

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic
Resources Honolulu,
Hawaii 96813

April 8, 2022

Board of Land
and Natural Resources
Honolulu, Hawaii

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Native Hawaiian Practices Permit Amendment to Pelika Andrade, Nā Maka Onaona (Formerly Nā Maka o Papahānaumokuākea) and the University of Hawai‘i at Mānoa, for Access to State Waters to use Traditional Ecological Knowledge to Conduct Intertidal Surveys and Monitoring to Advise and Direct Management Strategies for Intertidal Fisheries Activities

The Division of Aquatic Resources (DAR) hereby submits a request to amend the Board of Land and Natural Resources' (the Board) prior authorization and approval for issuance of a Papahānaumokuākea Marine National Monument Native Hawaiian practices permit to Pelika Andrade, Nā Maka Onaona (Formerly Nā Maka o Papahānaumokuākea) and the University of Hawai‘i at Mānoa, pursuant to §187 A-6, Hawai 'i Revised Statutes (HRS), Chapter 13-60.5, Hawai 'i Administrative Rules (HAR), and all other applicable laws and regulations.

AMENDMENT REQUEST

The amendment request seeks the Board's authorization and approval for issuance of a Papahānaumokuākea Marine National Monument (Monument) Native Hawaiian practices permit amendment to Pelika Andrade, Nā Maka Onaona (Formerly Nā Maka o Papahānaumokuākea) and the University of Hawai‘i at Mānoa.

This amendment is to modify and clarify language outlined in the applicant's existing permit (PMNM 2021-009) to conduct certain activities, including the following modifications and clarifications to specific condition #'s of the PMNM permit listed below:

1. The list of authorized personnel is to be expanded to include the following personnel: Rachel Rounds, Jared Underwood, Aisha Rickli-Rahman, Leila Nagatani, Alex Wang, Ty Spangler, Jon Littenberg, Julia Hartl, Gillian Wysock, Keoni Hassett and (4) TBD to account for any changes. The permittee shall provide an updated Compliance Information Sheet prior to each entry into the Monument.

ITEM F-4

13. Maximum number of collections for each ‘Opihi Makaiauli (*Cellana exarata*) and ‘Opihi ‘Ālinalina (*Cellana sandwicensis*) are to be increased to 80 at Nihoa Island only.

In addition, the following clarification items are to be made:

- An April 2022 access into the Monument will occur to Nihoa on a FWS chartered cruise aboard the vessel Searcher permitted under the Co-Manager permit (PMNM-2022-001).
- The additional authorized personnel listed above may only engage in permitted activities under the supervision and presence of the permittee, Pelikaokamanaoio Andrade.

All other terms and conditions of PMNM-2021-009 are unchanged and still apply.

The current Native Hawaiian practices permit allows entry and activities to occur at the following sites:

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

The activities covered under this amendment to the permit would be authorized to occur between April 2022 and May 2022.

This project proposes to support sustainable fisheries and aina momona through continuing intertidal surveys and monitoring across the archipelago to advise and direct management strategies which support intertidal fishery productivity, specifically ‘opihi. This research is a natural continuation of previous intertidal ecosystem studies, surveys and monitoring (with a variation on the research question), 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 eleven (11) years. This project will be done in conjunction and collaboration with Kane PMNM-2021-008 and the Office of Hawaiian Affairs (OHA). It will focus on the intertidal and marine ecosystems at Lalo (French Frigate Shoals), with potential stops at both Mokumanamana and Nihoa if weather and schedule allows. To accomplish this activity, the applicant will utilize a newly developed survey method called Productivity and Carrying Capacity surveys (“PACC”), which focuses on the effects of seasonal changes in habitat on patterns of reproductive cycles, recruitment, and productivity of rocky intertidal communities. The work generated will be used to develop a sustainable fishery model for evaluating species productivity on any intertidal coastline in Hawai‘i.

The applicant and permitted personnel will utilize traditional observational practices through the Huli‘ia process while additionally recording 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. Additional sampling of gonads for ‘opihi (*Cellana exarata*, *C. sandwicensis*) and hā‘uke‘uke (*Colobocentrotus atratus*) will be done to determine fecundity-at-size. Select samples are

requested to be brought back for analysis at UH Mānoa using a 10% buffered formalin. Shells will also be saved for analysis of growth rates. See the PMNM permit (PMNM 2021-009) attached for project background and procedure/methods.

The applicant will consume intertidal resources, collect limu for consumption, and to subsist and sustenance fish by trolling using handlines and/or other hook and trolling equipment to further support the cultural practice and relationship between participants and Papahānaumokuākea. Vessel operations were previously covered under OHA's authority per the Co-managers permit; for this expedition, vessel operations will be covered under a FWS chartered cruise aboard the vessel Searcher permitted under the Co-Manager permit (PMNM-2022-001). These studies will add onto the eleven (11) years of data on intertidal species, re-establishing Native Hawaiian ancestral consciousness and awareness about the health and condition of marine resources.

The central purpose of the expedition 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 cultural expedition 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 the environment (genealogy).

The applicant's proposed activities directly support the Marine Conservation Science (MCS) Monument Management Plan Action 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.

Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Monument permits have been

previously issued to the co-researcher working on the project (most recently 2018) 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. With this in mind, significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish, but rather enhance monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities. The Department has made an exemption determination for this permit in the original BLNR submittal (April 23rd, 2021) in accordance chapter 343, HRS, and Chapter 11-200.1, HAR.

