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**APPENDIX D:**  
**FWS Compatibility Determinations**

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## **Compatibility Determination**

**Use:** Wildlife Observation and Photography

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

On June 15, 2006, President Bush signed PP 8031 making the Hawaiian Islands NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112).

### **Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

### **Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

### **National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

The 1997 amendments to the National Wildlife Refuge System Administration Act of 1966 defined wildlife observation and photography as wildlife-dependent public uses. In that Act, the U.S. Congress charged that such uses be given special consideration in planning for and management of the National Wildlife Refuge System. When determined compatible on a refuge-specific basis, these uses are priority general public uses of that national wildlife refuge. National wildlife refuges are to seek opportunities to allow these uses in an appropriate and compatible manner.

The Hawaiian Islands NWR is not currently open to general public access, thus there would be few instances of public wildlife observation and photography. This purpose of this compatibility determination (CD) is to cover all individuals who come to the Refuge through a variety of means and would like to observe and photograph wildlife for personal enjoyment but are not covered under another CD. This could include but is not limited to official guests or visiting government employees or contractors, dignitaries, sail boat crews, and teachers. Through this process we ensure the legality of this activity and protect the resources involved. On occasion, dignitaries or other special guests accompany U.S. Fish and Wildlife Service (FWS) employees performing their official duties. Additionally, other agency personnel with or without guests may be working on the Refuge. As such, these members of the general public and other agencies would be “incidentally” observing and photographing wildlife and other Refuge natural and cultural resources for noncommercial purposes.

Following are examples of this type of use. A congressional staffer may need to make a fact finding trip to one of the islands to determine the current state of and need for additional facilities. Due to the remote nature and the limited travel options, they would probably accompany a FWS employee performing his/her official duties. During this visit, they would observe and photograph wildlife. In a different instance, another agency staff member may travel to the Refuge for official government work and take pictures and view Monument resources. Periodically, the National Oceanic and Atmospheric Administration (NOAA) would transport teachers as part of the “Teacher at Sea Program” to the Refuge, where they could view and photograph wildlife. This program and the experience enables teachers to gain a firsthand experience of the national and cultural wonders of the Refuge and Monument and share it with their students back in the classroom. Most, but perhaps not all, of this particular activity would be covered under the Environmental Education and Interpretation CD.

Presently the Refuge has approximately 200 each year participating in this use, primarily researchers and crew on NOAA vessels. The FWS expects this number to triple over the next 15 years as research and management actions in the Monument increase.

These types of activities could occur on or around any of the islands within the Refuge but would be subject to all Refuge-specific conditions that restrict locations, times, number of visitors, etc. (see the Stipulations Necessary to Ensure Compatibility section). Some islands (e.g., Pearl and Hermes Atoll, Maro Reef, Lisianski Island) seldom receive a visit and others (e.g., Nihoa, Laysan Island, and French Frigate Shoals) may have several visitors per year. On all occasions, the persons would be accompanied by a Government employee or receive a detailed orientation from the employee and would be required to observe all policies and regulation regarding disturbance and observation distance. The number of annual visits and visitors would be controlled by the Refuge through the Monument’s permitting process.

The FWS has some facilities and equipment available for this use, which include limited lodging and motorboats. The FWS is responsible for the costs of upkeep and replacement of these items.

**Availability of Resources:**

The FWS anticipates a minimal number of people requesting to engage in this use and accompany FWS employees while they perform their normal governmental operational and maintenance duties. Transportation to the Refuge is very costly due to its remote location. Persons covered under this CD would be expected to pay all costs or be covered under an agency that would be responsible for the costs. In cases where no funds and/or space are available, the activity would not occur.

The Refuge has sufficient staff time and other resources to allow this use at the current levels.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$2,500
Maintenance		\$0
Monitoring		\$2,000
Special equipment, facilities or improvements		\$0
Offsetting revenues		\$0

The numbers above reflect the current estimated costs. Estimated costs were calculated using 5% of the base cost of a GS-5 refuge biological technician and a 5% cost of a GS-9 refuge manager assuming that this priority activity would use that “portion of a year” to administer.

Transportation costs to reach the Refuge are paid by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All wildlife observation and photography activities would be designed and managed in a fashion to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When visitors and researchers are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any

particular bird or group of birds would be kept to 15 minutes or less for this reason. Observations occurring at a FWS blind could continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. Monks seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Monument waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Due to the very limited nature of this activity, we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit to the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Refuge and Monument would not be permitted.

#### **Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Web sites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of national wildlife refuge conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

**SPECIFIC TERMS AND CONDITIONS:**

All projects would be monitored by Refuge staff to ensure the use remains compatible and natural, cultural, and historic resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Nihoa finches, Nihoa millerbirds, Laysan finches, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate wildlife observation and photography that is already permitted and in progress should unacceptable impacts or issues arise or be noted.

All persons arriving are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance for seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. Permittees are required to go through orientation immediately upon arrival.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck wetlands.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators' ability to avoid collisions with marine life. Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow permittee observation of approaching spinner dolphins but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for permittee observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon, as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Only four-stroke outboard motors would be used for boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

**Justification:**

When determined compatible on a refuge-specific basis, wildlife observation and photography are priority public uses of that national wildlife refuge. The Hawaiian Islands NWR is closed to entry and use by the general public. However, there would be occasions when guests, dignitaries, sailboat crews, and teachers visit the Refuge. It is only natural that in a place as exotic and teeming with wildlife as the Hawaiian Islands NWR, these people would also be enjoying incidental wildlife observation and photography. The stipulations included herein would allow such uses to occur in a compatible manner.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**References Cited:**

- Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.
- Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.
- Executive Order 1019. 3 February 1909. Establishing the Hawaiian Islands Reservation.
- Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.
- Gerrodette, T.G., and W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. Conservation Biology 4:423-430.
- Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. Conservation Biology 13(4):888-897.
- Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. Journal of Field Ornithology. 120:299-310.
- Kenyon, K.W. 1972. Man verses the Monk Seal. Journal of Mammalogy 53:687-696.
- Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.
- Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. Nature 374:415.
- Presidential Proclamation 2416, 1940. Renaming the Hawaiian islands Reservation as the Hawaiian Islands National Wildlife Refuge.
- Presidential Proclamation 8031, 15 June 2006 (71 FR 36443). Establishing the Northwestern Hawaiian Islands as a marine national monument.
- Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).
- Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

## **Compatibility Determination**

**Use:** Environmental Education and Interpretation

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

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### **Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

### **Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

### **National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

The 1997 amendments to the National Wildlife Refuge System Administration Act of 1966 defined environmental education and interpretation as wildlife-dependent public uses. In that Act, the U.S. Congress charged that such uses be given special consideration in planning for and management of the National Wildlife Refuge System. When determined compatible on a refuge-specific basis, these uses are priority general public uses of that national wildlife refuge. National wildlife refuges are to seek opportunities to allow these uses in an appropriate and compatible manner.

Both environmental education and interpretation strive to convey an understanding and appreciation of national wildlife refuge resources, the issues that affect them, and the techniques and programs pursued in their management. For this reason these two uses have been combined in one compatibility determination (CD).

Due to the remote location of the Hawaiian Islands NWR and its limited accessibility, funding, and staffing, few opportunities for onsite environmental education and interpretive programs are available. However, with co-management of the Papahānaumokuākea Marine National Monument and new technology, we may be able to offer offsite programs through satellite transmissions to schools around the world. Additionally, from time to time private videographers and photographers may wish to develop environmental education and interpretation materials. These noncommercial activities by videographers covered under this CD would be subject to the same restrictions as the CD for commercial operators (CD for Photography, Videography, and Audiography).

In the future, these activities could occur on any of the islands within the Refuge during the year, but would only be led by government personnel and/or contractors and would be subject to all Refuge-specific conditions that restrict locations, times, number of visitors, etc. (see the Stipulations Necessary to Ensure Compatibility section). Any access for the public to participate in these activities would be primarily by boat and airplane, thus greatly restricting the opportunities for environmental education and interpretation. The number of annual visits and visitors would be controlled by the Refuge through the Monument's permitting process.

Specific examples of where this CD might apply are included in the Monument Management Plan as:

- 1) Section 3.1.1, Activity MCS-3.3: Include an educational component in marine research expeditions.
- 2) Section 3.5.4, Activity OEL-1.5, Continue Teacher- and Class-at-Sea programs on an annual basis.

Two National Oceanic and Atmospheric Administration (NOAA) vessels (*Oscar Elton Sette* and the *Hi'ialakai*) currently transit the Northwestern Hawaiian Islands, generally making three voyages total each year. During each voyage, there is usually one teacher aboard participating in the program who has the opportunity to visit the Refuge. In addition, in 2005 NOAA sponsored a "boatload of educators" tour within the Refuge. The Refuge expects the number of visits by NOAA vessels with teachers to triple in the next 15 years.

Onsite interpretation of the natural, historic, and cultural resources of the Hawaiian Islands NWR also occurs in association with research expeditions. Generally each ship carries an outreach staff member who works with the researchers and crew to transmit web-based features about their activities and Refuge resources. Occasionally they may visit the field camps at Tern Island or Laysan Island for brief daytime only visits on boats provided by the NOAA ship. These interpretive activities are expected to continue in

the future. Cultural resource activities and practices by Native Hawaiians, which includes access for cultural practitioners, are also covered under a separate CD (Cultural Resource Activities and Practices).

NOAA also offers an ongoing Teacher-at-Sea Program. This program enables teachers to gain firsthand experience of science and life at sea. Participation allows teachers to enrich their classroom curricula with a depth of understanding made possible by living and working side-by-side, day and night, with those who contribute to the world's body of oceanic and atmospheric scientific knowledge.

In the Teacher-at-Sea program, teachers apply and have three choices of vessel types; 1) Fisheries Research, 2) Oceanographic and Coastal Research, and 3) Hydrographic Surveys. They are usually at sea from 1-3 weeks and work the same shifts as the researchers. This sea based experience provides them excellent information for developing school programs and helps NOAA meet the objectives of their mission by promoting among teachers and their students a greater awareness of the need to understand and protect the world's oceans and their resources.

The Monument Management Plan also proposes to use telepresence technology for educational and outreach activities (section 3.5.4, Ocean Ecosystems Literacy). Technologies such as underwater video cameras, real-time video transmission, virtual field trips, and formal distance learning programs may be feasible from the Refuge in the future.

**Availability of Resources:**

The FWS has very limited staff, facilities, and equipment available for this use. The FWS is responsible for the costs of upkeep and replacement of these items. These facilities are described in greater detail in the Coordinated Field Operations Action Plan (section 3.6.3) within the Monument Management Plan.

Category and Itemization	One time (\$)	Annual (\$/yr)
Administration and Management		\$5,250
Maintenance		\$2,000
Monitoring		\$5,250
Special equipment, facilities or improvements		\$25,000
Offsetting revenues (estimated)		

Orientation and monitoring of impacts would be completed by the Refuge staff (5 % GS-7 Assistant Refuge Manager, \$2,250; 5 % GS-9 Refuge Manager, \$3,000). Additional maintenance of current facilities may be required to accommodate more people.

Additional funding for specialized telepresence technology would need to be made available (either through the FWS budget system or from an outside source) in order to allow this use to occur in a compatible manner. Should internal funding not materialize, the FWS would seek outside funding (e.g., from other agency partners or private conservation organizations.)

Transportation costs to reach the Refuge and are paid for by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance

to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All activities would be designed and managed in a manner to eliminate or minimize these impacts. All environmental education and interpretive activities would be designed and managed in a fashion to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

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#### *Environmental Education*

Impacts from visitors would be minimal and infrequent. Additionally, terrestrial and marine viewing areas would be carefully selected to limit wildlife disturbance and potential impacts to cultural resources.

Minimal to no impact on Monument resources is anticipated from offsite programs, designed to bring the place to the people rather than the people to the place. Educational demonstrations would be conducted or supervised by trained FWS-approved guides.

The specific impacts of the NOAA Teacher-at-Sea Program would be the same for any on island activities and would be permitted requiring the same restrictions as others. The Teacher-at-Sea permitting requirements are also covered under another CD (Operations of Co-managing Agencies).

### *Interpretation*

Minimal impact to Refuge resources is anticipated, since only trained FWS-approved guides would conduct interpretive talks and would avoid sensitive wildlife and cultural areas.

Impacts may occur to nesting seabirds, Hawaiian monk seals (*Monachus schauinslandi*), and Hawaiian green turtles (*Chelonia mydas*) may occur if visitors and residents were to wander off guided interpretive walks. Possible impacts include: 1) destruction of Bonin petrels (*Pterodroma hypoleuca*), Tristram's storm petrels (*Oceanodroma tristrami*), or wedge-tailed shearwaters (*Puffinus pacificus*) nesting burrows; 2) smashing, injuring or killing a seabird egg, chick, or adult by stepping on the bird or its nest; 3) negatively affecting seabird nesting success by causing abandonment; 4) allowing seabird egg predation by shorebirds by flushing incubating adults; and (5) disturbing or deterring a resting monk seal or green turtle from a preferred haulout, molting, or pupping/nesting location. Fowler (1995) studied seabird colonies with ecotourism operations and documented that birds located away from frequently visited areas react strongly to any human activity. Birds were observed to habituate to high levels of constant visitation, but not to less constant (although regular) visitation. Therefore, birds located far from trails are more likely to be disturbed from wandering visitors or residents. Monk seal research has documented that pregnant females would abandon preferred pupping locations due to human disturbance (Kenyon 1972).

Talks may be located near seabird colonies, but leaders and participants would not enter into the main colony area for these talks. Keeping the group at the edge of the colony would help to limit stress levels. Studies have shown that birds can adapt to repeated disturbance (Fowler 1995), so selection of an area where the birds are regularly viewed by FWS personnel and visitors would minimize the impact of this activity.

Due to the very limited nature of this activity, we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit to the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Refuge and Monument would not be permitted.

### **Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Web sites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act

of 1966, as amended and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

- \_\_\_ Use is Not Compatible
- X Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

**SPECIFIC TERMS AND CONDITIONS:**

All projects would be monitored by Refuge staff to ensure the use remains compatible and natural, cultural, and historic resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Nihoa millerbirds, Nihoa finches, Laysan finches, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate on-refuge a project that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.

