

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

April 28, 2017

Board of Land and Natural Resources
Honolulu, Hawai'i

Request for Authorization and Approval to Issue a Papahānaumokuākea Marine National Monument Conservation and Management Permit to Dr. T. Todd Jones, NOAA Fisheries, Pacific Islands Fisheries Science Center, for Access to State Waters to Conduct Sea Turtle Management Activities

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument research permit to Dr. T. Todd Jones, NOAA, pursuant to § 187A-6, Hawai'i Revised Statutes (HRS), Chapter 13-60.5, Hawai'i Administrative Rules (HAR), and all other applicable laws and regulations.

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

- French Frigate Shoals

The activities covered under this permit would occur between May 1, 2017 and April 30, 2018. The proposed activities are a renewal of work previously permitted and conducted in the Monument.

INTENDED ACTIVITIES

Dr. T. Todd Jones (applicant) proposes to continue conservation and management activities by NOAA NMFS Pacific Island Fisheries Science Center (PIFSC) Protected Species Division (PSD) to conduct surveying and tagging of Hawaiian green turtles (*Chelonia mydas*) within French Frigate Shoals (FFS). This project would add to over 40 years of green turtle population assessment data. Proposed activities would be conducted by up to three individuals between May and October 2017.

Proposed activities would consist of field camps at Tern and East Island and opportunistic day trips to Gin, Little Gin, and Trig Islands throughout the season. Turtles would be marked with temporary paint or a light shell etching (mototool) filled in with paint to visually distinguish one individual from another while noting time and activity. Turtles will be checked for existing tags, new tags are applied when applicable, measurements and skin samples are taken, and a visual assessment of the turtles' overall health (with focus on symptom of fibropapillomatosis). During the late season, nests will be excavated to estimate hatching success. Sand temperature loggers will be placed in up to 40 nests to monitor nesting temperature to elucidate the effects of changing climatic conditions on temperature-dependent sex ratios and embryonic death. Up to 8 turtles will be deployed with

satellite transmitters to understand intra-nesting movements and habitat use and well as post-nesting migrations.

This activity directly supports the Threatened and Endangered Species (TES) Action Plan Strategy TES-3: Ensure that nesting populations of green turtles at source beaches are stable or increasing over the life of the plan. Specifically Activity TES 3-1: Collect biological information on nesting turtle populations and Activity TES-3.2: Protect and manage nesting and basking habitat. (PMNM MMP Vol. 1, p. 165, 2008).

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawai'i Division of Aquatic Resources, Hawai'i Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March 28, 2017 giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Comments received from the scientific community are summarized as follows:

QUESTIONS:

1. Is the applicant able to provide any findings of data, reports etc. for community information?

Yes. We are more than happy to share previous publications and data reports post-field season as they are generated. We have attached our most recent paper describing the nesting population within the PMNM.

A Review of the Demographic Features of Hawaiian Green Turtles (*Chelonia mydas*). 2015. *Chelonian Conservation and Biology*, 14(2):119-129

2. Can the applicant present information at a future Papahānaumokuākea Cultural Working Group Meeting?

Yes. This would be great.

COMMENTS: None.

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

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

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

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

If so, please list or explain:

- The proposed activities are in compliance with the National Environmental Policy Act. Programmatic Environmental Assessment (PEA) of the Marine Turtle Research Program at the Pacific Island Fisheries Science Center (NOAA National Marine Fisheries Service (NMFS) Pacific Island Fisheries Science Center (PIFSC), August 2012) and associated FONSI.
- Endangered Species Act Permit (no 15685) covers all survey activities and contains extensive conditions and best management practices that are strictly adhered to when conducting activities.
- The proposed activities are in compliance with the HRS chapter 343. The Final Environmental Assessment covering the subject activity was published in OEQC's The Environmental Notice on December 23, 2008 with a finding of no significant impact (FONSI).

