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:
NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
nwhipermit@noaa.gov
PHONE: (808) 725-5800 FAX: (808) 455-3093

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:** Scott R. Santos  
**Affiliation:** Department of Biological Sciences, Auburn University, AL 36849

**Permit Category:** Research  
**Proposed Activity Dates:** June 2021  
**Proposed Method of Entry (Vessel/Plane):** US Fish and Wildlife Service PI coring project in June 2021  
**Proposed Locations:** Laysan Island

**Estimated number of individuals (including Applicant) to be covered under this permit:**  
As in US Fish and Wildlife Service PI coring project in June 2021

**Estimated number of days in the Monument:** As in US Fish and Wildlife Service PI coring project in June 2021

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

a.) The proposed activity would…
Collect 6 sediment core samples from the perimeter surrounding hypersaline lake in middle of Laysan Island. Cores would be to 12 inches (30.5 cm) depth and shipped intact to Auburn University where attempts would be made to hatch resting eggs of brine shrimp from layers of the cores. Given that deeper layers represent older points in time, this allows analyses of past population structure of the Laysan brine shrimp. Individual brine shrimp would be sacrificed following hatching for DNA analyses.

b.) To accomplish this activity we would ….  
Required collection of the 6 sediment core samples would be done by individuals taking part in the US Fish and Wildlife Service PI coring project in June 2021.

c.) This activity would help the Monument by …
Providing information on the species identity and past and current population structure of the Laysan brine shrimp, which to the best of our knowledge, has not been done...
before. This work would also provide information on the potential uniqueness of the Laysan brine shrimp that could be utilized in conservation and management decisions for the population.

**Other information or background:**