

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

April 10, 2026

Board of Land
and Natural Resources
Honolulu, Hawai‘i

Request for Authorization and Approval to Issue a Papahānaumokuākea Native Hawaiian Practices Permit to Pelika Andrade, Nā Maka Onaona and the University of Hawai‘i at Mānoa, for Access to State Waters to use Traditional Ecological Knowledge to Conduct Intertidal Surveys and Monitoring

I. SUMMARY

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Native Hawaiian practices permit to Pelika Andrade, Nā Maka Onaona and the University of Hawai‘i at Mānoa.

II. BACKGROUND LAW

The Board of Land and Natural Resources, by the Department of Land and Natural Resources (DLNR) Divisions of Aquatic Resources & Forestry and Wildlife, permits certain otherwise prohibited or regulated activities on or in its lands and waters, pursuant to Hawaii Revised Statutes (HRS) § 187A-6, 183D-6, and 195D-4; Hawaii Administrative Rules (HAR) § 13-60.5-5, 13-60.5-6, 13-126-9 and 13-126-10, and all other applicable laws and regulations.

III. DURATION AND LOCATION

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

- Nihoa
- Mokumanamana (Necker Island)
- Lalo (French Frigate Shoals)

The applicant requests to enter PMNM up to two (2) times for up to 12 days for each access. These accesses will occur by vessel. Dates, time, and method of entry are to be determined after consideration of weather, availability of vessel/vessel space, etc.

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IV. PERSONS COVERED UNDER THIS PERMIT

The applicant, Pelika Andrade, requests for up to 18 people to be authorized to enter PMNM and conduct activities under this permit:

1. Pelika Andrade
2. Kanoe Morishige
3. Anthony Mau
4. Kainalu Steward
5. Norman Kali
6. Justin Tabalno
7. Kupono Haituka
8. Kaimalino Andrade
9. Erik Franklin
10. TBD staff or volunteer
11. TBD staff or volunteer
12. TBD staff or volunteer

6 ship crew TBD

V. INTENDED ACTIVITIES

The applicant proposes to (1) conduct terrestrial surveying and controlling of terrestrial invasive species and terrestrial native species monitoring (as part of U.S. Fish and Wildlife Service (USFWS) efforts separately permitted under the MMB permit PMNM-2026-001), (2) conduct intertidal surveys and monitoring to advise and direct management strategies which support intertidal fishery productivity, specifically for ‘ōpihi, (3) engage in Huli‘ia, a traditional cultural observational process documenting seasonal changes and shifts across entire landscapes, and (4) participate in subsistence/sustenance fishing.

Procedures/Methods

Land-Based Activities

Terrestrial activities conducted will consist of surveying and controlling terrestrial invasive species and terrestrial native species monitoring under the direction of the USFWS. The terrestrial invasive species control would focus primarily on *Cenchrus echinatus* and the terrestrial native species monitoring would involve the use of remote cameras and recording phenology and abundance of seabirds, shorebirds, invertebrates, and native plants. The procedure and methods for the land-based invasive species control and native species monitoring are conducted in accordance with USFWS protocols and authorized under the MMB permit (PMNM 2026-001).

Intertidal Monitoring and Huli‘ia

The intertidal activities would be part of ongoing monitoring from across the archipelago that is used to advise and direct management strategies which support intertidal fishery

productivity, specifically for ‘opihi. This research is a natural continuation of previous intertidal ecosystem studies, surveys, and monitoring (with a variation on previous research questions), that have been conducted by the co-researcher working on the project, Kim Kanoe‘ulalani Morishige, and many other researchers affiliated with similar expeditions in the past (expeditions have occurred almost annually since 2009). More background information about the intertidal monitoring project can be found in the application.

The cultural research team would make visual assessments of intertidal areas where ‘opihi and hā‘uke‘uke are located. The research team would record substrate type, limu type/density, crustose/turf/macro algae proportions, other species proportions/ratio, clumping of ‘opihi, hā‘uke‘uke, and other intertidal species, presence of natural predators, freshwater input, etc. The team would take wet/dry notes and use digital cameras to record observations.

At the end of visiting each island, Nā Maka Onaona will facilitate a Huli‘ia discussion for the group to share observations. One person will be designated and write all the observations made by the group on one data sheet to facilitate the analysis process while observations are still fresh and can be clarified. Atmospheric, land, and ocean observations, substrate type, limu presence/density, crustose/turf/macro algae proportions, other species ratios, clumping of ‘opihi and hā‘uke‘uke, presence of natural predators, other intertidal species, and other intertidal information will be recorded.

Note: ‘Opihi are the only organisms collected for biological research reasons but when harvesting the other organisms, the researchers and assistants will take note of reproductive states and other observations, which are included in Huli‘ia.

PACC Surveys

The researchers/team will conduct productivity and carrying capacity (PACC) surveys to examine ‘opihi densities by size classes and maximum sizes within each vertically stratified zone (black zone (basalt rock) and pink zone (crustose coralline algae zone)). The black zone is located on the upper extent of the shoreline defined as the Emergent Tidal Zone where black rock is exposed to the air depending on the tide and the pink zone is located lower on the shoreline in the Wave Zone (Bird et al. 2013). Rugosity measurements will be recorded for the black zone and pink zone to identify differences in ‘opihi carrying capacity by distinct habitat zones within the intertidal ecosystem. Tilt measurements will also quantify the growth and shrinkage of the broader shoreline within each survey site to provide a practical measure of seasonal habitat threshold. PACC surveys will provide a total rugosity measurement for black and pink zones within the mixed (overlap of black and pink zones) rugosity zones. To increase the precision of ‘opihi habitat availability, PACC will also record differences in ‘opihi habitat and non-habitat to develop more precise estimates of ‘opihi densities.

More background information about PACC surveys can be found in the application.

‘Opihi Gonad Collection

The researchers will collect ‘opihi to dissect gonads and use histological methods that can

provide fecundity estimates and reproductive state by sizes that have not been used for ‘opihi in PMNM in prior years. To determine fecundity-at-size, the researchers will examine ‘opihi ovaries histologically for all size groups except size class A (0-1 cm SL). A total of n=80 specimens will be collected from Nihoa using an opihi knife. These specimens will be measured by caliper for shell length, shell width, and shell height, and weighed by scale for total weight, soft-body weight, and gonad weight.

Huli‘ia

The researchers/team will also be engaging in Huli ‘ia, an observational process documenting seasonal changes and shifts across entire landscapes, ma uka (ocean) to ma kai (ocean), identifying dominant correlating cycles to support and guide the management and best practices that support a productive and thriving community, ‘āina momona. It is an observational process documenting natural changes over time, identifies dominant cycles within certain species or occurrences (flowering, fruiting, presence/absence of flora/fauna, cloud formations, spawning, or recruiting of fish species, etc.), and assists in identifying correlations between species and/or occurrences as indicators of the other. Huli ‘ia stems from traditional management systems driven by an intimate understanding of the natural environment and the ability for communities to adjust and adapt their activities to support these systems of nature.

- Lani (atmospheric) observations include looking at cloud formations, noting wind direction/strength and when it changes, visibility of the horizon, bird activity, other weather-related observations such as rain or rainbows, the rising and setting of the moon and sun, the moon phase, and stars.
- Honua (land) observations include looking at any plants that are flowering, seeding or fruiting, new growth, animals reproducing, precipitation and soil moisture, bird arrival and departure and any other animal behaviors. Land observations from the main Hawaiian Islands during the expedition may also be useful to help remember activities in the NWHI during that time. For example, the researchers/team notice hala fruiting here on the main islands and can relate that in the Northwestern Hawaiian Islands, this is the season when juvenile iwa are still in the nest.
- Kai (ocean) observations include noting the tide (high/low and time), waves and currents, identifying and looking at the behavior of invertebrates, limu (algae) and fish in the intertidal environments, noting any spawning or aggregation of species, and noting any juveniles and newly recruited species. (see observation datasheet)

Subsistence/Sustenance Fishing

The applicant is also requesting to consume intertidal resources, collect limu for consumption, and to subsistence and sustenance fish by hook, spear, trolling using handlines, and/or other hook and trolling equipment to further support the cultural practice and relationship between participants and Papahānaumokuākea.

The amounts listed in the collections table are the maximum amounts to be taken throughout the timeframe of this permit. ‘Opihi will be gathered by hand using an ‘opihi knife, and the researcher and assistants will be mindful to harvest individuals that are larger than the legal-size

limit of 1 ¼ inch as well as to leave larger ‘opihi alone as they are believed to be more fecund. The researcher and assistants will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. ‘Opihi are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus the researcher is confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting/ pinching off the branches and leaving the holdfast will be utilized to ensure continual growth after it is harvested. All other invertebrates will be gathered by hand. All invertebrates will be consumed raw, except leho and pipipi, which will be boiled then consumed. Limu will be “cured” and prepared to supplement meals. He‘e will be harvested by using a metal rod to attract the he‘e out of its house and then be gathered by hand. The researcher and assistants will not harvest he‘e that is under one pound, in accordance with the State of Hawai‘i fishing rules. The he‘e will either be prepared by either drying or boiling before consumption. The researcher and assistants will conduct near-shore spear fishing or catch by hand methods for reef fish. Hook, handline, and trolling methods will be used to sustainance fish for pelagic fish while in State and Federal waters.

Collections lists for individual species below:

Inoa/Name	Scientific Name	Sample Amount	Size
‘A‘ama	<i>Grapsus tenuicrustatus</i>	30	3in. or larger
Makaloa	<i>Drupa ricina</i>	30	1/2in. or larger
Pipipi	<i>Nerita picea</i>	30	1/2in. or larger
Pūpū ‘Awa	<i>Thais aperta</i>	30	1/2in. or larger
Hā‘uke‘uke	<i>Colobocentrotus atratus</i>	30	2 in. or larger
‘Opihi Makaiauli	<i>Cellana exarata</i>	40	1 ¼ in. or larger
‘Opihi ‘Ālinalina	<i>Cellana sandwicensis</i>	40	1 ¼ in. or larger
‘Opihi Ko‘ele	<i>Cellana talcosa</i>	40	2 in. or larger
He‘e Maui/Pali	<i>Octopus cyanea/oliveri</i>	2	1lb. or heavier
Leho ahi	<i>Cypraea mauritiana</i>	6	2 in. or larger
Pūpū	<i>Thais intermedia</i>	24	1 in. or larger

Inoa/Name	Scientific Name	Sample Amount
Limu kohu	<i>Asparagopsis taxiformis</i>	~100g
Limu līpe‘epe‘e	<i>Laurencia spp.</i>	~100g
Limu Pālahalaha	<i>Ulva fasciata</i>	~100g
Misc. Algae	<i>Algae</i>	~100g
Ahi	<i>Thunnus albacares</i>	Up to 10 pelagic fish total while in transit
Mahimahi	<i>Coryphaena hippurus</i>	Up to 10 pelagic fish total while in transit
Ono	<i>Acanthocybium solandri</i>	Up to 10 pelagic fish total while in transit

Nenuē	<i>Kyphosus spp.</i>	Up to 10 pelagic fish total while in transit
Aku	<i>Katsuwonus pelamis</i>	Up to 10 pelagic fish total while in transit

Note on Collections: ‘Opihi are the only species that are collected for biological sampling; the other species are for consumption only. However, when harvesting the other species, the applicant and assistants, take note of reproductive states and other observations, which are included in Huli‘ia. To ensure responsible and ethical practices, the researchers/team will refrain from collecting ‘opihī and hā‘uke‘uke if populations appear too small to sustain collections. Consumption of intertidal resources including invertebrates and limu will further support cultural practice and relationship between participants and the islands.