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

If so, please summarize past permits:

- The Applicant (NOAA) was granted a permit to conduct similar activities each year under the PMNM-001 permit since the inception of the PMNM permitting process.

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

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

STAFF OPINION:

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

MONUMENT MANAGEMENT BOARD OPINION:

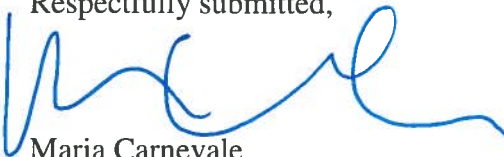
The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by PMNM staff.

RECOMMENDATION:

That the Board authorize and approve a Conservation and Management Permit to Dr. T. Todd Jones, Pacific Islands Fisheries Science Center, with the following special conditions:

1. That the permittee provide, to the best extent possible, a summary of their Monument access, including, but not limited to, any initial findings to the DLNR for use at educational institutions and outreach events.
2. 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 Monument for obtaining patent or intellectual property rights.
3. 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.
4. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.
5. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
6. 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.
7. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

Respectfully submitted,



Maria Carnevale

Papahānaumokuākea Marine National Monument



APPROVED FOR SUBMITTAL



SUZANNE CASE

Chairperson

Papahānaumokuākea Marine National Monument
CONSERVATION AND MANAGEMENT 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: T. Todd Jones Ph.D.

Affiliation: NOAA/NMFS Pacific Islands Fisheries Science Center (PIFSC), Protected Species Division, Marine Turtle Biology and Assessment Program

Permit Category: Conservation and Management

Proposed Activity Dates: 5 May – 31 October 2017

Proposed Method of Entry (Vessel/Plane): Vessel (NOAA Ship Oscar Elton Sette and NOAA Ship Hi'ialakai)

Proposed Locations: French Frigate Shoals

Estimated number of individuals (including Applicant) to be covered under this permit: 3

Estimated number of days in the Monument: up to 175 (May through October)

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The proposed activity would conduct surveying and tagging of Hawaiian green turtles (*Chelonia mydas*) within French Frigate Shoals (FFS), adding to over 40 years of green turtle population assessment data. The main rookery for the population is at East Island (23°47'12.50" N, 166°12'32.80" W) within FFS (Tiwari, 2010). The turtles' migratory pattern between FFS and the main Hawaiian Islands (MHI) for reproductive purposes has been previously documented (Balazs, 1976), and research has shown that approximately 90% of all Hawaiian green turtle breeding occurs at FFS (Balazs, 1980).

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

To accomplish this activity we would conduct systematic monitoring at East and Tern Islands. A 3 person turtle team will camp at Tern and East and rotate weekly. Two staff will camp on East and 1 on Tern with the Monk Seal Team. Opportunistic day trips to Gin, Little Gin, and Trig Islands for day of tracks, body pits, and basking turtles will take place throughout the season. Turtles would be marked with temporary paint or a light shell etching (mototool) filled in with paint to visually distinguish one individual from another (Balazs, 1992). Time and activity of the turtle would also be noted. As time

allows, turtles are checked for existing tags, new tags are applied when applicable, measurements are taken, and a visual assessment of the turtles' overall health (with focus on symptom of fibropapillomatosis) is performed. Once all information is collected for an individual, these data are not collected again so as to minimize disturbance, but all encounters with an individual are recorded and their activity level noted throughout the season (Humburg and Balazs, 2014). During the late season nests will be excavated to estimate hatching success. We will also place sand temperature loggers in up to 40 nests to monitor nesting temperature to elucidate the effects of changing climatic conditions on temperature-dependent sex ratios and embryonic death. Up to 8 turtles will be deployed with satellite transmitters to understand intra-nesting movements and habitat use and well as post-nesting migrations.