All else in the currently issued PMNM permit shall remain the same (See Attachment 1). This amendment (hereafter referred to as Amendment No. 1) is also subject to the same GENERAL CONDITIONS and SPECIAL CONDITIONS as the PMNM Permit (PMNM 2021-009). Amendment No. 1 shall be made a part of the PMNM permit indicated above and will be carried by the permittee(s) while engaged in activities authorized under the permit.

STAFF OPINION:

DAR staff is of the opinion that the amendment request should be approved.

MMB OPINION:


The MMB is of the opinion that the amendment request should be approved.

(continued on next page)

RECOMMENDATION:

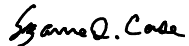
That the Board authorize and approve this request for issuance of a Papahānaumokuākea Marine National Monument research permit amendment to Pelika Andrade, Nā Maka Onaona (Formerly Nā Maka o Papahānaumokuākea) and the University of Hawai‘i at Mānoa, permit PMNM-2021-009-A1.

Respectfully submitted,



Brian J. Neilson, Administrator
Division of Aquatic Resources

APPROVED FOR SUBMITTAL



Suzanne D. Case, Chairperson
Board of Land and Natural Resources

Attachments:

- 1) PMNM Permit (PMNM 2021-009)



PAPAHĀNAUMOKUĀKEA
Marine National Monument

Ms. Pelikaokamanaio Andrade
President, Nā Maka Onaona
PO Box 947
Kīlauea, HI 96754

Welina me ke aloha e Ms. Andrade:

The National Oceanic and Atmospheric Administration (NOAA), the U.S. Fish and Wildlife Service (FWS), the State of Hawai‘i through the Department of Land and Natural Resources (DLNR), and the Office of Hawaiian Affairs (OHA) (collectively, the Co-Trustees) have approved the issuance of permit number PMNM-2021-009 to conduct activities within Papahānaumokuākea Marine National Monument (“PMNM or Monument”) for Native Hawaiian Practices. Activities are to be conducted in accordance with the permit application and all supporting materials submitted to the Monument, and the terms and conditions of permit number PMNM-2021-009 attached.

This permit is not valid until your signature page is received at this office. The original copy should be signed and returned to the Monument office at the following address within 30 days of issuance:

NOAA/Daniel K. Inouye Regional Center
NOS/ONMS/PMNM/ATTN: Permit Coordinator
1845 Wasp Blvd., Building 176
Honolulu, HI 96818

You are required to carry a signed copy of the permit with you while conducting the permitted activities. Your permit contains specific special conditions and reporting requirements. Please review them closely and fully comply with them while undertaking permitted activities.

The Point of Contact for questions concerning this permit and associated reporting requirements is Office of Hawaiian Affairs ‘Aho Pueo Kūkulu Papahānaumokuākea, Brad Ka‘aleleo Wong at 808-594-0244 or kaaleleow@oha.org. Mahalo nui for your continued cooperation.

Suzanne Case
Chairperson
Board of Land and Natural Resources
Department of Land and Natural Resources
State of Hawai'i

Date



Jared Underwood
Superintendent
Papahānaumokuākea Marine National Monument
Department of the Interior
U.S. Fish and Wildlife Service

Date



Athline Clark
Superintendent
Papahānaumokuākea Marine National Monument
Department of Commerce
National Oceanic and Atmospheric Administration

Date




PAPAHĀNAUMOKUĀKEA
Marine National Monument

MEMORANDUM THE FILE: PMNM-2021-009
FOR:

FROM:

Suzanne Case
Chairperson
Board of Land and Natural Resources
Department of Land and Natural Resources
State of Hawai‘i



Jared Underwood
Superintendent
Papahānaumokuākea Marine National Monument
Department of the Interior
U.S. Fish and Wildlife Service



Athline Clark
Superintendent
Papahānaumokuākea Marine National Monument
Department of Commerce
National Oceanic and Atmospheric Administration



SUBJECT: Findings Supporting Issuance of
Native Hawaiian Practices
Permit Number PMNM-2021-009

The Papahānaumokuākea Marine National Monument (“Monument or PMNM”) Co-Trustees are proposing to issue a Native Hawaiian Practices permit to Pelikaokamana‘oio Andrade (applicant) for intertidal monitoring research utilizing traditional ecological knowledge. The following document addresses the Findings in Proclamation 8031 (“Proclamation”) and Regulations 50 CFR Part 404.11(d) and (e). In accordance with 50 CFR Part 404.11(d) and (e) a permit may not be issued under this section unless the Secretaries find:

- 1. The activity can be conducted with adequate safeguards for the resources and ecological integrity of the Monument.*

The activity can be conducted with adequate safeguards for the resources and ecological integrity of the Monument. All proposed activities by the applicant (with the exception of Productivity and Carrying Capacity Surveys) have been previously permitted and have demonstrated no adverse impacts on Monument cultural, natural, and historic resources. The applicant has

additionally participated in these past permitted activities. All personnel named in this permit are experienced with conducting surveys in the intertidal zone and are aware of the risks associated with working in nearshore areas with high wave action. All environmental compliance activities (e.g. NEPA, ESA Section 7 consultation) have been completed. 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.

Productivity and Carrying Capacity (PACC) surveys will 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)). These surveys are a modified methodology to previously permitted activities. 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. 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.

Huli‘ia, environmental observational research is non-invasive on the resources within PMNM.

