

## **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:** Whitlow Au

**Affiliation:** Hawaii Institute of Marine Biology

**Permit Category:** Research

**Proposed Activity Dates:** May 10 - June 3, 2010

**Proposed Method of Entry (Vessel/Plane):** NOAA ship Hi'ialakai

**Proposed Locations:** For Deep EARs deployment

|                         |                 |                   |
|-------------------------|-----------------|-------------------|
| Kure Atoll:             | N28 deg 20.000' | W178 deg 13.000'  |
| Lisianski -Pioneer Bank | N26 deg 2.000'  | W173 deg 32.000'  |
| French FS-Brooks Bank   | N23 deg 55.000' | W166 deg 42,.000' |
| Nihoa                   | N22 deg 54.000' | W162 deg 12.000'  |

For Shallow EARs to be refurbished

|                         |           |            |
|-------------------------|-----------|------------|
| Pearl and Hermes Atoll2 | N27.94057 | W175.86171 |
| Maro Reef               | N25.41957 | W170.66913 |
| Lisianski               | N26.10010 | W173.99798 |
| KUR-Kure Atoll          | N28.38171 | W178.32571 |
| MID-Midway Atoll        | N28.19637 | W177.37495 |
| French Frigate Shoals2  | N23.63507 | W166.18554 |
| French Frigate Shoals3  | N23.76887 | W166.26197 |
| Pearl and Hermes Atoll1 | N27.79096 | W175.86298 |

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

1

**Estimated number of days in the Monument:** 24

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

a.) The proposed activity would...

Involve deployment of four deep EARs (Ecological Acoustic Recorders) to be moored on the bottom at approximately 400 m depth for the purpose of detecting baleen whales in Monument waters. The items used with each EAR is a syntatic foam collar on the EAR, an acoustic release, a garage post concrete block and two sandbags.

We will also be refurbishing 8 EARs that have been deployed in shallow waters. These EARs have been collecting acoustic data on the acoustic environment of the coral reef areas in the Monument. These shallow EARs have been successful in detecting different species of dolphins, humpback whales, different species of fish. The EARs are also collecting long-term data on the level of snapping shrimp sounds throughout the Monument.

b.) To accomplish this activity we would .... need a J-frame or A-frame to lift the mooring anchor (cement block and sandbag), the acoustic release and deep EAR package along with flotation form, over the side of the ship and then release the entire package and let it free dropped to the bottom.

In order to refurbish the 8 shallow EARs, divers would be need to separate the EAR from the bottom anchor (concrete block) and brought to the surface. The old battery packs will be replaced by new battery packs and the dish drive will be swapped with new ones. Then the refurbished unit will be taken down and attached to the bottom anchor.

c.) This activity would help the Monument by ... determining the distribution of baleen whales in deep waters of the Monument using the four new deep EARs. The refurbished shallow EARs will continue to collect data on the acoustic environment of coral reefs.

**Other information or background:** Humpback whales have been found to migrate to the Monument from unknown locations in high latitudes. Other baleen whales are probably also present in the Monument. It is important to understand what baleen whales are present, when they are present and where in the Monument they are present. This type of information is important in terms of management of the Monument.