All persons arriving to the Refuge are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds

from disturbance. All persons arriving to the Refuge are required to go through orientation immediately upon arrival.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck wetlands.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators' ability to avoid collisions with marine life. Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon, as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy. Anchors will be lowered into place rather than tossed overboard to provide a more controlled placement.

Only four-stroke outboard motors would be used for boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

**Justification:**

When determined compatible on a station specific basis, environmental education and interpretation are priority public uses of that national wildlife refuge. The Hawaiian Islands NWR is closed to entry and use by the general public. However, there are occasions where environmental education and interpretation occur in a very limited manner and usually in the company of another government employee (e.g., a person accompanying a government employee who does not recognize or understand the Refuge resources). Additionally, funding and technologies may become available in the future to increase environmental education and interpretation.

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.

Executive Order 1019. 3 February 1909. Establishing the Hawaiian Islands Reservation.

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

Gerrodette, T.G., and W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. Conservation Biology 4:423-430.

Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. *Conservation Biology* 13(4):888-897.

Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. *Journal of Field Ornithology*. 120:299-310.

Kenyon, K.W. 1972. Man verses the Monk Seal. *Journal of Mammalogy* 53:687-696.

Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.

Presidential Proclamation 2416, 1940. Renaming the Hawaiian Islands Reservation as the Hawaiian Islands National Wildlife Refuge.

Presidential Proclamation 8031, 15 June 2006 (71 FR 36443) Establishing the Northwestern Hawaiian Islands as a marine national monument.

Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).

Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
  
\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Hawaiian Islands National Wildlife Refuge

Use: Operations of Monument Co-Managing Agencies

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

## **Compatibility Determination**

**Use:** Operations of Monument Co-managing Agencies

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

On June 15, 2006, President Bush signed PP 8031 making the Hawaiian Islands NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112).

### **Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

### **Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

### **National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Papahānaumokuākea Marine National Monument is co-managed by FWS, the National Oceanic and Atmospheric Administration (NOAA) and the State of Hawai‘i (State). The Hawaiian Islands NWR is part of the Monument. This compatibility determination (CD) covers joint operational activities within the Hawaiian Islands NWR by NOAA and the State, which includes but is not limited to the joint use of facilities, small boats, vessels and aircraft, and coordinated field activities. All activities covered under this CD are reviewed by the Co-Trustees through their Monument permitting process.

Some examples of this joint-use include but are not limited to NOAA and the State: 1) sharing and using FWS living facilities, 2) conducting monitoring (not research) of plants and animals (research is covered in a separate CD), and 3) using FWS docking or landing facilities for their vessels and aircraft; and FWS, NOAA, and the State: 4) jointly using airplanes and ships for transporting supplies.

More specific examples of where and under what conditions this CD would apply are listed in the Monument Management Plan under:

- 1) Section 3.3.1, Activity MD-1.1, Continue working with partners to remove marine debris in the Monument and reduce additional debris entering the Monument.
- 2) Section 3.2.1, Activity TES-1.2, Support and facilitate emergency response for monk seals.

This is not a wildlife-dependent public use as defined by the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee).

These year-round, joint use and management activities occur throughout the Monument. This CD primarily covers facilities at Tern and Laysan Islands; field camps elsewhere in the refuge; use of small boats, vessels, and aircraft; and coordinated field activities within the Hawaiian Islands NWR. By coordinating these field activities, sharing infrastructure and equipment, the Co-Trustees can ensure safe and efficient management and monitoring operations while avoiding impacts to the natural, historic, and cultural resources within the Monument.

A Monument permit for all these types of operations and activities is issued by the Co-Trustees. The permit contains standard and specific operating requirements. Each Co-Trustee reviews all proposed activities by FWS, NOAA, State, and agency partners, contractors, and cooperators to ensure the protection of the Monument’s unique environment.

This activity/use is proposed because the Presidential Proclamation 8031 establishes a coordinated regime within the Northwestern Hawaiian Islands. This allows all Monument personnel from FWS, NOAA, and the State to work together, and share facilities, equipment, and management activities.

FWS has some facilities and equipment available for this use at Tern Island that includes office space, housing, motorboats, dive tanks, and tools. Users share the cost of maintenance and replacement of these items or supply their own for special operational needs.

**Availability of Resources:**

The availability of resources is not entirely applicable to this CD, because the three co-managing agencies generally share costs involved or exchange costs borne by one agency for in kind services. The FWS operates its stations under a full cost recovery requirement. Monument co-managing agencies will develop cooperating agreements that clearly identify the cost sharing arrangements. Increases in annual

operating costs due to increased presence will be borne by the co-managing agencies with no additional cost borne by the FWS.

Transportation costs to reach the Refuge are paid by the individual agency or exchanged for in kind service.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$4,400
Maintenance		\$10,000
Monitoring		\$4,000
Special equipment, facilities or improvements		NA
Offsetting revenues		NA

The numbers above reflect the current estimated costs. Estimated costs were calculated using 8% of the base cost of a GS-9 refuge manager assuming that activity would use that estimated “portion of a year” to administer. Maintenance includes the buildings and other facilities on Tern Island and a tent camp on Laysan Island. If a year-round tent camp is also established at Pearl and Hermes Atoll, costs would be shared between the appropriate agencies. Monitoring would include the 8% of the base cost of a GS-7 assistant refuge manager assuming that activity would use that estimated “portion of a year” to administer.

**Anticipated Impacts of the Use(s):**

Possible impacts from persons involved in operations by Monument co-managing agencies include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All activities would be designed and managed in a manner to eliminate or minimize these impacts. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon *et al.*, 1995 and Kataysky *et al.*, 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When co-managers are observing or working in the vicinity of albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky *et al.* (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Contact periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason, unless there is a justified research question to answer and the length of time is acceptable. It is important to note

that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. Monks seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Monument waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Each activity by any of the co-managing agencies would be carefully reviewed to eliminate if possible and/or prevent any significant short-term, long-term, or cumulative impacts. All proposals would have to go through the Monument permitting process, which requires review by the other Monument Co-Trustees. This high level of review would help ensure that impacts of any kind are carefully considered before any permit for co-managing agencies activities is issued.

Proposals which may have a negative impact to the Monument resources would not be permitted.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Websites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended and as determined by the Co-Trustees of the Monument. The Monument is of national interest, therefore, the availability of the draft Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

GENERAL TERMS AND CONDITIONS:

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of NWR and Monument conditions and restrictions is included in this CD and/or 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

SPECIFIC TERMS AND CONDITIONS:

All projects would be monitored by Refuge staff to ensure the use remains compatible and natural, cultural and historic resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Laysan finches, Nihoa finches, Nihoa millerbirds, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Monument.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate an activity that is already permitted and in progress should unacceptable impacts or issues arise or be noted.

Co-managers are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance.

At the discretion of the Refuge Manager, FWS-approved guides may be assigned to accompany permittees into particularly sensitive areas. Additional fees (approximately equal to the actual cost to the Refuge) would be charged for such special services.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck wetlands.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators’ ability to avoid collisions with marine life. Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be

thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow permittee observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for permittee observation, but entering the water would not be allowed.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Only four-stroke outboard motors would be used for permittee boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

**Justification:**

Presidential Proclamation 8031 establishes a coordinated management regime for Papahānaumokuākea Marine National Monument. This allows all Monument personnel from FWS, NOAA, and the State to work together, and share facilities, equipment, and management activities so the Monument’s natural, cultural, and historic resources may be enjoyed and protected in perpetuity. The FWS, NOAA, and the State each have their own special expertise and experience and working together to achieve purposes of the Monument and the Refuge is cost-effective and produces synergistic benefits.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

  X   Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

  X   Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.

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- Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.
- Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.
- Presidential Proclamation 2416, 1940. Renaming the Hawaiian Islands Reservation as the Hawaiian Islands National Wildlife Refuge.
- Presidential Proclamation 8031, 15 June 2006 (71 FR 36443). Establishing the Northwestern Hawaiian Islands as a marine national monument.
- Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).
- Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Hawaiian Islands National Wildlife Refuge

Use: Research, Scientific Collecting, and Surveys

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

## **Compatibility Determination**

**Use:** Research, Scientific Collecting, and Surveys

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

On June 15, 2006, President Bush signed PP 8031 making the Hawaiian Islands NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112).

### **Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

### **Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

### **National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

### **Description of Use(s):**

When determined compatible on a refuge-specific basis, research, scientific collecting, and surveys (research) are allowable uses and are conducted on refuge lands and waters by independent researchers, partnering agencies, and educational groups. FWS defines these uses as:

- Research: Planned, organized, and systematic investigation of a scientific nature.
- Scientific collecting: Gathering of refuge natural resources or cultural artifacts for scientific purposes.
- Surveys: Scientific inventory or monitoring.

The types of research vary greatly, but mostly revolve around birds, marine animals, sea turtles, coral reefs, the marine environment, fish population dynamics, marine debris, contaminants, habitat classification and restoration, and cultural and historic resources.

Presently on the Refuge 29 research projects are ongoing, which is representative of the numbers of projects that have occurred annually on the Refuge for the past 5 years. This number is expected to greatly increase in the next 10 years. Current research projects include but are not limited to: coral reef assessment, fledgling albatross movements, Bonin petrel (*Pterodroma hypoleuca*) abundance and distribution, juvenile reef fish recruitment, radio wave analysis, greenhouse gas monitoring, shark movement, and marine debris deposition analysis. The number of researchers on the islands at any one time ranges from 0 (Lisianski Island) to 10 people (Tern Island).

More specific examples of where this CD might apply are included in the Monument Management Plan, which lists approximately 80 proposed actions that would generate a multitude of research projects in the future. These proposed actions fall under the following categories: Native Hawaiian culture and history, historic resources, maritime heritage, threatened and endangered species, migratory birds, habitat management and conservation, marine debris, alien species, and maritime transportation and aviation. Examples of such activities include:

- 1) Section 3.2.1, Activity TES-4.2, Conduct studies to examine the correlation between reproductive success and contaminant loads.
- 2) Section 3.2.2, Activity MTA-2.1, Conduct studies on potential aircraft and vessel hazards and impacts.

Research proposals may be for any time of the year and on any of the islands and/or surrounding waters within the Refuge. However, the Refuge may limit the time and location of research projects to ensure that negative impacts to Refuge resources are avoided or limited.

Each research, scientific collection, or survey project would undoubtedly have different protocols and methodologies; therefore, each study necessitates its own scientific review. Each research project would be carefully reviewed to prevent any significant short-term, long-term or cumulative impacts. New research requests would be evaluated by refuge staff by comparing them to ongoing or recently completed research on the Refuge to determine if the species studied, methodologies used, or habitat type and locations used may lead to undesirable cumulative impacts. All projects would be subjected to the Monument permitting process, in which the Refuge also participates. This high level of review would help ensure all levels and types of impacts are carefully considered before any permit for research is issued. Within the permit, conditions would be clearly defined so as to protect and conserve the existing natural, cultural, and historic resources found within the Monument. Standard and specific conditions are included in this CD under Stipulations Necessary to Ensure Compatibility.

This use has been primarily proposed because the collecting and analyzing of scientific data is extremely valuable to the FWS for its ongoing management of the Refuge and Monument. The gathered information would also be used by other scientists and teachers around the world. The published manuscripts from this research help to support achievement of the FWS mission and Refuge purposes, and disseminate scientific information about the significance of the Monument to other researchers and the public.

The FWS has some facilities and equipment available for this use that includes office space, housing, motorboats, dive tanks, and bird banding supplies. Users pay fees to use these facilities and equipment or they supply their own.

**Availability of Resources:**

The Refuge’s extreme remoteness makes the operation and maintenance of its airfield, buildings, and infrastructure very costly for FWS. Therefore, appropriate fees would be charged for research projects occurring on the Refuge to help FWS defray their operational costs.

The FWS has sufficient staffing and funding to administratively support and monitor research that is currently taking place. Any significant increase in the number of research projects would create a need for additional employees to oversee the administration and monitoring of the researchers and their projects.

Any significant additional cost to the Refuge caused by researchers must be offset by the sponsoring agency or organization.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$2,000
Maintenance		\$10,000
Monitoring & Research		\$4,650
Special equipment, facilities, or improvements		\$0
Offsetting revenues		\$0

The numbers above reflect the current estimated costs. Estimated costs were calculated using 10 % of the base cost of a GS-7 assistant refuge manager and a 3 % cost of a GS-9 refuge manager assuming that the activity would use the estimated “portion of a year” to administer.

Transportation costs to reach the Refuge are paid for by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of

nonnative species to the Monument. All research would be designed and managed in a fashion with the best intent to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason, unless there is a justified research question to answer and the length of time is acceptable. Observations occurring from a FWS blind (if one were put in place) can continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). The historical record suggests that human access to the Northwestern Hawaiian Islands is increasing, and such activities may become a greater impediment to monk seal recovery if they are not limited to those compatible with wildlife conservation. From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. It is clear from these examples that monk seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Refuge waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Refuge. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Although a single research project for a single year may cause few, if any, negative resource impacts, it may in fact cause cumulative impacts over multiple years or when considered additively with all research projects in the Monument. Therefore, it is critical for Monument managers to examine all projects with a multi-year timeframe in mind and consider all research that is planned concurrently in the Monument

before approval is granted. It may be appropriate to set a limit to the number of research projects occurring in a particular habitat or relative to a single species or species group, even if staff are available to coordinate the projects. Based on the shorter-term nature of the majority of the 29 research projects currently occurring at the Refuge, the probability of cumulative impacts is low.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Websites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Draft Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

GENERAL TERMS AND CONDITIONS:

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands,” which cover the quarantine requirements (Attachment 3).

SPECIFIC TERMS AND CONDITIONS:

All research permit holders would be required to submit an annual report to the Refuge that summarizes their activities for a given year and a final report when the project is completed. The report would include at a minimum the following: study title, fiscal year, progress, important findings, problems encountered, proposed resolution to problems, disposition of any collected samples, preparer, and date prepared.

