

**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:** David Hyrenbach

**Affiliation:** Hawaii Pacific University

**Permit Category:** Research

**Proposed Activity Dates:** March 01 - May 31, 2009 & March 01 - May 31, 2009 (2 years)

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

**Proposed Locations:** Three sites are proposed: Midway Atoll, Kure Atoll and Tern Island. We are collaborating with Cynthia Vanderlip (State of Hawaii DLNR), who in 2008 collected 25 bolus samples for each albatross species, to be used in this project. We seek access to two field sites (Midway Atoll & French Frigate Shoals), and the ability to deliver supplies and equipment to a third site (Kure Atoll).

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

3

**Estimated number of days in the Monument:** 8 months: 2 people (one at each site) for 1 - 2 months during 2 field seasons (2009 & 2010)

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

a.) The proposed activity would...

Quantify the amount (incidence, loads) and the types (plastic, Styrofoam, fishing line) of marine debris ingested by Black-footed and Laysan albatross. By integrating this information with similar data we are collecting from the Main Hawaiian Islands (Oahu and Kauai), we will test the hypothesis that colonies closer to the North Pacific Chlorophyll Transition Zone (a known area of marine debris concentration) are characterized by higher ingestion rates. We will apply these data to answer two management questions of relevance to the management of the Monument: (i) develop a baseline of plastic ingestion in these species to facilitate future monitoring of marine debris and population health impacts, and (ii) design a field study to investigate the impacts of plastic ingestion in albatross chicks using ultrasound imaging (please refer to pending Monument permit by Hyrenbach). Together these two studies will improve our ability to monitor plastic ingestion trends in North Pacific albatrosses, and will increase our understanding of the mechanisms linking surface marine debris with ingestion by these far-ranging predators.

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

We will work with refuge staff at three study sites (Midway Atoll, Kure Atoll, French Frigate Shoals) to collect albatross boluses and deceased chicks for necropsy and lab analysis. Boluses will be dried in the air and stored for delivery by ship (or plane) and processing back in Oahu. Chicks will be necropsied in the colony and the stomach contents and tissue samples (for pollutant and isotopic diet analyses) will be preserved and returned to Oahu for lab analysis.

Tissue analyses will include: (i) stomach contents, (ii) tissues for isotopic analyses (muscle, toe nails, primary / body feathers, liver, intestine), and (iii) specimens use in educational activities (e.g., necropsy lab, as part of a university seabird course). Hyrenbach already has a special purpose possession / salvage permit from USFWS (MB - 180283-0), valid through 03/31/2011. (For reference, please refer to enclosed pdf copy) While the number of samples available is impossible to predict, we would like to collect up to 50 boluses and chicks per species per site (yearly total: 300 chicks, adults and boluses). Because only "high quality" boluses (fresh and unscavenged by crabs) will be analyzed for the monitoring study, the remainder will be used in outreach activities working with educators in Hawaii and California (see online products: <http://www.oikonos.org/projects/oceanstewardship.htm>). We recognize that the number of deceased chicks and adults may be considerably lower than this target, and will augment these samples with naturally-deceased adults from fisheries bycatch, provided by NOAA-fisheries and our colleague at Moss Landing Marine Labs (Hannah Nevins).

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

Developing a standardized baseline of plastic ingested by albatross chicks at three NWHI colonies, comparable to other similar studies at two MHI sites (Oahu / Kauai). This information will be useful for future monitoring and health studies of albatross populations in the Monument, and will be applied to ongoing educational and outreach efforts to raise awareness about plastic pollution in the marine environment. In particular, please refer to enclosed permit application for ultrasound-based studies of plastic ingestion in albatross chicks.

**Other information or background:** This research is part of a study to characterize plastic ingestion by albatross and to understand the individual and population-level effects of this ingested plastic on albatross chicks. More specifically, we are interested in studying the general origin (post-user / industrial) and the mechanisms (color preferences, association with natural prey) by which certain pieces are chosen at sea. While it is widely known that surface feeding tubenose seabirds (order Procellariiformes) ingest and feed floating plastic fragments at sea to their chicks, previous studies have not addressed geographic and species-specific differences in the types and amounts of ingested debris. By comparing the results from multiple sites / species breeding in the Monument with colonies in the Main Hawaiian Islands, this study will start to test mechanistic hypotheses about the geographic and life-history factors influencing the plastic ingestion in North Pacific albatross populations. Please refer to the enclosed permit application for non-destructive ultrasound-based monitoring of plastic ingestion in live albatross chicks.

