

State of Hawai'i
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawai'i 96813

July 27, 2018

Board of Land and Natural Resources
Honolulu, Hawai'i

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Education Permit to Mr. Keolohilani Lopes Jr., Joint Institute of Marine and Atmospheric Research/PMNM, for Access to State Waters to Conduct Filming and Photography Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument Education permit to Mr. Keolohilani Lopes, Joint Institute of Marine and Atmospheric Research/PMNM to § 187A-6, Hawai'i Revised Statutes (HRS), Chapter 13-60.5, Hawai'i Administrative Rules (HAR), and all other applicable laws and regulations.

The Education permit, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the Northwest Hawaiian Islands (NWHI) State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Nīhoa Island
- Mokumanamana (Necker)
- French Frigate Shoals
- Gardner Pinnacles
- Maro Reef
- Laysan Island
- Lisianski Island, Neva Shoal
- Pearl and Hermes Atoll
- Kure Atoll

The activities covered under this permit would occur between August 15, 2018 thru August 14, 2019.

Though this Applicant is new, the proposed activities have been previously authorized and conducted in the Monument.

INTENDED ACTIVITIES

Monitoring Program research expedition to Papahānaumokuākea Marine National Monument (PMNM). Documentary would also highlight research projects occurring on the cruise. Filming for this project began in the Main Hawaiian Islands with the students attending the University of Hawai'i Quantitative Underwater Ecological Surveying Techniques (QUEST) program in May 2018. Video footage will be obtained by handheld video equipment as well as a DJI Phantom 4 Pro+ unmanned aircraft system (UAS).

The proposed activities would consist of the applicant and one visual observer/Resource Monitor accessing the Monument aboard a research vessel for a research expedition currently scheduled for August 23, 2018 – September 16, 2018 though the permit would be good for one year. Other specific activities include swimming/snorkeling, interviewing researchers and others, recording interviews, and filming and photography. The applicant is a technical research diver who will be jointly covered under separately permitted activities (PMNM-2018-029, PMNM-2018-031, and PMNM-2018-032). Filming activities will occur opportunistically as time, safety, weather, and location permit. The applicant is a FAA certified UAS pilot and all UAS operations will occur in the presence of a PMNM resource monitor. UAS operations will be conducted from the marine environment and occur over open waters and near the shoreline, not to exceed the high water mark. Upon completion of this film, it will be submitted to the Hawaii International Film Festival and the Waimea Ocean Film Festival as well as to PMNM for educational uses.

To safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Human Hazards to Seabirds Briefing (BMP #003), Boat Operations and Diving Activities (BMP #003), Reducing Light Impact to Sea Turtles (BMP #009), Marine Wildlife Viewing Guidelines (BMP #010), Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011), Midway Reservation Requirements (BMP #014), Nonnative Species Inspection Requirements at Midway Atoll (BMP #015), and Best Practices for Maritime Heritage Sites (BMP #017).

The activities will benefit the conservation and management of the Monument by supporting the Monument Management Plan (MMP) as described in:

Activity CBO-2.3: Support other entities' efforts to broaden knowledge of and appreciation for Monument resources and management priorities.

Establishment of the Monument has created interest from documentary filmmakers, writers, photographers, and other entities to help us "bring the place to the people." The MMB will support those endeavors that provide benefit to Monument resources and management and our constituents without impacting Monument resources. (PMNM MMP Vol. 1, p. 271, 2008).

To safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Human Hazards to Seabirds Briefing (BMP #003), Special Conditions and Rules for Moving Between Islands / Atolls and Packing for Field Camps (BMP #007), Reducing Light Impact to Sea Turtles (BMP #009), Marine Wildlife Viewing Guidelines (BMP #010), Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011), Precautions for Minimizing Human Impacts on Endangered Land Birds (BMP #012), and Best Practices for Maritime Heritage Sites (BMP #017).

Strategy MCS-3: Communicate results of research and monitoring over the life of the plan:

Research is an exciting way to promote ecosystem literacy and caring for the NWHI. Ecosystem research-related education and outreach present an ideal opportunity to “bring the place to the people and not the people to the place.” This strategy serves a dual purpose of presenting the science to a general audience and promoting the research necessary to manage the Monument. In addition, research and modeling discoveries can be shared with the public and incorporated into classroom curricula. Activities contained within this strategy apply to terrestrial and marine research and monitoring activities in the Monument. (PMNM MMP Vol. 1, p. 127, 2008).

Activity CBO-2.3: Support other entities’ efforts to broaden knowledge of and appreciation for Monument resources and management priorities.

