitioners on the vessel will enhance the value of the maritime heritage activities in the Monument.

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

A minimal amount of time will be spent at each location depending on weather and oceanographic conditions.

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

Personnel included in this permit application have extensive experience conducting research in the Monument, and with all archaeological methods that will be utilized. This is a continuance of a multi-year project. All methods are primarily non-invasive. OHA and cultural practitioners will be consulted in order to further avoid any potential impacts.

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

This cruise and subsequent data analyses are supported by an allocation of 28 days at sea aboard the NOAA ship HIALAKAI from NOAA's Office of Marine and Aviation Operations, a line item in the budget of NOAA's Papahānaumokuākea Marine National Monument, and an allocation of funds from NOAA's Coral Reef Conservation Program to NOAA Pacific Islands Fisheries Science Center.

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

The research consists primarily of non-invasive surveys. Artifact recovery will follow proper protocol (Conditions for the Custody and Care of Navy Historical Property, Annexed Rules of the UNESCO Convention on the Protection of Underwater Cultural Heritage) and undergo Section 106 and NEPA clearance, as well as additional permitting with the Naval Historic Center (for USS Saginaw artifacts). OHA and cultural practitioners will be consulted in order to further avoid any potential impacts.

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

The NOAA research vessel Hi'ialakai has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of the Presidential Proclamation 8031.

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

There are no other factors that would make the issuance of a permit for the activities inappropriate.

8. Procedures/Methods:

Methods:

Individual site assessment survey, remote sensing survey, artifact recovery and video collection are primary objectives, and monitoring and site/environmental data are secondary objectives, of the proposed 2008 maritime heritage project. Where possible, survey locations are prioritized, providing flexible alternatives in case of rough weather, other mission priorities, etc. The following methods will be employed for each of the four proposed 2008 objectives:

1) site assessment survey

Baseline trilateration and measured sketching will provide data for the initiation of the site map. Trilateration and the creation of a site map consists of sketching major features and measuring distances between artifacts in reference to a fixed temporary baseline, and is a time-consuming task. Divers deploy a temporary baseline, replicating previous surveys by attaching the baseline to fixed stainless steel datums. Survey tapes, slates with mylar “paper,” and pencils and then used to triangulate the position of all artifacts in reference to the fixed reference line. In addition, digital video and digital photography are used to document feature and artifact details, as well as record the survey process itself. Artifacts and features are temporarily tagged with numbers and photographed in-place. Photos include scale and magnetic sign board. Also, hand-held metal detectors are used to confirm/eliminate the presence of iron within sediments or substrate, and limited hand fanning of loose sediments and limited sediment probing is used to record details of artifacts and site boundaries. Typically, remote sensing survey methods are also employed in the vicinity when available to help determine site boundaries during individual site survey.

Equipment: Underwater slates
Transect tapes
Pencils
Folding rulers
Gear bags
Open-circuit scuba

- Wireless OTS diver communication gear
- Olympus 5060 digital camera and Light-in-Motion housing
- HD Sony digital video camera and housing
- Sony VX-2100 digital video with Amphibico housing
- Nikon D-100 digital SLR and Light and Motion housing
- AquaScan AQ1B handheld underwater metal detector
- Photo scales
- Plastic artifact tags
- Magnetic sign board for archaeological photos
- Copper wire sediment probes
- Garmin GPS units and waterproof boxes
- Pelican marker floats
- Site buoy

As part of a research design that puts into place a long term strategy for surveying historical resources, maritime archaeologists borrow methods developed by coral reef ecologists working in the NWHI by setting permanent datums to replicate baseline transects at selected maritime heritage resource sites. These datums consist of 3/8” stainless steel rods driven by hammer into clear areas of noncoral substrate (no possibility of cultural material lying beneath the stakes). The non-corroding stainless steel pins will then be glued down with double-barreled epoxy. Where possible, stakes will be placed at linear 5m increments and the beginning and end of the transect will be marked with two stakes. These allow for the accurate replication of the temporary site baseline.

Equipment: 3/8” stainless steel pins
Two-part fast setting underwater epoxy
Hammer

Sites selected for potential assessment survey in 2008 include the British whaler Hermes (1822) at Pearl and Hermes Atoll, the schooner Churchill (1917) at French Frigate Shoals and the British collier Dunnottar Castle (1886) at Kure Atoll.

2) remote sensing survey

Remote sensing survey locates anomalies and potential maritime heritage resources for subsequent site assessments. The surface vessel tows a remote magnetometer sensor (towfish) on linear parallel tracks at or near the surface for shallow zones, recording variations in the localized magnetic field (gamma). The data is processed shipboard. A second alternative, diver tow boarding, though not technically “remote sensing” (divers in the water doing real-time visual survey), is sometimes used to supplement normal remote sensing. Diver survey is particularly helpful in shallow areas of extreme topographical variation. Any potential diver tow boarding operations during 2008 will be conducted only following established training provided by NOAA NMFS and along established NOAA NMFS tow boarding protocols for the NWHI.

Equipment: Marine Magnetics Explorer Mini Magnetometer
Klein Model 3000 Side Scan Sonar

Tow boards
Laptop
HyPack survey software
Honda eu2000i generator or marine 12v batteries

3) monitoring sites

Monitoring sites employs a small subset of the same methods used for initial site survey. Slates, tapes, and (if necessary) temporary re-deployment of the baseline are used to confirm possible movement of features or artifacts. Digital photography is used to generate comparative data on the condition of features and changes to the natural environment (sediment level, etc.).