Note on Fishing: Applicant and assistants will fish in transit for pelagic fish or near-to-shore for nearshore fish (nenuē). The researcher and assistants usually pull lines as they get closer to land because of birds hunting and as a preventative measure in case they encounter other species foraging close to the islands. Nenuē is the only fish the project will harvest close to land using either spear or hand techniques. When utilizing line fishing for pelagic fish, it is difficult to target size but if an individual is too large or too small, it will be released if chances of survival are good. Nenuē are caught with more selection capability, so a medium size is usually the desired target size. A maximum total of 10 individuals will be collected across the 5 species of pelagic fish.

Note on ‘Opihī: Full amount for all ‘opihī may not be collected; maximum combined total of 80 individuals to be collected (across the three species of ‘opihī)

To safeguard PMNM resources, the applicant will harvest from various places along the shoreline to be mindful of harvest pressure in one location. The applicant has also attended and completed the 2019 Resource Monitor Training and has ample experience at Nihoa and the collection sites there.

VI. ADHERENCE TO FINDINGS CRITERIA, BMPs, AND OTHER SAFETY PROTOCOLS:

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

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving monument resource
- Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area
- Anchoring a vessel
- Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- Attracting any living Monument resource

- Subsistence fishing (State waters only)

Monument Management Plan Strategies

The applicant's proposed activities directly support the following Monument Management Plan activities:

- MCS-1.1: Continue to characterize types and spatial distributions of shallow-water marine habitats to inform protection and management efforts.
- MCS-1.2: Continue monitoring of shallow-water coral reef ecosystems to protect ecological integrity.
- NHCH 2.3: Facilitate cultural field research and cultural education opportunities annually.
- NHCH 2.6: Continue to facilitate Native Hawaiian cultural access.

Best Management Practices

To safeguard Papahānaumokuākea resources the applicants will abide by all PMNM Best Management Practices (BMPs) while conducting the aforementioned activities within PMNM.

BMP Number	Title	Download
001	Marine Alien Species Inspection Standards for Maritime Vessels	PDF
002	Protocol for Acquiring Avian Blood Samples	PDF
003	Human Hazards to Seabirds Briefing	PDF
004	Best Management Practices for Boat Operations and Diving Activities	PDF
005	Protocols to Reduce Impact to the Laysan Finch	PDF
006	General Storage and Transport Protocols for Collected Samples	PDF
007	Best Management Practices for Terrestrial Biosecurity	PDF
008	Seabird Protocols Necessary for Conducting Trolling Research and Monitoring in Papahānaumokuākea Marine National Monument	PDF
009	Best Practices for Minimizing the Impact of Artificial Light on Sea Turtles	PDF
010	Marine Wildlife Viewing Guidelines	PDF
011	Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment, Papahānaumokuākea Marine National Monument (Monument)	PDF
012	Precautions for Minimizing Human Impacts on Endangered Land Birds	PDF
015	Nonnative Species Inspection Requirements at Midway Atoll	PDF
016	Best Management Practices for Activities on Nihoa	PDF
017	Best Management Practices for Maritime Heritage Sites	PDF
018	Rodent Prevention and Inspection Standards for Permitted Vessels	PDF

019	Best Management Practices for Activities on Mokumanamana (Necker Island)	PDF
020	Best Management Practices to minimize the spread of nuisance alga	PDF

VII. REVIEW PROCESS

The permit application was sent out for review and comment to the following scientific and cultural entities: DAR, DOFAW, NOAA Office of National Marine Sanctuaries Papahānaumokuākea National Marine Sanctuary, NOAA National Marine Fisheries Service, USFWS Refuges, USFWS Ecological Services, and the Office of Hawaiian Affairs (OHA). In addition, the permit application was posted on the Monument website within 40 days of its receipt, in accordance with the Monument’s Public Notification Policy giving the public an opportunity to comment.

A. Monument Management Board (MMB) Agency Reviewer Questions and Applicant Responses:

Below are some of the questions, comments, and responses received during the review process at the time of drafting this submittal.

1. Can you please define the acronym PACC and provide a clearer description of this survey method, including how it will be conducted in the field?

Response:

Productivity and Carrying Capacity (PACC): We plan to implement a mix of standardized and novel methodologies across boulder, bench, and sloped rocky substratum to: 1) *examine the effect of swell exposure (Low, Medium, High) on habitat size*; 2) *develop a practical, routine method for determining ‘opihi growth rates and age in-situ*; and 3) *measure species fecundity and reproductive output in relation to major environmental factors such as temperature*. Our project will evaluate how environment, growth and age structure, and reproductive output affects total shellfish production on temporal and spatial scales; and re-establish productive ecosystems as a fundamental strategy of traditional Hawaiian resource management.

I’ve also included it on Page 4 second paragraph of the permit.

2. Can you clarify the requested specimen collection limits so they are consistent throughout the application?
 - Page 12 references “two traditionally harvested and prepared individuals of each invert species per person”
 - Page 17 references “no more than four (4) individuals of each invert species per person”

Response:

Apologies, I didnt realize I had not made the edit to page 12. I’ve updated page 12 to reflect and align with page 17. Four (4) individuals

3. Can you clarify what is meant by “per island/location per access”?
- Does this mean collection limits apply at the island scale, atoll scale, or by multiple locations within an island?
 - How should “location” be interpreted for purposes of collection limits?

Response:

Our organization has been supporting other activities within the monument since 2008. We sometimes participate in multiple access per year, at multiple locations. Instead of submitting an application per access, we were hoping to blanket a years worth of accesses under one permit. Our lead, Pelika Andrade, accompanies FWS service to Nihoa yearly on their cenchrus work and sometimes does 2 accesses just on that project (April/May and September). Along with that access our partnership includes those with NOAA in their summer field work and PMDP on their activities as well. There are also instances where we are brought into Midway for special workshops and field support. Some of these invitations are last minute (in the permit timeline). This permit was meant to eliminate last minute submissions of permits, while supporting each access respectfully and appropriately.

Location is interpreted by island. If we contribute to April Cenchrus project and time allows, that would be an access. If we return in September, that would be another [access](#). Assured that though it blankets all locations and accesses individually, we would still be following our extensive experience in harvest appropriateness as noted in the permit.

4. Can you clarify the “per access” component?
- How many total accesses are anticipated/requested under this permit during the permit term?

Response:

Please see response in #3.

5. For the stated collection of n=80 ‘opihi from Nihoa for gonad dissection/fecundity estimates:
- Which species will be collected: *Cellana exarata*, *Cellana sandwicensis*, or both?

Response:

We collect as close to 50/50 as possible.

- Are these 80 specimens included in the species-specific collection totals provided in response to Question 9?

Response:

Again, we try to ensure that what we harvest for food is utilized for as many means allowable... so yes the 80 include the numbers we gather to eat.

- Will any of these specimens be consumed within PMNM/PNMS, retained, or removed from the monument/sanctuary for analysis?

Response:

We have found that both some may be consumed within PMNM and some may be removed. It's all time allotted and our comfort processing on ship. Most times, seasickness is not an issue, but there are some accesses that we cannot get the the processing done within the monument and have to bring them home to the main Hawaiian Islands for a more stable-easier processing. Shells that do come with us are used in education and outreach as we work with the opihi fishery 365 days a year since 2009.

6. If any whole organisms, tissues, gonads, shells, or other specimen parts will be retained, dissected, transported, or removed from PMNM/PNMS, can you please clearly identify that in the application and reconcile it with the current responses to Questions 9b and 10?

Response:

Done

7. Section B Project Information (5a & b) were blank regarding locations and subsistence fishing for the pelagic species listed elsewhere. Please let us know what was intended to be checked and details.

Response:

Apologies. On my end, I did check the boxes. I have put them in bold but the answers for 5a:

Nihoa, Moku Manamana and French Frigate Shoals

Land-based, Shallow Water

Remaining ashore on any island or atoll between sunset and sunrise. (field camps mostly for cenchrus work covered also by the co-managers permit)

5b:

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource (also covered by the co-managers permit)
- Anchoring a vessel (also covered by the co-managers permit)
- Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument (also covered by the co-managers permit)
- Attracting any living Monument resource (also covered by the co-managers permit)
- 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 (also

covered by the co-managers permit)

8. Please ensure that the collection/sampling design removes a sustainable proportion from the local population of target organisms and makes efforts to distribute collection activities across shoreline/reef flat/benthic areas, so as not to consolidate the impacts of collection in one location.

Response:

ABSOLUTELY. These are practices we follow on all shorelines and in all collections.

9. Is the take for Ahi, Mahimahi, Ono, Nenu, Aku, and Uku, 10 of each species or 10 total across all species?

Response:

10 across all species. I don't see us needing any more than that for subsistence.

10. Vessel access and list of participants implies an independent access via the Searcher, is this correct? If so, we would like more information about potential dates. If not, are all of those participants also going on USFWS vessels in 2026? Is this for one vessel access for 12 days or multiple trips totaling 12 days?

Response:

Again, our organization has been supporting other activities within the monument since 2008. We sometimes participate in multiple access per year, at multiple locations. Along with that access our partnership includes those with NOAA in their summer field work and PMDP on their activities as well. There are also instances where we are brought into Midway for special workshops and field support. Some of these invitations are last minute (in the permit timeline). This permit was meant to eliminate last minute submissions of permits, while supporting each access respectfully and appropriately. I believe our co-managers are working on contracts with the Searcher and some of our accesses will be to support co-management activities. Our permit is a safety in case there is time to conduct our activities, we would be ok to proceed. As for dates, we are looking at the entire summer season to support co-manager activities. If we need to say a specific number of days in the monument, that would be hard... BUT, if we need to identify a number of days allotted to our specific request within the permit, I would be comfortable with the projection of 12 days total spread between various accesses depending on year and availability of our crew and availability of seats on each deployment.

11. Are the cultural sustenance/subsistence/consumption activities and Huli'ia and PACC research activities the same at Lalo? What is the plan for visiting Lalo?

Response:

They are the same. We included Lalo if we were able to get there but most times we do not have the funding or opportunity to get all that way. If we do, we usually only spend time at the pinnacles (high rocky intertidal shoreline). We do collaborate with the MEGA

Lab and Dr. Haunani Kane for landings on islets, etc... but if that does happen, she usually will submit a separate permit for those activities.

12. Are any of these collected specimens brought back to the MHI? About how many of each specimen are consumed in Papahānaumokuākea versus how many are brought back?

Response:

What is done with the specimens that are brought back? All, with the exception of Opihi, are will be consumed in PMNM. Opihi, if we cannot process, will come back for processing, consumption, and shells will be utilized for education and outreach.

VIII. ENVIRONMENTAL COMPLIANCE

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g., HRS chapters 183C, 343; MMPA, ESA) Yes

If so, please list or explain:

- The Department has made an exemption determination for this permit as necessary for the applicant and team on this project in accordance with Chapter 343, HRS, and Chapter 11-200.1, HAR. See Attachment (“DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200.1 HAR, FOR A PAPAHAANAUMOKUAKEA NATIVE HAWAIIAN PRACTICES PERMIT TO PELIKA ANDRADE, NA MAKA ONAONA AND THE UNIVERSITY OF HAWAI‘I AT MANOA, FOR ACCESS TO STATE WATERS TO USE TRADITIONAL ECOLOGICAL KNOWLEDGE TO CONDUCT INTERTIDAL SURVEYS AND MONITORING UNDER PERMIT PMNM-2026-009”)
- National Environmental Policy Act Categorical Exemption B9

Has the Applicant been granted a permit from the State in the past? Yes

If so, please summarize past permits:

PMNM permits have been issued to applicant Pelika Andrade (PMNM-2021-009, PMNM-2023-004, 2023-004 R1, 2023-004 R2) and the co-researcher working on the project, Kim Kanoē‘ulalani Morishige, for similar activities (PMNM-2011-040, PMNM-2012-052, PMNM-2014-020, PMNM-2015-017, PMNM-2015-017 A1 and PMNM-2017-024).