Establishment of the Monument has created interest from documentary filmmakers, writers, photographers, and other entities to help us “bring the place to the people.” The MMB will support those endeavors that provide benefit to Monument resources and management and our constituents without impacting Monument resources. (PMNM MMP Vol. 1, p. 271, 2008).

The activities described above may require the following regulated activities to occur in State waters:

- ☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within and Special Preservation Area or Midway Atoll Management Area
- ☒ Anchoring a vessel

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawai‘i Division of Aquatic Resources, Hawai‘i Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Pacific Islands NW Refuge Complex Office, the Office of Hawaiian Affairs (OHA), and the PMNM Native Hawaiian Cultural Working Group. In addition, the permit application has been posted on the Monument Web site since May 25, 2018, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument’s Public Notification Policy.

Comments received from the scientific community are summarized as follows:

Scientific reviews support the acceptance of this application.

1. Is there a recovery plan for any operator or mechanical error with the drone (unmanned UAS)?
Retrieval after an inland drone crash may cause significant impact and damage to resources and nesting birds.

Drone operator will have new clothing that has been frozen for +48hrs for each site visited in the rare case of an inadvertent drone (UAS) crash and will coordinate recovery of the UAS with Monk Seal Research Program staff in the vicinity if possible. Just to reaffirm, the planned flights will take place over

the shoreline, not to exceed the high water line of any site. Built in, electronic safeguards that will prevent "runaways" include a return to starting point feature, if the UAS loses contact with the remote control device, it will automatically return to the takeoff location via built in GPS.. In addition to this feature the UAV also has an industry leading, anti-collision sensors that will further reduce the risk of an accidental crash. The drone operator also has been a part of the Marine Debris Program for one field season and has worked in and around these shorelines before and will be extremely careful around these delicate bird habitats, paying particular attention to burrowing birds and the bird species that nurse eggs in unprotected nests.

2. Can they use any of the b-roll footage from Tandem Stills and Motion?

Due to the specific storyline and video shot list, generic video footage would be less than ideal to accurately portray a visually stimulating story that is intended for these intended video products.

COMMENTS / RECOMMENDATIONS:

1. In the event that the drone inadvertently comes down on land, NMFS request that the applicant coordinate recovery efforts with Hawaiian Monk Seal Research Program staff if they are on island.

Will do.

2. All individuals covered by the application must review and adhere to the conditions set forth in the Marine and Wildlife Viewing Guidelines, the Boating and Diving Protocols, Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment.

Yes, we will adhere to those Monument Best Management Practices.

3. The applicant isn't allowed to fly a drone over the Hawaiian Islands National Wildlife Refuge (Nihoa, Mokumanamana, French Frigate Shoals, Laysan, Lisianski and Pearl & Hermes). He may fly the drone near shore, where it would be accessible to collect if it went down. It is up to the discretion of the resource monitor in what conditions the drone is flown with wildlife and weather concerns. The resource monitor will monitor for wildlife disturbance. The applicant fails to mention the best management practices and how they will apply them to their work in the Monument.

All UAS operations will be conducted from the marine environment and capture the shallow water environment up to the high water mark on the shoreline. If the UAS has a catastrophic crash deep inland, I will change into my sterile footwear, and cloths, and will adhere to PMNM BMP #007 to eliminate the risk of introduced species during a land recovery of the UAS. In the event of a water crash, I will snorkel to get it. The UAS will not immediately sink so there will be time to drive the boat to it and retrieve it. To avoid disturbing habitat and the animals residing on the atolls all footage will be shot from near the shoreline. I will not venture inland more than the high water line on the shore line. When flying the drone I will always have a path to retrieve it at any point in the operation.

4. Make sure the applicant preforms good biosecurity measures for marine aquatic invasive spp. introduction. They need to clean their gear and inspect their pockets to ensure they don't have any invasive alga or other organism. Clean their gear by rinsing/soaking in a diluted beach

solution. They also need to do a bleach soak/rinse between atoll/islands/reef within the Monument.

This applicant will be covered in the managers permit as a scientist researcher so all gear will be treated as stated in the "Disease and Introduced Species Prevention Protocol or Permitted Activities in the Marine Environment" protocols, in addition to the "Special Condition Rules For Moving Between Islands/ Atolls".

5. The applicant isn't allowed to film at Midway without a USFWS resource monitor present. Much of the atoll is closed to people.

Noted

Comments received from the Native Hawaiian community are summarized as follows:

Cultural reviews support the acceptance of this application. No concerns were raised.