## **Section A - Applicant Information**

### **1. Applicant**

Name (last, first, middle initial): Hyrenbach, David

Title: Assistant Professor of Oceanography

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

Andrew Titmus

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

[REDACTED]

Phone:

[REDACTED]

Fax:

[REDACTED]

Email:

[REDACTED]

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

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

Hawaii Pacific University (<http://www.pelagicos.net>)

#### **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):**

Andrew Titmus, Field Researcher

Pamela Michael, Field Researcher

**Section B: Project Information**

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

|   |  |  |                                     |
|---|--|--|-------------------------------------|
| <input type="checkbox"/> Nihoa Island                     | <input type="checkbox"/> Land-based            | <b><u>Ocean Based</u></b>              |                                     |
| <input type="checkbox"/> Necker Island (Mokumanamana)     | <input type="checkbox"/> Land-based            | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> French Frigate Shoals | <input checked="" 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 checked="" type="checkbox"/> Midway Atoll          | <input checked="" type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Kure Atoll            | <input checked="" type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input type="checkbox"/> Other                            |  |  |                                     |

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

Location Description:

Black-footed and Laysan Albatross colonies on French Frigate Shoals, Kure Atoll and Midway Atoll

**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:***

Although it is known that albatross ingest plastic particles at sea, the locations and distributions of these plastics are poorly understood. By examining the plastic ingested by albatross chicks / adults in the Northwest Hawaiian Islands through necropsies and bolus analysis, we will document the incidence / loads of this debris to albatross foraging ecology. In particular, we will combine the our project with the results from previous satellite tracking data studies and at-sea surveys. This multi-disciplinary approach will allow us to relate the amount and type of plastic ingested by these two sympatrically-breeding albatross to marine debris concentrations and to the oceanography within the foraging grounds where albatross are known to travel during the breeding season. Integrating these colony and at-sea perspectives will give managers an improved understanding of the colony-specific patterns of marine debris ingestion by albatross. This critical information will help develop a baseline for monitoring trends in plastic ingestion rates across the Monument.

**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?

Only dead chicks / adults and regurgitated boluses will be collected by searching the albatross colonies on foot. Thus, we anticipate minimal disturbances to the birds. The processing of boluses and necropsies will require minimal counter space for sorting and air drying, and freezer space for preserving the tissue samples (liver, muscle). We will provide all the necessary lab supplies and will return all the waste to Oahu. We will work with the Monument personnel at each site to determine how best to use funds and personnel.

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? By examining the incidence and type of plastic ingested by these seabirds, this research will provide valuable baseline data for monitoring these species in the Monument and for designing future hypothesis-driven studies relating plastic ingestion to albatross health and population trends. Please refer to the enclosed permit application for ultrasound-based monitoring of plastic ingestion in live albatross chicks.

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.

The Monument contains the main breeding sites for the central Pacific populations of Black-footed and Laysan Albatrosses, making these critical sites for this research to take place. An

important aspect of this study is the comparisons across among multiple colonies, required to investigate the influence of the regional oceanography. Thus, it is imperative that we study multiple replicate colonies to characterize the types and amounts of ingested plastic in the MHI and the NWHI. Furthermore, testing the prediction of differences in plastic ingestion rates in colonies closer and farther from the North Pacific Chlorophyll Front (NPCF) will require samples from several sites spanning the latitudinal range of the Monument. Thus, we selected the northern-most sites (Midway Atoll, Kure Atoll) and a central site (French Frigate Shoals) to conduct this study.

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 research will increase the Monument's knowledge about the incidence and amount of plastic ingestion in breeding albatross populations. It will also determine geographic differences across colonies and relate these patterns to a broader ecological and oceanographic context using the available information from satellite-tracking studies and marine debris distributions. Furthermore, we will apply the results of this research to educate the public about the pervasive problem of marine debris, and its impacts on marine wildlife. It is our belief that these benefits will outweigh any adverse impacts on the resources and qualities of the Monument.