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 PMNM with proper intent and that all resources are treated with respect and care. Native Hawaiian protocols, including oli (chants) and mele (songs), 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), the islands and resources (older siblings) and prepares participants for that interaction. These protocols and ceremonies are necessary to tap into an elevated state of awareness which will support cultural research and participants’ openness to “see” properly.

The consumption of marine resources 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 (*Cellana spp.*) the applicant 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 applicant 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 and Magruder 1977), thus there is

confidence that there will be larval recruitment the following year. When harvesting limu (*Asparagopsis taxiformis*, *Ulva fasciata*, etc), the practice of cutting the branches off and leaving the holdfast will be utilized to ensure continual growth after it is harvested.

2. *The activity will be conducted in a manner compatible with the purposes of the Proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument resources, qualities, and ecological integrity, any indirect, secondary or cumulative effects of the activity, and the duration of such effects.*

The activity will be conducted in a manner compatible with the purposes of the Proclamation. All proposed activities by the applicant (with the exception of Productivity and Carrying Capacity Surveys) have been previously permitted and have demonstrated no impact on Monument cultural, natural, and historic resources. The applicant has additionally participated in these past permitted activities. All environmental compliance activities (e.g. NEPA, ESA Section 7 consultation) have been completed. All personnel named in this permit are experienced with conducting surveys in the intertidal zone and are aware of the risks associated with working in nearshore areas with high wave action. No negative effects have resulted from previous years' surveys within the Monument.

In addition, this activity is consistent with the intent of the Mai Ka Pō Mai Guidance Document:

- Kūkulu Ho‘omana – 1-1, 1-2, 1-3, 1-4
- Kūkulu Hō‘ike – 2-1, 2-2, 2-3
- Ho‘oku‘i – 3
- Kūkulu Ho‘oulu – 3-1, 3-3, 3-4
- Kūkulu Ho‘olaha – 4-2

and 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

Previous permitted intertidal monitoring efforts suggest the take activity is beneficial for intertidal resources. In 2012, the intertidal data collected by Dr. Chris Bird and other intertidal monitoring participants 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). Similarly, researchers and participants have noted differences in population distributions, 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 Lalo. No ‘opihi samples were collected at La Perouse Pinnacles due to the low population size. The applicant will conduct responsible and ethical practices by refraining from collecting ‘opihi, hā‘uke‘uke, or other marine species if the population numbers appear too low.

3. There is no practicable alternative to conducting the activity within 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. Since the Northwestern Hawaiian Islands are remotely managed, this area serves as an optimal measure to determine expected abundances-as these cultural researchers are engaged in community-based near shore marine management in the main Hawaiian Islands. A field study was attempted on Kaho'olawe, however, due to fishing pressures and run-off, the study site was determined to be sub-optimal.

The consumption of intertidal invertebrates, fish and limu can be conducted outside of PMNM. However, there is no alternative to consuming an important cultural resource at a place like PMNM 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 (Native Hawaiians) can connect to the place they live, because they have a deep and intimate connection to their land, their oceans and to their resources. The intent of these activities is to mālama or care for PMNM by re-connecting to place, being present, and observing the hō‘ailona (signs) around.

4. The end value of the activity outweighs its adverse impacts on Monument 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. Considering these factors, the end value of the activity outweighs any adverse impacts on Monument resources.

5. The duration of the activity is no longer than necessary to achieve its stated purpose.

Access into the monument would occur on a vessel separately permitted under the co-managers permit (PMNM-2021-001) or other. Each trip would last up to 15 days. Weather permitting, the applicant proposes to visit 4 islets at Lalo (Gin, East, Tern, La Perouse), Mokumanamana, and/or Nihoa during any 15-day access period.

The initial trip will be conducted aboard SSV Makani ‘Olu, which is largely powered by wind. The 15 days includes transiting from O‘ahu to Lalo and back, with 5 days allotted for research at Lalo, Mokumanamana, and Nihoa. The 5 days of fieldwork for this research involves the

minimum time required to obtain the desired data necessary. Subsequent trips may use a different vessel but follow the same general timeframe as listed above for duration in the monument.

Considering these factors, the duration of the activity is no longer than necessary to achieve its stated purpose.

6. *The applicant is qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.*

The applicant, Pelika Andrade, is the President and co-founder of Nā Maka Onaona supporting community management across Hawai‘i. Ms. Andrade is a co-developer of Huli‘ia, Nā Maka Onaona’s seasonal tracking tool/program which has been used during previous intertidal cruises, and is currently used in Kure Atoll field crew activities, NMFS monk seal field camps, as well as Midway FWS activities. Andrade has also spent the past 12 years working within PMNM conducting research, supporting management activities, supporting outreach and education initiatives and serving on both the PMNM Reserve Advisory Council and the Native Hawaiian Cultural Working Group. She is one of the co-founders of the formal intertidal cruise in 2010 supporting the collaboration from 2011 until it’s final year in 2017. Andrade is also a Hawai‘i Sea Grant Extension Agent at the University of Hawai‘i, Mānoa 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 twelve 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 Kū‘ula: Integrative Marine Resource Management course established in partnership with PMNM NOAA and UH Hilo Marine Science and Uluākea Program.

Furthermore, the cultural researchers that will perform these proposed research activities are all trained in traditional near-shore marine management, fishery management, traditional weather observations and working in dangerous near-shore, high wave action areas.

Considering these factors, the applicant and its participants are adequately qualified to complete these activities.