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g. MMPA, ESA, EA) Yes ☒ No ☐

If so, please list or explain:

- A request to the U.S. Fish and Wildlife Service Pacific Islands Fish and Wildlife Office (PIFWO) for a Section 7 informal consultation pursuant to the Endangered Species Act of 1973 is underway to analyze the effects of proposed activities within the Monument on protected species. The outcome of this consultation may require the applicant to adhere to other PIFWO-prescribed conditions. Such conditions would be reflected in the PMNM permit, prior to issuance.
- An informal review of all aforementioned activities following section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. 1855(b)) is currently underway. The outcome of this review may require the applicant to adhere to other NMFS-prescribed conditions. Such conditions would be reflected in the PMNM permit, prior to issuance.
- The Department has made an exemption determination for this permit in accordance chapter 343, HRS, and Chapter 11-200, HAR. See Attachment ("DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT EDUCATION PERMIT TO MR. KELOHILANI LOPES JR., JOINT INSTITUTE OF MARINE AND ATMOSPHERIC

RESEARCH/PMNM, FOR ACCESS TO STATE WATERS FOR FILING AND PHOTOGRAPHY
ACTIVITIES UNDER PERMIT PMNM-2018-25.”)

Has Applicant been granted a permit from the State in the past? Yes ☐ No ☒

If so, please summarize past permits:

Have there been any a) violations: Yes ☐ No ☒
b) late/incomplete post-activity reports: Yes ☐ No ☒

Are there any other relevant concerns from previous permits? Yes ☐ No ☒

STAFF OPINION

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for his application and should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Education Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION

The MMB has not yet provided endorsement for this amendment action. This is a product of process timeframes and not necessary a result of any concern with the proposed amendment itself. A verbal update will be provided at the time of the BLNR hearing.

RECOMMENDATION

That the Board authorize and approve an Education Permit Amendment to Mr. Keolohilani Lopes Jr., Joint Institute of Marine and Atmospheric Research/PMNM with the following special conditions:

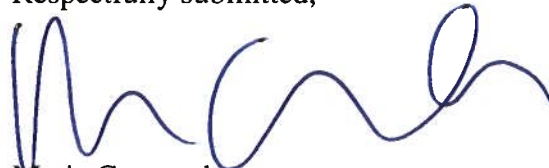
That the Board declare that the actions which are anticipated to be undertaken under this permit will have little or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.

Upon the finding and adoption of the department's analysis by the Board, that the Board delegate and authorize the Chairperson to sign the declaration of exemption for purposes of recordkeeping requirements of chapter 343, HRS, and chapter 11-200, HAR.

1. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.

2. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
3. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge.
4. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.
5. That the permittee provide, to the best extent possible, a summary of their Monument access, including, but not limited to, any initial findings to the DLNR for use at educational institutions and outreach events.

Respectfully submitted,



Maria Carnevale
State Co-Manager

 Papahānaumokuākea Marine National Monument

APPROVED FOR SUBMITTAL



Suzanne D. Case
Chairperson

Papahānaumokuākea Marine National Monument
EDUCATION 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:
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: Keolohilani H. Lopes Jr.

Affiliation: PMNM/JIMAR

Permit Category: Education

Proposed Activity Dates: 08/23/2018 – 09/16/2018

Proposed Method of Entry (Vessel/Plane): Vessel

Proposed Locations: Marine areas within all Special Preservation Areas: Kure, Pearl and Hermes, French Frigate Shoals (FFS), Nihoa, Mokumanamana, Maro Reef, Laysan, Lisianski, and Gardner Pinnacles and marine and land areas of Midway Atoll Special Management Area.

Estimated number of individuals (including Applicant) to be covered under this permit: 2

Estimated number of days in the Monument: 26

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

Create a documentary film that tracks two (2) university students as they pursue their dream of becoming marine scientist. This film will introduce the students beginning in May 2018 at QUEST (UH Hilo field school to teach SCUBA survey methods) and follow them after they have been selected as PMNM interns for this research cruise. Once on the cruise this film intends to highlight all the work that the managing partners are doing in the monument to mitigate the issues that face PMNM. The story will continue with the new interns as they get accustomed to the ship, the research, and the daily routine the expedition requires. Additionally, this film intends to show some of the seasoned veteran divers of the deep reef team, and the other research projects that will be conducted on this cruise. Most video footage for this film will be shot on a handheld video camera, underwater video cameras, and a small unmanned aircraft system (UAS) High Definition video, and a compact sport camera (GoPro) of the various atolls within PMNM (see application to be submitted by Randy Kosaki) on an upcoming NOAA ONMS HA1802 cruise to PMNM (dates 8/23/2018 – 9/16/2018). All video footage will be