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

We will work with the managers to determine the most effective approach. In principle, this is what we envision: chick carcasses will be collected - by Monument personnel if possible - throughout the rearing season (March through June) as they perish during the field season of 2009. A researcher from our project will spend 1 - 2 months at each site to collect boluses and additional dead chicks, and will process these samples for shipping back to Oahu for detailed analysis. We will work with the refuge manager at each island to determine the best approach for collecting samples, this may entail additional time spent in the refuge by our researchers if the manager is low on personnel or resources. During the second field season of 2010 a researcher from our project will spend 1 - 2 months at each site to collect and necropsy dead albatross chicks and collect boluses. The researcher will also assist refuge staff as needed.

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

We will work with the Monument managers to determine the most effective approach. In principle, this is what we envision: the activity will require that the existing monitoring personnel at the study sites collect dead birds opportunistically, record basic specimen information (date, location, apparent cause of death), and store the bird in a freezer for processing by the researcher from our project. The existing monitoring personnel at the study sites will be qualified for these activities. Hyrenbach (PI) and two graduate students (Titmus / Michael) have many years of experience working with seabirds, and have handled albatross adults and chicks in the past. Moreover, these investigators have experience with seabirds necropsies and the collection and preservation of tissue samples.

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. We have been awarded two National Fish and Wildlife Foundation (NFWF) Marine Debris grants to fund the stated research project. The duration of these ongoing grants is June 1, 2010. Funds from these grants can be applied to both offset personnel costs of refuge staff already at the project sites and / or travel and accommodations for researchers from this project.

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.

Our methods will cause minimal disruption to the Monument ecosystem because our study will require collection of dead chicks and adults and non-invasive diet sampling from boluses during the late chick rearing season for albatrosses. These activities will only require a minimal research presence in the field. In addition, the albatross colonies will be minimally disturbed during the collection of dead birds and boluses. Depending on the logistical limitations, basic necropsies can be done on site and samples (stomach contents, tissues) shipped to Oahu for more detailed processing at Hawaii Pacific University (HPU). Alternatively, if the refuge has access to a freezer, sample processing will be done off-site. The carcasses and boluses will be shipped to Oahu (by ship or plane) for analysis.

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

N / A

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

The proposed method would result in minimal disturbance to Albatross colonies as live birds would not be disturbed. The Monument's resources would not be strained by this project as this project will require a minimal presence at the study sites.

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

We are flexible about the timing and the duration of the visits to the Monument, and will work with the managers of the two proposed field sites (French Frigate Shoals, Midway Atoll) to determine the most efficient way to collect the samples we are requesting. Furthermore, we are prepared to discuss the ways that our resources can contribute to the management goals of the Monument. For instance, we could provide financial support for the current staff to perform the sample collection. Alternatively, the project personnel deployed in the field could volunteer in other research / monitoring activities. We are aware that the resources available for research and the availability of transportation to / from the Monument change from year to year, and look forward to working with the appropriate co-trustees to develop a research plan that accommodates these limitations.

**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:

Laysan Albatross

Black-footed Albatross

Scientific name:

Phoebastria immutabilis

Phoebastria nigripes

# & size of specimens:

Up to 50 chicks / 50 adults of each species at each location, during two years (2009 and 2010).

Total of 300 chicks and 300 adults (Note: anticipated number of adults, considerably smaller).

Albatross boluses: 50 of each species at each location, during two years (2009 and 2010).

Total of 300 boluses.

Collection location:

Albatross colonies on Midway Atoll, Kure Atoll and French Frigate Shoals

Whole Organism  Partial Organism

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

Specimens will be disposed of either on the Monument (following the directions of the Refuge managers) or in Oahu (through a commercial service, available at Sea Life Park). Some parts will be collected and archived for use in a teaching collection, under auspices of USFWS salvage and special use permit to Dr. David Hyrenbach. Please refer to enclosed pdf copy.

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

Specimens will be collected after natural death

• General site/location for collections:

Dead birds and boluses collected from albatross colonies

• Is it an open or closed system?  Open  Closed

n/a

- Is there an outfall?  Yes  No

n/a

- Will these organisms be housed with other organisms? If so, what are the other organisms?

n/a

- Will organisms be released?

n/a

**10. If applicable, how will the collected samples or specimens be transported out of the Monument?**

Specimens will be transported by plane and / or NOAA ship to Honolulu as soon as possible after collection.