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

involving any of the applicant agencies or personnel?

Are there any other relevant concerns from previous permits? If yes, please explain: No

IX. STAFF OPINION

Department staff are of the opinion that the Lopes permit is justified under HAR chapter 13-60.5 criteria and should be allowed to enter state lands and waters in the Monument as indicated, and to conduct the activities as specified, subject to the PMNM Permit General Conditions, and the indicated special instructions, conditions, and protocols to be observed. Staff recommends that the BLNR approve the application as indicated below.

X. MONUMENT MANAGEMENT BOARD OPINION

The seven members of the Monument Management Board (MMB) were consulted and are of the opinion that the applicant has met permit procedures and criteria under the findings of Presidential Proclamation 8031, 71 Fed. Reg. 36,443 (2006) as required, and the research activities may be conducted subject to completion of all compliance requirements recommended below. The MMB concurs with any special conditions recommended by DLNR staff. The MMB determined that a Resource Monitor be assigned to this permit and a NOAA ONMS staff person will fill this role.

XI. RECOMMENDATIONS:

That the Board of Land and Natural Resources

- A. Approve the proposed permit for Pelika Andrade according to the form of the Application (Attachment 1) and authorize and approve entry to State lands and waters of the PMNM, with the following conditions:
1. That the BLNR declare that the anticipated actions to be undertaken under this permit will have little or no significant effect on the environment except consistently with the activities covered in the 2008 Final Environmental Assessment (FEA) and FONSI. Any activities not covered in the FEA shall be addressed by the declaration of exemption from the preparation of an environmental assessment (attached).
 2. Upon the finding and adoption of the department's analysis by the Board, that the Board review and accept the declaration of exemption for purposes of recordkeeping requirements of chapter 343, HRS, and chapter 11-200.1, HAR.
 3. That the permittee provide, as required under the Papahānaumokuākea permit general terms and conditions, a summary of their findings under this PMNM access, including but not limited to, any initial findings to the DLNR for use at educational institutions and outreach events. Any unexpected results and anomalous encounters should be included in a report or future permit applications to the BLNR to allow proper evaluation of research efforts in future permitting decisions.

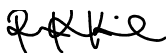
4. That all persons covered under this permit shall abide by and obey all Papahānaumokuākea permit general conditions and protocols, unless otherwise specifically permitted, exempted, or excluded under the terms and conditions.
5. This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized activities must be for noncommercial purposes not involving the use or sale of any organism, by-products, or materials collected within the Papahānaumokuākea for obtaining patent or intellectual property rights.
6. The permittee may not convey, transfer, or distribute, in any fashion (including, but not limited to, selling, trading, giving, or loaning) any coral, live rock, or organism collected under this permit without the express written permission of the Co-Trustees.
7. To prevent the introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to the permit.
8. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
9. 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 with the exception of boats utilized in operations that are land-based for extended periods of time.
10. If there is any Hawaiian monk seal or any other protected species in the area when performing any permitted activity shall cease until the animal(s) depart the area, except as permitted for specific management of that species.

Respectfully submitted,



Brian J. Neilson, Administrator
Division of Aquatic Resources

APPROVED FOR SUBMITTAL



Ryan K. P. Kanaka'ole, Acting Chairperson
Board of Land and Natural Resources

Attachments:

- 1) Application (updated after review period)
- 2) Declaration of Exemption (“DE”) from the Preparation of an Environmental Assessment under the Authority of Chapter 343, HRS & Chapter 11-200.1 HAR

Papahānaumokuākea Marine National Monument
NATIVE HAWAIIAN PRACTICES 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: Pelika Andrade

Affiliation: Na Maka Onaona (formerly Na Maka o Papahānaumokuākea) & UH Mānoa Sea Grant College Program

Nā Maka Onaona (NMO) is a non-profit 501(c)3 supporting Aina Momona: A thriving and productive Hawaii. NMO cultivates and supports Aina Momona through providing culturally grounded educational programs and partnerships that support the over all health of our communities; mentally, spiritually, emotionally, and physically. NMO has been developing programs focused on investing in our communities and the next generation to lay a foundation for change paving the way to redefining health, wellness, and productivity. Most issues we face today are rooted in the misbehavior of people and the values, or lack of, we collectively share today. NMO focuses on addressing people to shift our behaviors, our values and our relationships and including people in healing the natural world around us. NMO strongly believes that the health of our environment is reflected in our people and the health of our people are reflected in our environment and it is a journey we must all take together.

Permit Category: Native Hawaiian Practices

Proposed Activity Dates: TBD April 2026 – March 2027

Proposed Method of Entry (Vessel/Plane): Vessel – Searcher / TBA

Proposed Locations: Nihoa, Moku Manamana, Lalo

Estimated number of individuals (including Applicant) to be covered under this permit: 12-20 (12 project personnel + 6 vessel crew) total people will be covered to conduct activities under this permit, co-listed under a co-managers permit (when applicable).

Estimated number of days in the Monument: 12

Description of proposed activities: (complete these sentences):

a.) The proposed activity will...

Support co-managers (permit tba) to survey for and control invasive plants, primarily Cenchrus

echinatus; retrieve data from and re-deploy remote cameras; and record phenology and abundance of seabirds, shorebirds, invertebrates and native plants.

In support of these activities, we will also be engaging in Huli ‘ia, an observational process documenting seasonal changes and shifts across entire landscapes, *ma uka* (ocean) to *ma kai* (ocean) identifying dominant correlating cycles to support and guide our management and best practices that support a productive and thriving community, ‘aina momona. It is an observational process documenting natural changes over time, identifies dominant cycles within certain species or occurrences (*flowering, fruiting, presence/absence of flora/fauna, cloud formations, spawning, or recruiting of fish species, etc.*) and assists in identifying correlations between species and/or occurrences as indicators of the other. When one thing happens (a flower blooms in mass), it indicates that another occurrence (a fish is spawning in mass) is happening (Sterling et al. 2017, Morishige et al. 2018). It allows natural cycles to support and guide our management practices allowing the flexibility needed to ensure the best times to rest areas or species and/or to harvest areas or species. Huli ‘ia stems from traditional management systems driven by an intimate understanding of the natural environment and the ability for communities to adjust and adapt their activities to support these systems of nature. Through this documentation process, Huli ‘ia supports the development of best practices enabling communities to adjust and adapt their activities to assist in malama ‘aina.

- Lani (atmospheric) observations include looking at cloud formations, noting wind direction/strength and what times it changes, visibility of the horizon, bird activity, other weather related observations such as rain or rainbows, the rising and setting of the moon and sun, the moon phase, and stars.
- Honua (land) observations include looking at any plants that are flowering, seeding or fruiting, new growth, animals reproducing, precipitation and soil moisture, bird arrival and departure and any other animal behaviors. Land observations from the main Hawaiian Islands during the expedition may also be useful to help remember activities in the NWHI during that time. For example, we notice hala fruiting here on the main islands and can relate that in the Northwestern Hawaiian Islands, this is the season when juvenile iwa are still in the nest.
- Kai (ocean) observations include noting the tide (high/low and time), waves and currents, identifying and looking at the behavior of invertebrates, limu (algae) and fish in the intertidal environments, noting any spawning or aggregation of species, and noting any juveniles and newly recruited species. (see observation datasheet)

If time allows, we will support sustainable fisheries and aina momona through continuing intertidal surveys and monitoring across the archipelago to advise and direct management strategies to support the intertidal fishery focusing on Opihi/Limpet productivity. Over the past decade of collaborative intertidal monitoring, our locally led research team has identified significant shortcomings to the current research being conducted on Hawai‘i’s unique wave-dominated, rocky intertidal shoreline. For instance, prior data collection methods failed to

measure environment – a key component to intertidal ecology and sustainable fisheries management. From recent findings, we draw new hypotheses and a new survey method (PACC) that focus on the effects of seasonal changes in habitat on patterns of reproductive cycles, recruitment and productivity of rocky intertidal communities. The work generated would be used to develop a sustainable fishery model for evaluating species productivity on any intertidal coastline in Hawai'i. As a model system for intertidal mollusc fisheries, our objectives are to assess the stock status for three species of limpet (*Cellana* spp.) in the Hawaiian Islands by: (1) describing and delineating their environment and habitat, (2) improving the understanding of the biology and ecology of *Cellana* spp., and (3) proposing sustainable harvest practices and management measures using an indicator-based approach.

PACC: Productivity and Carrying Capacity (PACC): We plan to implement a mix of standardized and novel methodologies across boulder, bench, and sloped rocky substratum to: 1) examine the effect of swell exposure (Low, Medium, High) on habitat size; 2) develop a practical, routine method for determining 'opihi growth rates and age in-situ; and 3) measure species fecundity and reproductive output in relation to major environmental factors such as temperature. Our project will evaluate how environment, growth and age structure, and reproductive output affects total shellfish production on temporal and spatial scales; and re-establish productive ecosystems as a fundamental strategy of traditional Hawaiian resource management.

Sustainable ecosystems and aina that are thriving and productive are fundamental in Native Hawaiian values and systems. Looking beyond the obvious Native Hawaiian practice of harvesting and gathering, there was a system in place that supported productive lands, oceans, and communities generationally. Our proposed activities are supporting the Native Hawaiian practice of Aina Momona.

Since 2009, Na Maka Onaona has been a major partner in Hawaii's Intertidal Monitoring Partnership conducting research in PMNM. Over the past eleven years, our team has been conducting intertidal monitoring along Hawaii's wave-exposed shorelines to address community concerns on sustainable harvest of 'opihi (*Cellana* spp). Working with numerous schools and community organizations, we have learned valuable lessons about both the productivity of our shorelines, and how this productivity aligns within the larger goals of thriving communities (Morishige et al. 2018). Through integrating institutional research, traditional knowledge systems, end-user (i.e. fisher) engagement, and outreach/education, our team has developed a unique research approach - made possible through the contributions of these multiple perspectives, considerations, and relationships. This journey provides us the capacity to understand a space through the multiple lenses within a community and create a platform that is inclusive of various knowledge systems to address the needs of our people, our environment, and a thriving relationship between the two entities. Building on recent research, our understanding of place changes by season and across multiple landscapes. We have developed a modified survey to look at the role of different habitat types, and the influence of environment on the carrying capacity of our intertidal fishery. Based on a shared goal of a productive and sustainable

fishery, our latest series of questions have led us to identify management strategies that can maximize replenishment in these rocky intertidal ecosystems. We believe the sharing of this journey is valuable, and will encourage a more inclusive conversation to evolve management and conservation to truly support ‘aina momona, abundant and productive communities of people and place.

PACC surveys aim to better understand how natural fluctuations occur even on remote shorelines with low human impact. This research will shed light on seasonal growth and die back of populations in relation to their habitat size and local physical environment. In 2012, the intertidal data was collected for the fourth consecutive year and Dr. Chris Bird and intertidal monitoring crews have noted changes over time. For example, there was a high density of recruits recorded in June 2010, however, they did not all survive, suggesting that more ‘opihi settled on the shore than the habitat could sustain. In 2010, participants recorded numerous small one month old ‘opihi (300 per m²), whereas in 2011, there were less 1.5-year-old ‘opihi (50 per m²) (http://www.papahanaumokuakea.gov/news/opihi/opihi_chris_b.html). Although one year might seem like there are many recruited ‘opihi, the habitat and environmental conditions can limit their survival and influence successful recruitment into adult populations. This highlights the importance of considering the maximum and minimum thresholds of population densities by size to identify stable carrying capacities.

