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. Andrew Rossiter: Director, Waikiki Aquarium
Affiliation: Waikiki Aquarium, and Department of Zoology, University of Hawaii at Manoa

Permit Category: Education
Proposed Activity Dates: April 1, 2011 - December 31, 2011
Proposed Method of Entry (Vessel/Plane): Vessel and Plane
Proposed Locations: Nihoa Island, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, Neva Shoal, Pearl and Hermes Atoll, Midway Atoll, and Kure Atoll

Estimated number of individuals (including Applicant) to be covered under this permit:
(10) ten, but most likely no more than (8) eight on any one trip
Estimated number of days in the Monument:
Estimated maximum of (3) three separate trips covering aproximately (30) thirty days each, for a total of 90 days

Description of proposed activities: (complete these sentences):

a.) The proposed activity would…
involve the collection and removal of a limited number of target live fishes and corals from the Papahanaumokuakea Marine National Monument. These specimens will be collected with extreme care by trained and highly experienced professional biologists. Accidental by-catch and incidental mortalities will be avoided by targeting select specimens, and extreme care will be taken to not damage the habitat. It is the goal of the Waikiki Aquarium staff or other designees to collect specimens and return them alive and in good condition to the Waikiki Aquarium, where they will be maintained and put on public display in a new exhibit highlighting the fauna and ecosystem of the Papahanaumokuakea Marine National Monument.

b.) To accomplish this activity we would ….
use SCUBA and snorkeling techniques within the Papahanaumokuakea Marine National Monument, specifically around the islands of Midway Atoll, French Frigate Shoals, Maro Reef,

and Pearl and Hermes Atoll, but also including other islands/reefs within the Monument. A small boat or vessel may be used to reach those few collecting sites where shore access is not possible.

The target organisms will be collected by trained and experienced biologists using non-destructive and non-lethal collecting methods, namely handnets, barrier nets, geological picks, small hand tools, fishkeeps and other small collection containers. Specimens will be targeted individually to avoid the accidental capture or incidental mortality of unwanted specimens that can occur during non-targeted netting activities.

For fishes, to minimize post capture trauma, emphasis will be placed on collecting smaller, juvenile specimens so as to avoid the stress-related issues that sometimes occur with larger specimens during transportation and introduction to captivity. Additionally, this protocol aims to, whenever possible, avoid the removal of larger, reproductively mature animals from the population.

For corals, priority will be given to collecting fragments which have become detached naturally from parent colonies. Fragmentation of intact colonies will be undertaken as a last resort only when naturally occurring fragments are not plentiful or available, and will be done with utmost care so as to minimize impact to the parent colony. Waikiki Aquarium biologists and their designees are highly experienced and extremely competent in this procedure and any deleterious effects from sampling will be minimal and short lived. For example, in the 2009 sampling for this project, the small scars left when fragments were removed from a parent colony had completely healed over three weeks later.

c.) This activity would help the Monument by …
presenting to our 320,000 visitors annually, a living reef habitat representative of that found in the Monument. Viewing this ecologically accurate exhibit and associated graphic and video educational messaging will result in increased public awareness of the Monument. Furthermore, it will also give rise to an improved understanding of the unique nature of the marine faunas found there, and why it is so important to preserve and protect them. Additionally, our education programs, which reach over 32,000 schoolchildren annually, will be revised to incorporate accurate scientific and cultural information about the Monument, using the exhibit as a dynamic living tool to underline the education and conservation message.

Other information or background:
The Waikiki Aquarium has a long and successful history in maintaining, breeding, and propagating both local and non-local species of marine fishes and invertebrates. This includes uncommon and previously described "hard to keep" species, endangered species, and Species of Concern. The Aquarium is internationally renowned for its pioneering and successful programs in this area and holds many records for 'firsts' in public exhibiting or breeding of species, any many records for longevity in captivity. For example, it was the first aquarium within the United States, and second worldwide, to successfully breed the Chambered Nautilus, and continues to

breed these animals to this day. One of the signature fish species which we have applied to collect under this permit, the Masked Angelfish Genicanthus personatus, has only been bred in captivity at the Waikiki Aquarium. The Aquarium's Coral Ark program seeks to maintain at the Aquarium rare corals from around the Main Hawaiian Islands, as a precautionary measure should these corals disappear from their natural environment. Currently, rare species, such as the irregular rice coral Montipora dilatata, one of four federally recognised Species of Concern in Hawaii (Kaneohe Bay, Oahu) and Acropora cytherea (Kauai) are currently being successfully grown and propagated as part of this program. Our trip to French Frigate Shoals in 2009, and again last August 2010, resulted in the collection and current successful maintenance of one undescribed Acropora species according to personal communications with USFWS Coral Reef Biologist, Dr. James Maragos. Many other examples of the Aquarium's achievements exist, and the Aquarium continues to be at the forefront in maintaining successfully, exhibiting or breeding newly discovered, rare, and challenging species.