opportunistically captured as time, safety, weather, and location will dictate. I am estimating that 75% of the video will be shot with a handheld camera in the ocean (ship, small boat, underwater), 10% Hawaii Island (QUEST), 5% Midway, and ~10% drone footage of all operational site locations. Upon completion of this film I plan to submit it to the Hawaii International Film Festival and the Waimea Ocean Film Festival and no profit will be generated personally by me. This film will become the property of PMNM as it is shot on their gear (except for drone), and I am a salaried employee of PMNM conducting this work primarily on work hours.

b.) To accomplish this activity we would

I will have the video gear with me during the daily operations and be ready to film when I am free from my research duties. My primary responsibility on this research cruise is that of a Technical Diver to survey the deep reef. This task requires a lot of time, however, I will be should be able to capture some footage with the handheld cameras and launch the drone from the small boat (vessel support to be separately permitted) and fly it around areas of interest being careful not to disturb wildlife. Most footage will be taken at low altitude (400' ceiling) and at low speeds (<20 mph), along the shoreline. Our current draft itinerary doesn't take us to the culturally sensitive areas of Nihoa and Mokumanamana and these atolls will only be shot from a distance (>1mi) if our plans change due to weather.

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

Creating a high quality documentary targeted for a worldwide audience that will highlight the Monument's natural and cultural resources, partner agencies work in mitigating threats facing PMNM, and the type of research is being conducted.

Other information or background:

I have received the Fish and Wildlife Service (FWS) UAS checklist and I meet all requirements set. I have passed my FAA Part 107 UAS pilot exam and I am currently awaiting my UAS pilot certificate number that I will forward to you when I receive it. The DJI Phantom 4 Pro+ is approved by the FAA and registered under my name with the associated Serial Number of 189CEBLBA20955 and Certification number of FA3934HENF, exp. Date 04/07/2021. I will act as the Pilot In Command (PIC) for all flights, and assign a visual observer (TBD, a simple task that can be assigned to available personnel) at all times to watch the drone for potential obstacles (living and non-living). When on Midway I will have Kalani Quiocho act as a resource monitor when I fly, in addition to a visual observer.

UA Pilot Information. I will have 5 months of experience flying the DJI Phantom 4 Pro+ Unmanned Aircraft (UA). I have passed the FAA Part 107 UAS exam on May 5th and will have all legal documents required by the US government to fly a UAS. I will receive my temporary license in a week or two and then it will be followed up by my permanent card. The instructor said to expect a 7 to 8 week wait for the certification card to arrive in the mail.

UA Specifications - DJI Phantom 4 Pro+ is a small (square diagonal 35cm) weighing 1380 grams. It has a 28 minute flight time per battery pack. The UA also has many intelligent features built in like obstacle avoidance, intelligent flight modes, and auto return, and auto tracking features. This drone will automatically return to the last known home location if it loses contact with the remote control. All of these intelligent features are designed for safety. The noise emitted is nominal.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Lopes Jr., Keolohilani, H.

Title: Mr.

1a. Intended field Principal Investigator (See instructions for more information):
Keolohilani H. Lopes Jr.

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

Phone: [REDACTED]

Fax: None

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):
NOAA Office of National Marine Sanctuaries PMNM

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, Teacher; Jane Doe, Videographer):
Visual Observer TBD (1 per flight): A visual observer will be assigned based on who is on the small boat at the time of flight operations. The only job required by this visual observer is to keep an eye out for potential collisions between the unmanned aircraft and other objects.

Section B: Project Information

5a. Project location(s):

☒ Nihoa Island	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Necker Island (Mokumanamana)	☐ Land-based	☒ Shallow water	☐ Deep water
☒ French Frigate Shoals	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Gardner Pinnacles	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Maro Reef			
☒ Laysan Island	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Lisianski Island, Neva Shoal	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Pearl and Hermes Atoll	☐ Land-based	☒ Shallow water	☐ Deep water
☒ Midway Atoll	☒ Land-based	☒ Shallow water	☐ Deep water
☒ Kure Atoll	☐ Land-based	☒ Shallow water	☐ Deep water
☐ Other			

NOTE: Shallow water is defined by water less than 100 meters in depth.

☐ Remaining ashore on any island or atoll (with the exception of Sand Island at Midway and field camp staff on other islands/atolls) between sunset and sunrise.