7. *The applicant has adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.*

The proposed field activities will be funded by a grant for Dr. Haunani Kane’s research (PMNM-2021-008) and the vessel by the Office of Hawaiian Affairs. The field and research activities are supported through the collaboration of the PACC project and Dr. Kane’s field crew. The data workup for all the information collected through this project will be supported by the Hawai‘i Institute of Marine Biology School, University of Hawai‘i at Mānoa, and Nā Maka Onaona.

OHA is a Co-Trustee of the Monument and has been represented on the MMB since its establishment in 2006. They have previously funded multiple expeditions into the Monument and have provided financial and logistical support for personnel.

Considering these factors the applicant has adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

8. *The methods and procedures proposed by the applicant are appropriate to achieve the proposed activity's goals in relation to their impacts to monument resources, qualities, and ecological integrity.*

The methods and procedures employed are widely accepted methods for acquiring data in the marine environment by Native Hawaiian marine practitioners and research scientists. The proposed methodology would not require specialized equipment and would also take into full account the fragility of the Monument's resources. The applicant will conduct responsible and ethical practices by refraining from collecting 'opihi, hā'uke'uke, or other marine species if the population numbers appear too low.

9. *The applicant's vessel has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of §404.5.*

All access into the monument will be aboard a vessel outfitted with a working NOAA OLE type-approved Vessel Monitoring System (VMS) as required by 50 CFR Part 404.5 and stated in the Proclamation prior to entering the Monument.

For the initial access, the applicant and other authorized personnel would access the Monument via OHA's authority under the co-managers permit on SSV Makani 'Olu which is outfitted with a working NOAA OLE type-approved VMS.

10. *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 permitted intertidal monitoring expeditions (2011-2019), a presentation would be provided to the CWG both before and after the trip. Other presentations will be planned for other venues.

ADDITIONAL FINDINGS FOR NATIVE HAWAIIAN PRACTICES

11. *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.

12. The purpose and intent of the activity is appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono), and demonstrates 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. The ability to increase or maintain productivity of a particular kai (fishery) is integral to maintaining traditional Native Hawaiian knowledge and marine management systems; and is therefore consistent with pono marine stewardship tenets.

13. 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. Outreach and education opportunities will be offered and presented to the Native Hawaiian communities and students.

In the Main Hawaiian Islands, Nā Maka Onaona has built strong partnerships with UH Manoa, NOAA PMNM, OHA, USFWS, Hawai'i Institute of Marine Biology, DAR, Hui Maka'ainana o Makana, Kalaemano Interpretive Center, and various other community partners across Hawai'i. The research team 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, the 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.

Considering these factors, the activity benefits the resources of PMNM and the Native Hawaiian community.

14. 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 researchers/practitioners being selected for the expedition possess intricate knowledge of traditional Native Hawaiian marine management practices in the near shore fishery area within their own ahupua‘a (land division from mountain to sea). 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'omalulu (regulated activities) and kapu (prohibited activities) which are fundamental in traditional Native Hawaiian marine management.

Considering these factors, this activity supports and advances the perpetuation of traditional knowledge and ancestral connections.

15. All Monument resources harvested in the Monument will be consumed in the Monument. If not, explain why not.

All resources harvested for cultural purposes will be consumed in the Monument. The eggs of the hā‘uke‘uke will be frozen in seawater in a liquid nitrogen dry shipper for future biochemical analyses.



PAPAHĀNAUMOKUĀKEA
Marine National Monument

NATIVE HAWAIIAN PRACTICES PERMIT

Permittee Name

Pelikaokamanaio Andrade
President, Nā Maka Onaona
PO Box 947
Kīlauea, HI 96754

Permit Number: PMNM-2021-009

Effective Date: July 31, 2021

Expiration Date: May 31, 2022

Project Title: Productivity and Carrying Capacity (PACC) Surveys and Traditional Ecological Knowledge to Examine Nearshore Ecosystems

This permit is issued for activities in accordance with Proclamation 8031 (“Proclamation”) establishing Papahānaumokuākea Marine National Monument (“Monument or PMNM”) under the Antiquities Act of 1906, 16 USC §§ 431-433 (“Antiquities Act”) and implementing regulations (50 CFR Part 404). All activities must be conducted in accordance with the Proclamation and the regulations (attached). No activity prohibited by the Proclamation or 50 CFR Part 404 is allowed except as specified below. Chapter 13-60.5, Hawai‘i Administrative Rules remains in effect for activities in State waters.

The National Oceanic and Atmospheric Administration (NOAA), the U.S. Fish and Wildlife Service (FWS), the State of Hawai‘i through the Department of Land and Natural Resources (DLNR), and the Office of Hawaiian Affairs (OHA) (collectively the Co-Trustees) have reviewed and endorsed the activities listed in this permit. Based on applicable authorities, this permit hereby authorizes the permittee listed above to conduct Native Hawaiian Practice activities within the Monument subject to the terms and conditions enclosed herein. All activities are to be conducted in accordance with this permit. The permit application is incorporated into this permit and made a part hereof; provided, however, that if there are any conflicts between the permit application and the terms and conditions of this permit, the terms and conditions of this permit shall be controlling.

