

**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](mailto: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:** John C. Wiltshire (contact for details is John R. Smith)

**Affiliation:** University of Hawaii Undersea Research Laboratory (HURL)

**Permit Category:** Research

**Proposed Activity Dates:** Between mid-October through November, 2010

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

**Proposed Locations:** Gardner Pinnacles region to Necker Ridge

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

9

**Estimated number of days in the Monument:** 14

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

a.) The proposed activity would...

Provide facility support for researchers needing to map or reach the seafloor to carry out their research projects. Hawaii Undersea Research Laboratory (HURL) staff will also support other research activities conducted aboard the UH research vessel KA'IMIKAI-O-KANALOA (KoK).

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

The Pisces submersibles and RCV-150 ROV would serve as the in-situ platforms for proposed research activities including benthic habitat mapping, voucher specimen collection and identification and possible site surveys for drop camera activities. All the research activities would be covered under separate Monument permits that are going through the Monument permit application process.

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

Supporting research activities that will result in a better understanding of the Monument's resources and qualities. The submersible vehicles will also abide by all Monument regulations and best management practices.

**Other information or background:** Please see research permit application from the scientist (Clague) for more details on the research activities proposed aboard KoK.

## **Section A - Applicant Information**

### **1. Applicant**

Name (last, first, middle initial): Wiltshire, John C. (contact for details is Smith, John R.)

Title: Director, Hawaii Undersea Research Lab (J.R. Smith is Science Director)

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

David Clague (please see his individual scientist application for CV, etc)

**2. Mailing address (street/P.O. box, city, state, country, zip):** Hawaii Undersea Research Lab, [REDACTED]

Phone: Director's office [REDACTED]  
[REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

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

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

University of Hawaii and NOAA's Undersea Research Program

#### **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):**

HURL Submersible and ROV operations crew:

The following are all at the Makai Research Pier, [REDACTED]:

Terry Kerby (Operations Director/Chief Pilot) [REDACTED]

Maximilian Cremer (Deputy Operations Director/Pilot) [REDACTED]

Colin Wollerman (Submersible Support Tech) [REDACTED]

Steven Price (Submersible Support Tech) [REDACTED]

Douglas Bloedorn (Submersible Support Tech) [REDACTED]

The following are all at the University of Hawaii Marine Center:

Bernard Greeson (Chief Engineer, [REDACTED]) [REDACTED]

Peter Townsend (ROV Engineering Manager, [REDACTED]) [REDACTED]

2nd ROV Pilot, TBD -- will complete in the Compliance Information Sheet

Multibeam sonar technician, TBD -- will complete in the Compliance Information Sheet

**Section B: Project Information**

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

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

'Other' sites include: Middle Bank, Twin Banks, St. Rogatien Bank, Brooks Banks, and Necker Ridge. Operations for these areas along with Nihoa, Mokumanmana, and French Frigate Shoals will only consist of multibeam bathymetric surveying of their deepwater flanks during transit to and from Gardner Pinnacles. Dive operations will occur only around the Gardner Pinnacles platform.

The deep water work outlined above consists of deep water multibeam mapping during transits between Nihoa, Mokumanmana (Necker), and French Frigate Shoals. For Gardner Pinnacles, operations will include both multibeam mapping in deep water and submersible dives. Shallow water is indicated only for one dive that will end at a notch in the carbonate platform at about 65 m depth. Scientists will survey using the ship during each night and dive on the series of drowned reef terraces around Gardner Pinnacles that range in depth from 65 to nearly 2000 m. Multibeam bathymetric surveys would also be conducted on the flanks of volcanoes within the Monument during transits to and from Gardner Pinnacles and Oahu via Middle Bank, Nihoa, Twin Banks, Mokumanmana Island, French Frigate Shoals, St. Rogatien, Brooks Banks, and to Necker Ridge. Please see individual scientist application (D. Clague) for details.

**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:***

To provide facility support for project scientists awarded or contracting research submersible dives with HURL. Please see individual scientist application for specific activities (D. Clague).

**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?

We will not be visiting any of the island portions and will thus have no possible impact on their said resources. We will not be working in the shallow reef areas and will thus have no impact on their said resources. We will be working in the offshore deeper water areas and HURL has a proven record of successfully supporting the similar types of science operations with the same PI (Clague) at other locations in the main Hawaiian Islands for many years. Our submersible pilots are skillful in operating the vehicles and the dexterous manipulator arm to take small pieces of a sample if that is all that is needed, or the whole sample, if required, without damage to the surrounding ecosystem. The advantage of using manned submersibles and ROVs with cameras is that we can be extremely careful about exactly which samples to take and how best to approach them to minimize any adverse effects. We will have no negative impact on cultural, natural, and historic resources and we are aware that the Northwestern Hawaiian Islands are culturally important to Native Hawaiians.