Equipment: Underwater slates
Transect tapes
Pencils
Gear bags
Olympus 5060 digital camera and Light-in-Motion housing
HD Sony digital video camera and housing
Site buoy

4) artifact recovery (marine sites)

Artifact removal, assessment and documentation:

Diagnostic artifacts are necessary for wreck site identification. Additionally, artifacts become invaluable means of education and outreach for the public, particularly for remote sites that visitors may never get to visit. In the case of the two USS Saginaw artifacts and one Parker artifact proposed for recovery in 2008, they may also be at risk due to looting and disturbance from divers, and resource agencies' current limited enforcement capability in the remote Northwestern Hawaiian Islands. Removal of a ship's bell will assist maritime heritage managers in confirming the identity of the shipwreck sites and provide an important artifact to be shared with the public, adding to interpreting the site. Additionally, the removal of a piece of sounding lead will help the public understand the incredible stories of the USS Saginaw and Parker's wrecking and survival at sea. Removal consists of collecting the two artifacts from the surface of the hard bottom substrate, placing them into a padded container underwater and carefully transporting them to the dive boat and main vessel. No sediment or substrate will be moved or disturbed in the process (artifacts are not buried).

Once the three artifacts are carefully recovered from the shipwreck site by NOAA maritime archaeologists, the objects will be fully documented. The ship's bells and sounding lead will be assigned artifact field numbers immediately upon return to the research vessel, followed by complete photo documentation, including bar scale, date, and field number. The artifacts will be measured and sketched, note being made of any markings and diagnostic features. The artifacts will then be stored submerged in fresh water and transported wet. This prevents hardening of calcium carbonate deposits. The artifacts will be sealed in secure containers and shipped by fedex to the conservation lab immediately upon return to Honolulu. Once at the conservation facility in California, the bell will be placed in a freshwater holding tank until the appropriate treatment has begun. All documentation is recorded on HRCL (conservation facility)

conservation record sheets, which remain on the premises, and HRCL also provides a fully documented report to the client (in this case, NOAA) at the completion of the treatment.

Once the artifacts have been received by the conservation facility, the required treatment time and appropriate methods can then be determined. Once the proper treatment has been determined, the two artifacts will undergo conservation, the process being fully documented itself. Following treatment, the artifacts will be prepared for shipment back to Papahānaumokuākea Marine National Monument office in Hawaii, and subsequently delivered to the curatorial facility in Hilo for further study and public display.

Equipment:

- Open-circuit scuba
- Wireless OTS diver communication gear
- Olympus 5060 digital camera and Light-in-Motion housing
- HD Sony digital video camera and housing
- Sony VX-100 digital video with Amphibico housing
- Lift Bag

5) video collection

For the purposes of education and outreach, a short, documentary film piece will be developed during the 2008 August research cruise. This video will focus on maritime archaeological field surveys and the interpretation of the shipwreck stories in the Monument. A NOAA filmmaker will be contracted to conduct this work. This film will be used in public presentations, conferences, and as a product to hand out to the public.

- Open-circuit scuba
- HD Sony digital video camera and housing

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?

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:

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

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

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

As part of a research design that allows for the accurate replication of the temporary baseline used in trilateration, archaeologists borrow methods developed by coral reef ecologists by setting permanent datums at selected maritime heritage resource sites. Permission was granted in 2005 for the establishment of datums at the whaler Hermes site at Pearl and Hermes Atoll (FWS SUP #05016). There is no need to establish any additional datum points at the Hermes site, though

there may be a need to replace stainless steel pins at previously existing stations if any are missing (consistent with the original permits). The wreck of the Dunnottar Castle at Kure Atoll may have sufficient iron structure (iron hulled ship) to allow a replicable baseline to be attached to the structure itself with minimal impact. However, there may be a need for stainless steel pins to be placed into the hard substrate (pavement) at the Dunnottar Castle site. There may be a need to establish pins at the Churchill shipwreck site at French Frigate Shoals (pavement/hard substrate).

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

Initial results will be reported in the Cruise Report for HI-08-08. Site reports resulting from this cruise will be finalized by June 2009. Data from this project will consist of trilateration site maps, digital still images and digital video images. A summary descriptive project report (activity report) including abstract, major accomplishments, participants, activity log, results of work to date, and proposed schedule of final report will be completed by December 1, 2008, within three months of the end of the expedition. A final report including heritage background, site descriptions, methodology, results, project evaluation and recommendations for maritime heritage resource management will be completed by July 2009. Data and report from this proposal will be sufficient to provide presentations at annual maritime history and maritime archaeology symposiums (for example Society for Historical Archaeology, Society for Hawaiian Archaeology, Symposium on the Maritime Archaeology and History of Hawai`i and the Pacific), and presentations will be made available upon request. Preservation-related data from the 2008 field season will also contribute to heritage preservation material on the NOAA Maritime Heritage Program web page (<http://sanctuaries.noaa.gov/maritime/>). Any film project created will be complete within one year of 2008 field work (08/2009) .

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

None.

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