All projects would be monitored by Refuge staff to ensure the use remains compatible and resources (which include but are not limited to nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Laysan finches, Nihoa finches, Nihoa millerbirds, native plants and insects, and cultural and historic resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

If the proposed research methods would impact or potentially impact Refuge resources (habitat or wildlife), it must be demonstrated that the research is essential (i.e., critical to survival of a species; Refuge islands provide only or critical habitat for a species; or assessment and/or restoration after cataclysmic events), and the researcher must identify the issues in advance of the impact. Highly intrusive or manipulative research is generally not permitted in order to protect native bird and marine mammal populations.

Researchers are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

Researchers will adhere to current species protocols for data collection.

The Refuge Manager can suspend/modify conditions/terminate on-refuge research that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.

Visitors, researchers, and residents are provided orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance.

Researchers would be required to obtain the appropriate Monument permit type. These permits stipulate more detailed access restrictions and regulations to protect wildlife. At the discretion of the Refuge Manager, FWS-approved guides may be assigned to accompany researchers into particularly sensitive areas. Additional fees (approximately equal to the actual cost to the Refuge) would be charged for such special services.

Visitors and researchers would not be allowed to approach closer than 150 feet to Laysan duck wetlands without specific approval from FWS staff.

Vessels involved in research activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators’ ability to avoid collisions with marine life. Visitors and researchers planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water-related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow visitor and researcher observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for visitor and researcher observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon, as well as preferred Hawaiian monk seal haulout, molting, and pupping sites and green turtle high use areas such as East Island.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy. Anchors will be lowered into place rather than tossed overboard to control placement.

Only four-stroke outboard motors would be used for visitor and researcher boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

All publications would need to reference the fact that research took place on the Refuge and also state that the Refuge is closed to general public use.

**Justification:**

Research on the Refuge and in the Monument is inherently valuable to the FWS, since it is intended to expand the knowledge base of those who are given the responsibility of managing the resources found within. This is particularly true in this case where many of the resources remain in pristine condition and detailed information is lacking for a portion of these species. In many cases, if it were not for the Refuge providing access to the lands and waters along with some support, the research would never take place and less scientific information would be available to FWS to aid in managing and conserving the Refuge and the Monument resources.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.

Executive Order 1019. 3 February 1909. Establishing the Hawaiian Islands Reservation.

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

- Gerrodette, T.G., and W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. *Conservation Biology* 4:423-430.
- Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. *Conservation Biology* 13(4):888-897.
- Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. *Journal of Field Ornithology*. 120:299-310.
- Kenyon, K.W. 1972. Man verses the Monk Seal. *Journal of Mammalogy* 53:687-696.
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- Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.
- Presidential Proclamation 2416, 1940. Renaming the Hawaiian Islands Reservation as the Hawaiian Islands National Wildlife Refuge.
- Presidential Proclamation 8031, 15 June 2006 (71 FR 36443). Establishing the Northwestern Hawaiian Islands as a marine national monument.
- Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).
- Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Refuge Determination:**

Refuge Manager

Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument

\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Hawaiian Islands National Wildlife Refuge

Use: Cultural Resource Activities and Practices

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?		✓
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

## **Finding of Appropriateness of a Refuge Use: Attachment 1**

Use: Cultural Resource Activities and Practices

Additional information regarding the U.S. Fish and Wildlife Service (FWS) evaluation of proposed Cultural Resource Activities and Practices at Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument.

- d. The activity is not consistent with public safety. Since the activity may have failed to meet this requirement and consistent with relevant policy (603 FW 1.11 B.), the Refuge has completed an “Exceptional or Unique Circumstances Analysis” (see below).

Exceptional or Unique Circumstances Analysis for cultural practices at the Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument (603 FW 1.11 B.).

The “Finding of Appropriateness of a Refuge Use” determination revealed that proposed Cultural Resources Activities and Practices may not be consistent with public safety. Despite the possibility of not meeting this requirement and consistent with relevant policy (603 FW 1.11 B.), the Refuge has made a determination that the use is appropriate for the following reasons.

- The use would only be allowed if it were also determined compatible.
- This use is an important component of the Native Hawaiian culture and Presidential Proclamation 8031 recognizes its significance and provided for this use when certain conditions are met. FWS possesses the resources to manage this use at the current levels.
- One or more support vessels would accompany Hawaiian sailing canoes during their voyages for safety.
- Length of stay on islands would be limited and be required to have a FWS-approved guide to accompany them, which would contribute to a higher level of safety. The guide would make sure landings at islands only occurred during good weather conditions and in safe areas. The guide would brief all participants on the safety issues involved in sailing in the Monument and visiting islands.
- Participants would be required to carry appropriate first aid supplies that could be used to treat minor injuries.

## **Compatibility Determination**

**Use:** Cultural Resource Activities and Practices

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

On June 15, 2006, President Bush signed PP 8031 making the Hawaiian Islands NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112).

### **Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

### **Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

### **National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Presidential Proclamation 8031 defines Native Hawaiian Practices as “...cultural activities conducted for the purposes of perpetuating traditional knowledge, caring for and protecting the environment, and strengthening cultural and spiritual connections to the Northwestern Hawaiian Islands that have demonstrable benefits to the Native Hawaiian community. This may include, but is not limited to, the non-commercial use of Monument resources for direct personal consumption while in the monument.”

Cultural resource activities and practices are a means to honor and continue the traditional knowledge and practices that are vital to the Native Hawaiian community. They continue to remind and teach the Native Hawaiian connections and relationships that ancestors have passed down from generation to generation.

Activities could involve, but are not limited to, voyaging by traditional sailing canoes with at least one support vessel to one or more of the islands within the Monument. Although requests for general access may be received for any of the islands within the Monument, most often the activity would occur on either Nihoa or Mokumanamana (Necker Island) in the Hawaiian Islands NWR. The use may be conducted at any time during the year, but would most often occur during equinoxes and solstices. The permittees would explore where ancestors traveled and practiced their culture, teach others the Native Hawaiian culture and history, practice living and traveling as ancestors did, and make a spiritual connection with nature and ancestors. The use may include overnight visits on some islands, sailing by canoe to the islands, celestial navigation, spiritual ceremonies, and presentation of offerings. However, camping on Nihoa Island or Mokumanamana is not considered under this CD due to the lack of appropriate and suitable sites (rugged terrain, and presence of cultural sites and endangered species) on these islands. Cultural practitioners requesting to camp on these islands would require the Service complete additional determinations for appropriateness and compatibility.

More specific examples of where this CD might apply are listed in the Monument Management Plan under:

- 1) Section 3.1.2, Activity NHCH-2.3, Facilitate field research and cultural education opportunities annually during the field season.
- 2) Section 3.1.2, Activity NHCH-2.6, Support Native Hawaiian cultural accesses to assure cultural research needs are met.

The study and use of native fish, wildlife, plants, and their habitats by Native Hawaiians is integral to their cultural practices. However this activity is not a wildlife-dependent use as defined by the National Wildlife Refuge System Administration Act of 1966, as amended.

This activity could include fishing and gathering of renewable natural resources for ceremonial, religious, nutritional, and other traditional cultural purposes. Resources of interest may include, but are not limited to, shed feathers, fish, shells, or salt. Gathering of resources of interest may be requested in Native Hawaiian Practices Permit applications and considered by Monument managers on a case-by-case basis. Approval of these requests must include, but are not limited to, consideration of surplus populations available for harvest; maintenance of biological integrity and diversity; maintenance of self-sustaining populations; permittee possession of other necessary permits (e.g., for migratory birds), etc.

Since the establishment of the Monument, only two Native Hawaiian practices permits have been issued. This permit allowed 14 Native Hawaiians to anchor off of Nihoa and Mokumanamana Islands and conduct cultural ceremonies on the islands for no more than 2 full days.

Native Hawaiian practitioners must first apply for and receive a permit from the Monument. After issuance, the practitioners would normally travel to the island(s) by boat and conduct the activity on land

or in the water. The FWS would typically expect 1 boat per permit (2, if a support vessel is accompanying a traditional sailing canoe) with less than 15 people and would anticipate fewer than 3 permits per year. A FWS staff member would accompany all parties permitted to engage in this use to increase safety, ensure the activity is compatible, and does not impact other Refuge or Monument resources or other permitted uses.

No facilities are dedicated solely to these uses that need to be covered by this compatibility determination.

**Availability of Resources:**

No funding presently exists specifically for this use. However, the occurrence of this activity is currently infrequent and is not expected to grow significantly in the near future, thus the costs to the Refuge are minimal and can be accommodated within the existing budget. The issuance of the permit and FWS staff time to act as a guide for the cultural group account for the major costs.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$2,000
Maintenance		
Monitoring		\$2,000
Special equipment, facilities or improvements		
Offsetting revenues		

The cost reflects the estimated Refuge current expense for this use (5% of a GS-12 wildlife biologist).

Transportation costs to reach the Refuge are paid for by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Short-term impacts should be very minimal since the applicant must follow very strict permit regulations (i.e., quarantine procedures for each island) and have a FWS-approved guide. Some minimal disturbance of wildlife may occur from the parties entering and leaving the islands. The permit does not allow disturbance or collection of the historic or cultural resources. However, we recognize some of the Native Hawaiian cultural/spiritual practices may involve moving stones which would not be considered disturbance.

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All cultural resource activities would be designed and managed in a fashion with the best intent to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific

plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason. Observations occurring from a blind can continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. Monks seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Monument waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Due to the very limited nature of this activity (i.e., 1- to 2-day duration limited to access to one or two islands), we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit to the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Refuge and Monument would not be permitted.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Websites at <http://www/fws/gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the. The Monument is of national interest; therefore, the availability of the Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

**SPECIFIC TERMS AND CONDITIONS:**

Persons desiring access for cultural purposes to areas not generally open to the public would be required to obtain a Native Hawaiian Practices Permit from the Monument. These permit applications are reviewed by select cultural practitioners or cultural resource managers to ensure the proposed activities meet the findings outlined in the Proclamation. Permits issued may stipulate more detailed access restrictions and regulations to protect wildlife.

All projects would be monitored by Refuge staff to ensure the use remains compatible and cultural and natural resources (which include but are not limited to nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Laysan finches, Nihoa finches, Nihoa millerbirds, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Monument.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate a project that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.

All trash, human waste, etc., will be removed from the islands upon departure.

All persons traveling to the Refuge are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck wetlands.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators’ ability to avoid collisions with marine life. Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy. Anchors will be lowered into place rather than tossed overboard to control placement.

If motorized boats are used, only four-stroke outboard motors would be allowed. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

Any alteration of the Refuge’s natural or cultural resources through this use (including movement of stones on islands) would be approved and overseen by FWS personnel.

As part of their permit, users would be required to certify that their use of the Refuge and its natural and cultural resources, including any items collected from the Refuge, is of a noncommercial nature.

**Justification:**

This use is an important component of the Native Hawaiian culture, and Presidential Proclamation 8031 recognizes its significance and provided for this use when certain conditions are met. FWS possesses the resources to manage this use at the current levels.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.

Executive Order 1019. 3 February 1909. Establishing the Hawaiian Islands Reservation.

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

Gerrodette, T.G., and W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. Conservation Biology 4:423-430.

Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. Conservation Biology 13(4):888-897.

Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. Journal of Field Ornithology. 120:299-310.

Kenyon, K.W. 1972. Man verses the Monk Seal. Journal of Mammalogy 53:687-696.

Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. Nature 374:415.

Presidential Proclamation 2416, 25 July 1940. Renaming the Hawaiian Islands Reservation as the Hawaiian Islands National Wildlife Refuge.

Presidential Proclamation 8031, 15 June 2006 (71 FR 36443) Establishing the Northwestern Hawaiian Islands as a marine national monument.

Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).

Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument

\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Hawaiian Islands National Wildlife Refuge

Use: Commercial Photography, Videography, Filming, or Audio Recording

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

### **Compatibility Determination**

**Use:** Commercial Photography, Videography, Filming, or Audio Recording

**Refuge Name:** Hawaiian Islands National Wildlife Refuge (NWR), Papahānaumokuākea Marine National Monument

**City/County and State:** City and County of Honolulu, State of Hawai‘i

**Establishing and Acquisition Authority(ies):**

The Hawaiian Islands Reservation was established by President Theodore Roosevelt through Executive Order (EO) 1019, dated February 3, 1909.

In 1940, President Franklin D. Roosevelt signed Presidential Proclamation (PP) 2416, which changed the name of the Reservation to the Hawaiian Islands NWR, but did not add to or otherwise modify the Reservation’s purposes.

On June 15, 2006, President Bush signed PP 8031 making the Hawaiian Islands NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112).

**Refuge Purpose(s):**

The purpose of the Hawaiian Islands Reservation is “...as a preserve and breeding ground for native birds...” (EO 1019).

The Monument covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...” (PP 8031).

**Wilderness Management Objectives:**

Portions of the Hawaiian Islands NWR were proposed for designation as wilderness under the Wilderness Act of 1964. Per FWS policy and Department of the Interior regulation, proposed wilderness is managed to preserve its wilderness character until such time as Congress takes action on the proposal and managed according to wilderness management objectives found in 6 Refuge Manual 8.3:

1. To manage the land to accomplish refuge purposes in such a way so as to preserve the wilderness resource for future benefit and enjoyment of the public; and
2. To provide opportunities for education, research, solitude, and recreation where these activities are compatible with refuge purposes.

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Commercial photography, video, filming, and audio recording (“recording”) are considered in this compatibility determination (CD). This use has occurred in the past (in recent years, 1-2 permits annually have been issued for this type of use on the Refuge) and future requests for this use are expected to grow. The use typically involves creating a documentary film, taking still photographs, or recording wildlife sounds for commercial purposes. Commercial “recording” activities not related to natural, historic, or cultural subjects are not covered under this CD (e.g., swimsuit calendar photography, filming a movie unrelated to the Refuge mission, etc.). For example, the permittee may wish to make a film on the variety of wildlife seen on the islands or on the life cycles of a specific animal or plant. After filming and editing, the permittee would attempt to sell the film to a commercial television station for viewing. People choose to engage in “recording” activities in the Hawaiian Islands NWR because of the pristine nature of the Refuge, and its exotic and approachable wildlife. Films, photographs, and other recordings made in this area are especially appealing to the general public because it exposes an exotic locale which is closed to general public access.