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

Our research team is currently collaborating with other investigators, and will share the boluses / samples for broader investigations of squid diet (Bill Walker, NOAA) and pollutants (Myra Finlestein, UCSC). Additionally, we have plans to collaborate with other ongoing studies of albatross boluses in Kure Atoll (Cynthia Vanderlip, State of Hawaii DLNR) and Guadalupe Island (Bill Henry, UCSC) by coordinating data collection / analyses to facilitate inter-colony comparisons. These collaborations will ensure broader use of the samples and will avoid redundancy and duplicated effort. Finally, we are collaborating with researchers involved in several related projects: (i) outreach and educational activities (Carol Keiper, Oikonos); (ii) satellite tracking studies of albatross movements from Tern Island (David Anderson, Wake Forest University) and Kure Atoll (Michelle Hester, Oikonos); (iii) ingestion of plastic debris by North Pacific seabirds (Hannah Nevins, Moss Landing Marine Labs) and at-sea surveys of marine debris in the North Pacific Ocean (Kara Lavender, Sea Education Association).

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

No specialized gear is required. Funds are budgeted for the required field and lab supplies. If the Monument needs additional freezers to store the tissue samples, we have some flexibility in the budget to cover these costs.

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

None. Samples will either be frozen or processed and stored dry on site.

**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 envision a two-year project involving data collection and write-up:

- March - June 2009: Dead albatross chicks / adults and boluses collected from three sites (Midway Atoll, Kure Atoll, and French Frigate Shoals) and transported to Honolulu.
- July - October 2009: Samples sorted and quantified at Hawaii Pacific University.
- November 2009 - December 2009: Complete analysis of first year of data.
- January - February 2010: Work with Monument to plan year 2 sampling using year1 results.
- March - June 2010: Dead albatross chicks / adults and boluses collected from three sites (Midway Atoll, Kure Atoll, and French Frigate Shoals) and transported to Honolulu.
- July - October 2010: Samples sorted and quantified at Hawaii Pacific University.
- November - December 2010: Finalize analysis and synthesize results.
- January - February 2011: Results write-up. Submit ms for publication.

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

Hyrenbach, D., Nevins, H., Hester, M., Keiper, C., Webb, S., Harvey, J. 2009. Seabirds Indicate Plastic Pollution in the Marine Debris in Alaska. In: Marine Debris in Alaska. Alaska Sea Grant, Anchorage, AK.

Hyrenbach, K.D. 2008. Applying Spatially-explicit Measures for Albatross Conservation, Pp. 118-120. In: De Roi, T., Jones, M., Fitter, J. (Eds). Albatross: their world, their ways. Firefly Books, Buffalo, NY.

Hyrenbach, K.D., Keiper, C., Allen, S.G., Anderson, D.J., and Ainley, D.G. 2006. Use of national marine sanctuaries by far-ranging predators: commuting flights to the California Current System by breeding Hawaiian albatrosses. Fisheries Oceanography, 15 (2): 95-103.

Nevins, H., Keiper, C., Hyrenbach, D., Stock, J., Hester, M., and Harvey, J. 2005. Seabirds as Indicators and Ambassadors to Teach about Marine Plastic Pollution. Rivers to Sea Conference Proceedings Available online at: <http://conference.plasticdebris.org/whitepapers.html>

Keiper, C.A., Hester, M.M., and Hyrenbach, K.D. 2005. Wondrous Ocean Wanderers in Our Own Front Yard. Hydrosphere 17: 1, 10-11. [www.farallones.org/docs/albatross.pdf](http://www.farallones.org/docs/albatross.pdf)

Shaffer, S. Costa, D., Suryan, R., and Hyrenbach, D. 2004. Regional Summaries: North Pacific (section 4.1). In: Bird Life International. Global Procellariiform Tracking Workshop Report. Cambridge, BirdLife International. pp. 47-49.

Hyrenbach, K.D., and Dotson, R.C. 2003. Assessing the susceptibility of female Black-footed Albatross (*Phoebastria nigripes*) to longline fisheries during their post-breeding dispersal: an integrated approach. *Biological Conservation*, 112: 391-404.

Hyrenbach, K.D., Fernández, P, and Anderson, D.J. 2002. Oceanographic habitats of two sympatric North Pacific albatrosses during the breeding season. *Marine Ecology Progress Series*, 233: 283-301.

Hyrenbach, K.D., and Dotson, R.C. 2001. Post-breeding movements of a male Black-footed Albatross *Phoebastria nigripes*. *Marine Ornithology*, 29:23-26.

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