PACC implements a mix of standardized and novel methodologies across boulder, bench, and sloped rocky substratum to: 1) examine the effect of swell exposure (Low, Medium, High) on habitat size; 2) develop a practical, routine method for determining opihī growth rates and age in-situ; and 3) measure species fecundity and reproductive output in relation to major environmental drivers such as temperature. Our project evaluates how environment, growth and age structure, and reproductive output affects total shellfish production on temporal and spatial scales; and re-establishes productive ecosystems as a fundamental strategy of traditional Hawaiian resource management.

The outputs of this project will be the identification of optimal habitat for a productive intertidal fishery, effective management strategies/tools, and support for stakeholder decision-making based on the sustainable opihī population density for respective shorelines-types. If we can understand a shoreline’s stable habitat (habitat size and population densities at its minimum normally during the seasonal dieback), we can understand that shoreline’s stable carrying capacity of ‘opihi. This research in PMNM is part of an on-going initiative to survey multiple locations in the Main Hawaiian Islands to inform management techniques to sustainably harvest and rest populations that compliments cyclical productivity. Locations across the Hawaiian Archipelago have been selected due to existing, long-term partnerships and/or areas of interest expressed by Native Hawaiian community members. Our research team will train and work with local and Native Hawaiian communities to build local research capacity by surveying their intertidal ecosystems.

Consistent with proclamation 8031, these activities will strengthen cultural and spiritual

connections to the Northwestern Hawaiian islands and foster the expansion and perpetuation of Native Hawaiian ecological knowledge and research methodologies. This knowledge may be critical as it is observed by local Hawaii residents that 'opihi and hā'uke'uke stocks are generally diminishing in size and number in the main Hawaiian Islands, therefore more data in this area may help to curb the decline. The continuation of 'opihi data collection, and comprehensive intertidal surveys (including fishes, algae and invertebrates) using Native Hawaiian ecological knowledge and methodologies coupled with western science will help to contribute to the overall health of Papahānaumokuākea.

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

conduct PACC surveys to examine 'opihi densities by size classes and maximum sizes within each vertically stratified zone (black zone (basalt rock) and pink zone (crustose coralline algae zone)). The black zone is located on the upper extent of the shoreline defined as the Emergent Tidal Zone where black rock is exposed to the air depending on the tide and the pink zone is located lower on the shoreline in the Wave Zone (Bird et al. 2013). Rugosity measurements will be recorded for the black zone and pink zone to identify differences in 'opihi carrying capacity by distinct habitat zones within the intertidal ecosystem. Tight measurements will also quantify the growth and shrinkage of the broader shoreline within each survey site to provide a practical measure of seasonal habitat threshold. PACC surveys will provide a total rugosity measurement for black and pink zones within the mixed (overlap of black and pink zones) rugosity zones. In order to increase the precision of 'opihi habitat availability, PACC will also record differences in 'opihi habitat and non-habitat to develop more precise estimates of 'opihi densities.

We will collect 'opihi to dissect gonads and use histological methods that can provide fecundity estimates and reproductive state by sizes that have not been used for 'opihi in PMNM in prior years. To determine fecundity-at-size, we will examine 'opihi ovaries histologically for all size groups except size class A (0-1 cm SL). A total of n=80 specimens will be collected from Nihoa using an opihiki knife. These specimens will be measured by caliper for shell length, shell width, and shell height, and weighted by scale for total weight, soft-body weight, and gonad weight.

To ensure responsible and ethical practices, we will refrain from collecting 'opihi and hā'uke'uke if populations appear too small to sustain collections. Consumption of intertidal resources including invertebrates, limu will further support cultural practice and relationship between participants and our islands. Consumption feeds physical, spiritual, and cultural health rooting us in our ancestral ties and customary practices. Consumption allows us to be nurtured and nourished by place and genealogy. Our islands and the resources thriving here are older siblings and customary relationships are based on the reciprocal practice of being fed and cared for by our older siblings while we care for and “feed” them in return. Our presence, activities, oli, observations, surveys, etc feed and care for place further supporting the physical, spiritual and cultural health of our islands and ourselves. Consumption also allows us to interact with place and understanding the network involved to produce a meal, which feeds a community. The research team will work together to apply this integrated monitoring approach. The research

team will be comprised of cultural researchers / practitioners, scientists, and managers. To ensure the success of these field studies, the team will conduct appropriate protocol and offer ho'okupu (cultural offerings) to maintain the spiritual integrity of the sites that are visited.

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

This activity will not only add to the current knowledge of the marine environment in the NWHI, it will help to gain a better understanding of the resources by looking at the resources through a Native Hawaiian cultural lens ensuring a holistic approach to interaction and care. It will also help the monument by continuing to re-establish Native Hawaiian ancestral consciousness and awareness about the health and condition of the marine resources. This integrated monitoring research cruise is the only one of its kind that integrates Native Hawaiian worldview and knowledge systems with western scientific methods to better understand the status of intertidal marine resources. It helps the Monument strengthen its management of cultural resources and ensures the strong participation of Native Hawaiians in the region's long-term protection. By providing opportunities to conduct cultural research, (cultural) researchers will assist in the recovery of important Native Hawaiian marine management practices and support the use of Native Hawaiian traditional ecological knowledge. Additionally, the permitted cultural practitioners and researchers will be key to the development of an eventual cultural access and monitoring plan for the NWHI.

The scientific research methods will build on the valuable long-term monitoring data collected on previous intertidal research cruises.

Other information or background:

Additionally this project is also supported by the following activities in the Monument Management Plan, (NHCH-2.1, 2.2, 2.3, 2.5, 2.6, 3.4, 4.2, 5.3 and NHCI – 3.1 and 3.2) all of which call for the identification of Native Hawaiian research priorities and access opportunities.

NHCH-2.1: Continue to compile information and conduct new cultural historical research about the NWHI.

NHCH-2.2: Support Native Hawaiian cultural research needs.

NHCH-2.3: Facilitate cultural field research and cultural education opportunities annually.

NHCH-2.5: Incorporate cultural resources information into the Monument Information Management System.

NHCH-2.6: Continue to facilitate Native Hawaiian cultural access.

NHCH-3.4: Identify and integrate Native Hawaiian traditional knowledge and management concepts into Monument management.

NHCH-4.2: Develop and implement specific preservation and access plans, as appropriate, to protect cultural sites at Nihoa and Mokumanamana.

NHCH-5.3: Integrate Native Hawaiian values and cultural information into the Monument

permittee education and outreach program.

NHCI-3.1: Engage the Native Hawaiian community to identify how traditional knowledge will be integrated into Monument activities.

NHCI-3.2: Use and integrate Native Hawaiian traditional knowledge in Monument management activities.

References

Bird, C.E., Franklin, E.C., Smith, C.M. and Toonen, R.J., 2013. Between tide and wave marks: a unifying model of physical zonation on littoral shores. *PeerJ*, 1, p.e154.

Kay, E.A. and Magruder, W., 1977. The biology of opihi. Department of Planning and Economic Development, Honolulu, p.46.

Mau, A.B., 2019. The Aquaculture and Biology of ‘Opihi ‘Alinalina (*Cellana sandwicensis*) (Doctoral dissertation, University of Hawai‘i at Mānoa).

Morishige, K., Andrade, P., Pascua, P., Steward, K., Cadiz, E., Kapono, L. and Chong, U., 2018. Nā Kilo ‘Āina: Visions of Biocultural Restoration through Indigenous Relationships between People and Place. *Sustainability*, 10(10), p.3368.

Sterling, E., Tickin, T., Morgan, T.K.K., Cullman, G., Alvira, D., Andrade, P., Bergamini, N., Betley, E., Burrows, K., Caillon, S. and Claudet, J., 2017. Culturally grounded indicators of resilience in social-ecological systems. *Environment and Society*, 8(1), pp.63-95.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Andrade, Pelikaokamanaio, KK

Title: Executive Director, Na Maka Onaona / Extension Agent, UH Sea Grant

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

Andrade, Pelikaokamanaio

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

Phone:

Fax:

Email:

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

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

Na Maka Onaona, University of Hawai'i Sea Grant, University of Hawaii Manoa, Hawaii
Institute of Marine Biology

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, Diver):

We expect that the final list of cruise personnel will be available in once funding is secured and/or crew invitations are confirmed. We will be submitting via an updated PMNM Compliance Information Sheet at that time.

Tentative List for 2026 Access(es)

Pelika Andrade, Ph.D. Student, UH Sea Grant Extension Agent, PMNM Cultural Resource Monitor, Na Maka Onaona,
Natie Hawaiian Cultural Working Group, NHP Permittee

- 1 - Pelika Andrade
- 2 - Kanoë Morishige
- 3 - Anthony Mau
- 4 - Kainalu Steward
- 5 – Norman Kali
- 6 – Justin Tabalno
- 7 – Kupono Haitzuka
- 8 – Kaimalino Andrade
- 9 – Erik Franklin
- 10 - staff or volunteer
- 11 - staff or volunteer
- 12 - staff or volunteer
- 6 searcher crew TBD

Section B: Project Information

5a. Project location(s):

- | | | | | |
|--|--|--------------------|---|-------------------------------------|
| <input checked="" type="checkbox"/> Nihoa Island | <input checked="" type="checkbox"/> Land-based | <u>Ocean Based</u> | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input checked="" type="checkbox"/> Necker Island (Mokumanamana) | <input checked="" type="checkbox"/> Land-based | | <input checked="" type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |

- | | | | |
|--|---|--|-------------------------------------|
| <input checked="" type="checkbox"/> French Frigate Shoals | <input checked="" type="checkbox"/> Land-based | <input checked="" 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 type="checkbox"/> Midway Atoll | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input type="checkbox"/> Kure Atoll | <input type="checkbox"/> Land-based | <input type="checkbox"/> Shallow water | <input type="checkbox"/> Deep water |
| <input type="checkbox"/> 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 Atoll 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:

Various key location on Nihoa for invasive species sweeps, transects, and removal activities. Intertidal areas of Nihoa.

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:*

The central purpose of the expedition is to support co-management activities. The central purpose of this permit is to expand and advance traditional Native Hawaiian knowledge in the field of marine conservation and management and continue to bridge the gap between cultural and western research methodologies. The primary objectives of the permit activities are to:

- (1) collect environmental data related to traditional Native Hawaiian marine management;
- (2) expand the application of traditional Hawaiian environmental monitoring tools and methodologies;
- (3) increase the knowledge base pertaining to intertidal ecosystems, including ‘opihi / hā‘uke‘uke / limu abundance, health, and reproductive cycles; and
- (4) re-establishing and strengthening cultural ties through feeding and being fed by our environment (genealogy).

*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?

All activities contained in this permit application were permitted over prior years and have demonstrated no impact on Monument cultural, natural and historic resources. All consultations (e.g. Section 106 National Historic Preservation Act) and compliance requirements would be

completed prior to departure. The activities would adhere to all rules and regulations established by the Monument including adherence to all quarantine requirements, wildlife viewing guidelines, and entry/exit notification procedures where applicable.