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

This activity would help the monument by providing a comprehensive population assessment of a critically important green turtle nesting site (East Island) within Papahānaumokuākea Marine National Monument (PMNM), in the Northwestern Hawaiian Islands (NWHI). Data from this program would assist monument managers by providing them with information on peak nesting times, numbers of green turtles nesting within FFS, hatching success and productivity, health assessment information, climatic impacts on nesting, and habitat use and migratory patterns. The work has been ongoing for nearly 30 years and is a flagship project for understanding nesting ecology of marine turtles.

Other information or background:

An important part of the PIFSC research mission is to provide the scientific foundation for conservation and management actions to recover depleted populations of sea turtles. Actions to protect turtles began with the 1973 Endangered Species Act, and in the 1978 revision of the Act sea turtles were listed as threatened or endangered species. Along with these events, in the mid-1970s the Marine Turtle Research Program (MTRP) was founded by scientists at the Honolulu Laboratory, precursor to the PIFSC, and the group began studies of marine turtles in Hawai'i, other U.S. territories in the central and western Pacific, and around the Pacific Rim. The primary focus was on the threatened green turtle population in the Hawaiian Islands. The program launched biological investigations of many aspects of green turtle life history and ecology including assistance with nesting surveys at FFS (in support of the U.S. Fish and Wildlife Service); surveys of turtles in their nearshore feeding and resting habitats around the main Hawaiian Islands; rescue, rehabilitation and release of turtles stranded on beaches due to injury; studies of turtle health and disease; and much more. The MTRP, with the active collaboration of research partners, has produced valuable long-term time series of data on Hawaiian green turtles and numerous contributions to the peer-reviewed scientific literature.

Much of the data is used by the Center's Marine Turtle Biology and Assessment Program (MTBAP) (which was formed in 2015 and combines the two previous turtle programs) to investigate the biology of turtles in Hawai'i and across the U.S. Pacific

Island Territories and focus on the quantitative analysis of turtle populations, their ecosystems, and the effects of climate and environmental factors on turtle population dynamics.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Jones, Timothy Todd Ph.D.

Title: Supervisory Research Biologist

Director, Protected Species Division (on detail)
Leader, Marine Turtle Biology and Assessment Program
Pacific Islands Fisheries Science Center
NOAA Fisheries

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

Marylou Staman

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

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

For students, major professor's name, telephone and email address: N/A

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

Marine Turtle Biology and Assessment Program
Protected Species Division
Pacific Islands Fisheries Science Center
NOAA Fisheries

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, Research Diver; Jane Doe, Field Technician):

Marylou Staman, Field Camp Leader; Jan Willem Staman, Field Camp Assistant; Alexandra Reininger, Field Camp Assisstant

Section B: Project Information

5a. Project location(s):

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

Ocean Based

Remaining ashore on any island or atoll (with the exception of Midway & Kure Atolls 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:

The main rookery for the population is East Island (23°47'12.50" N, 166°12'32.80" W), a 3-hectare island within French Frigate Shoals (Tirwani, 2010). French Frigate Shoals is a 35-km long, crescent-shaped atoll (Amerson, 1971) approximately 900 kilometers (km) northwest of Honolulu and 1300 km southeast of Kure Atoll. The FFS lagoon contains two exposed volcanic rocks (La Perouse Pinnacles) and nine low sandy islets, comprising 27 hectares of land and 9307 hectares of associated coral reef habitat thereby making FFS the largest atoll in the NWHI.

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 green turtle (*Chelonia mydas*) is listed as threatened under the Endangered Species Act (ESA) throughout its Pacific Range, except for the endangered population nesting on the Pacific coast of Mexico. The green turtle in Hawai'i is a genetically distinct stock. Analysis of mitochondrial DNA demonstrates the genetic discontinuity of the Hawai'i population from other green turtle populations in the Pacific (Bowen et al. 1992, Balazs and Chaloupka 2004b, Dutton et al. 2008). The PIFSC is proposing to conduct surveying and tagging of nesting marine turtles on land at East Island, French Frigate Shoals. The activities would take place during May - October 2017 and the turtle research team would travel to PMNM via NOAA ship (cruise numbers SE-17-04 and HA-17-03 for 2017).