PERMITTED ACTIVITY DESCRIPTION:

The following activities are authorized by this permit:

1. The permittee, Pelikaokamanaio Andrade, and the following (17) personnel are authorized to enter PMNM and conduct activities under this permit: Kim Kanoe‘ulalani Morishige, Lauren Kaponu, Anthony Mau, Brad Ka‘aleleo Wong, Shacles Anikū Chong, Tressie Kaponu, Kristian McDonald, Kammie Dominique

Tavares, Haunani Kane; and eight (8) additional individuals TBD, inclusive of ship crew. Multiple entrances into PMNM are authorized under this permit to achieve research goals. The permittee shall provide an updated *Compliance Information Sheet* prior to each entry into the Monument.

2. Swimming and snorkeling within Special Preservation Areas, specified in the Permitted Activity Locations, as necessary to support Native Hawaiian Practice activities covered under this permit.
3. Conducting surveys of nearshore areas using PACC survey methodologies inclusive of recording substrate, limu type/density, crustose/turf/macro algae proportions, other species proportions and ratios, ‘opihi and hā‘uke‘uke densities, potential freshwater input, natural predators, ‘opihi shell measurements, and gonad analysis. Surveys shall be conducted below the high tide mark within Special Preservation Areas listed in the Permitted Activity Locations.
4. Conducting Huli‘ia observational surveys of the environment.
5. Use of digital cameras to record observations for PACC and Huli‘ia surveys.
6. Removing, moving, taking, harvesting, possessing, injuring, disturbing; or attempting to remove, move, take, harvest, possess, injure, or disturb ‘opihi and hā‘uke‘uke for the purpose of measuring and conducting growth rate studies on shells and for the dissection of gonads.
7. Transporting of ‘opihi shell and gonad samples for further growth rate analysis.
8. Possessing fishing gear to conduct sustenance and subsistence fishing within Monument waters.
9. Attracting a Monument living resource in support of sustenance and subsistence fishing activities (Activities #10 and 11).
10. Subsistence fishing via trolling an artificial lure with a pole or handline and fishing via 3-prong spear (within State of Hawai‘i waters, defined as three (3) nautical miles from emergent land listed in the Permitted Activity Locations) for subsistence, and traditional and customary practices by Native Hawaiians.
11. Sustenance fishing via trolling an artificial lure with a pole or handline to provide sustenance in support of activities otherwise allowed under this permit. Sustenance fishing is defined as fishing for bottomfish or pelagic species in which all catch is consumed within the Monument, and that is incidental to a permitted activity.
12. Conducting Native Hawaiian cultural protocols to include ho‘okupu (cultural offerings) consisting of oli (chants), mele (songs), ha‘i ‘ōlelo (speeches), pule (prayers) and offering ho‘okupu (gifts) of pa‘akai (salt), powdered or dried ‘awa

(*Piper methysticum*), and ua (rain water). Any ho‘okupu will be consistent with Monument Best Management Practices.

13. Removing, moving, taking, harvesting, possessing, injuring, disturbing; or attempting to remove, move, take, harvest, possess, injure, or disturb common invertebrate and algae species for the purpose of consuming within the Monument according to the following table (sample numbers are per island/location), where each sample is defined as the whole organism unless otherwise specified and represents the maximum numbers to be collected combined across all trips:

<u>Inoa/Name</u>	<u>Scientific name</u>	<u>Sample No.</u>	<u>Size</u>
‘A‘ama	<i>Grapsus tenuicrustatus</i>	24	3in. or larger
Makaloa	<i>Drupa ricina</i>	24	1/2in. or larger
Pipipi	<i>Nerita picea</i>	24	1/2in. or larger
Pūpū ‘Awa	<i>Thais aperta</i>	24	1/2in. or larger
<u>Inoa/Name</u>	<u>Scientific name</u>	<u>Sample No.</u>	<u>Size</u>
‘Opihi Makaiauli	<i>Cellana exarata</i>	40	1 ¼ in. or larger
‘Opihi ‘Ālinalina	<i>Cellana sandwicensis</i>	40	1 ¼ in. or larger
Hā‘uke‘uke	<i>Colobocentrotus atratus</i>	30	2 in. or larger
He‘e Maui/He‘e Pali	<i>Octopus cyanea/oliveri</i>	2	1lb. or heavier
Leho ahi	<i>Cypraea mauritiana</i>	12	2 in. or larger
Pūpū- Thais	<i>Thais intermedia</i>	24	1 in. or larger
Limu kohu Limu līpe‘epe‘e	<i>Asparagopsis taxiformis</i>		~100g
Pālahalaha	<i>Ulva fasciata</i>		~100g
Misc. Algae	<i>Algae</i>		~100g

Note: Limu will be collected up to one small “snack size” Ziploc full, per island, about 100g. Cultural harvesting protocols for all take will be adhered to by only taking what is needed without compromising the ecological integrity of the resources.

14. The MMB may monitor activities under the permit. Any member of the MMB or their designee may, for a period not to exceed 48 hours, verbally require temporary modification or cessation of activities identified in the permit if, in the opinion of the MMB member or designee, such action is necessary to limit effects on Monument

resources beyond the intended scope of the permit, to protect governmental equipment, or to ensure the safety of personnel. Such action will be followed as soon as possible by MMB emergency consideration of the temporary permit modification or temporary permit cessation. If the MMB concurs with the temporary action taken by the MMB member or designee, the Co-Trustees may amend the permit with the necessary changes or withdraw it. A decision by the Co-Trustees to amend the permit or to allow the activity to continue unchanged will include the necessary findings that the activity and its effects satisfy Monument permit issuance criteria and do not risk the safety of governmental employees or damage to governmental equipment.