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

Location Description:

All UAS operations will be conducted from the marine environment and capture the shallow water environment up to the high water mark on the shoreline. If the UAS has a catastrophic crash deep inland, I will change into my sterile footwear, and cloths to will adhere to PMNM BMP #007 to eliminate the risk of introduced species during a land recovery of the UAS. In the event of a water crash, I will snorkel to get it. The UAS will not immediately sink so there will be time to drive the boat to it and retrieve it. To avoid disturbing habitat and the animals residing on the atolls all footage will be shot from near the shoreline. I will not venture inland more than the high water line on the shore line.

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:*

Papahānaumokuākea Marine National Monument is a sacred and isolated region that makes access here virtually impossible for the average person. This film intends to reach a broader public via the Hawaii International Film Festival and perhaps other film festivals. With this attempt to reach a broader audience perhaps more people will get to experience, in some way, the majestic beauty that is PMNM. As a researcher for PMNM I have had the privilege of visiting this place and I feel an obligation to attempt to bring this place to the people through a visually beautiful documentary that is educational. aerial imagery is essential in documentaries to show grandeur, remoteness, beauty, and to gain different perspectives never seen before. Additionally, this documentary film will shed light on the work conducted by NOAA and its managing partners in addressing threats and mitigating them (Sea Level Rise, Marine Debris, etc.)

*Considering the purpose of the proposed activities, do you intend to film / photograph federally protected species? Yes ☐ No ☒

If so, please list the species you specifically intend to target.

For a list of terrestrial species protected under the Endangered Species Act visit:

<http://www.fws.gov/endangered/>

For a list of marine species protected under the Endangered Species Act visit:

<http://www.nmfs.noaa.gov/pr/species/esa/>

For information about species protected under the Marine Mammal Protection Act visit:

<http://www.nmfs.noaa.gov/pr/laws/mmpa/>

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?

Prior to launch I will notify all potentially effected personnel (Monk Seal Campers, FWS staff, Air Traffic Control (Midway), Hialakai. In an effort to insure any an all participants being filmed agree to such filming I will have them sign a video release prior to the shooting, describe the shot I want to achieve, and then stage the players accordingly. No one will be filmed without prior knowledge and consent. Standard safeguards for piloting drones will be exercised with additional measures to protect the wildlife and

other resources of the Monument as well as personnel. We will operate in daylight hours only, operating in winds less than 20 mph, have a visual observer (boat coxswain or other crew on the small boat) monitoring the UAV and alerting me to potential obstacles living and non-living. Additionally, I will operate the UAV at low speeds (<20 mph) and low altitudes (<400'). Close-up footage of wildlife will not be shot with the UAV. The UAV will be primarily used for panoramic and shots taking from distances to convey the remoteness of these atolls. Flights will only occur in airspace with a low density of birds flying in the immediate area. The visual observer will also notify me if there are wildlife heading in the direction of the UAV which will trigger an appropriate maneuver to avoid impacting these animals. I will only use vertical launching and recovering from small boats, and always operate the aircraft within visual line of sight. Additional safeguards built in to the Phantom 4 Pro+ is the low battery warning, automated return home button, and collision avoidance to prevent crashes. In the unlikely event of a crash or runaway I will retrieve the UAV. Land crash protocol will include the use of sterile cloths to change into and then get dropped off by the small boat to get in to shore safely. In the case of an ocean crash, I will snorkel to retrieve it. When flying the drone I will always have a path to retrieve it at any point in the operation. In order to protect cultural sites I will get advice from our Native Hawaiian Program Specialist (Kalani Quiocho, he will be on this cruise) and address other potentially sensitive maritime archaeology footage will be screened by Kelly Keogh prior to public release. The priority for a launch will be the safety and protection of both natural and cultural resources of the monument. If the risk is too high, I will not fly the UAV. This UAV footage will add an element of specter and awe to the place in which we work and in no way is it integral to the storyline, however it does add a cinematic effect that can't be duplicated by any other means.

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?

All activity will be observational and no adverse effects on wildlife and nature are anticipated. This documentary project is another opportunity to "bring the place to the people". Uniquely positioned as a researcher in the monument, I have the capacity to shoot high quality video and get it seen by the public while understanding the regulations, importance, and most of all the sacredness of PMNM. The safety practices described above will insure that no damage to animals and habitat will occur.

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.

This activity is designed to furnish high quality video footage of PMNM to produce a documentary on PMNM and increase the quality of outreach products by expanding our library of stock footage. In order to obtain high quality aerial imager of all the islands and atolls in PMNM the activity must be conducted within the Monument.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?