Foraging grounds are primarily located in the waters surrounding the MHI, whereas nesting primarily occurs on sandy beaches 500 miles to the northwest of Honolulu in the NWHI, with 90% of all nesting occurring at FFS (Balazs 1976). The Hawaiian green turtle stock is demonstrating encouraging signs of population recovery after years of protective efforts as indicated by a steady long-term increase in the number of nesting females in the NWHI as well as increases in the number of immature green turtles residing in foraging pastures of the MHI (Balazs 1996, Balazs and Chaloupka 2006, Chaloupka and Balazs 2007, Chaloupka et al. 2008a). However, outside of Hawai'i, green turtle populations have seriously declined throughout most of the Pacific. The harvest of green turtles by humans for meat and eggs is the most serious threat. Other threats include habitat loss, incidental capture in commercial and recreational fishing gear, boat collisions, shark attack, and the tumor disease fibropapillomatosis (FP) (NMFS and USFWS 1998a, Chaloupka et al. 2008b).

Research suggests marine turtle populations today are less than ten percent of their historical numbers (Lotze et al. 2006). The systematic human exploitation of sea turtles for eggs, meat, and shells is considered a major factor in their decline (McClenachan et al. 2006). These threats continue today, with the added impacts from incidental commercial fisheries capture, beach development, and climate change. Climate, for example, is the least understood threat yet may be the dominant influence on sea

turtles worldwide (Van Houtan 2010, Van Houtan & Halley 2011). Further understanding of the population dynamics and environmental influences is essential to ensure the recovery of these species in the region.

The MTBAP has ESA 10(a)1A Scientific Research and Enhancement permit # 15685 to conduct all of the activities discussed in #8 below.

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

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?

The activities will be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the monument. The turtle biologists conducting these activities recognize the cultural significance of the green turtle or honu and understand its significance as 'aumakua (family or personal gods) to some Native Hawaiian families (Beckwith, 1917). As in previous years, turtle biologists will conduct all turtle surveys with the utmost care and respect for turtles and their surroundings while camping within Papahānaumokuākea and will also attend the requisite Native Hawaiian cultural briefing prior to embarking for the monument.

Additionally, the turtle biologists understand the fragile nature of the environment they are working in and will continue to follow all applicable best management practices when working within Papahānaumokuākea including but not limited to small boat operations, quarantine and human hazards to seabirds protocols. While the biologists will camp on East and Tern Islands, the camping is in low-impact tents and all equipment and supplies brought into Papahānaumokuākea will be removed at the end of the survey. The surveys themselves are also low impact and consist of biologists walking the perimeter of East Island during the night and conducting surveys of turtles

hauled out on the island. For information on additional best management practices for these surveys, please see Attachment 1.

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?

Green turtle surveys align with the management direction of the proclamation and are discussed within the monument management plan in the Threatened and Endangered Species Action Plan Strategy TES-3, *Ensure that nesting populations of green turtles at source beaches are stable or increasing over the life of the plan.*

Activity TES-3.1: Collect biological information on nesting turtle populations.

Research has been conducted on the green turtle nesting population in the NWHI since 1973 and comprises one of the longest time series of nesting abundance data for any sea turtle population around the globe. Information on abundance of nesting turtles is critical for making intelligent management decisions, understanding the status of the Hawaiian population of the green turtle, and evaluating the success of management programs. Maintenance of standardized and consistent monitoring protocols is crucial to understanding population trends, leading to effective management. In addition to maintaining current nesting monitoring at East Island, distribution of nesting activity throughout the Monument will be periodically reassessed. As the population increases, or nesting sites are degraded as a result of sea level rise, new sites may be used for nesting.

Activity TES-3.2: Protect and manage nesting and basking habitat.