Photography, video, filming, and audio recording of a noncommercial nature are addressed under separate CDs (Environmental Education and Interpretation, and Wildlife Observation and Photography). Also, this CD does not apply to bona fide news media activities, which are authorized under Co-Trustee Conservation and Management permits.

Commercial photography, video, filming, and audio recording may be conducted on or around Refuge islands or waters within the areas of our jurisdiction. Although applications for this activity may be for any time during the year, some time restrictions may be required to limit disturbance. This may include such specifications as time of day and seasonal restrictions.

A specific example of where this CD might apply is included within the Monument Management Plan as:

- 1) Section 3.4.5, Activity CBO-2.3: Support other entities’ efforts to broaden knowledge of and appreciation for Monument resources and management priorities.

The use may be conducted on foot, from the air, from boats and/or in the water using commercial recording equipment. Very specific conditions would be developed by the FWS to minimize or avoid adverse impacts to Monument resources and are listed under Stipulations Necessary to Ensure Compatibility in this document.

In order to ensure there are no negative impacts to the Refuge or Monument resources, the applicant would first have to obtain a Monument permit, which is reviewed and signed by all Co-Trustees. Additionally, when conducting actual onsite operations, the applicant would be accompanied by a FWS-approved guide to ensure compliance of the permit conditions and prevent any unforeseen negative impacts to the Refuge or Monument resources.

**Availability of Resources:**

At present the Refuge can only accommodate one or two commercial photography, video, filming, and audio recording operations within a given year. If the number of applicants begins to increase, additional staffing would be required. The FWS requires the permittee to offset any cost incurred by the Refuge. FWS has some facilities and equipment available for this use, such as limited lodging and motorboats. FWS is responsible for the costs of upkeep and replacement of these items.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$2,250
Maintenance		
Monitoring & Research		\$1,750
Special equipment, facilities, or improvements		
Offsetting revenues		actual costs

The above annual cost reflects cost to manage the program and prevent impacts to the natural resources. Estimated costs were calculated using 5% of the base cost of a GS-5 refuge biological technician and a 5% cost of a GS-9 refuge manager assuming that this activity would use that “portion of a year” to administer. The one-time administration and monitoring cost reflects the approximate cost per commercial photography, video, filming, and audio recording operation incurred by the Refuge and the offsetting cost reflects the reimbursement provided by the permittee. The offsetting cost should always be equal to the Refuge-incurred cost and would come to the Refuge in the form of fees paid by the commercial photographers. These fees should at least equal our costs to administer the use, including any costs associated with facilities, equipment, supplies, and services.

Transportation costs to reach the Refuge are paid by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*), Nihoa finches (*Telespiza ultima*), Nihoa millerbirds (*Acrocephalus familiaris kingi*), and Laysan finches (*Telespiza cantans*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All recording activities would be designed and managed in a manner to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason. Observations occurring from a blind can continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). The historical record suggests that human access to the Northwestern Hawaiian Islands is increasing, and such activities may become a greater impediment to monk seal recovery if they are not limited to those compatible with wildlife conservation. From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. It is clear from these examples that monk seals are very sensitive to disturbance and proposed activities should be carefully monitored and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Refuge waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Due to the limited frequency of this activity, we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit to the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Refuge and Monument would not be permitted.

#### **Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Web sites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

Use is Not Compatible

Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

**SPECIFIC TERMS AND CONDITIONS:**

All permit holders would be required to submit a report to the Refuge that summarizes their activities at the Refuge. The report would include at a minimum the following: title, fiscal year, progress, products and distribution, problems encountered, proposed resolution to problems, preparer, and date prepared.

All projects would be monitored by Refuge staff to ensure the use remains compatible and resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, Laysan finches, Nihoa finches, Nihoa millerbirds, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate a project that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.

All persons arriving to the Refuge are provided orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All persons arriving to the Refuge are required to go through orientation immediately upon arrival.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck seeps unless authorized to do so by FWS staff.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators' ability to avoid collisions with marine life. Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow observation, photography, or other recording of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon, as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy. Anchors will be lowered into place rather than tossed overboard to control placement.

Only four-stroke outboard motors would be used for boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

Permittee would be responsible to cover all Refuge costs associated with the recording activity.

Permittee would be required to be accompanied by FWS-approved guides.

Permittee would provide FWS and Co-Trustees with at least one free copy of all commercial products generated on the Refuge for noncommercial use promoting the Monument, Refuge, and the National Wildlife Refuge System.

All commercial films, books, and other recordings of images and sounds collected on the Refuge would need to reference the fact that they were collected on the Refuge and also state in the products that the Refuge is closed to general public use.

**Justification:**

Allowing commercial photography, video, filming, and audio recording as an economic wildlife-dependent use would contribute to the achievement of the Refuge purpose and the mission of the FWS. The products may reach groups of people that would not normally know about the Refuge. The services provided by commercial filmmakers are also beneficial to expand public appreciation for and understanding of unique wildlife, diverse native habitats, management programs, and the mission of the National Wildlife Refuge System.

Conditions imposed by the Refuge and Monument in their permits for photography, video, filming, and audio recording would ensure that these wildlife-dependent activities occur without adverse effects to Refuge resources or other permittees.

This proposed activity contributes to the mission of the FWS. In addition to reaching the general public through educational wildlife media, the end products may provide an educational opportunity to a much broader distribution of people who may not have the opportunity to visit and personally view these remote and very unique resources. The media products produced by these commercial operations would also be beneficial in promoting the mission of the National Wildlife Refuge System.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

Chesher, R. H. 1969. Destruction of Pacific corals by the sea star *Acanthaster planci*. Science 165(3890):280-283.

Executive Order 1019. 3 February 1909. Establishing the Hawaiian Islands Reservation.

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

Gerrodette, T.G., and W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. Conservation Biology 4:423-430.

Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. Conservation Biology 13(4):888-897.

Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. Journal of Field Ornithology. 120:299-310.

Kenyon, K.W. 1972. Man verses the Monk Seal. Journal of Mammalogy 53:687-696.

Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.

Presidential Proclamation 2416, 1940. Renaming the Hawaiian Islands Reservation as the Hawaiian Islands National Wildlife Refuge.

Presidential Proclamation 8031, 15 June 2006 (71 FR 36443) Establishing the Northwestern Hawaiian Islands as a marine national monument.

Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031)

Ragen, T. 1997. Human Activities Affecting the Population Trends of the Hawaiian Monk Seal. Conservation of Long-Lived Marine Animals Conference. 24 August 1997; Monterey, CA.

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_



## **Finding of Appropriateness of a Refuge Use: Attachment 1**

Use: Sustenance Fishing

Additional information regarding the U.S. Fish and Wildlife Service evaluation of proposed Sustenance Fishing at Hawaiian Islands National Wildlife Refuge, Papahānaumokuākea Marine National Monument.

(c) The use is not consistent with applicable Executive orders and Department and Service policies:

Presidential Proclamation 8031 states: “The Secretaries may permit sustenance fishing outside of any Special Preservation Area as a term or condition of any permit issued under this proclamation.”

The Hawaiian Islands NWR is within Special Preservation Areas (SPAs) designated by Proclamation 8031. The authority to allow sustenance fishing within SPAs was not granted the Secretaries of Commerce and the Interior. Therefore, this proposed activity is not consistent with applicable Executive orders, etc., and is found Not Appropriate.

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge

Use: Operations by Monument Co-Managing Agencies

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes \_\_\_ No ✓

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate \_\_\_\_\_

Appropriate ✓

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319**  
**02/06**

### **Compatibility Determination**

**Use:** Operations of Monument Co-managing Agencies

**Station Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is considered an unincorporated, insular area of the United States (General Accounting Office 1997), and lies outside the State of Hawai'i

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay Refuge by a cooperative agreement with the U.S. Navy (Navy) under the authority of the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966, as amended (U.S. Navy and U.S. Fish and Wildlife Service 1988). Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Jurisdiction and control for Midway Atoll were officially transferred from the Navy to the FWS under Executive Order (EO) 13022, signed by President Clinton on October 31, 1996, which superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation (PP) 8031 making Midway Atoll NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112). Under PP 8031, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

The following purposes were included in the cooperative agreement between the Navy and FWS (U.S. Navy and U.S. Fish and Wildlife Service 1988) under the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966, as amended. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services" (Fish and Wildlife Act of 1956).
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934)
3. "...consolidate the authorities... for... the conservation of fish and wildlife..." (National Wildlife Refuge System Administration Act of 1966, as amended)

The following additional purposes were included in EO 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

Additionally, PP 8031 established the Papahānaumokuākea Marine National Monument, which covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...”.

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Papahānaumokuākea Marine National Monument is co-managed by FWS, the National Oceanic and Atmospheric Administration (NOAA) and the State of Hawai‘i (State). Midway Atoll NWR is a part of the Monument. This compatibility determination (CD) covers joint operational activities within Midway Atoll NWR by NOAA and the State, which includes but is not limited to the joint use of facilities, small boats, vessels, and aircraft, and coordinated field activities. All activities covered under this CD are reviewed by the Co-Trustees through the Monument permitting process.

Some examples of this joint-use include, but are not limited to, NOAA and the State: 1) sharing and using FWS living facilities, 2) conducting monitoring (not research) of plants and animals (research is addressed in a separate CD), 3) using FWS docking or landing facilities for their vessels and aircraft, and FWS, NOAA, and the State: 4) jointly using airplanes and ships for transporting supplies.

More specific examples of where and under what conditions this CD would apply are listed in the Monument Management Plan under:

- 1) Section 3.3.1, Activity MD-1.1, Continue working with partners to remove marine debris in the Monument and reduce additional debris entering the Monument.
- 2) Section 3.2.1, Activity TES-1.2, Support and facilitate emergency response for monk seals.
- 3) Section 3.6.3, Activity CFO-6.2, Within 2 years, station additional vessels at Midway for use during the summer marine research field season.

Joint operations on Midway Atoll also are proposed within the Midway Atoll National Wildlife Refuge Conceptual Site Plan (see Appendix B).

This is not a wildlife dependent use as defined by the National Wildlife Refuge System Administration Act, as amended (16 U.S.C. 668dd-668ee).

Most of the activities would occur on Sand Island, but could occur on or in any of the lands and/or waters of Midway Atoll NWR.

These year-around, joint use and management activities occur throughout the Monument. This CD primarily covers facilities at Sand Island, use of small boats, vessels, and aircraft, and coordinated field activities within Midway Atoll NWR. By coordinating these field activities and sharing infrastructure and equipment, the Co-Trustees can ensure safe and efficient management and monitoring operations while avoiding or minimizing adverse impacts to the natural, cultural, and historic resources within the Monument. Current co-management uses include approximately 12 projects/programs, some of which are one-time or one-per-year events and others of which occur continuously, year-round. At any one time, these several projects/programs involve up to 15 people. Throughout the year, the number of people currently on the Refuge participating in this use averages 4-6, but could significantly increase in coming years.

A Monument permit for all these types of operational activities is issued by the Co-Trustees. The permit contains standard and specific operating requirements. The Monument Management Board reviews all proposed activities by FWS, NOAA, State, and agency partners, contractors, and cooperators to ensure the protection of the Monument's unique resources.

This activity/use is proposed because the Presidential Proclamation 8031 establishes a coordinated regime within the Northwestern Hawaiian Islands. This allows all Monument personnel from FWS, NOAA, and the State to work together, and share facilities, equipment, and management activities.

FWS has some facilities and equipment available for this use on Sand Island that includes office space, housing, motorboats, dive tanks, heavy equipment, harbor, piers, runway, dining hall, and tools. Users share the cost of maintenance and replacement of these items or supply their own for special operational needs.

**Availability of Resources:**

The availability of resources is not entirely applicable to this CD, because the three co-managing agencies generally share costs involved or exchange costs borne by one agency for in kind services. The FWS operates its stations under a full cost recovery requirement. Under situations where FWS costs are increased, such as travel to and onsite living on Sand Island, the FWS requires payment by the cooperating agency. A permanent operational presence of other agencies on Midway will increase annual maintenance, special equipment, facilities or improvement costs. Monument co-managing agencies will develop cooperating agreements that clearly identify the cost sharing arrangements. Increases in these annual operating costs due to increased presence will be borne by the co-managing agencies with no additional cost borne by the FWS.

Transportation costs to reach the Refuge are paid for by the individual agency or exchanged for in kind service.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$6,800
Maintenance		NA
Monitoring & Research		\$6,000
Special equipment, facilities or improvements		NA
Offsetting Revenues		\$0

The numbers above reflect the current estimated costs. Estimated costs for Administration and Management and Monitoring and Research were calculated using 8% of the base cost of a GS-13 refuge manager and a GS-12 assistant refuge manager assuming those activities would use that estimated “portion of a year” to administer.

**Anticipated Impacts of the Use(s):**

Possible impacts from persons involved in operations by Monument co-managing agencies include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All activities would be designed and managed in a manner to eliminate or minimize these impacts. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon *et al.*, 1995 and Kataysky *et al.*, 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When co-managers are observing and working in the vicinity of albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky *et al.* (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Contact periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey

in 1968. Monks seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Monument waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats, kayaks, or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Each activity by any of the co-managing agencies would be carefully reviewed to eliminate if possible and/or prevent any significant short-term, long-term or cumulative impacts. All proposals would have to go through the Monument permitting process, which requires review by the other Monument Co-Trustees. This high level of review would help ensure that impacts of any kind are carefully considered before any permit for co-managing agencies activities is issued.