No further disturbance of the cultural or natural resources of the Monument is allowed.

PERMITTED ACTIVITY LOCATION:

Other than entrance into the Monument, the permitted activities listed above are allowed within marine and nearshore areas within following Special Preservation Areas:

1. Nihoa Island
2. Mokumanamana Island
3. Lalo (French Frigate Shoals Atoll)

GENERAL TERMS AND CONDITIONS:

In accordance with the Proclamation and applicable regulations, the permitted activities listed above are subject to the following general terms and conditions:

1. The permittee must sign and date this permit on the appropriate line below. Once signed and dated, the permittee must provide a signed original copy to the Monument official identified below. The permit becomes valid on the date the last signature is obtained and shall remain valid until the permit expiration date.

NOAA/Inouye Regional Center
NOS/ONMS/Papahānaumokuākea Marine National Monument
1845 Wasp Blvd, Building 176
Honolulu, HI 96818

2. This permit is neither transferable nor assignable and must be carried by the permittee while engaging in any activity authorized by this permit. All other persons entering the Monument under the authority of this permit must provide the name of the permittee or the permit number to any authorized enforcement or management personnel upon request.
3. This permit may only be modified by written amendment approved by the Co-Trustee signatories listed at the end of this permit. Modifications to this permit must be requested in the same manner as the original request was made. Any modifications requested by

the permittee, such as adding or changing personnel to be covered by the permit or to change the activities that are allowed, must be made in writing.

4. This permit is subject to suspension, modification, non-renewal, or revocation for violation of the Proclamation, implementing regulations, or any term or condition of the permit. Any verbal notification of a violation from an authorized Monument representative may require immediate cessation of activities within the Monument. The issuance of a permit shall not constitute a vested or property right to receive additional or future permits. This permit may, in the sole discretion of the Co-Trustee signatories listed at the end of this permit, be renewed or reissued. However, there is no right to a renewal or reissuance. Failure to fulfill permit requirements may affect consideration of future permit applications.
5. Permit terms and conditions shall be treated as severable from all other terms and conditions contained in this or any other ancillary permit. In the event that any provision of this permit is found or declared to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining terms or conditions of this permit.
6. This permit does not relieve the permittee of responsibility to comply with all federal, state and local laws and regulations. For a list of federal, state, and local laws and regulations, refer to attached Papahānaumokuākea Marine National Monument Laws and Regulations document. Activities under this permit may be conducted only after any other permits or authorizations necessary to conduct the activities have been obtained.
7. The permittee may be held liable for the actions of all persons entering the Monument under the authority of this permit.
8. All persons entering the Monument under the authority of this permit are considered under the supervision of the permittee and may be liable in addition to the permittee for any violation of this permit, the Proclamation and implementing regulations in conjunction with this permit. The permittee must ensure that all such persons have been fully informed of the permit terms and conditions prior to entry into the Monument. Each such person must provide written acknowledgment to the permittee, prior to entry into the Monument, that he/she has received a copy of the permit, agrees to abide by all applicable terms and conditions, and may be liable for violations of the permit. The permittee shall maintain all signed acknowledgments and submit them with the summary report described in General Condition #22.b. An acknowledgement form is attached.
9. Notification of entry into the Monument must be provided at least 72 hours, but no longer than one month, prior to the entry date. Any updates to the list of personnel must also be provided at least 72 hours before entering the Monument. Notification of departure from the Monument must be provided within 12 hours of leaving the Monument. Notification may be made via e-mail or telephone by contacting: E-mail: nwhi.notifications@noaa.gov; Telephone: 1-866-478-6944; or 1-808-395-6944. No other methods of notification will be considered valid.

10. The permittee and any person entering the Monument under the authority of this permit shall, before entering the Monument, attend a cultural briefing or view designated cultural informational materials on Papahānaumokuākea regarding the region's cultural significance and Native Hawaiians' spiritual and genealogical connection to the natural and cultural resources. Persons entering the Monument at Midway Atoll may satisfy this requirement upon arrival.
11. All vessels (including tenders and dive boats), engines and anchor lines shall be free of introduced species prior to entry into the Monument. To ensure this, all vessels, engines and anchor lines shall be inspected for potential introduced species prior to departing the last port before entering the Monument. No later than 24 hours prior to entry, the permittee shall provide the Monument Permit Coordinator with a report prepared by the individual conducting the inspection that: a) sets forth when and where the inspection occurred; b) identifies any introduced species observed, including where found; c) summarizes efforts to remove any species observed; and d) certifies the vessel as free of all introduced species. The Monument Permit Coordinator shall review the report and, based on the review, may delay the entry into the Monument until all concerns identified by the Monument Permit Coordinator have been addressed.
12. All hazardous materials, biohazards and sharps, must be pre-approved by the Co-Trustees. For purposes of this permit, "hazardous material" has the same meaning as the definition found at 49 CFR §105.5 (U.S. Department of Transportation). All hazardous materials, biohazards and sharps must be stored, used, and disposed of according to applicable laws and Monument-approved protocols. The permittee or a designated individual entering the Monument under the authority of this permit must be properly trained in the use and disposal of all such materials proposed. Proof of appropriate training may be required by the Co-Trustees. No such material may be left in the Monument after the departure of the permittee unless it has been previously approved by Monument staff. Immediately after the project is complete the permittee must remove all such materials from the Monument. The permittee will be responsible for all costs associated with use, storage, transport, training, disposal, or HazMat response for these materials.
13. All equipment or supplies brought into the Monument, or structures of any kind built in the Monument by the permittee are the responsibility of the permittee. All materials that are brought to the Monument by the permittee must be removed by the permittee except as otherwise permitted. Any permanent structures, equipment, or supplies that require maintenance, are determined to be unserviceable, or are a safety hazard, must be immediately repaired or removed from the Monument by the permittee. No structures, equipment, or supplies may be left in the Monument following the completion of the project except as listed in the permit.
14. If Monument staff is present at the field site, the permittee must meet with them before beginning permitted activities. Even with a valid permit, authorized Monument staff may prohibit entry into any location(s) within the Monument as they may deem appropriate to