The intertidal monitoring / ‘opihi team consists of Native Hawaiian practitioners / cultural researchers on this voyage who are experienced in proper protocol and will help to ensure the entire group enters Papahānaumokuākea with proper intent and that all resources are treated with respect and care. Native Hawaiian protocols, including oli and mele, will be conducted to re-establish an awareness between people and place. It will also serve to reconnect the Northwestern Hawaiian Islands into the Hawaiian consciousness and worldview. This ceremony/protocol is very important because it establishes a sense of respect and reverence for the environment and all things it encompasses. It also supports a cultural interaction between people (younger siblings) and the islands & resources (older siblings) and prepares participants for that interaction. These protocol and ceremony are necessary to tap into an elevated state of awareness which will support cultural research and participants’ openness to “see” properly.

The consumption of intertidal resource invertebrates, limu will be conducted with adequate safeguards by not taking more than what is needed to allow participants to practice their culture but without compromising the ecological integrity and natural resources. For example, when harvesting ‘opihi we will be mindful to harvest individuals that are larger than the legal-size limit of 1 ¼ inch as well as to leave larger ‘opihi alone as they are believed to be more fecund. We will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. ‘Opihi are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus we are confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting the branches off and leaving the holdfast will be utilized to ensure continual growth after it is harvested. We believe that four (4) traditionally harvested and prepared individuals of each invert species (see Quest #9) per person and a total of one “mini snack-sized zip lock bag” approximately 100 grams of limu (see Quest #9) is appropriate to harvest per island.

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?

Per 7a above, all activities obtained in this permit application were permitted over prior years and have previously demonstrated no impact on Monument cultural, natural and historic resources. All consultations (e.g. ESA Section 7) and compliance requirements would be completed prior to departure. All personnel named in this permit will be accompanied by an experienced researcher in conducting surveys in the intertidal zone and are aware of the risks associated with working in nearshore areas with high wave action. Activities proposed in this application would have no cumulative effect as the applicant is proposing short survey days and no negative effects have resulted from previous years’ surveys within the NWHI.

In addition, this activity is part of the following Monument Management Plan Action Plans:

- NHCH 2.3: Facilitate cultural field research and cultural education opportunities annually;
- NHCH 2.6: Continue to facilitate Native Hawaiian cultural access;
- NHCH-3.1: Assess Monument cultural resource capacity;
- NHCH-3.2: Increase knowledge base of Native Hawaiian values and cultural information through “in-reach” programs for research managers;
- NHCH-4.2: Develop and implement specific preservation and access plans, as appropriate, to protect cultural sites at Nihoa and Mokumanamana;
- NHCH-5.3: Integrate Native Hawaiian values and cultural information into the Monument permittee education and outreach program

In addition, NOAA Office of National Marine Sanctuaries (ONMS) as a managing agency on the Monument Management Board, does and would commit to monitoring the intertidal zones of Nihoa and Mokupapapa (French Frigate Shoals). From 2010-2018, ONMS funded 100% of the annual intertidal research cruises to the same areas on Nihoa, Mokumanamana, and Mokupapapa (French Frigate Shoals - FFS) in which permitted sampling of various invertebrate species occurred the prior year. The project is led by two experts: Pelika Andrade and Kim Kanoe‘ulalani Morishige. ONMS and permittees will provide survey and report data to the U.S. Fish and Wildlife Service (USFWS) as stipulated in the general conditions of this permit.

Previous permitted intertidal monitoring efforts suggest the take activity is beneficial for the resource. In 2012, the intertidal data was collected for the fourth consecutive year and Dr. Bird, Na Maka Onaona, and the Intertidal Monitoring Partnership have noted changes over time. For example, the high density of recruits recorded in June 2010, didn’t all survive, suggesting that more ‘opihi settled on the shore than the habitat could sustain. In 2010, participants recorded numerous small one month old ‘opihi (300 per m²), whereas in 2011, there were less 1.5-year-old ‘opihi (50 per m²) (http://www.papahanaumokuakea.gov/news/opihi/opihi_chris_b.html). Similarly, researchers and participants have noted differences in population distribution, for example, in 2012, ‘opihi at Mokumanamana and Nihoa were recorded in the tens of thousands compared to the 3,000 found at La Perouse Pinnacles at FFS (http://www.papahanaumokuakea.gov/research/intertidal_cruise2013_return.html). No ‘opihi samples were or will be collected at La Perouse Pinnacles due to the low population size.

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.

There is no practicable alternative to conducting the activity within the Monument. There is no other place within the Hawaiian Archipelago that can serve as a baseline of abundance for local community-based marine managers due to its remote locale and legal protection status. Because the Northwestern Hawaiian Islands are remotely managed, this area serves as an optimal measure

for determining how environment and habitat availability influence ‘opihi populations with minimal human impact. These activities will directly contribute to the PACC surveys being conducted in the Main Hawaiian Islands to develop indicators of productivity that incorporate environmental factors and critical aspects of ‘opihi life history, both essential components for sustainable fisheries management.

The consumption of intertidal inverts and limu can be conducted outside of Papahānaumokuākea, however there is no alternative to consuming an important cultural resource at a place like Papahānaumokuākea because it allows one to connect to a place on a spiritual level which cannot be done by consuming it elsewhere. This is the reason kanaka maoli can connect to the place they live, because they have a deep and intimate connection to their land, their oceans and to their resources. We cannot whole-heartedly connect to Papahānaumokuākea without practicing our culture like we do in other parts of Hawai‘i, this is an extension of our daily lives and make up who we are. The intent is to mālama Papahānaumokuākea by re-connecting ourselves to the place, being present, observe & listen to what she tells us and to allow her to spiritually and physically mālama us by consuming resources found there and by giving us ‘ike and showing us hō‘ailona and experiences found nowhere else on this planet.

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 end value of the activity outweighs any adverse impacts by safeguarding against the loss of opportunity to expand Native Hawaiian knowledge and re-connect kanaka maoli culturally, physically, and spiritually to Papahānaumokuākea. There is a great need to recover traditional Native Hawaiian marine ecosystem management practices, and as such, the Monument provides an unparalleled venue to accomplish this.

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 fit into any open opportunities to access the shoreline within the primary activity of the co-managers permit. All other activities listed in this permit will be in support of the primary activity of the co-managers permit.

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

The applicant, Pelika Andrade, is qualified to conduct and complete the activities within this application. **Pelika Andrade** is the executive director and co-founder of Na Maka Onaona supporting productive communities across Hawaii. Andrade is a co-developer of Huli‘ia, Na Maka Onaona’s seasonal tracking tool/program which has been used during previous intertidal cruises, in Kure Atoll field crew activities, as well as Midway FWS activities. Andrade has also

spent the past 18 years working within Papahānaumokuākea conducting research, supporting management activities, supporting outreach and education initiatives and serving on both the PMNM Reserve Advisory Council and the Cultural working group. She was one of the co-founders of the formal intertidal cruise in 2010 supporting the collaboration from 2011 till it's final year in 2017. Andrade is also a Hawai'i Sea Grant Extension Agent at the University of Hawaii Manoa and a native Hawaiian born and raised on the island of Kaua'i. She has a long history working with coastal communities throughout the archipelago as a community member, sailor, voyager, cultural practitioner and researcher. For the past 16 years, she has been developing alternate approaches to monitoring Hawai'i's shoreline and supporting implementation of a management strategy that supports healthy, balanced communities in Hawai'i. Previous to her work as a Sea Grant Extension Agent, Andrade served as the program coordinator for the Keaholoa STEM Scholars Program at the University of Hawai'i at Hilo and a lecturer co-instructing the Kuula: Integrative Marine Resource Management course established in partnership with PMNM NOAA and UHHilo Marine Science and Uluakea program.

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.

The vessel and transport are funded in full by USFWS. The field and research activities on Nihoa are led and supported by USFWS. All other activities, including the data workup for all the information collected through this access, will be supported by the University of Hawaii at Manoa and Na Maka Onaona.

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.

The methods and procedures employed are widely accepted by Native Hawaiian marine practitioners and research scientists for collecting quantitative and qualitative data in intertidal ecosystems. The proposed methodology would not require specialized equipment and would also take into full account the fragility of the Monument's resources. We will conduct responsible and ethical practices by refraining from collecting and harvesting invertebrates or algae if the population numbers appear too low. We will use hook/handline and trolling methods for the sustenance fishing while in federal waters.

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

It is highly likely that this activity would be carried out on a vessel outfitted with a mobile transceiver unit approved by OLE and therefore 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.

All permits required for access and conducting cultural observations of the marine environment will be obtained. Also, several members from the Native Hawaiian cultural working group have been consulted regarding the activities to be permitted under this application. Similar to all previous Intertidal Cruise's (2011-2017), a presentation will be provided to the working group when time is available.

ADDITIONAL FINDINGS FOR PROPOSED NATIVE HAWAIIAN PRACTICES

k. Explain how the activity is non-commercial and will not involve the sale of any organism or material collected.

The activity is non-commercial. The end-value of the activity is informational and is intended to provide local and governmental managers the information critical to the conservation of these cultural resources.

l. Explain how the purpose and intent of the activity is appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono), and demonstrate an understanding of, and background in, the traditional practice and its associated values and protocols.

The purpose and intent of the proposed activity is appropriate and pono by traditional standards in the Native Hawaiian culture in that the expedition is centered on enhancing traditional marine resource management skills through careful observation.

m. Explain how the activity benefits the resources of the Northwestern Hawaiian Islands and the Native Hawaiian community.

The data collected from these field studies will better enable these cultural researchers / practitioners to understand the biological, spiritual and cultural connections between the NWHI and the Main Hawaiian Islands. In doing so, researchers will be better equipped to manage their areas in the main Hawaiian Islands from which the Northwestern Hawaiian Islands will ultimately benefit.

In the Main Hawaiian Islands, Na Maka Onaona has built strong partnerships with numerous organizations building the capacity of community groups, families, and agencies to track seasonal cycles and trends across entire landscapes. Na Maka Onaona has also built strong relationships with UH Manoa, NOAA PMNM, OHA, USFWS, Hawaii Institute of Marine Biology, Hawaii DAR, Hui Maka'ainana o Makana, Kalaemano Interpretive Center, and various other community partners focusing on intertidal research and opihi fishery management. Our team of research leads, student interns, and community volunteers will conduct monthly intertidal surveys and quarterly sample collections, while the UH Sea Grant College Program and UH graduate students will analyze the data and conduct outreach to disseminate the findings to

community stakeholders. Drawing upon over a decade of experience in building local community capacity for conducting research and outreach in Hawai‘i’s rocky intertidal, our team will develop products that will inform local community decision-making on the development of effective adaptive management strategies and tools that support a productive intertidal ‘opihi fishery that ensures a stable food resource for future generations of local residents and Hawaiians.

n. Explain how the activity supports or advances the perpetuation of traditional knowledge and ancestral connections of Native Hawaiians to the Northwestern Hawaiian Islands.

The group of cultural researcher / practitioners leading activities of this permit possess intricate knowledge of traditional Native Hawaiian phenology and marine management practices in the near shore fishery area within their own ahupua'a. Of equal importance, knowledge gained will be utilized to inform local marine management and conservation education within their home communities. Each practitioner will reflect upon traditional concepts like ‘āina momona (bountiful lands), ho'omalū (regulated activities) and kapu (prohibited activities) which are fundamental in traditional Native Hawaiian marine management.

o. Will all Monument resources harvested in the Monument be consumed in the Monument? If not, explain why not.

Yes, under this permit, all of the resources harvested for cultural purposes will be consumed in the monument.