We have a goal of releasing this film at the Hawaii International Film Festival in 2019. We plan to enter this feature film as a "Made in Hawaii" and "Indigenous Filmmaker" category. Smaller video releases may be used on social media platforms. The film festival venue will be a great outlet to gain a wider and different audience. There will be no adverse impacts on any of the Monuments resources. The visual products created by this project will be useful for years to come.

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

The duration of the activity will be limited to the research cruise dates August 23rd – Sept 16th and therefore no longer than necessary to obtain aerial imagery for a documentary on PMNM.

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

I have been a part of the PMNM research team and have been on 7 expeditions into the Monument since 2010. I have also been into the Monument on a Marine Debris cleanup in 2012 where we removed derelict fishing gear and other plastics for nearly 2 months. This experience has allowed me to conduct research from small boats and inflatable Zodiacs doing all types of activities. Over the years I have become familiar with these atolls and know most of the areas to avoid, as well as the beautiful areas that should be recorded. I am also familiar with the wildlife that resides in the monument and understand that we are guests in their place and I will not disturb the daily routine of these animals. I will have ~5 months (+200 hrs. projected) of flight time and will take my FAA Part 107 exam regarding the flight of unmanned aircraft (UA) on April 25.

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.

I have a berth on the Hiialakai for the upcoming cruise into the Monument (HA1804). All the video equipment has been secured and no other cost will be incurred.

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 film footage will be observational. I intend to launch and recover the drone from a small boat and will not disturb the wildlife or any other of the monuments natural resources. Additionally, I will have a visual observer on the boat whose sole job is to insure that the drone will not crash into any hazards, wildlife or habitat. This, in addition to the automated crash avoidance systems, and safe flying (low altitude and low speed) will allow for an extremely safe flying protocol.

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

Access to PMNM and small vessel support will be provided by NOAA Ship HIALAKAI (separately permitted under permit no. PMNM-2018-001). NOAA Ship HIALAKAI has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031.

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:

I am primarily a researcher with the PMNM dive team that will be conducting separately permitted research activity on deep reef monitoring. I am planning on having my video gear and drone on our small boats during our daily operations and will shoot video by opportunity. If we have time to shoot, weather is nice, and everyone on the team (small boat) is OK to go get some footage I will attempt a flight. Prior to the launch I will practice and discuss with the crew the safety protocols I have described earlier. There will be at least one visual observer and not have an excessive amount of birds in the area I intend to film. If all these conditions are met I will launch the drone from the back deck of the stationary boat. I will operate the drone according to the FAA's Small UAS Rule (14 CFR Part 107) by flying at or below 400 feet and within visual line of sight at all times. In addition, when flying at Kure Atoll I will not land, launch or approach with my UAS within 500 feet of the State Wildlife Sanctuary. I do not intend to operate near or target any protected species. Any footage captured of protected species would be limited to incidental occurrences while filming and capturing imagery of panoramic views. UAS land operations will be limited to Midway Atoll and would follow all directions provided by the FWS Refuge Manager.

Video shots I hope to achieve are panning shots of the atolls from the shoreline no higher than the high tide mark. Shots of the NOAA small boats heading out to the dive sites. Most shots will be "dolly" type shots flying parallel to shore and then panning up and out capturing an aerial shot. I will not fly over land, except for Midway, where we will have a day to film on island. Midway pier site, I plan to get a shot of the ship and the sunrise combining the UAV to a time lapse scene. Additionally, I would like to launch from land to get some beach video footage. I intend to contact FWS biologist and the Air Traffic Control tower prior to operations in order to receive guidelines for UAS flight on the atoll.

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary): None

Common name:

N/A

Scientific name:

& size of specimens:

Collection location:

☐ Whole Organism ☐ Partial Organism

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

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

• Specific site/location:

• 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 be transported out of the Monument?

N/A

11. Is your proposed activity based on a State Department of Education Standards Based Curriculum? If so, describe:

N/A

12. If applicable, describe how you are collaborating with others in any way to reduce duplicative activities in the Monument or elsewhere?

