

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 unlocated 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.