8. Procedures/Methods:

The cultural research team would make visual assessments of intertidal areas where ‘opihi and ha‘uke‘uke are located. The research team would record substrate type, limu type/density, crustose/turf/macro algae proportions, other species proportions/ratio, clumping of ‘opihi, hā‘uke‘uke, and other intertidal species, presence of natural predators, freshwater input, etc. The team would take wet/dry notes and use digital cameras to record observations (will remain within the BMO distance for any filming or photography of protected species). At the end of visiting each island, Na Maka Onaona will facilitate a Huli ‘ia discussion for the group to share observations. One person will be designated and write all the observations made by the group on one data sheet to facilitate the analysis process while observations are still fresh and can be clarified. To complete these activities, our crew would require access to nearshore areas (below the splash zone) that contain ‘opihi habitat (e.g. intertidal zone at Mokumanamana). Every participant will adhere to all Monument requirements while undertaking this project.

Cultural harvesting protocols for intertidal invertebrates and limu will be conducted with adequate safeguards by not taking more than what is needed to allow participants to practice their culture but without compromising the ecological integrity and natural resources. Appropriate oli/mele will be conducted prior to arrival and departure on each island to introduce

ourselves and our pono intentions as well as to thank each island for their contributions. We believe the following amounts per visit within the timeframe of this permit are appropriate: no more than four (4) individuals of each invert species, including ha‘uke‘uke and opihi, per person, (see Quest #9), two he‘e, and a total of one “mini snack-sized zip lock bag” approximately 100 grams of limu (see Quest #9) is appropriate to harvest per island. Harvesting will supplement meals and may consist of ‘opihī, hā‘uke‘uke, limu, ‘a‘ama, pipipi, makaloa, he‘e, and leho. ‘Opihī will be gathered by hand using an ‘opihī knife, and we will be mindful to harvest individuals that are larger than the legal-size limit of 1 ¼ inch as well as to leave larger ‘opihī alone as they are believed to be more fecund. We will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. ‘Opihī are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus we are confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting/ pinching off the branches off and leaving the holdfast will be utilized to ensure continual growth after it is harvested. All other invertebrates will be gathered by hand. All inverts will be consumed raw, except leho and pipipi, which will be boiled then consumed. Limu will be “cured” and prepared to supplement meals. He‘e will be harvested by using a metal rod to attract the he‘e out of its house and then be gathered by hand. We will not harvest he‘e that is under one pound, in accordance to the State of Hawai‘i fishing regulations. The he‘e will either be prepared by either drying or boiling before consumption. Near-shore spear fishing or catch by hand methods for reef fish. Hook, handline, and trolling methods will be used to sustenance fish while in State and Federal waters. Refer to attached table for list of species.

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):

Common name:

1. Thin-Shelled Rock Crab
2. Spotted Drupe
3. Black Nerite
4. Open Drupe
5. Helmet Urchin
6. Black-Foot ‘Opihī
7. Yellow-Foot ‘Opihī
8. Day Octopus / Cliff Octopus
9. Humpback Cowry
10. Intermediate Drupe
11. None, Bonnemaisoniaceae Family
12. Sea lettuce, Ulvaceae Family

13. Order Ceramiales, Rhodomelaceae Family
14. Yellowfin tuna
15. Dolphinfish
16. Wahoo
17. Hawaiiin Chub
18. Skipjack tuna
19. Blue-Green Snapper

Scientific name:

1. *Grapsus tenuicrustatus*
2. *Drupa ricina*
3. *Nerita picea*
4. *Thais aperta* (formally *Purpura aperta*)
5. *Colobocentrotus atratus*
6. *Cellana exarata*
7. *Cellana sandwicensis*
8. *Octopus cyanea* / *Octopus oliveri*
9. *Cypraea mauritiana*
10. *Thais intermedia*
11. *Asparagopsis taxiformis*
12. *Ulva lactuca*
13. *Palisada parvipapillata*
14. *Thunnus albacares*
15. *Coryphaena hippurus*
16. *Acanthocybium solandri*
17. *Kyphosus hawaiiensis*
18. *Katsuwonus pelamis*
19. *Aprion virescens*

Hawaiian name:

1. 'A'ama
2. Makaloa
3. Pipipi
4. Pūpū 'Awa
5. Hā'uke'uke
6. Makaiauli
7. 'Ālinalina
8. He'e Maui / He'e Pali
9. Leho ahi
10. Pūpū
11. Limu Kohu

12. Pālahalaha
13. Līpe‘epe‘e
14. Ahi
15. Mahimahi
16. Ono
17. Nenu
18. Aku
19. Uku

& size of specimens:

1. ‘A‘ama:
 - a. Up to 30 per island/location per access
 - b. 3 inches or larger
2. Makaloa
 - a. Up to 30 per island/location per access
 - b. ½ inch or larger
3. Pipipi
 - a. Up to 30 per island/location per access
 - b. ½ inch or larger
4. Pūpū ‘Awa
 - a. Up to 30 per island/location per access
 - b. ½ inch or larger
5. Hā‘uke‘uke
 - a. Up to 30 per island/location per access
 - b. 2 inches or larger
6. Makaiauli
 - a. Up to 40 per island/location per access
 - b. 1 ¼ inch or larger
7. ‘Ālinalina
 - a. Up to 40 per island/location per access
 - b. 1 ¼ inch or larger
8. He‘e Maui / He‘e Pali
 - a. Up to 2 individuals per island/location per access
 - b. 1 lb or heavier
9. Leho Ahi
 - a. Up to 6 per island/location per access
 - b. 2 inches or larger
10. Pūpū - Thais
 - a. Up to 24 per island/location per access
 - b. 1 inch or larger
11. Limu Kohu

12. a. Up to 1 small “snack size” ziploc full (approx. 100g) per access
Pālahalaha
13. a. Up to 1 small “snack size” ziploc full (approx. 100g) per access
Līpe‘epe‘e
14. a. Up to 1 small “snack size” ziploc full (approx. 100g) per access
Ahi, Mahimahi, Ono, Nenue, Aku, Uku
14. a. Up to 10 individuals of the species listed while in transit.

Collection location:

Nihoa, Mokumanamana, Mokuapāpapa

Whole Organism Partial Organism

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

All specimens, with the exception of Opihi, will be consumed while in PMNM. We gather all gonad/fecundity data on all opihi collected for consumption while in the monument, but sometimes the ship is too rocky and we are unable to process. In these instances, we will choose not to consume opihi within PMNM and wait till our return to stable waters or environments to process so we don't miss the opportunity to gather important data to support management decisions. In this instance, we'll process back in the MHI, consume the opihi and not waste it, and utilize the shells in our education and outreach activities.

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

• General site/location for collections:

NA

• Is it an open or closed system? Open Closed

NA

• Is there an outfall? Yes No

NA

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

NA

- Will organisms be released?

NA/NO

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

If there is need to take Opihi back home to dissect and process, we will put it in the ships freezer in a ziplock bag until we can process.

11. Describe any fixed or semi-permanent structures or installations, or cultural offerings you plan to leave in the Monument:

Offerings of pa'akai (salt) and wai (water) may remain in the Monument.

12. List all specialized gear and materials to be used in the proposed activities:

Snorkeling gear, transect line, data sheets, 'opihi knives, handline, hook & trolling equipment.

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

NONE

14. Describe collaborative activities to share samples, cultural research and/or knowledge gained in the Monument:

This permit application has been submitted in conjunction with the permit application submitted the co-manager permit.

In addition, cultural researchers will present preliminary findings to community partner organizations, agency partners, and marine resource managers under this permit. Na Maka Onaona will continue to inform and update the public (e.g. at NWHI Coral Reef Ecosystem Reserve Advisory Council meetings) and the Native Hawaiian Cultural Working Group on all findings.

15a. Will you produce any publications, educational materials or other deliverables?

Yes No

15b. Provide a timeline for write-up and publication of information or production of materials:

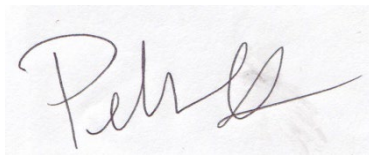
Education and Outreach curriculum material will be produced from this project and incorporated into material used for local schools in the Main Hawaiian Islands. One such example are the

various Huli ‘ia posters produced by Na Maka Onaona and partners (NOAA PMNM, USFWS, OHA) and Huli ‘a data collected by communities across the archipelago.

16. If applicable, list all Applicant’s publications directly related to the proposed project:

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 1/22/26

SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE BELOW:

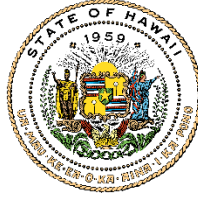
NOAA/Inouye Regional Center
NOS/ONMS/PMNM/Attn: Permit Coordinator
1845 Wasp Blvd, Building 176
Honolulu, HI 96818
FAX: (808) 455-3093

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

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

CIARA W. K. KAHAHANE
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

April 10, 2026


TO:

Division of Aquatic Resources File

THROUGH:

Ryan K. P. Kanaka'ole, Acting Chairperson 

FROM:

Brian J. Neilson, Administrator
Division of Aquatic Resources 

SUBJECT:

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200.1 HAR, FOR A PAPAĀNAUMOKUĀKEA NATIVE HAWAIIAN PRACTICES PERMIT TO PELIKA ANDRADE, NĀ MAKA ONAONA AND THE UNIVERSITY OF HAWAII AT MĀNOA, FOR ACCESS TO STATE WATERS TO USE TRADITIONAL ECOLOGICAL KNOWLEDGE TO CONDUCT INTERTIDAL SURVEYS AND MONITORING UNDER PERMIT PMNM-2026-009

SUMMARY

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200.1, HAR:

Project Title:

Papahānaumokuākea Native Hawaiian Practices Permit to Pelika Andrade, Nā Maka Onaona and the University of Hawaii'i at Mānoa, for Access to State Waters to use Traditional Ecological Knowledge to Conduct Intertidal Surveys and Monitoring

Permit Number:

PMNM-2026-009

Project Description:

F-2

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

- Nihoa
- Mokumanamana (Necker Island)
- Lalo (French Frigate Shoals)

The applicant requests to enter PMNM up to two (2) times for up to 12 days for each access. These accesses will occur by vessel. Dates, time, and method of entry are to be determined after consideration of weather, availability of vessel/vessel space, etc.

INTENDED ACTIVITIES

The applicant proposes to (1) conduct terrestrial surveying and controlling of terrestrial invasive species and terrestrial native species monitoring (as part of U.S. Fish and Wildlife Service (USFWS) efforts separately permitted under the MMB permit PMNM-2026-001), (2) conduct intertidal surveys and monitoring to advise and direct management strategies which support intertidal fishery productivity, specifically for ‘opihi, (3) engage in Huli‘ia, a traditional cultural observational process documenting seasonal changes and shifts across entire landscapes, and (4) participate in subsistence/sustenance fishing.

Procedures/Methods

Land-Based Activities

Terrestrial activities conducted will consist of surveying and controlling terrestrial invasive species and terrestrial native species monitoring under the direction of the USFWS. The terrestrial invasive species control would focus primarily on *Cenchrus echinatus* and the terrestrial native species monitoring would involve the use of remote cameras and recording phenology and abundance of seabirds, shorebirds, invertebrates, and native plants. The procedure and methods for the land-based invasive species control and native species monitoring are conducted in accordance with USFWS protocols and authorized under the MMB permit (PMNM 2026-001).