N/A

13. What materials, products or deliverables will be developed as a result of your proposed activity? Provide a time line for write-up and publication of information or production of educational materials:

We plan on creating a documentary that will focus on the preparations made by all of the science crew for this research cruise (HA1804). It will also track the story of the interns that will participate on this expedition. Second, this video will be informative about the various threats which the Monument faces and the agencies and people involved in the mitigation of such threats. We have an aggressive schedule to produce a final product by November of 2019. This project will also create stock video footage to use in all perpetuity with the hopes to convey the natural beauty of PMNM. Archival video clips of PMNM. I, nor any third party will profit from this project. The video footage will be the property of PMNM as it is shot on their equipment (except for the UAS) and it will be shot primarily during work hours. This film is meant to entertain and educate with no motive to profit from this.

14. List all specialized gear and materials to be used in this activity:

DJI Phantom 4 Pro+

15. List all Hazardous Materials you propose to take to and use within the Monument:

None

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

None

17. List all Applicants' publications/references directly related to the proposed project:

None

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:

NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
FAX: (808) 455-3093

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

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant): Keolohilani H. Lopes Jr., UAV Pilot

2. Specific Site Location(s): (Attach copies of specific collection locations): Ka'ula Rock, French Frigate Shoals, Maro Reef, Laysan, Lisianski, Pearl and Hermes, Midway, and Kure. All flights will be conducted by opportunity near shore of the atoll. Weather will determine the location of most of our dive operations and will therefore dictate flight locations at these atolls.

3. Other permits (list and attach documentation of all other related Federal or State permits): None

3a. For each of the permits listed, identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation. N/A

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information): None

5. Time frame:

Activity start: 8/23/2018

Activity completion: 9/16/2018

Dates actively inside the Monument:

From: 8/25/2018

To: 9/14/2018

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application: None

Total ballast water capacity volume (m3):
Total number of ballast water tanks on ship:
Total fuel capacity:
Total number of fuel tanks on ship:
Marine Sanitation Device:
Type:

Explain in detail how you will comply with the regulations regarding discharge in the Monument. Describe in detail. If applicable, attach schematics of the vessel's discharge and treatment systems:

Other fuel/hazardous materials to be carried on board and amounts:

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type:

VMS Email:
Inmarsat ID#:

* Individuals **MUST ENSURE** that a type-approved VMS unit is installed and that its automatic position reports are being properly received by the NOAA OLE system prior to the issuance of a permit. To make sure your VMS is properly configured for the NOAA OLE system, please contact NOAA OLE at (808) 725-6110 or (808) 725-6100.

* **PERMITS WILL NOT BE ISSUED TO INDIVIDUALS ENTERING THE MONUMENT VIA VESSEL UNTIL NOAA OLE HAS CONTACTED THE MONUMENT PERMIT COORDINATOR WITH A 'POSITIVE CHECK' READING.**

10. Tender information:

On what workboats (tenders) will personnel, gear and materials be transported within the Monument? List the number of tenders/skiffs aboard and specific types of motors. N/A

DAVID Y. IGE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 27, 2018

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT MASUDA
FIRST DEPUTY

JEFFREY PEARSON P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

TO: Division of Aquatic Resources File

THROUGH: Suzanne D. Case, Chairperson

FROM: Maria Carnevale
Papahānaumokuākea Marine National Monument

**DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT
UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR
PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT EDUCATION PERMIT TO MR.
KEOLOHILANI LOPES JR., JOINT INSTITUTE OF MARINE AND ATMOSPHERIC RESEARCH/PMNM,
FOR ACCESS TO STATE WATERS TO CONDUCT ACTIVITIES FOR FILMING AND PHOTOGRAPHY
ACTIVITIES UNDER PERMIT PMNM-2018-025**

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

Project Title:

Papahānaumokuākea Marine National Monument Education Permit to Mr. Keolohilani Lopes Jr., Joint Institute of Marine and Atmospheric Research/PMNM for Access to State Waters to Conduct Filming and Photography Activities.

Permit Number: PMNM-2018-025

Project Description:

The Education permit application, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the Northwest Hawaiian Islands (NWHI) State waters between August 15, 2018 through August 14, 2019.

The applicant proposes to conduct filming/photography activities for a documentary on the experiences of two university students chosen to serve as interns on the annual Reef Assessment Monitoring Program research expedition to Papahānaumokuākea Marine National Monument (PMNM). Documentary would also highlight research projects occurring on the cruise. Filming for this project began in the Main Hawaiian Islands with the students attending the University of Hawai'i Quantitative Underwater Ecological Surveying Techniques (QUEST) program in May

2018. Video footage will be obtained by handheld video equipment as well as a DJI Phantom 4 Pro+ unmanned aircraft system (UAS).