conserve or manage resources, particularly in areas where cumulative impacts of permitted activities are concentrated.

15. In order to facilitate monitoring and compliance, any person entering the Monument under the authority of this permit, including assistants and ship's crew shall, upon request by authorized Monument enforcement personnel, promptly: a) allow access to and inspection of any vessel or facility used to carry out permit activities; b) produce for inspection any sample, record, or document related to permit activities, including data, logs, photos, and other documentation obtained under, or required by, this permit; and c) allow inspection on board the vessel or at the permittee's premises of all organisms, parts of organisms, and other samples collected under this permit.
16. It is prohibited to possess or consume alcohol in the Hawaiian Islands National Wildlife Refuge in accordance with the refuge policy. Any violations will result in immediate removal of the offender from the Monument at the individual's own cost. Offenders may not be readmitted to the Monument.
17. All persons entering the Monument under the authority of this permit are responsible for the cost of removing themselves from the Monument at the conclusion of the term of the permit or upon revocation or suspension of the permit. All such persons are also responsible for the cost of removing themselves from the Monument in the event of a necessary medical evacuation, emergency evacuation, including weather, or for the cost of any necessary search and rescue operation.
18. Except as expressly required by applicable law, the Co-Trustees are not liable for any damages to equipment or injuries to the permittee and persons entering the Monument under the authority of this permit. The permittee and any person entering the Monument under the authority of this permit shall release, indemnify, and hold harmless NOAA, the Department of Commerce, the USFWS, the Department of the Interior, the United States Government, the State of Hawai'i, OHA, and their respective employees and agents acting within the scope of their duties from and against any claims, demands, actions, liens, rights, subrogated or contribution interests, debts, liabilities, judgments, costs, and attorney's fees, arising out of, claimed on account of, or in any manner predicated upon the issuance of this permit or the entry into or habitation upon the Monument or as the result of any action of the permittee or persons participating in the activity authorized by this permit. In the event that a government employee, acting in his official capacity, is the permittee, or is entering the Monument under the authority of this permit, then he shall be subject to all applicable federal and State laws that pertain to claims by or against him predicated upon the issuance of this permit or entry into or habitation upon the Monument.
19. Monument managers or their designees may verbally require the permittee to modify or cease activities not identified in this permit if, in the opinion of the managers or designees, such action is necessary to limit disturbance to or protect Monument resources, to protect government equipment, or to ensure the safety of personnel. After providing such verbal instructions, the managers or designees will provide the permittee

with a written modification, suspension or revocation to this permit at the earliest practicable opportunity. The failure to follow verbal instructions or modified permit terms, or to cease activities upon suspension or revocation of this permit, may constitute a violation of this permit, the Proclamation, the regulations, or other applicable law.

20. Disturbance of any cultural or historic property, including but not limited to Native Hawaiian cultural sites, burials, archaeological deposits, maritime heritage sites, and WWII structures and features, such as stone walls and mounds, stone uprights, bunkers, batteries, camp sites, hospitals, housing areas, and radio towers; or the disturbance or collection of any historic or cultural materials and artifacts, including but not limited to bottles, dishes, cartridges, hospital materials, carvings, human remains, or Native Hawaiian bone or stone implements, found within the Monument, including the sale or trade in such items, is prohibited.
21. All Monument resources within the jurisdiction of the State of Hawai‘i are held in trust under the Hawai‘i State Constitution, Article XI, Sec. 1. The State of Hawai‘i and the Government of the United States reserve ownership or control, as the case may be, of Monument resources, both living and nonliving, that may be taken or derived from those found in the Monument.
22. The permittee must satisfy the following reporting requirements:
 - a. Within thirty (30) days after the expiration date of this permit, the permittee must submit a summary report of activities conducted under this permit. The report shall be submitted using the Monument permit report template, if applicable.
 - b. For permitted vessels, the permittee having authority over the vessel must maintain and submit a cruise log within thirty (30) days after the expiration date of this permit. The log shall include but is not limited to: description of cruise activities, geographic locations of those activities, anchoring locations, and small boat dive locations. The permittee shall also maintain a daily vessel discharge log, which must be submitted with the cruise log.
 - c. Annual Report. The comprehensive annual report is a summary of all activities undertaken, including but not limited to: dates of all arrivals and departures from islands and atolls within the Monument, names of all persons involved in permitted activities, details of all specimens collected, handled, etc., any other pertinent information, GPS locations of all samples collected, transects, etc., results of work to date, copy of all data collected, and a proposed schedule of publication or production of final work. The report shall include a concise summary or abstract for use in Monument reports. A minimum of one electronic copy (Microsoft Word preferred, but not required), must be submitted to the Co-Trustees. The annual report is due by December 31 for each calendar year the permit was in effect. Subsequent annual reports are requested each year until all data collected under research permits are fully analyzed or before a new permit is issued, whichever comes first.