Green turtle nesting habitat, including basking beaches, will be protected by use of best management practices to prevent the introduction of mammalian predators on eggs and hatchlings, reduce artificial lighting near nesting beaches, prohibit undesirable habitat alteration, and control human access. Limited entry policies will be continued, and human activities will be strictly regulated at islands and reefs used by green turtles. Rises in sea level as a result of climate change are predicted to reduce the availability of green turtle nesting habitat at French Frigate Shoals, and changes in nest-site temperature regimes may affect population ecology by modifying sex ratios of hatchling populations. Management actions may need to be undertaken to delay habitat loss as a result of rising sea level. Awareness of these impacts will improve our ability to reduce impacts and manage habitat for sea turtle populations.

Turtle survey activities proposed in this permit application align 100% with the above activities in the management plan, and with the management direction of Proclamation 8031. Additionally, an environmental assessment (attached) conducting an analysis of potential effects from these surveys was completed and a Finding of No Significant Impact (FONSI) was signed on August 9, 2012. Finally, the MTBAP has an ESA permit (# 15685 – attached) that covers the survey activities and contains extensive conditions

and best management practices that the turtle biologists must follow when conducting survey activities.

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.

Since approximately 90% of all Hawaiian green turtle breeding occurs at French Frigate Shoals (Balazs, 1980), there is no practicable alternative to conducting the survey activities within the monument.

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

Turtle surveys would have minimal to no adverse impacts to the monument's cultural, natural and historic resources qualities and ecological integrity. The survey data collected would provide researchers, monument managers and cultural practitioners with further understanding of the nesting and basking activities of one of Papahānaumokuākea's important cultural and natural resources. Additionally, it is important to note that over 40 years of green turtle survey data exists; this constitutes one of the longest data streams collected within the NWHI and provides important reproductive and migratory information to cultural practitioners, managers and researchers alike.

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

The activity would coincide with green turtle nesting season at FFS and biologists would not attempt to camp any earlier or remain any later than nesting season.

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

Dr. T. Todd Jones is the Acting PIFSC Protected Species Division Director and the lead researcher for the Marine Turtle Biology and Assessment Program. He has extensive experience leading this survey and advising his field biologists. Please see attached CV (Attachment 2).

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.

These activities are funded by PIFSC in whole. The federal government is self-insured.

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.

Please see Finding A. The methods and procedures proposed for the turtle surveys have been refined for over 40 years. The field biologists conducting this work have extensive experience working with green turtles and living within Papahānaumokuākea and understand its cultural significance and biological fragility and in addition to the conditions in their ESA permit, will adhere to all applicable Papahānaumokuākea best management practices including small boat, quarantine and human hazards to seabirds protocols. Additional best management practices specific to these proposed activities include: (1) turning lights off when conducting surveys in the event that a Hawaiian monk seal happens to be facing a biologist; (2) maintaining a low profile during daylight hours when sighting a Hawaiian monk seal, and whenever possible, passing it from downwind; (3) wearing brown or sand-colored clothing in order to blend in with the environment and minimize disturbance. For a complete list of additional best management practices for these surveys, please see Attachment 1.

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

Both NOAA Ship Hi'ialakai and NOAA Ship Oscar Elton Sette have been outfitted with the appropriate vessel monitoring system.

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.

N/A

8. Procedures/Methods:

Survey and monitoring activities

Three researchers would be deployed at FFS during the peak of the turtle nesting season between May – October 2017 for approximately 16 – 20 weeks depending on the schedule of the NOAA Ships Hi'ialakai and Oscar Elton Sette during each field season. While at FFS, researchers would count, tag, identify, measure and sample nesting female green turtles. Up to two people at a time would camp at East Island within FFS and would conduct the aforementioned field monitoring and survey activities while the third researcher would be stationed at Tern Island (approximately 14.8 miles from East Island) to perform data entry. The three researchers would alternate shifts on East and Tern Islands approximately every 7 days.