The proposed activities would consist of the applicant and one visual observer/Resource Monitor accessing the Monument aboard a research vessel for a research expedition currently scheduled for August 23, 2018 – September 16, 2018 though the permit would be good for one year. Other specific activities include swimming/snorkeling, interviewing researchers and others, recording interviews, and filming and photography. The applicant is a technical research diver who will be jointly covered under separately permitted activities (PMNM-2018-029, PMNM-2018-031, and PMNM-2018-032). Filming activities will occur opportunistically as time, safety, weather, and location permit. The applicant is a FAA certified UAS pilot and all UAS operations will occur in the presence of a PMNM resource monitor. UAS operations will be conducted from the marine environment and occur over open waters and near the shoreline, not to exceed the high water mark. Upon completion of this film, it will be submitted to the Hawaii International Film Festival and the Waimea Ocean Film Festival as well as to PMNM for educational uses.

To safeguard Monument resources the applicant would abide by the following PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within the PMNM: Human Hazards to Seabirds Briefing (BMP #003), Boat Operations and Diving Activities (BMP #003), Reducing Light Impact to Sea Turtles (BMP #009), Marine Wildlife Viewing Guidelines (BMP #010), Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011), Midway Reservation Requirements (BMP #014), Nonnative Species Inspection Requirements at Midway Atoll (BMP #015), and Best Practices for Maritime Heritage Sites (BMP #017).

The activities will benefit the conservation and management of the Monument by supporting the Monument Management Plan (MMP) as described in:

Activity CBO-2.3: Support other entities' efforts to broaden knowledge of and appreciation for Monument resources and management priorities.

Establishment of the Monument has created interest from documentary filmmakers, writers, photographers, and other entities to help us "bring the place to the people." The MMB will support those endeavors that provide benefit to Monument resources and management and our constituents without impacting Monument resources. (PMNM MMP Vol. 1, p. 271, 2008).

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawai'i Division of Aquatic Resources, Hawai'i Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, the Office of Hawaiian Affairs (OHA), and the PMNM Native Hawaiian Cultural Working Group. In addition, the application has been posted on the Monument web site since May 25, 2018, giving the public an opportunity

to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Exemption Determination:

After reviewing HAR § 11-200-8, including the criteria used to determine significance under HAR § 11-200-12, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit; including swimming; have been evaluated as a single action. As a preliminary matter, multiple or phased actions, such as when a group of actions are part of a larger undertaking, or when an individual project is precedent to or represents a commitment to a larger project, must be grouped together and evaluated as a single action. HAR § 11-200-7. This permit does not involve an activity that is precedent to a later activity.

2. The Exemption Class for Basic Data Collection with no Serious or Major Environmental Disturbance Appears to Apply. Chapter 343, HRS, and § 11-200-8, HAR, provide for a list of classes of actions exempt from environmental assessment requirements. HAR §11-200-8.A.5. exempts the class of actions which involve "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." The proposed activities appear to fall squarely under the exemption class #5, exempt item #2 as described under the Exemption List for the Department of Land and Natural Resources, published on June 5, 2015 as "non-destructive data collection and inventory, including field, aerial, and satellite surveying and mapping". It has also been interpreted to include various modes of transportation to reach field areas necessary to carry out such activities, such as those to be supported by the proposed activities. As discussed below, no significant disturbance to any environmental resource is anticipated in observing and sampling of Monument resources. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

All activities will be performed in a culturally appropriate manner and adhere to Monument Best Management Practices (BMP) listed earlier in this document. To minimize the potential of disease introduction or transfer during swimming and snorkeling activities, the applicant would follow Disease and Introduced Species Prevention (BMP #011). The applicant does not intend to approach or photograph protected species; however, the applicant proposes to conduct activities in areas where Hawaiian monk seals and sea turtles are present. The applicant will adhere to Best Management Practices for Boat Operations and Diving Activities (BMP #004); and Marine Wildlife Viewing Guidelines (BMP #010) to reduce or eliminate adverse effects on protected marine species through interactions with in-water activities.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not Be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if "the

cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. Examples of actions which commonly have a significant effect on the environment are listed under HAR § 11-200-12.

Activities directly under this permit would be purely observational. Similar activities have previously been approved and conducted within the Monument. No measurable impacts from similar activities have been observed in previous years and none would be expected from proposed activities. There will not be any other permits on the R/V Hi’ialakai that will be using UAS and collecting video. There is no overlap anticipated as this applicant will be telling the story of two interns conducting activities under associated permits.

With this in mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts that would occur as a result of these activities.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts Will Probably be Minimal and Insignificant. Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all conservation and management activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures.

Conclusion. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.