- d. For activities on State lands or within State waters, the permittee must submit a monthly report on the specified form.
 - e. The permittee may debrief the Co-Trustees following the completion of all activities in the Monument covered under this permit. The permittee may schedule the debriefing upon submitting the annual report.
 - f. The permittee must submit two copies of any article, publication, or other product created as a result of the information gained or work completed under this permit, including materials generated at any time in the future following expiration of this permit.
 - g. Any publications and/or reports resulting from activities conducted under the authority of this permit must include the notation that the activity was conducted under permit number PMNM-2021-009. This requirement does not apply to publications or reports produced by the news media.
 - h. All required submissions (including plans, logs, reports, and publications) shall be provided to the Monument official at the address indicated in General Condition #1.
23. All data acquired or created in conjunction with this permit will be submitted with the summary report, and annual report. Photographic and video material is considered data. The permittee retains ownership of any data, (including but not limited to any photographic or video material), derivative analyses, or other work product, or other copyrightable works, but the Federal Government and the State of Hawai'i retain a lifetime, non-exclusive, worldwide, royalty-free license to use the same for government purposes, including copying and dissemination, and making derivative works. The permittee will receive acknowledgment as to its ownership of the data in all future use. This requirement does not apply to data acquired or created by the news media.
 24. Because photographic or video material that is created for personal use (i.e., not specifically acquired or created in conjunction with this permit) could unintentionally collect data that is also valuable for management purposes, the Co-Trustees reserve the right to request copies of any such material and the permittee agrees to provide a copy of such material within a reasonable time. The Co-Trustees may use such material for management purposes.
 25. Any question of interpretation of any term or condition of this permit will be resolved by the Co-Trustees.

SPECIAL TERMS AND CONDITIONS:

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

2. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
3. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge.
4. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional, and customary practices by Native Hawaiians.
5. If there is any Hawaiian monk seal or any other protected species in the area when performing the permitted activity, the activity shall cease until the animal(s) depart the area.
6. The permittee shall provide, to the best extent possible, a summary of their Monument access including, but not limited to, any initial findings to the DLNR for use at educational institutions and outreach events.
7. The permittee will implement a collection/sampling design that 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 (if applicable/if collecting samples).
8. To avoid physical damage to corals during transit to any of the listed locations, a spotter should be placed in the bow of the dingy to watch for exposed or near surface coral heads.
9. Measures should be implemented to prevent detergents and other cleaners from being washed overboard.
10. Commercial sale of individual photographs or video material is prohibited without prior Co-Trustee approval.
11. To ensure the protection of Monument resources, the permittee must conduct all activities in accordance with the following Monument Best Management Practices and guidelines, as attached:
 - a. Marine Alien Species Inspection Standards for Maritime Vessels (BMP #001)
 - b. Human Hazards to Seabirds Briefing (BMP #003)
 - c. Best Management Practices for Boat Operations and Diving Activities (BMP #004)
 - d. General Storage and Transport Protocols for Collected Samples (BMP #006)
 - e. Seabird Protocols Necessary for Conducting Trolling Activities (#008)
 - f. Best Practices for Minimizing the Impact of Artificial Light on Sea Turtles (BMP #009)
 - g. Marine Wildlife Viewing Guidelines (BMP #010)
 - h. Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011)

- i. Best Management Practices for Maritime Heritage Sites (BMP #017)
- j. Rodent Prevention and Inspection Standards for Permitted Vessels (BMP #018)

Your signature below, as permittee, indicates that you accept and agree to comply with all terms and conditions of this permit. This permit becomes valid on the date when signed by the last Monument Official. Please note that the expiration date on this permit will not be extended by a delay in your signing below.

Pelikaokamanaio Andrade
President
Nā Maka Onaona

Date

Attachments (15):

1. Papahānaumokuākea Marine National Monument Rules and Regulations
2. Map of the Papahānaumokuākea Marine National Monument
3. Permit Acknowledgment Form
4. Monument Management Board Policy on Sustenance Fishing
5. Sustenance and Subsistence Fishing Data Form
6. Marine Alien Species Inspection Standards for Maritime Vessels (BMP #001)
7. Human Hazards to Seabirds Briefing (BMP #003)
8. Best Management Practices for Boat Operations and Diving Activities (BMP #004)
9. General Storage and Transport Protocols for Collected Samples (BMP #006)
10. Seabird Protocols Necessary for Conducting Trolling Activities (#008)
11. Best Practices for Minimizing the Impact of Artificial Light on Sea Turtles (BMP #009)
12. Marine Wildlife Viewing Guidelines (BMP #010)
13. Disease and Introduced Species Prevention Protocol for Permitted Activities in the Marine Environment (BMP #011)
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15. Rodent Prevention and Inspection Standards for Permitted Vessels (BMP #018)

Suzanne Case
Chairperson
Board of Land and Natural Resources
Department of Land and Natural Resources
State of Hawai'i

Date



Jared Underwood
Superintendent
Papahānaumokuākea Marine National Monument
Department of the Interior
U.S. Fish and Wildlife Service

Date



Athline Clark
Superintendent
Papahānaumokuākea Marine National Monument
Department of Commerce
National Oceanic and Atmospheric Administration

Date