While on East Island, researchers would conduct a short walk around the perimeter of the island starting just before sunset to locate hauled out Hawaiian monk seal mom and pup pairs and map their locations in order to avoid disturbance throughout the night.

Starting at 2100, nesting surveys would be conducted on foot approximately every two hours. Depending on the number of turtles, each survey would take up to two hours to complete. In addition to surveying turtles researchers would also tag turtles with metal flipper tags and implantable micro-chip tags. Additionally researchers would collect biological samples of selected, healthy turtle including skin for DNA testing, and affix selected turtles with satellite tags. Researchers would carry a flashlight, notebook GPS unit, camera, tagging equipment and personal protective equipment including knee pads and safety glasses. All equipment would be carried in a brown colored vest worn by the researcher in order to blend into the surrounding environment. In addition to conducting turtle surveys, researchers would collect and properly dispose of marine debris that would be potentially hazardous to Hawaiian monk seals, sea turtles and other wildlife. During the day, researchers would conduct basking surveys and nest excavations.

Camping

The camp on East Island would consist of the stationary weatherport platform (USFWS) and a temporary tent and fence situated where historically low numbers of Hawaiian monk seals have been observed. Small stakes would be driven into the ground to secure the tent. A small metal fence would be erected around the camp site, approximately 7.5m², and secured using metal t-poles driven into the ground to approximately 45 centimeters. The tent and fence would be removed at the end of the field season along with all trash and waste. The tent color would be brown or sand color in order to blend in with the surrounding environment.

Vessel operations

The researchers would travel to PMNM via NOAA Ship Hi'ialakai and NOAA Ship Oscar Elton Sette and would disembark at FFS via small boat. Travel between Tern and East Island would also occur via small boat that would temporarily anchor on sandy substrate in shallow water to load/unload researchers and gear at both islands. The maximum transit speed of both NOAA ships is nine knots and the maximum transit speed of the small boats is approximately ten knots.

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:
Chelonia mydas

Scientific name:
Green turtle

& size of specimens:

Tissue samples (6 mm biopsy punch of skin) are taken from all encountered and marked turtles. Therefore, the total number of samples could range anywhere from 80 to > 800 depending on the nesting season. Historically the biggest season in terms of nesting numbers was 890 turtles. We will also collect the remains of up to 40 nests after conducting excavations 75+ days after a nest was laid. The remains will typically include unhatched whole eggs, dead hatchling turtles, and broken egg shells from emerged turtles. Humeri bones, scutes, and skin samples will be collected from any stranded/salvaged dead turtles observed.

Collection location:

East Island, French Frigate Shoals, NWHI

x Whole Organism x Partial Organism

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

The MTBAP of PIFSC is a repository for specimens as listed on ESA Recovery permits. All samples are archived at PIFSC and then consumed in analyses such as DNA or stable isotope analyses to understand population level metrics, habitat use, and migration.

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

All sampling is of tissue or of dead organisms/biological material. No live collection will take place.

• General site/location for collections:

All collections will take place within the Islands of French Frigate Shoals as stated in the methods and site location above. Opportunistic collection may take place from any of the PIFSC Protected Species camps throughout the NWHI; however, these collections will take place from dead organisms/material or if tissue sample collected from live turtle it will take place under direction of the Marine Turtle Field Lead listed above.

• Is it an open or closed system? Open Closed
N/A

• Is there an outfall? Yes No
N/A

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

• Will organisms be released?
N/A

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

All samples are transported on the NOAA Ships listed above in field camp transit.

11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:

NOAA PIFSC is the only organization conducting turtle research on FFS within the NWHI and the work is done collaboratively with the USFWS and the State of Hawaii. There is no duplicative sampling taking place and all data/reports/publications are shared with stakeholders.