Proposals that may have a negative impact to the Refuge and/or Monument natural, cultural, or historic resources would not be permitted.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through Monument Websites at <http://www/fws/gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the Monument. The Monument is of national interest, therefore, the availability of the MMP (including the CDs) was advertised at the national level.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

GENERAL TERMS AND CONDITIONS:

Each co-manager would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and/or 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. Depending

upon the type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands in the Monument must adhere to the “Special Conditions for Movement to and from Islands,” which cover the quarantine requirements (Attachment 3).

#### SPECIFIC TERMS AND CONDITIONS:

All projects would be monitored by Refuge staff to ensure the use remains compatible and natural, cultural, and historic resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Monument.

If the proposed activities would impact or potentially impact Monument resources (habitat or wildlife), it must be demonstrated that the activities are essential, and the co-manager must identify the issues in advance of the impact. Highly intrusive or manipulative activities are generally not permitted in order to protect native bird and marine mammal populations.

Co-managers are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate an activity that is already permitted and in progress on the Refuge, should unacceptable impacts or issues arise or be noted.

The beaches on Spit and Eastern Island are closed (unless special permission is granted) as well as the southern and western beaches on Sand Island. Power boats are not allowed to travel closer than 500 feet from these closed beaches, except for activities occurring on Eastern Island that would necessitate tying up to the pier.

Co-managers are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green sea turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All Monument co-managers are required to go through orientation immediately upon arrival or early the next day in the case of an unusually late arrival.

Monument co-managers who desire access to areas not generally open to the public would be required to abide by more detailed access restrictions and regulations to protect wildlife. At the discretion of the Refuge Manager, FWS-approved guides may be assigned to accompany co-managers into particularly sensitive areas.

All trips to Eastern Island for activities would be closely supervised by FWS-approved guides. Boats would tether to either end of the 150-foot pier, and disembarking passengers would be briefed on proper behavior to minimize disturbance to Hawaiian monk seals or green turtles that may be present. During periods of intensive tern nesting, routes would be carefully selected to minimize disturbance. Co-managers would be advised to travel in single file in an expeditious manner through the colony. Photography would be allowed at the beginning and end of such a transit, not in the middle, to reduce the length of disturbance to the core nesting population. Restrictions on access to sensitive areas would be enforced. Spit Island would be off limits unless they accompany FWS-approved guides and have FWS authorization.

Co-managers would not be allowed to approach closer than 150 feet to Laysan duck seeps.

Vessels involved in activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators' ability to avoid collisions with marine life. Within the inner harbor, boats must remain within speed limits of 10 knots. Co-managers planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities would not be permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon (Fig. 1), as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Co-managers and their luggage would go through an inspection for insects and plants prior to departing Honolulu, and again when leaving Midway to reduce the possibility of alien species introductions. Co-managers would be asked to clean their shoes and other clothing before coming to Midway through advance introductory materials. Anyone bringing their own snorkel or dive gear to Midway would be required to treat the gear to prevent the inadvertent introduction or transmission of alien species.

Only four-stroke outboard motors would be used for boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

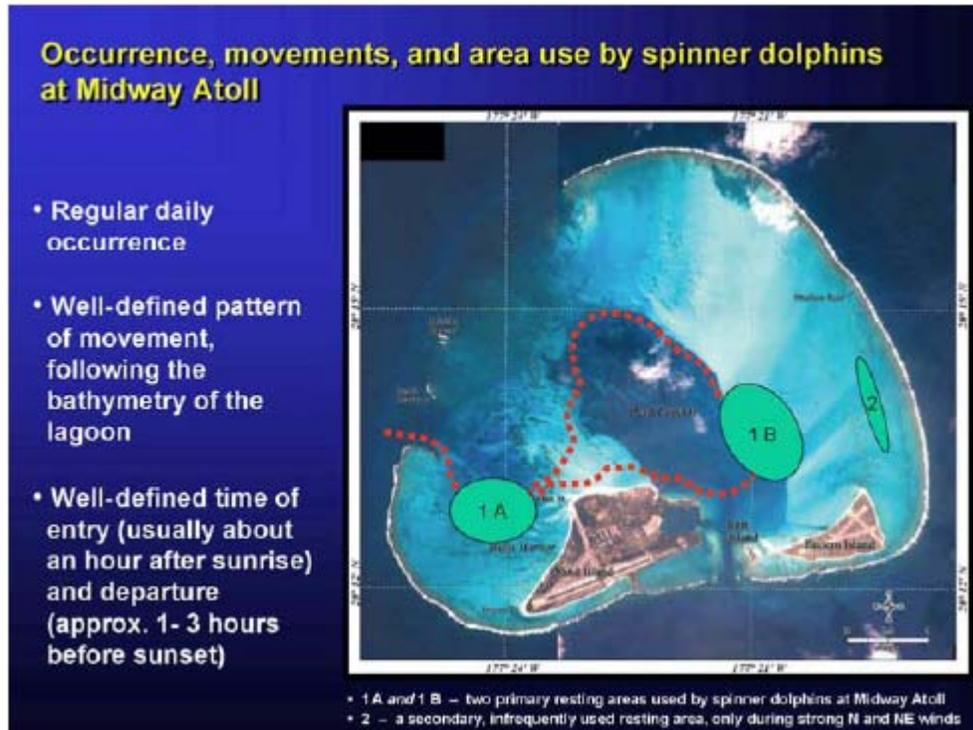


Figure 1. Occurrence, movements, and area use by Hawaiian spinner dolphins at Midway Atoll (courtesy of Dr. Leszek Karczmarski)

A review of files documenting past violations of closed beaches and/or monk seal disturbance shows that many of the people had not received orientation to the refuge and closed areas. Strict compliance with the orientation policy would address many of those types of violations. Some of the documented violations were clearly due to poor or nonexistent signing. A new sign plan would be developed by Refuge staff and all signs put in place by 2009. Temporary signs may be used prior to that time. Activities may be temporarily or permanently halted for purposeful violations of closed beached and endangered species regulations.

**Justification:**

Presidential Proclamation 8031 establishes a coordinated management regime for Papahānaumokuākea Marine National Monument. This allows all Monument personnel from FWS, NOAA, and the State to work together, and share facilities, equipment, and management activities so the Monument's natural, cultural, and historic resources may be enjoyed and protected in perpetuity. The FWS, NOAA, and the State each have their own special expertise and experience and working together to achieve purposes of the Monument and the Refuge is cost-effective and produces synergistic benefits.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

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Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. Nature 374:415.

Presidential Proclamation 8031, 15 June 2006 (71 FR 36443) Establishing the Northwestern Hawaiian Islands as a marine national monument.

Presidential Proclamation 8112, 6 March 2007. Establishment of the Papahānaumokuākea Marine National Monument (72 FR 10031).

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U.S. Fish and Wildlife Service. 2000. Update to U.S. Fish and Wildlife Service Manual Chapter 2 on compatibility: Part 603 National Wildlife Refuge System uses. Washington, D.C.

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**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
  
\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge

Use: Research, Scientific Collecting, and Surveys

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

## **Compatibility Determination**

**Use:** Research and Surveys

**Station Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is considered an unincorporated, insular area of the United States (General Accounting Office 1997), and lies outside the State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay Refuge by a cooperative agreement with the U.S. Navy (Navy) under the authority of the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Act of 1966 (U.S. Navy and U.S. Fish and Wildlife Service 1988). Under this agreement, administrative responsibility for the Refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Jurisdiction and control for Midway Atoll were officially transferred from the Navy to the FWS under Executive Order (EO) 13022, signed by President Clinton on October 31, 1996, which superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary’s Order (SO) 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation (PP) 8031 making Midway Atoll NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112). Under PP 8031, Midway has unique authority and responsibility as a Special Management Area.

### **Refuge Purpose(s):**

The following purposes were included the cooperative agreement between the Navy and FWS (U.S. Navy and U.S. Fish and Wildlife Service 1988) under the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966. Pertinent language in those statutes includes:

1. “. . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services.” (Fish and Wildlife Act of 1956)
2. “. . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . .” (Fish and Wildlife Coordination Act of 1934)
3. “. . . consolidate the authorities . . . for . . . the conservation of fish and wildlife . . .” (National Wildlife Refuge System Administration Act of 1966, as amended)

The following additional purposes were included in EO 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

Additionally, PP 8031 established the Papahānaumokuākea Marine National Monument, which covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States....”

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

When determined compatible on a refuge-specific basis, research, scientific collecting, and surveys (research) are allowable uses and are conducted on NWR lands and waters by independent researchers, partnering agencies, and educational groups. The FWS defines these uses as:

- Research: Planned, organized, and systematic investigation of a scientific nature.
- Scientific collecting: Gathering of refuge natural resources or cultural artifacts for scientific purposes.
- Surveys. Scientific inventory or monitoring.

The types of research vary greatly, but mostly revolve around birds, marine animals, sea turtles, coral reefs, the marine environment, fish population dynamics, marine debris, contaminants, habitat classification and restoration, and historic resources.

Presently at Midway Atoll 14 research projects are ongoing, which is representative of the number of projects that has occurred at year at Midway for the past 5 years. This number is expected to greatly increase in the next 10 years. Current research projects include but are not limited to coral reef assessment, fledgling albatross movements, Bonin petrel (*Pterodroma hypoleuca*) abundance and distribution, juvenile reef fish recruitment, radio wave analysis, greenhouse gas monitoring, shark movement, and marine debris deposition analysis. The number of researchers on the Refuge ranges from 0 to 10 people at one time.

More specific examples of where this CD might apply are included in the Monument Management Plan, which lists approximately 80 proposed actions that would generate a multitude of research projects in the future. These proposed actions fall under the following categories: Native Hawaiian culture and history, historic resources, maritime heritage, threatened and endangered species, migratory birds, habitat management and conservation, marine debris, alien species, and maritime transportation and aviation. Examples of such activities include:

- 1) Section 3.2.1, Activity TES-4.2, Conduct studies to examine the correlation between reproductive success and contaminant loads.
- 2) Section 3.2.2, Activity MTA-2.1, Conduct studies on potential aircraft and vessel hazards and impacts.

Research proposals may be for any time of the year and on any of the islands and/or surrounding waters within the Refuge. However, the Refuge may limit the time and location of research projects to ensure that negative impacts to NWR resources are avoided or limited.

Each research or survey project would undoubtedly have different protocols and methodologies; therefore, each study necessitates its own scientific review. Each research project would be carefully reviewed to prevent any significant short-term, long-term or cumulative impacts. New research requests would be evaluated by Refuge staff by comparing them to ongoing or recently completed research on the Refuge to determine if the species studied, methodologies used, or habitat type and locations may lead to undesirable cumulative impacts. All projects would be subjected to the Monument permitting process, in which the Refuge also participates. This high level of review would help ensure all levels and types of impacts are carefully considered before any permit for research is issued. Within the permit, conditions would be clearly defined so as to protect and conserve the existing natural, cultural, and historic resources found within the Monument. Standard and specific conditions are included in this CD under Stipulations Necessary to Ensure Compatibility.

This use has been primarily proposed because the collecting and analyzing scientific data is extremely valuable to the FWS for its ongoing management of the Refuge and Monument. The gathered information would also be used by other scientists and teachers around the world. The published manuscripts from this research help to disseminate the FWS mission and the significance of the Monument to other researchers and the public.

The FWS has some facilities and equipment available for this use that include office space, housing, motorboats, dive tanks, and bird banding supplies. Users pay fees to use these facilities and equipment or they supply their own.

**Availability of Resources:**

Midway Atoll's extreme remoteness makes the operation and maintenance of its airfield, harbor, buildings, and infrastructure very costly for FWS. Therefore, appropriate fees would be charged for research projects occurring at Midway Atoll to help FWS defray their operational costs. A complete and updated fee schedule can be found at the refuge internet website at: <http://midway.fws.gov>.

The FWS has sufficient staffing and funding to administratively support and monitor research that is currently taking place. Any significant increase in the number of research projects would create a need for additional employees to oversee the administration and monitoring of the researchers and their projects.

Any significant additional cost to the Refuge caused by researchers must be offset by the sponsoring agency or organization.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$4,000
Maintenance		\$10,000
Monitoring & Research		\$8,000
Special equipment, facilities or improvements		\$0
Offsetting revenues		Some fees would be collected from researchers

The numbers above reflect the current estimated costs. Estimated costs were calculated using 10 % of the base cost of a GS-11 refuge biologist and a 3 % cost of a GS-13 refuge manager assuming that this priority use would use that portion of a year to administer. Off-setting revenues are fees paid by researchers for their stay on Midway Atoll and obtaining a project permit. These fees include boat rentals, housing, a research/project fee as well as others, and would amount to approximately the cost of administering this use.

Permittees would pay the cost of their transportation to the Refuge.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All research would be designed and managed in a fashion with the best intent to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason, unless there is a justified research

question to answer and the length of time is acceptable. Observations occurring at the FWS blind placed at the water catchment area can continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). The historical record suggests that human access to the Northwestern Hawaiian Islands is increasing, and such activities may become a greater impediment to monk seal recovery if they are not limited to those compatible with wildlife conservation. From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. It is clear from these examples that monk seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Refuge waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats, kayaks, or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate Midway Atoll. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Although a single research project for a single year may cause few, if any, negative resource impacts, it may in fact cause cumulative impacts over multiple years or when considered additively with all research projects in the Monument. Therefore, it is critical for Monument managers to examine all projects with a multi-year timeframe in mind and consider all research that is planned concurrently in the Monument before approval is granted. It may be appropriate to set a limit to the number of research projects occurring in a particular habitat or relative to a single species or species group, even if staff are available to coordinate the projects. Based on the shorter-term nature of the majority of the 14 research projects currently occurring at Midway, the probability of cumulative impacts is low.

### **Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Websites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended and as determined by the Co-Trustees of the. The Monument is of national interest; therefore, the availability of the Draft Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR, Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel within the Monument to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

**SPECIFIC TERMS AND CONDITIONS:**

All research permit holders would be required to submit an annual report to the Refuge that summaries their activities for a given year and a final report when the project is completed. The report would include at a minimum the following: study title, fiscal year, progress, important findings, problems encountered, proposed resolution to problems, disposition of any collected samples, preparer, and date prepared.