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?

HURL is providing the tools to put the researchers proposing work here into the submarine environment and will not be conducting scientific or other studies on our own. The HURL vehicles will be maintained and operated to meet all specified

guidelines of the Monument. Successful completion of the science projects we are supporting will provide new knowledge of benefit to management of the Monument and its resources. Removal of rock samples from depth and careful depositon of steel ballast shot should have no detrimental effects on the cultural, natural, and historic resources in the short or long term. Again, we are aware that the Northwestern Hawaiian Islands are culturally important to Native Hawaiians and the proposed activities will have no impact on cultural 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 not. The science project has been specifically proposed to gather data from drowned reefs along the Hawaiian Ridge within the Monument. Of course, the specific nature of submersible science requires that we go exactly where the researchers need to do their work.

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 supported project has been specifically designed to minimize extraction and reduce impact on the ecosystem. The project, if awarded funding, will have succeeded over other proposals based on a review process that attaches significant value to the scientific results that will be seen. The project is designed to use submersible vehicles and HURL is capable of carrying out all these operations with minimal impact to the environment.

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

Given the long transits required, this is the shortest cruise that is fiscally feasible. In addition, it reflects the minimum number of dives required to answer the science questions posed. We are also concentrating effort in only a few locations in relatively close proximity to minimize transit and impact.

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

HURL has been supporting submersible science operations in the NWHI and elsewhere for over 28 years. Our Operations Director and Chief Pilot has been with us for almost that long and will be aboard and operating the submersible on a rotating basis. All our submersible and ROV crew have been with HURL for at least several to many years and have developed the skills to maintain and pilot these vehicles in delicate, diverse, and challenging environments. HURL has procedures in place to reduce the impacts of its vehicles.

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.

HURL will apply funding from one or two sources to cover the entire cost of supporting the science projects proposed and return us to Honolulu. The funding sources are core HURL funding from NOAA/NURP and possible additional funding from NOAA OE. HURL has additional funds in reserve should any contingency arise. We also carry insurance on the vehicles.

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.

All of the methods proposed by the project scientist have been carried out in the NWHI and elsewhere by HURL and its current personnel and vehicles with success and minimal adverse impact. Results to date have been useful (publications from project scientists produced) and we continue to improve the methods and equipment we use to support these science projects.

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

Yes, this was installed to support an expedition to the Monument in 2007.

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 activity inappropriate.

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

Please see individual scientist application for specific scientific procedures and methods (D. Clague). For HURL, all personnel will arrive and depart the Monument aboard the support ship R/V KoK, descend to the seafloor in the Pisces IV or V human occupied vehicles or pilot the RCV-150 remotely operated vehicle from KoK. ROV and multibeam mapping operations typically occur during night time. All this work is offshore in deep water, except for one dive to 65 m. Access to land and the near shore is not required. No assistance from Monument staff is necessary unless they wish to send a representative along. Additional volunteers may be sought if space is available.

**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:

Please see individual scientist application for specimen collection information (D. Clague).

Scientific name:

# & size of specimens:

Collection location:

Whole Organism  Partial Organism

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

Please see individual scientist application for specimen collection information (D. Clague).

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

Please see individual scientist application for specimen collection information (D. Clague).

• 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?**

Please see individual scientist application for specimen collection information (D. Clague). All specimens collected and stored aboard the KOK will comply with Monument regulations and best management practices, including but not limited to the Monument disease protocols.

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

Please see individual scientist application for specimen collection information (D. Clague). HURL maintains a database of video and still images and assists with specimen identifications. Other scientists can query our database to see what data types exist for their research areas of interest.

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

Submersibles Pisces IV & V, ROV RCV-150, SeaBeam multibeam echosounder, various manipulators, suction samplers, scoop devices, etc to collect specimens from the submersibles.

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

HURL only carries house hold quantities (up to 5 gal.) of marine paints, cleaning agents (simple green, isopropyl alcohol) and solvents (acetone, paint thinner). There are only a few compounds that we carry in commercial quantities: hydraulic oil (Tellus), compensation fluid (Diala), oxygen, some International Paint products, and Sofnolime CO2 absorbant. The submersible batteries contain sulfuric acid. Unless there is a catastrophic failure, the battery acid will not be in contact with sea water. Each cell contains about 2.5 quarts of acid, and there are 72 cells for a total of 45 gallons per Pisces submersible. Approximately 10 gallons of regular gasoline are carried for the small chase boat.

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

None, we plan to recover any vehicles and devices that are deployed.

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

Please see individual scientist application for time line information (D. Clague).

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

Please see individual scientist application for publication information (D. Clague).

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.

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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