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

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

14. Describe any fixed installations and instrumentation proposed to be set in the Monument:
N/A

15. Provide a time line for sample analysis, data analysis, write-up and publication of information:

Data entry and validation into the MTBAP Oracle database takes place for up to 6 months after completion of the nesting season. An annual report will be produced in January 2018. Tissue samples are archived and analyses will be conducted at PIFSC and with partners at the SWFSC (Dutton lab for DNA). Publications are continuous and as the nature of a long-term field site are often syntheses of several years or decades.

16. List all Applicant’s publications directly related to the proposed project:

Please see attachment 3.

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as “confidential” prior to posting the application.

Signature

Date

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

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

DID YOU INCLUDE THESE?

- Applicant CV/Resume/Biography
- Intended field Principal Investigator CV/Resume/Biography
- Electronic and Hard Copy of Application with Signature
- Statement of information you wish to be kept confidential
- Material Safety Data Sheets for Hazardous Materials

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant): T. Todd Jones (Supervisory Research Biologist; Permittee), Marylou Staman (Field Camp Leader), Jan Wilhelm Staman (Field Camp Assistant), Alexandra Reininger (Field Camp Assistant)

2. Specific Site Location(s): (Attach copies of specific collection locations): French Frigate Shoals land and near-shore waters

3. Other permits (list and attach documentation of all other related Federal or State permits): Endangered Species Act (ESA) Permit No. 15685-01 (issued by the National Marine Fisheries Service) and ESA Permit No. TE72088A-1 (issued by U.S. Fish and Wildlife Service) were issued to PIFSC for authorized limited take of listed sea turtle species (including green sea turtles).

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

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information):

All work is Federally funded as part of NOAA's yearly allocation.

5. Time frame:

Activity start: 5/5/2017

Activity completion: 10/31/2017

Dates actively inside the Monument:

From: TBD

To: TBD

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application:

Based on NOAA ship schedules, operations, and weather.

Personnel schedule in the Monument:

We are not swapping personnel, all staff listed under #1 will be deployed to French Frigate Shoals for the duration.

6. Indicate (with attached documentation) what insurance policies, bonding coverage, and/or financial resources are in place to pay for or reimburse the Monument trustees for the necessary search and rescue, evacuation, and/or removal of any or all persons covered by the permit from the Monument:

Federal Government is self-insured.

7. Check the appropriate box to indicate how personnel will enter the Monument:

- Vessel
 Aircraft

Provide Vessel and Aircraft information: NOAA Ship Oscar Sette

8. The certifications/inspections (below) must be completed prior to departure for vessels (and associated tenders) entering the Monument. Fill in scheduled date (attach documentation):

- Rodent free, Date:
 Tender vessel, Date:
 Ballast water, Date:
 Gear/equipment, Date:
 Hull inspection, Date:

9. Vessel information (NOTE: if you are traveling aboard a National Oceanic and Atmospheric Administration vessel, skip this question):

Vessel name:
Vessel owner:
Captain's name:

IMO#:
Vessel ID#:
Flag:
Vessel type:
Call sign:
Embarkation port:
Last port vessel will have been at prior to this embarkation:
Length:
Gross tonnage:
Total ballast water capacity volume (m3):
Total number of ballast water tanks on ship:
Total fuel capacity:
Total number of fuel tanks on ship:
Marine Sanitation Device:
Type:

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

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

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

VMS Email:
Inmarsat ID#:

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

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

10. Tender information:

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

Additional Information for Land Based Operations

11. Proposed movement of personnel, gear, materials, and, if applicable, samples:
Personnel will disembark at French Frigate Shoals and will remain on East and Tern Islands for duration.

12. Room and board requirements on island: n/a

13. Work space needs: n/a

DID YOU INCLUDE THESE?

- Map(s) or GPS point(s) of Project Location(s), if applicable
- Funding Proposal(s)
- Funding and Award Documentation, if already received
- Documentation of Insurance, if already received
- Documentation of Inspections
- Documentation of all required Federal and State Permits or applications for permits