All projects would be monitored by Refuge staff to ensure the use remains compatible and resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, native plants and insects, and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

If the proposed research methods would impact or potentially impact Refuge resources (habitat or wildlife), it must be demonstrated that the research is essential (i.e., critical to survival of a species; Refuge islands provide only or critical habitat for a species; or assessment and/or restoration after cataclysmic events), and the researcher must identify the issues in advance of the impact. Highly intrusive or manipulative research is generally not permitted in order to protect native bird and marine mammal populations.

Researchers are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

Researchers will adhere to current species protocols for data collection.

The Refuge Manager can suspend/modify conditions/terminate on-refuge research that is already permitted and in progress, should unacceptable impacts or issues arise or be noted.

The beaches on Spit and Eastern Island would be closed to researchers (unless special permission is granted) as well as the southern and western beaches on Sand Island. Power boats would not be allowed to travel closer than 500 feet from these closed beaches, except to tie up to the pier on Eastern Island.

Visitors, researchers, and residents are provided orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All visitors, researchers, and new residents are required to go through orientation immediately upon arrival or early the next day in the case of an unusually late arrival.

Researchers who desire access to areas not generally opens to the public would be required to obtain the appropriate Monument permit. These permits stipulate more detailed access restrictions and regulations to protect wildlife. At the discretion of the Refuge Manager, FWS-approved guides may be assigned to accompany researchers into particularly sensitive areas. Additional fees (approximately equal to the actual cost to the Refuge) would be charged for such special services.

All trips to Eastern Island for research would be closely supervised by FWS-approved staff and/or guides. Boats would tether to either end of the 150-foot pier, and disembarking passengers would be briefed on proper behavior to minimize disturbance to Hawaiian monk seals or green turtles that may be present. During periods of intensive tern nesting, routes would be carefully selected to minimize disturbance. Visitors and researchers would be advised to travel in single file in an expeditious manner through the colony. Photography would be allowed at the beginning and end of such a transit, not in the middle, to reduce the length of disturbance to the core nesting population. Restrictions on access to sensitive areas would be enforced. Spit Island would be off limits for researchers unless they accompany FWS approved staff and/or guides or have FWS authorization.

Visitors and researchers would not be allowed to approach closer than 150 feet to Laysan duck seeps. The blind at the water catchment basin would allow people to see the species without disturbing them.

Vessels involved in research activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators’ ability to avoid collisions with marine life. Within the inner harbor, boats must remain within speed limits of 10 knots. Visitors and researchers planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow visitor and researcher observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for visitor and researcher observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon (Fig. 1), as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

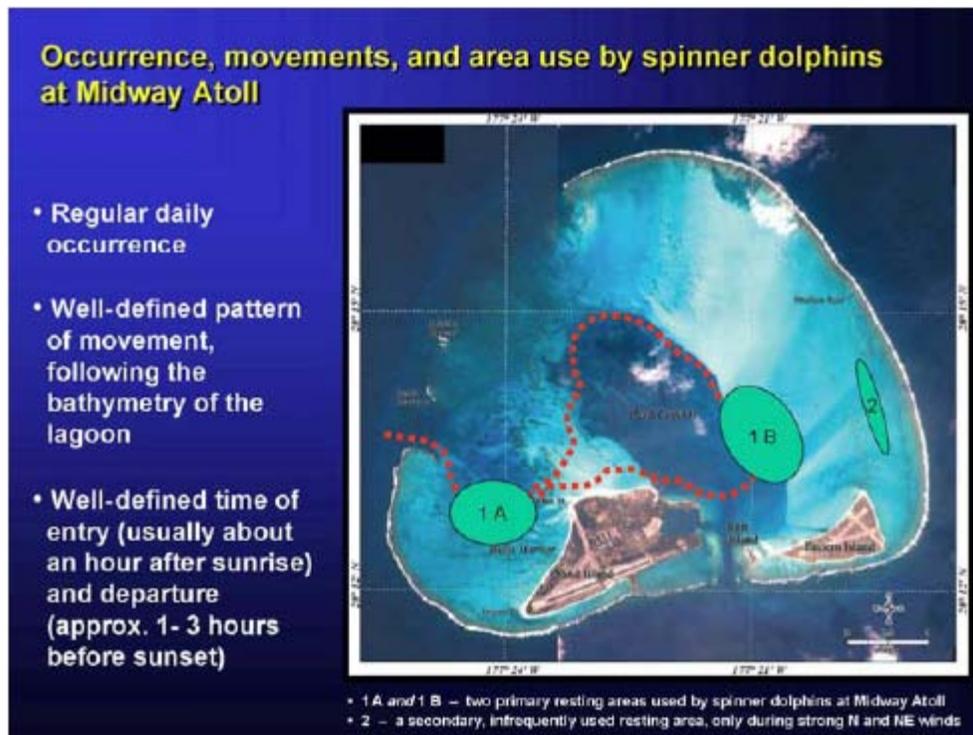


Figure 1. Occurrence, movements, and area use by Hawaiian spinner dolphins at Midway Atoll (courtesy of Dr. Leszek Karczmarski)

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Only four-stroke outboard motors would be used for visitor and researcher boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

Power boats taking visitors and researchers to Eastern Island or snorkeling or diving may encounter spinner dolphins or, less frequently, green sea turtles while traversing the lagoon. Hawaiian monk seals are only rarely observed swimming in the lagoon. Boat operators would be fully briefed on known resting areas of spinner dolphins in the lagoon (Figure 1.1 above) and routes to and from snorkel and dive sites would be plotted to avoid these areas as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

Visitors, researchers, and their luggage would go through an inspection for insects and plants prior to departing Honolulu, and again when leaving Midway to reduce the possibility of alien species introductions. Visitors and researchers would be asked to clean their shoes and other clothing before coming to Midway through advance introductory materials. Anyone bringing their own snorkel or dive gear to Midway would be required to treat the gear to prevent the inadvertent introduction or transmission of alien species.

A review of files documenting past visitor/researcher violations of closed beaches and/or monk seal disturbance shows that many of the people had not received orientation to the Refuge and closed areas.

Strict compliance with the orientation policy would address many of those types of violations. Some of the documented violations were clearly due to poor or nonexistent signing. A new sign plan will be developed by Refuge staff and all signs put in place by 2009. Temporary signs may be used prior to that time. Research permits may be temporarily or permanently withdrawn for purposeful violations of closed beached and endangered species regulations.

All publications would need to reference the fact that research took place on the Refuge.

**Justification:**

Research in the Monument is inherently valuable to the FWS, since it is intended to expand the knowledge base of those who are given the responsibility of managing the resources found within. This is particularly true in this case where many of the resources remain in pristine condition and detailed information is lacking from a portion of these species. In many cases, if it were not for the Refuges providing access to the lands and waters along with some support, the research would never take place and less scientific information would be available to FWS to aid in managing and conserving Midway's and the Monument's resources.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

X  Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

X  Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**References Cited:**

Bejder, L., S. M. Dawson, and J. A. Harraway. 1999. Responses by Hector's dolphins to boats and swimmers in porpoise bay, New Zealand. 15(3):738-750.

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Gerrodette, T.G., W.G. Gilmartin. 1990. Demographic consequences of changed pupping and hauling sites of the Hawaiian monk seal. *Conservation Biology* 4:423-430.

Hawkins, J. P., C. M. Roberts, T. V. T. Hof, K. D. Meyer, J. Tratalos, and C. Aldam. 1999. Effects of recreational scuba diving on Caribbean coral and fish communities. *Conservation Biology* 13(4):888-897.

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Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.

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Secretarial Order (Department of the Interior) 3217. 13 September 2000. Designation of the Battle of Midway National Memorial (67 FR 743 (No. 4) 7 January 2002).

U.S. Fish and Wildlife Service. 2000. Update to U.S. Fish and Wildlife Service Manual Chapter 2 on compatibility: Part 603 National Wildlife Refuge System uses. Washington, D.C.

U.S. Navy and U.S. Fish and Wildlife Service. 1988. Cooperative agreement for use of U.S. Navy lands and waters: Naval Air Facility, Midway Atoll for U.S. Fish and Wildlife Service conservation and management purposes. April 22, 1988. Barbers Point, HI and Portland, OR. U.S. Navy and U.S. Fish and Wildlife Service. 3 p.

**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
  
\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge

Use: Cultural Resource Activities and Practices

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?		✓
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes \_\_\_ No ✓

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate \_\_\_\_\_

Appropriate ✓

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

### **Finding of Appropriateness of a Refuge Use: Attachment 1**

Use: Cultural Resource Activities and Practices

Additional information regarding the U.S. Fish and Wildlife Service evaluation of proposed Cultural Resource Activities and Practices at Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument.

- d. The activity is not consistent with public safety. Since the activity may have failed to meet this requirement and consistent with relevant policy (603 FW 1.11 B.), the Refuge has completed an “Exceptional or Unique Circumstances Analysis” (see below).

Exceptional or Unique Circumstances Analysis for Cultural Resource Activities and Practices at Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument (603 FW 1.11 B.).

The “Finding of Appropriateness of a Refuge Use” determination revealed that proposed Cultural Resources Activities and Practices may not be consistent with public safety. Despite the possibility of not meeting this requirement and consistent with relevant policy (603 FW 1.11 B.), the FWS has made a determination that the use is appropriate for the following reasons.

- The use would only be allowed if it were also determined compatible.
- This use is an important component of the Native Hawaiian culture and Proclamation 8031 recognizes its significance and provided for this use when certain conditions are met. The FWS possesses the resources to manage this use at the current levels.
- One or more support vessels would accompany Hawaiian sailing canoes during their voyages for safety.

## **Compatibility Determination**

**Use:** Cultural Resource Activities and Practices

**Station Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is considered an unincorporated, insular area of the United States (General Accounting Office 1997), and lies outside the State of Hawai‘i

### **Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay Refuge by a cooperative agreement with the U.S. Navy (Navy) under the authority of the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Act of 1966 (U.S. Navy and U.S. Fish and Wildlife Service 1988). Under this agreement, administrative responsibility for the Refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Jurisdiction and control for Midway Atoll were officially transferred from the Navy to the FWS under Executive Order (EO) 13022, signed by President Clinton on October 31, 1996, which superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary’s Order (SO) 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation (PP) 8031 making Midway Atoll NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112). Under PP 8031, Midway has unique authority and responsibility as a Special Management Area.

### **Refuge Purpose(s):**

The following purposes were included in the cooperative agreement between the Navy and FWS (U.S. Navy and U.S. Fish and Wildlife Service 1988) under the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966. Pertinent language in those statutes includes:

1. “. . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services.” (Fish and Wildlife Act of 1956)
2. “. . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . .” (Fish and Wildlife Coordination Act of 1934)
3. “. . . consolidate the authorities . . . for . . . the conservation of fish and wildlife . . .” (National Wildlife Refuge System Administration Act of 1966, as amended)

The following additional purposes were included in EO 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

Additionally, PP 8031 established the Papahānaumokuākea Marine National Monument, which covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States....”

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Presidential Proclamation 8031 defines Native Hawaiian Practices as “...cultural activities conducted for the purposes of perpetuating traditional knowledge, caring for and protecting the environment, and strengthening cultural and spiritual connections to the Northwestern Hawaiian Islands that have demonstrable benefits to the Native Hawaiian community. This may include, but is not limited to, the non-commercial use of Monument resources for direct personal consumption while in the monument.”

Cultural resource activities and practices are a means to honor and continue the traditional knowledge and practices that are vital to the Native Hawaiian community. They continue to remind and teach the Native Hawaiian connections and relationships that ancestors have passed down from generation to generation.

Activities could involve, but are not limited to, voyaging by traditional sailing canoes with one or more support vessels to one or more of the islands within the Monument. The permittees would explore where ancestors traveled, teach others the Native Hawaiian culture and history, practice living and traveling as ancestors did, and make a spiritual connection with nature and the ancestors. The use may include overnight visits on some islands, sailing by canoe to the islands, celestial navigation, spiritual ceremonies, and presentation of offerings. The use may be conducted at any time during the year.

More specific examples of where this CD might apply are listed in the Monument Management Plan under:

- 1) Section 3.1.2, Activity NHCH-2.3, Facilitate field research and cultural education opportunities annually during the field season.

- 2) Section 3.1.2, Activity NHCH-2.6, Support Native Hawaiian cultural accesses to assure cultural research needs are met.

The study and use of native fish, wildlife, plants, and their habitats by Native Hawaiians is integral to their cultural practices. However this activity is not a wildlife-dependent use as defined by the National Wildlife Refuge System Administration Act, as amended of 1997.

This activity could include fishing and gathering of renewable natural resources for ceremonial, religious, nutritional, and other traditional cultural purposes. Resources of interest may include, but are not limited to, shed feathers, fish, shells, or salt. Gathering of resources of interest may be requested in Native Hawaiian Practices Permit applications and considered by Monument managers on a case-by-case basis. Approval of these requests must include, but are not limited to, consideration of surplus populations available for harvest; maintenance of biological integrity and diversity; maintenance of self-sustaining populations; permittee possession of other necessary permits (e.g., for migratory birds), etc.

Since the establishment of the Monument, no Native Hawaiian Practices Permit has been issued for Midway Atoll.

Native Hawaiian practitioners must first apply for and receive a permit from the Monument. After issuance, the practitioners would normally travel to Midway by boat or chartered aircraft. If the permittees are authorized to go into areas closed to public uses, an FWS-approved guide would accompany the parties to ensure the activity is compatible and not impacting other Refuge or Monument resources.

The FWS has some facilities and equipment available for this use, which include meeting room space, housing, motorboats, and tools. Users pay fees to use these facilities and equipment or they supply their own. These facilities and equipment are used and maintained for the FWS and other visitor programs in addition to this proposed use.

**Availability of Resources:**

No funding presently exists specifically for this use. However, the occurrence of this activity is infrequent, thus the costs to the Refuge are minimal. The issuance of the permit and the FWS-approved guide for the cultural group account for the major costs of the use.