Intertidal Monitoring and Huli‘ia

The intertidal activities would be part of ongoing monitoring from across the archipelago that is used to advise and direct management strategies which support intertidal fishery productivity, specifically for ‘opihi. This research is a natural continuation of previous intertidal ecosystem studies, surveys and monitoring (with a variation on previous research questions), that have been conducted by the co-researcher working on the project, Kim Kanoe‘ulalani Morishige, and many other researchers affiliated with similar expeditions in the past (expeditions have occurred almost annually since 2009). More background information about the intertidal monitoring project can be found in the application.

The cultural research team would make visual assessments of intertidal areas where ‘opihi and

hā‘uke‘uke are located. The research team would record substrate type, limu type/density, crustose/turf/macro algae proportions, other species proportions/ratio, clumping of ‘opihi, hā‘uke‘uke, and other intertidal species, presence of natural predators, freshwater input, etc. The team would take wet/dry notes and use digital cameras to record observations.

At the end of visiting each island, Nā Maka Onaona will facilitate a Huli‘ia discussion for the group to share observations. One person will be designated and write all the observations made by the group on one data sheet to facilitate the analysis process while observations are still fresh and can be clarified. Atmospheric, land, and ocean observations, substrate type, limu presence/density, crustose/turf/macro algae proportions, other species ratios, clumping of ‘opihi and hā‘uke‘uke, presence of natural predators, other intertidal species, and other intertidal information will be recorded.

Note: ‘Opihi are the only organisms collected for biological research reasons but when harvesting the other organisms, the researchers and assistants will take note of reproductive states and other observations, which are included in Huli‘ia.

PACC Surveys

The researchers/team will conduct productivity and carrying capacity (PACC) surveys to examine ‘opihi densities by size classes and maximum sizes within each vertically stratified zone (black zone (basalt rock) and pink zone (crustose coralline algae zone)). The black zone is located on the upper extent of the shoreline defined as the Emergent Tidal Zone where black rock is exposed to the air depending on the tide and the pink zone is located lower on the shoreline in the Wave Zone (Bird et al. 2013). Rugosity measurements will be recorded for the black zone and pink zone to identify differences in ‘opihi carrying capacity by distinct habitat zones within the intertidal ecosystem. Tight measurements will also quantify the growth and shrinkage of the broader shoreline within each survey site to provide a practical measure of seasonal habitat threshold. PACC surveys will provide a total rugosity measurement for black and pink zones within the mixed (overlap of black and pink zones) rugosity zones. To increase the precision of ‘opihi habitat availability, PACC will also record differences in ‘opihi habitat and non-habitat to develop more precise estimates of ‘opihi densities.

More background information about PACC surveys can be found in the application.

‘Opihi Gonad Collection

The researchers will collect ‘opihi to dissect gonads and use histological methods that can provide fecundity estimates and reproductive state by sizes that have not been used for ‘opihi in PMNM in prior years. To determine fecundity-at-size, the researchers will examine ‘opihi ovaries histologically for all size groups except size class A (0-1 cm SL). A total of n=80 specimens will be collected from Nihoa using an opihi knife. These specimens will be measured by caliper for shell length, shell width, and shell height, and weighed by scale for total weight, soft-body weight, and gonad weight.

Huli‘ia

The researchers/team will also be engaging in Huli 'ia, an observational process documenting seasonal changes and shifts across entire landscapes, ma uka (ocean) to ma kai (ocean) identifying dominant correlating cycles to support and guide the management and best practices that support a productive and thriving community, 'āina momona. It is an observational process documenting natural changes over time, identifies dominant cycles within certain species or occurrences (flowering, fruiting, presence/absence of flora/fauna, cloud formations, spawning, or recruiting of fish species, etc.) and assists in identifying correlations between species and/or occurrences as indicators of the other. Huli 'ia stems from traditional management systems driven by an intimate understanding of the natural environment and the ability for communities to adjust and adapt their activities to support these systems of nature.

- Lani (atmospheric) observations include looking at cloud formations, noting wind direction/strength and when it changes, visibility of the horizon, bird activity, other weather-related observations such as rain or rainbows, the rising and setting of the moon and sun, the moon phase, and stars.
- Honua (land) observations include looking at any plants that are flowering, seeding or fruiting, new growth, animals reproducing, precipitation and soil moisture, bird arrival and departure and any other animal behaviors. Land observations from the main Hawaiian Islands during the expedition may also be useful to help remember activities in the NWHI during that time. For example, the researchers/team notice hala fruiting here on the main islands and can relate that in the Northwestern Hawaiian Islands, this is the season when juvenile iwa are still in the nest.
- Kai (ocean) observations include noting the tide (high/low and time), waves and currents, identifying and looking at the behavior of invertebrates, limu (algae) and fish in the intertidal environments, noting any spawning or aggregation of species, and noting any juveniles and newly recruited species. (see observation datasheet)

Subsistence/Sustenance Fishing

The applicant is also requesting to consume intertidal resources, collect limu for consumption, and to subsist and sustenance fish by hook, spear, trolling using handlines, and/or other hook and trolling equipment to further support the cultural practice and relationship between participants and Papahānaumokuākea.

The amounts listed in the collections table are the maximum amounts to be taken throughout the timeframe of this permit. 'Opihi will be gathered by hand using an 'opihi knife, and the researcher and assistants will be mindful to harvest individuals that are larger than the legal-size limit of 1 ¼ inch as well as to leave larger 'opihi alone as they are believed to be more fecund. The researcher and assistants will also harvest from various places along the shoreline to be mindful of harvest pressure on one rock. 'Opihi are also able to reach reproductive maturity at approximately 7 months after settling onto the rocks (Kay & Magruder 1977), thus the researcher is confident that there will be larval recruitment the following year. When harvesting limu, proper practice of cutting/ pinching off the branches off and leaving the holdfast will be utilized to ensure continual growth after it is

harvested. All other invertebrates will be gathered by hand. All invertebrates will be consumed raw, except leho and pipipi, which will be boiled then consumed. Limu will be “cured” and prepared to supplement meals. He‘e will be harvested by using a metal rod to attract the he‘e out of its house and then be gathered by hand. The researcher and assistants will not harvest he‘e that is under one pound, in accordance with the State of Hawai‘i fishing rules. The he‘e will either be prepared by either drying or boiling before consumption. The researcher and assistants will conduct near-shore spear fishing or catch by hand methods for reef fish. Hook, handline, and trolling methods will be used to sustainance fish for pelagic fish while in State and Federal waters.

Collections lists for individual species below:

Inoa/Name	Scientific Name	Sample Amount	Size
‘A‘ama	<i>Grapsus tenuicrustatus</i>	30	3in. or larger
Makaloa	<i>Drupa ricina</i>	30	1/2in. or larger
Pipipi	<i>Nerita picea</i>	30	1/2in. or larger
Pūpū ‘Awa	<i>Thais aperta</i>	30	1/2in. or larger
Hā‘uke‘uke	<i>Colobocentrotus atratus</i>	30	2 in. or larger
‘Opihi Makaiauli	<i>Cellana exarata</i>	40	1 ¼ in. or larger
‘Opihi ‘Ālinalina	<i>Cellana sandwicensis</i>	40	1 ¼ in. or larger
‘Opihi Ko‘ele	<i>Cellana talcosa</i>	40	2 in. or larger
He‘e Maui/Pali	<i>Octopus cyanea/oliveri</i>	2	1lb. or heavier
Leho ahi	<i>Cypraea mauritiana</i>	6	2 in. or larger
Pūpū	<i>Thais intermedia</i>	24	1 in. or larger

Inoa/Name	Scientific Name	Sample Amount
Limu kohu	<i>Asparagopsis taxiformis</i>	~100g
Limu līpe‘epe‘e	<i>Laurencia spp.</i>	~100g
Limu Pālahalaha	<i>Ulva fasciata</i>	~100g
Misc. Algae	<i>Algae</i>	~100g
Ahi	<i>Thunnus albacares</i>	Up to 10 pelagic fish total while in transit
Mahimahi	<i>Coryphaena hippurus</i>	Up to 10 pelagic fish total while in transit
Ono	<i>Acanthocybium solandri</i>	Up to 10 pelagic fish total while in transit
Nenuē	<i>Kyphosus spp.</i>	Up to 10 pelagic fish total while in transit
Aku	<i>Katsuwonus pelamis</i>	Up to 10 pelagic fish total while in transit

Note on Collections: ‘Opihi are the only species that are collected for biological sampling; the other

species are for consumption only. However, when harvesting the other species, the applicant and assistants, take note of reproductive states and other observations, which are included in Huli‘ia. To ensure responsible and ethical practices, the researchers/team will refrain from collecting ‘opihi and hā‘uke‘uke if populations appear too small to sustain collections. Consumption of intertidal resources including invertebrates and limu will further support cultural practice and relationship between participants and the islands.

Note on Fishing: Applicant and assistants will fish in transit for pelagic fish or near-to-shore for nearshore fish (nenu). The researcher and assistants usually pull lines as they get closer to land because of birds hunting and as a preventative measure in case they encounter other species foraging close to the islands. Nenu is the only fish the project will harvest close to land using either spear or hand techniques. When utilizing line fishing for pelagic fish, it is difficult to target size but if an individual is too large or too small, it will be released if chances of survival are good. Nenu are caught with more selection capability, so a medium size is usually the desired target size. A maximum total of 10 individuals will be collected across the 5 species of pelagic fish.

Note on ‘Opihi: Full amount for all ‘opihi may not be collected; maximum combined total of 80 individuals to be collected (across the three species of ‘opihi)

To safeguard PMNM resources, the applicant will harvest from various places along the shoreline to be mindful of harvest pressure in one location. The applicant has also attended and completed the 2019 Resource Monitor Training and has ample experience at Nihoa and the collection sites there.

ADHERANCE TO FINDINGS CRITERIA, BMPs, AND OTHER SAFETY PROTOCOLS:

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

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving monument resource
- Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area
- Anchoring a vessel
- Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- Attracting any living Monument resource
- Subsistence fishing (State waters only)

Monument Management Plan Strategies

The activities proposed by the applicants directly support the Monument Management Plan (PMNM MMP Vol. 1, 2008), including but not limited to the following priority management needs:

- MCS-1.1: Continue to characterize types and spatial distributions of shallow-water marine habitats to inform protection and management efforts.
- MCS-1.2: Continue monitoring of shallow-water coral reef ecosystems to protect ecological

integrity.

- NHCH 2.3: Facilitate cultural field research and cultural education opportunities annually.
- NHCH 2.6: Continue to facilitate Native Hawaiian cultural access.

Best Management Practices (BMPs)

To safeguard Monument resources the applicant will abide by all PMNM BMPs while conducting the aforementioned activities within PMNM:

BMP Number	Title	Download
001	Marine Alien Species Inspection Standards for Maritime Vessels	PDF
002	Protocol for Acquiring Avian Blood Samples	PDF
003	Human Hazards to Seabirds Briefing	PDF
004	Best Management Practices for Boat Operations and Diving Activities	PDF
005	Protocols to Reduce Impact to the Laysan Finch	PDF
006	General Storage and Transport Protocols for Collected Samples	PDF
007	Best Management Practices for Terrestrial Biosecurity	PDF
008	Seabird Protocols Necessary for Conducting Trolling Research and Monitoring in Papahānaumokuākea Marine National Monument	PDF
009	Best Practices for Minimizing the Impact of Artificial Light on Sea Turtles	PDF
010	Marine Wildlife Viewing Guidelines	PDF
011	Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment, Papahānaumokuākea Marine National Monument (Monument)	PDF
012	Precautions for Minimizing Human Impacts on Endangered Land Birds	PDF
015	Nonnative Species Inspection Requirements at Midway Atoll	PDF
016	Best Management Practices for Activities on Nihoa	PDF
017	Best Management Practices for Maritime Heritage Sites	PDF
018	Rodent Prevention and Inspection Standards for Permitted Vessels	PDF
019	Best Management Practices for Activities on Mokumanamana (Necker Island)	PDF
020	Best Management Practices to minimize the spread of nuisance alga	PDF

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: DAR, DOFAW, NOAA Office of National Marine Sanctuaries Papahānaumokuākea National Marine Sanctuary, NOAA National Marine Fisheries Service, USFWS Refuges, USFWS Ecological Services, and the Office of Hawaiian Affairs (OHA). In addition, the permit application

was posted on the Monument website within 40 days of its receipt, in accordance with the Monument's Public Notification Policy giving the public an opportunity to comment.