<b>Category and Itemization</b>	<b>One-time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management		\$1,700
Maintenance		\$2,000
Monitoring		\$1,300
Special equipment, facilities or improvements		\$2,000
Offsetting revenues		\$7,000

The numbers above reflect the current estimated costs. Estimated costs were calculated using 2% of the base cost of a GS-11 wildlife biologist and a 2% cost of a GS-13 refuge manager assuming that this priority use would use that portion of a year to administer. Off-setting revenues are fees paid by permittees for their stay on Midway Atoll and obtaining a project permit. These fees include boat rentals, housing, a research/project fee as well as others, and would amount to approximately the cost of administering this use. Annual offsetting revenues would be approximately equal to the annual FWS cost of this program.

Permittees would pay the cost of their transportation to the Refuge.

**Anticipated Impacts of the Use(s):**

Short-term impacts should be very minimal since the applicant must follow very strict permit regulations and have a FWS-approved guide if entering a closed area. Some minimal disturbance of wildlife may occur from the parties entering and leaving the islands.

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All cultural activities would be designed and managed in a fashion with the best intent to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. Monks seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Monument waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats, kayaks, or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially

disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral in the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Due to the very limited nature of this activity (i.e., less than 1 week), we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit to the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Monument would not be permitted.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through the Monument Websites at <http://www/fws/gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Draft Monument Management Plan (including the CDs) was advertised at the national level.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

**GENERAL TERMS AND CONDITIONS:**

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and/or 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. The type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel within the Monument to and from Midway Atoll must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

SPECIFIC TERMS AND CONDITIONS:

All activities would be monitored by Refuge staff to ensure the use remains compatible and natural, cultural and historic resources (which include but are not limited to: nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, native plants and insects, and cultural and historical resources) are not impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the NWR.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project/use. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate on-refuge activities that are already permitted and in progress, should unacceptable impacts or issues arise or be noted.

The beaches on Spit and Eastern Island would be closed to permittees (unless special permission is granted) as well as the southern and western beaches on Sand Island. Power boats would not be allowed to travel closer than 500 feet from these closed beaches, except for guided tours to tie up to the pier on Eastern Island.

Persons desiring access for cultural purposes to areas not generally open to the public would be required to obtain a Native Hawaiian Practices Permit from the Monument. These permit applications are reviewed by select cultural practitioners or cultural resource managers to ensure the proposed activities meet the findings outlined in the Proclamation. Permits issued may stipulate more detailed access restrictions and regulations to protect wildlife. At the discretion of the Refuge Manager, FWS-approved guides may be assigned to accompany permittees into particularly sensitive areas. Additional fees (approximately equal to the actual cost to the Refuge) may be charged for such special services.

Visitors, permittees, and residents are provided cultural briefing information, as well as orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All visitors, permittees, and new residents are required to go through orientation immediately upon arrival or early the next day in the case of an unusually late arrival.

Visitors and permittees would not be allowed to approach closer than 150 feet to Laysan duck wetlands. The blind at the water catchment basin would allow people to see the species without disturbing them.

Vessels involved in permitted activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators’ ability to avoid collisions with marine life. Within the inner harbor, boats must remain within speed limits of 10 knots.

Visitors and permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow visitor and permittee observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for visitor and permittee observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon (Fig. 1), as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

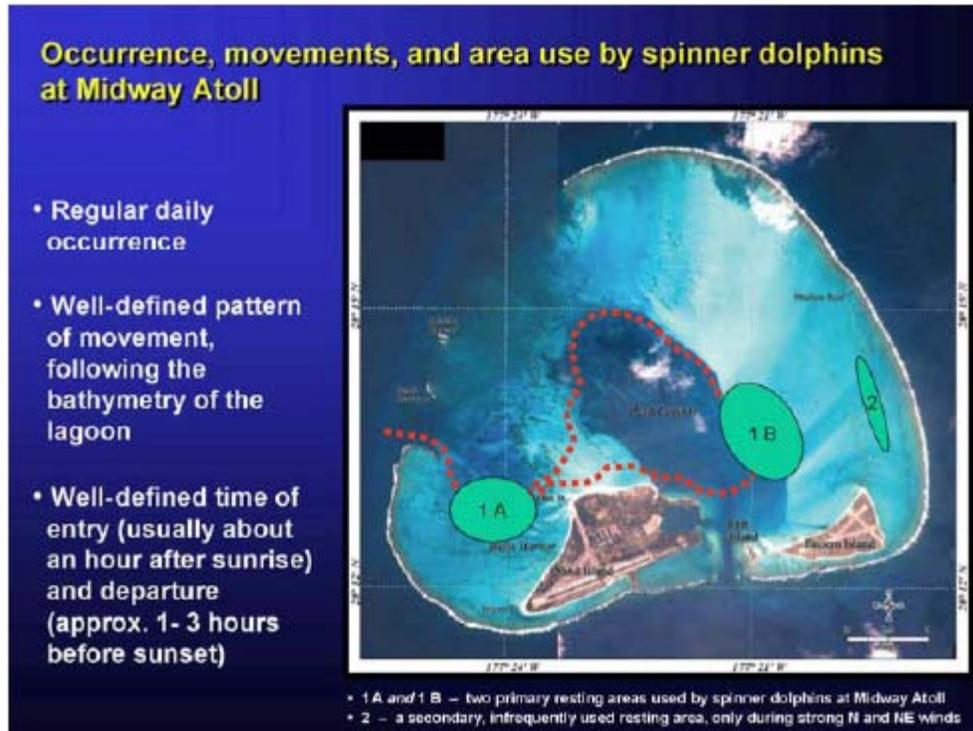


Figure 1. Occurrence, movements, and area use by Hawaiian spinner dolphins at Midway Atoll (courtesy of Dr. Leszek Karczmarski)

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Only four-stroke outboard motors would be used for visitor and permittee boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

Power boats taking visitors and permittees to Eastern Island or snorkeling or diving may encounter spinner dolphins or, less frequently, green sea turtles while traversing the lagoon. Hawaiian monk seals are only rarely observed swimming in the lagoon. Boat operators would be fully briefed on known resting areas of spinner dolphins in the lagoon (Figure 1.1 above) and routes to and from snorkel and dive sites would be plotted to avoid these areas as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

A review of files documenting past visitor/permittee violations of closed beaches and/or monk seal disturbance shows that many of the people had not received orientation to the refuge and closed areas. Strict compliance with the orientation policy would address many of those types of violations. Some of the documented violations were clearly due to poor or nonexistent signing. A new sign plan would be developed by Refuge staff and all signs put in place by 2009. Temporary signs may be used prior to that time. Permits may be temporarily or permanently withdrawn for purposeful violations of closed beached and endangered species regulations.

Visitors, permittees, and their luggage would go through an inspection for insects and plants prior to departing Honolulu and again when leaving Midway to reduce the possibility of alien species introductions. Visitors and permittees would be asked to clean their shoes and other clothing before coming to Midway through advance introductory materials. Anyone bringing their own snorkel or dive gear to Midway would be required to treat the gear to prevent the inadvertent introduction or transmission of alien species.

Any proposed alteration of the Refuge's natural or cultural resources through this use would be approved and overseen by FWS personnel.

As part of their permit, users would be required to certify that their use of the Refuge and its natural and cultural resources, including any items collected from the Refuge, is of a noncommercial nature.

**Justification:**

This use is an important component of the Native Hawaiian culture, and Presidential Proclamation 8031 recognizes its significance and provided for this use when certain conditions are met. The FWS possesses the resources to manage this use at the current levels.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**References Cited:**

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**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader  
Hawaiian and Pacific  
Islands NWRC  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge

Use: Commercial Photography, Videography, Filming, or Audio Recording

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes \_\_\_ No ✓

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate \_\_\_\_\_

Appropriate ✓

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319**  
**02/06**

### **Compatibility Determination**

**Use:** Commercial Photography, Videography, Filming, or Audio Recording

**Station Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is considered an unincorporated, insular area of the United States (General Accounting Office 1997), and lies outside the State of Hawai‘i

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay Refuge by a cooperative agreement with the U.S. Navy (Navy) under the authority of the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966 (U.S. Navy and U.S. Fish and Wildlife Service 1988). Under this agreement, administrative responsibility for the Refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Jurisdiction and control for Midway Atoll were officially transferred from the Navy to the FWS under Executive Order (EO) 13022, signed by President Clinton on October 31, 1996, which superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary’s Order (SO) 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation (PP) 8031 making Midway Atoll NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112). Under PP 8031, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

The following purposes were included the cooperative agreement between the Navy and FWS (U.S. Navy and U.S. Fish and Wildlife Service 1988) under the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966. Pertinent language in those statutes includes:

1. “. . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services” (Fish and Wildlife Act of 1956).
2. “. . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . .” (Fish and Wildlife Coordination Act of 1934).
3. “. . .consolidate the authorities... for... the conservation of fish and wildlife...” (National Wildlife Refuge System Administration Act of 1966, as amended)

The following additional purposes were included in EO 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

Additionally, PP 8031 established the Papahānaumokuākea Marine National Monument, which covers a much larger area than the Refuge, but also includes the Refuge. The Monument’s establishing purpose is “...protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States...”.

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended, 16 U.S.C. 668dd-668ee).

**Description of Use(s):**

Commercial photography, videography, filming, and audio recording (“recording”) are considered a commercial use in this compatibility determination (CD). These activities for noncommercial purposes are considered under separate CDs (Environmental Education and Interpretation, and Wildlife Observation and Photography). Additionally, this CD does not apply to bona fide news media activities, which are authorized under Co-Trustee Conservation and Management permits.

Commercial recording typically involves creating a documentary film, taking still photographs, or recording wildlife sounds that are intended to be or could be sold for income or revenue or traded for goods or services. Commercial “recording” of natural, historic, or cultural subjects are covered under this CD. An example of a covered activity would be a permittee who wishes to make a film on the variety of wildlife seen on the islands or on the life cycles of a specific animal or plant. After filming and editing, the permittee would attempt to sell the film to a commercial television station for viewing.

Commercial “recording” activities not related to natural, historic, or cultural subjects are not covered under this CD (e.g., swimsuit calendar photography, filming a movie unrelated to the Refuge mission, etc.).

Commercial recording activities may be conducted on or around Refuge islands or waters. Although applications for this activity may be for any time during the year, some time restrictions may be required to limit disturbance. This may include such things as time of day and seasonal restrictions.

More specific examples of where this CD might apply are listed in the Monument Management Plan as:

- 1) Section 3.4.5, Activity CBO-2.3: Support other entities’ efforts to broaden knowledge of and appreciation for Monument resources and management priorities.

The use may be conducted on foot, from the air, from boats and/or in the water using commercial recording equipment. Very specific conditions would be developed by FWS to minimize or avoid adverse impacts to Monument resources and are listed under Stipulations Necessary to Ensure Compatibility in this document.

In order to ensure there are no negative impacts to the Refuge or Monument resources, the applicant would first have to obtain a Monument permit, which is reviewed and signed by all Co-Trustees. Additionally, when conducting actual onsite operations in areas not open to the public, the applicant would be accompanied by a FWS-approved guide to ensure compliance of the permit conditions and prevent any unforeseen negative impacts to the Refuge or Monument resources.

Due of its commercial nature, this use is not a “wildlife-dependent public use” as defined by the National Wildlife Refuge System Administration Act of 1966, as amended. Therefore, it does not enjoy the special consideration in planning and management accorded those six wildlife-dependent uses.

From 2002 to 2007, Midway Atoll has averaged approximately two groups consisting of 2-6 people participating in this use.

This use is being proposed at Midway Atoll NWR because of the pristine nature of the Refuge and its abundance and diversity of wildlife and plants. Films, photographs, and other recordings made in this area are especially appealing to the general public, because they explore, explain, and share an exotic locale that is difficult to visit in person.

**Availability of Resources:**

At present the Refuge can accommodate the relatively small numbers (two groups of 2-6 people) of commercial photography, videography, filming, and audio recording operations within a given year. If the number of applicants begins to increase significantly, additional staffing would be required. The FWS has some facilities and equipment available for this use, which include meeting room space, housing, motorboats, and tools. Users pay fees to use these facilities and equipment or they supply their own.

<b>Category and Itemization</b>	<b>One-time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management		\$3,000
Maintenance		
Monitoring		\$2,000
Special equipment, facilities or improvements		
Offsetting revenues		actual costs

The above annual cost reflects cost to manage the program and prevent impacts to the natural resources. Estimated costs were calculated using 3% of the base cost of a GS-13 refuge manager and a 3% cost of a GS-11 wildlife biologist assuming that this activity would use that “portion of a year” to administer. The one-time administration and monitoring cost reflects the approximate cost per commercial photography, videography, filming, and audio recording operation incurred by the Refuge and the offsetting cost reflects the reimbursement provided by the permittee. The offsetting cost should always be equal to the

Refuge-incurred cost and would come to the Refuge in the form of fees paid by the commercial photographers. These fees must at least equal our costs to administer the use, including any costs associated with facilities, equipment, supplies, and services.

Transportation costs to reach the Refuge are paid for by the participant or covered by another agency.

**Anticipated Impacts of the Use(s):**

Possible impacts from this use include: (1) disturbance to nesting and resting seabirds and other migratory birds; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming and feeding in the nearshore marine environment or resting on beaches; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming and feeding in the nearshore marine environment; (4) disturbance to fish, cetaceans, marine invertebrates, and corals; (5) disturbance to Laysan ducks (*Anas laysanensis*); (6) trampling of native plants and insects; (7) damage to corals; (8) accidental release of pollution and contaminants; and (9) the accidental introduction and establishment of nonnative species to the Monument. All recording activities would be designed and managed in a manner to eliminate or minimize these impacts. However, even with proper management and execution of a well planned project, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When participants are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Observation periods for any particular bird or group of birds would be kept to 15 minutes or less for this reason. Observations occurring from a blind can continue for up to 1 hour. It is important to note that even wildlife photography by professionals or amateurs can often be disturbing depending on the manner in which it is pursued.