Monument Management Board (MMB) Agency Reviewer Questions and Applicant Responses

Below are some of the questions, comments, and responses received during the review process at the time of drafting the BLNR submittal. The review process will be completed before the permit will be issued.

1. Can you please define the acronym PACC and provide a clearer description of this survey method, including how it will be conducted in the field?

Response:

Productivity and Carrying Capacity (PACC): We plan to implement a mix of standardized and novel methodologies across boulder, bench, and sloped rocky substratum to: 1) *examine the effect of swell exposure (Low, Medium, High) on habitat size*; 2) *develop a practical, routine method for determining 'opihi growth rates and age in-situ*; and 3) *measure species fecundity and reproductive output in relation to major environmental factors such as temperature*. Our project will evaluate how environment, growth and age structure, and reproductive output affects total shellfish production on temporal and spatial scales; and re-establish productive ecosystems as a fundamental strategy of traditional Hawaiian resource management.

I've also included it on Page 4 second paragraph of the permit.

2. Can you clarify the requested specimen collection limits so they are consistent throughout the application?
 - Page 12 references "two traditionally harvested and prepared individuals of each invert species per person"
 - Page 17 references "no more than four (4) individuals of each invert species per person"

Response:

Apologies, I didnt realize I had not made the edit to page 12. I've updated page 12 to reflect and align with page 17. Four (4) individuals

3. Can you clarify what is meant by "per island/location per access"?
 - Does this mean collection limits apply at the island scale, atoll scale, or by multiple locations within an island?
 - How should "location" be interpreted for purposes of collection limits?

Response:

Our organization has been supporting other activities within the monument since 2008. We sometimes participate in multiple access per year, at multiple locations. Instead of submitting an application per access, we were hoping to blanket a years worth of accesses under one permit. Our lead, Pelika Andrade, accompanies FWS service to Nihoa yearly on their cenchrus work and sometimes does 2 accesses just on that project (April/May and September). Along with that access our partnership includes those with NOAA in their

summer field work and PMDP on their activities as well. There are also instances where we are brought into Midway for special workshops and field support. Some of these invitations are last minute (in the permit timeline). This permit was meant to eliminate last minute submissions of permits, while supporting each access respectfully and appropriately.

Location is interpreted by island. If we contribute to April Cenchrus project and time allows, that would be an access. If we return in September, that would be another [access](#). Assured that though it blankets all locations and accesses individually, we would still be following our extensive experience in harvest appropriateness as noted in the permit.

4. Can you clarify the “per access” component?
- How many total accesses are anticipated/requested under this permit during the permit term?

Response:

Please see response in #3.

5. For the stated collection of n=80 ‘opihi from Nihoa for gonad dissection/fecundity estimates:
- Which species will be collected: *Cellana exarata*, *Cellana sandwicensis*, or both?

Response:

We collect as close to 50/50 as possible.

- Are these 80 specimens included in the species-specific collection totals provided in response to Question 9?

Response:

Again, we try to ensure that what we harvest for food is utilized for as many means allowable... so yes the 80 include the numbers we gather to eat.

- Will any of these specimens be consumed within PMNM/PNMS, retained, or removed from the monument/sanctuary for analysis?

Response:

We have found that both some may be consumed within PMNM and some may be removed. It’s all time allotted and our comfort processing on ship. Most times, seasickness is not an issue, but there are some accesses that we cannot get the the processing done within the monument and have to bring them home to the main Hawaiian Islands for a more stable-easier processing. Shells that do come with us are used in education and outreach as we work with the opihi fishery 365 days a year since 2009.

6. If any whole organisms, tissues, gonads, shells, or other specimen parts will be retained, dissected, transported, or removed from PMNM/PNMS, can you please clearly identify that

in the application and reconcile it with the current responses to Questions 9b and 10?

Response:
Done

7. Section B Project Information (5a & b) were blank regarding locations and subsistence fishing for the pelagic species listed elsewhere. Please let us know what was intended to be checked and details.

Response:

Apologies. On my end, I did check the boxes. I have put them in bold but the answers for 5a:

Nihoa, Moku Manamana and French Frigate Shoals

Land-based, Shallow Water

Remaining ashore on any island or atoll between sunset and sunrise. (field camps mostly for cencrus work covered also by the co-managers permit)

5b:

- Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource (also covered by the co-managers permit)
 - Anchoring a vessel (also covered by the co-managers permit)
 - Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument (also covered by the co-managers permit)
 - Attracting any living Monument resource (also covered by the co-managers permit)
 - 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 (also covered by the co-managers permit)
8. Please ensure that the collection/sampling design removes a sustainable proportion from the local population of target organisms and makes efforts to distribute collection activities across shoreline/reef flat/benthic areas, so as not to consolidate the impacts of collection in one location.

Response:

ABSOLUTELY. These are practices we follow on all shorelines and in all collections.

9. Is the take for Ahi, Mahimahi, Ono, Nenu, Aku, and Uku, 10 of each species or 10 total across all species?

Response:

10 across all species. I don't see us needing any more than that for subsistence.

10. Vessel access and list of participants implies an independent access via the Searcher, is this correct? If so, we would like more information about potential dates. If not, are all of those participants also going on USFWS vessels in 2026? Is this for one vessel access for 12 days or multiple trips totaling 12 days?

Response:

Again, our organization has been supporting other activities within the monument since 2008. We sometimes participate in multiple access per year, at multiple locations. Along with that access our partnership includes those with NOAA in their summer field work and PMDP on their activities as well. There are also instances where we are brought into Midway for special workshops and field support. Some of these invitations are last minute (in the permit timeline). This permit was meant to eliminate last minute submissions of permits, while supporting each access respectfully and appropriately. I believe our co-managers are working on contracts with the Searcher and some of our accesses will be to support co-management activities. Our permit is a safety in case there is time to conduct our activities, we would be ok to proceed. As for dates, we are looking at the entire summer season to support co-manager activities. If we need to say a specific number of days in the monument, that would be hard... BUT, if we need to identify a number of days allotted to our specific request within the permit, I would be comfortable with the projection of 12 days total spread between various accesses depending on year and availability of our crew and availability of seats on each deployment.

11. Are the cultural sustenance/subsistence/consumption activities and Huli'ia and PACC research activities the same at Lalo? What is the plan for visiting Lalo?

Response:

They are the same. We included Lalo if we were able to get there but most times we do not have the funding or opportunity to get all that way. If we do, we usually only spend time at the pinnacles (high rocky intertidal shoreline). We do collaborate with the MEGA Lab and Dr. Haunani Kane for landings on islets, etc... but if that does happen, she usually will submit a separate permit for those activities.

12. Are any of these collected specimens brought back to the MHI? About how many of each specimen are consumed in Papahānaumokuākea versus how many are brought back?

Response:

What is done with the specimens that are brought back? All, with the exception of Opihi, are will be consumed in PMNM. Opihi, if we cannot process, will come back for processing, consumption, and shells will be utilized for education and outreach.

ENVIRONMENTAL COMPLIANCE

NEPA / HEPA:

- Categorical Exclusion / Exempt Class:
HEPA Exemptions 1 & 5; NEPA Categorical Exclusion B9
- EA:
N/A
- EIS:
N/A

Other Consultations: (ESA/MMPA Section 7; NHPA Section 106, etc.)

- EFH and ESA informal consultations through NOAA

Has Applicant been granted a permit from the State in the past? Yes

If so, please summarize past permits:

PMNM permits have been issued to applicant Pelika Andrade (PMNM-2021-009, PMNM-2023-004, 2023-004 R1, 2023-004 R2) and the co-researcher working on the project, Kim Kanoe‘ulalani Morishige, for similar activities (PMNM-2011-040, PMNM-2012-052, PMNM-2014-020, PMNM-2015-017, PMNM-2015-017 A1 and PMNM-2017-024).

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

involving any of the applicant agencies or personnel?

Are there any other relevant concerns from previous permits? If yes, please explain: No

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: DAR, DOFAW, NOAA Office of National Marine Sanctuaries Papahānaumokuākea National Marine Sanctuary, NOAA National Marine Fisheries Service, USFWS Refuges, USFWS Ecological Services, and the Office of Hawaiian Affairs (OHA). In addition, the permit application was posted on the Monument website within 40 days of its receipt, in accordance with the Monument’s Public Notification Policy giving the public an opportunity to comment.

Exemption Determination:

After reviewing §11-200.1-15, HAR, including the criteria used to determine significance under §11-200.1-13, HAR, 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 have been evaluated as a single action. Since this permit allows only a maximum total take over the period of the permit duration, the categorical exemption determination here will treat all planned activities under this permit as a single action under §11-200.1-10, HAR.
2. The general exemption type #5 for basic data collection, research and experimental management with no serious or major environmental disturbance and type #1 for operations, repairs or maintenance of existing structures, facilities, equipment, or topographical features, involving minor expansion or minor change of use beyond that previously existing appear to apply. §11-200.1-16 (a) (1) and §11-200.1-16 (a) (2), HAR, exempts the class of actions that 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.” This exemption type has been interpreted to include the intertidal surveys and monitoring and the collection and analysis of ‘opihi and reproductive biology, such as those being proposed.

§11-200.1-16 (a) (1) and §11-200.1-16 (a) (2), HAR, also exempts the class of actions that involve “operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving minor expansion or minor change of use beyond that previously existing.” This exemption type has been interpreted to include the cultural subsistence and sustenance collection which is incidental to the main surveying and monitoring activities and the amounts proposed for collection do not constitute a serious or major environmental disturbance.

The proposed activities here appear to fall squarely under the general exemption type identified under HAR §11-200.1-16 (a) (1) and as described under the revised 2020 DLNR Exemption List (Concurred on by the Environmental Council on November 10, 2020), under the general exemption type #5 (Part 1), item #15, which includes, the conducting of “game and non-game wildlife surveys, vegetation and rare plant surveys, aquatic life surveys, inventory studies, new transect lines, photographing, recording, sampling, collection, culture, and captive propagation” and type #1 (Part 1), item #45, “Use of lands and waters by those exercising traditional and customary practices for minor noncommercial purposes or for the gaining of traditional ecological knowledge.”

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.” §11-200.1-15 (d), HAR. 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. §11-

200.1-13, HAR.

PMNM permits have been previously issued to the co-researcher working on the project (most recently 2018, 2021, and 2023 with renewals in 2024 and 2025) in State Waters, and several permits have been issued to various researchers since 2011 for similar types of intertidal studies. There were no deleterious effects from the previous expeditions. Significant cumulative impacts are not anticipated because 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, but rather enhance PMNM 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, nor did it raise any cultural concerns that would occur because 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 have a Minimal or No Significant Effect on the Environment. 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 PMNM 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-mentioned project as provided by Chapter 343, HRS and Chapter 11-200.1 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.