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). The historical record suggests that human access to the Northwestern Hawaiian Islands is increasing, and such activities may become a greater impediment to monk seal recovery if they are not limited to those compatible with wildlife conservation. From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Recreational beach activities caused monk seals to alter their pupping and hauling patterns, and survival of pups in suboptimal habitats was low, leading to gradual population declines (Kenyon 1972). Prior to its establishment and management as a national wildlife refuge, activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. It is clear from these examples that monk seals are very sensitive to disturbance and proposed activities should be carefully reviewed and, as appropriate, restricted so no further impacts to seals would occur.

Increased use of Refuge waters also increases the potential for introductions of nonnative species and interactions (some negative) by boats, kayaks, or snorkelers/divers with monk seals, sea turtles, spinner dolphins, cetaceans, and live corals. One accidental introduction of a nonnative species on a boat or dive equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5 year period along 38 km of Guam's coastline (Chesher 1969). Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the cetaceans or seals are in a resting phase (Bejder et al. 1999). Snorkel or dive operations also include the added risk of damaging living coral on the Refuge (Hawkins et al. 1999). Improper boat operation could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

Due to the very limited nature of this activity, we do not expect any additional short-term, long-term, and/or cumulative and indirect/secondary impacts other than those normally associated with required existing FWS work. However, it is critical that all visitors follow all quarantine procedures to prevent the accidental introduction of nonnative species to the Monument. One invasive species has the potential to devastate the fragile ecosystem (Chesher 1969). It may be appropriate to set a limit on the number of participants allowed under this use even if staff are available to coordinate the activities. Proposed uses when transportation costs are not covered, quarantine procedures not followed, or there is an unnecessary risk to the natural and cultural resources of the Refuge and Monument would not be permitted.

#### **Public Review and Comment:**

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through Monument Web sites at <http://www.fws.gov/pacificislands> and <http://hawaiiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the Monument. The Monument is of national interest; therefore, the availability of the Monument Management Plan (including the CDs) was advertised at the national level.

#### **Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

#### **Stipulations Necessary to Ensure Compatibility:**

##### GENERAL TERMS AND CONDITIONS:

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR, Part 27. Not all of these conditions and restrictions would apply to every use. Depending upon the type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover the quarantine requirements (Attachment 3).

SPECIFIC TERMS AND CONDITIONS:

All permit holders would be required to submit a report to the Refuge that summarizes their activities at the Refuge. The report would include at a minimum the following: title, fiscal year, progress, products and distribution, problems encountered, proposed resolution to problems, preparer, and date prepared.

All projects would be monitored by Refuge staff to ensure the use remains compatible and resources (which include but are not limited to nesting and resting seabirds and other migratory birds, Hawaiian monk seals, green turtles, spinner dolphins, fish, cetaceans, marine invertebrates, corals, Laysan ducks, native plants and insects, and cultural and historical resources) are not adversely impacted. Staff will also monitor for the accidental release of pollution and contaminants, and the accidental introduction and establishment of nonnative species to the Refuge.

Permittees are responsible for acquiring and/or renewing any necessary State and Federal permits prior to beginning or continuing their project. In addition, the agencies commit to consultation under the Endangered Species Act, Marine Mammal Protection Act, as appropriate, prior to initiation of any action that may affect any marine mammal or Federally-listed species or designated critical habitat.

The Refuge Manager can suspend/modify conditions/terminate activities that are already permitted and in progress on the Refuge should unacceptable impacts or issues arise or be noted.

The beaches on Spit and Eastern Island are closed to permittees (unless special permission is granted) as well as the southern and western beaches on Sand Island. Power boats are not allowed to travel closer than 500 feet from these closed beaches, except for guided tours to tie up to the pier on Eastern Island.

Visitors, permittees, and residents are provided orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot minimum distance from seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green sea turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. The 150-foot distance is the minimum, however greater distances may be required depending upon the response of the wildlife. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All visitors, permittees, and new residents are required to go through orientation immediately upon arrival or early the next day in the case of an unusually late arrival.

Permittees who desire access to areas not generally open to the public would be accompanied by FWS-approved guides into particularly sensitive areas. Additional fees (approximately equal to the actual cost to the Refuge) would be charged for such special services.

All trips to Eastern Island would be closely supervised by FWS-approved guides. Boats would tether to either end of the 150-foot pier, and disembarking passengers would be briefed on proper behavior to minimize disturbance to Hawaiian monk seals or green sea turtles that may be present. During periods of intensive tern nesting, routes would be carefully selected to minimize disturbance. Permittees would be advised to travel in single file in an expeditious manner through the colony. Photography would be allowed at the beginning and end of such a transit, not in the middle, to reduce the length of disturbance to the core nesting population. Restrictions on access to sensitive areas would be enforced. Spit Island is off limits for permittees unless they accompany FWS-approved guides or have FWS authorization.

Permittees would not be allowed to approach closer than 150 feet to Laysan duck seeps unless authorized to do so by FWS staff. The blind at the water catchment basin would allow people to photograph the species without disturbing them.

Vessels involved in activities would be required to return to dock at least 1 hour before sunset, which would also enhance boat operators' ability to avoid collisions with marine life. Within the inner harbor, boats must remain within speed limits of 10 knots.

Permittees planning to engage in water-related activities during the albatross fledging season (June-July) would be thoroughly briefed on watching for shark activity, and water related activities are not permitted during peak shark foraging times (½-hour before dusk to ½-hour after sunrise).

Power boat operators may slow to allow permittee observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we would allow the boat to slow and/or stop for permittee observation, but entering the water would not be allowed. Routes to and from snorkeling/dive sites would be plotted to avoid known resting areas of spinner dolphins in the lagoon (Fig. 1), as well as preferred Hawaiian monk seal haulout, molting, and pupping sites. The only exception to this rule would be if the commercial photographer obtained the appropriate permits from the National Oceanic and Atmospheric Administration (NOAA) to specifically film cetaceans, seals, and turtles.

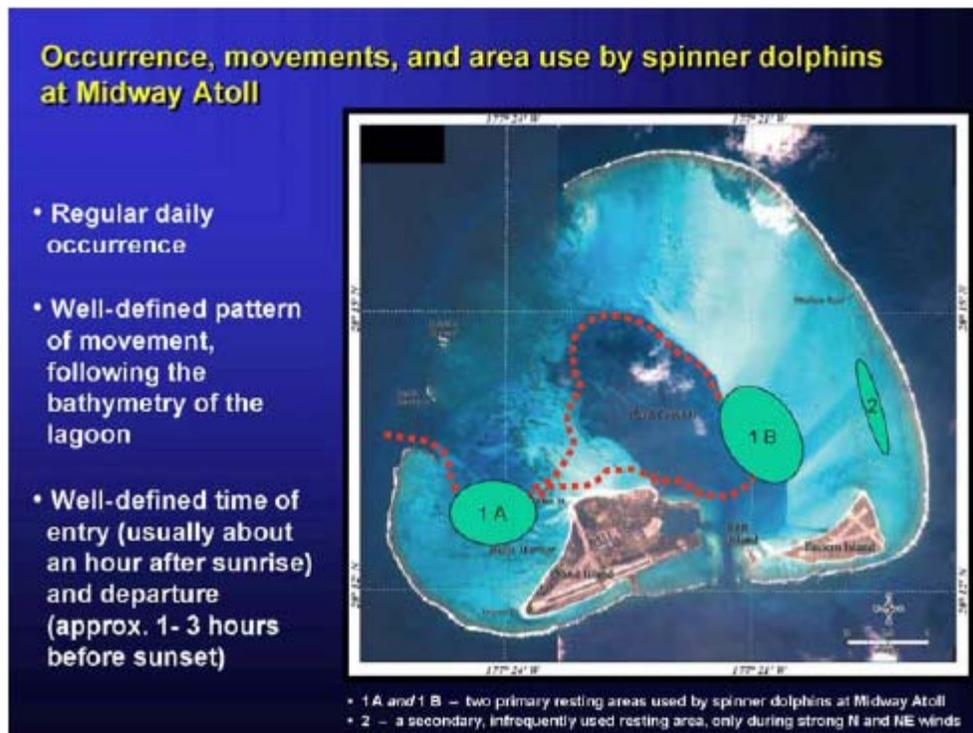


Figure 1. Occurrence, movements, and area use by Hawaiian spinner dolphins at Midway Atoll (courtesy of Dr. Leszek Karczmarski)

To eliminate anchoring impacts on coral, boat operators would be required to anchor in known sand areas or tie up to a mooring buoy.

Only four-stroke outboard motors would be used for permittee boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

Power boats taking permittees to Eastern Island or snorkeling or diving may encounter spinner dolphins or, less frequently, green turtles while traversing the lagoon. Hawaiian monk seals are only rarely observed swimming in the lagoon. Boat operators would be fully briefed on known resting areas of spinner dolphins in the lagoon (Figure 1.1 above) and routes to and from snorkel and dive sites would be plotted to avoid these areas as well as preferred Hawaiian monk seal haulout, molting, and pupping sites.

Permittees and their luggage would go through an inspection for insects and plants prior to departing Honolulu, and again when leaving Midway to reduce the possibility of alien species introductions. Permittees would be asked to clean their shoes and other clothing before coming to Midway through advance introductory materials. Anyone bringing their own snorkel or dive gear to Midway would be required to treat the gear to prevent the inadvertent introduction or transmission of alien species.

A review of files documenting past visitor/permittee violations of closed beaches and/or monk seal disturbance shows that many of the people had not received orientation to the Refuge and closed areas. Strict compliance with the orientation policy would address many of those types of violations. Some of the documented violations were clearly due to poor or nonexistent signing. A new sign plan would be developed by refuge staff and all signs put in place in 2008. Temporary signs may be used prior to that time. Permits may be temporarily or permanently withdrawn for purposeful violations of closed beaches and endangered species regulations.

All commercial films, books, and other recordings of images and sounds collected on the Refuge would need to reference the fact that they were collected on the Refuge.

Permittee would provide FWS and Co-Trustees with at least one free copy of all commercial products generated on the Refuge for noncommercial use promoting the Monument, Refuge, and the National Wildlife Refuge System.

**Justification:**

Allowing commercial photography, videography, filming, and audio recording on the Refuge would contribute to the achievement of the Refuge purpose and the mission of the FWS. The products may reach groups of people who would not normally know about the Refuge. The services provided by commercial filmmakers are also beneficial to expand public appreciation and understanding of unique wildlife, diverse native habitats, and the mission of the National Wildlife Refuge System.

Conditions imposed by the Refuge and Monument in their permits for photography, videography, filming, and audio recording would ensure that these activities occur without adverse effects to Refuge resources or other permittees.

This proposed activity contributes to the mission of the FWS. In addition to reaching the general public through educational wildlife media, the end products may provide an educational opportunity to a much broader distribution of people who may not have the opportunity to view these remote and very unique resources. The products produced by these commercial operations would also be beneficial in promoting the mission of the National Wildlife Refuge System.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

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**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge

Use: Sustenance Fishing

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: \_\_\_\_\_

Date: \_\_\_\_\_

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

A compatibility determination is required before the use may be allowed.

**FWS Form 3-2319  
02/06**

## **Finding of Appropriateness of a Refuge Use: Attachment 1**

Use: Sustenance Fishing

Additional information regarding the U.S. Fish and Wildlife Service evaluation of proposed Sustenance Fishing at Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument.

- i. The project does not contribute to the public’s understanding and appreciation of the Refuge’s natural or cultural resources and is not beneficial to the Refuge’s natural or cultural resources. Since the activity has failed to meet this requirement, consistent with relevant policy (603 FW 1.11 B.) the Refuge has completed an “Exceptional or Unique Circumstances Analysis” (see below).

Exceptional or Unique Circumstances Analysis for Sustenance Fishing at Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument (603 FW 1.11 B.).

The “Finding of Appropriateness of a Refuge Use” determination revealed that proposed Sustenance Fishing would not contribute to the public’s understanding and appreciation of the Refuge’s natural or cultural resources and would not be beneficial to the Refuge’s natural or cultural resources. However, following the Refuge conditions for compatibility will establish that sustenance fishing will also not materially detract from these resources or the public’s understanding and appreciation of them. Despite not meeting this requirement and consistent with relevant policy (603 FW 1.11 B.), the Refuge has made a determination that the use is appropriate for the following reasons.

- The use would not measurably harm cultural resources or populations of fish, wildlife, plants, or their habitats on the Refuge.
- The use would not adversely impact the public’s understanding and appreciation of the Refuge’s natural or cultural resources. For those members of the public participating in the use incidental to a permit to conduct another activity, understanding and appreciation would increase.
- The use would only be allowed if it were also determined compatible.
- Resuming sustenance fishing at Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument would enhance the quality of life for Monument employees and other permittees, many of whom are stationed at this remote location or on a vessel for extended periods of time, by providing fresh food at substantial savings to the Government.
- Sustenance fishing is recognized as part of the culture and practices of Native Hawaiians and is allowed under Presidential Proclamation 8031.
  - Presidential Proclamation 8031 allows the Secretaries of the Interior and Commerce to issue permits for a variety of activities, including sustenance fishing incidental to other permitted activities.

### **Compatibility Determination**

**Use:** Sustenance Fishing

**Refuge Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, Papahānaumokuākea Marine National Monument

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is considered an unincorporated, insular area of the United States (General Accounting Office 1997), and lies outside the State of Hawai‘i

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay Refuge by a cooperative agreement with the U.S. Navy (Navy) under the authority of the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966, as amended (U.S. Navy and U.S. Fish and Wildlife Service 1988). Under this agreement, administrative responsibility for the Refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Jurisdiction and control for Midway Atoll were officially transferred from the Navy to the FWS under Executive Order (EO) 13022, signed by President Clinton on October 31, 1996, which superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary’s Order (SO) 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation (PP) 8031 making Midway Atoll NWR part of a monument that became the Papahānaumokuākea Marine National Monument (Monument) on March 6, 2007 (PP 8112). Under PP 8031, Midway has unique authority and responsibility as a Monument Special Management Area.

**Refuge Purpose(s):**

The following purposes were included in the cooperative agreement between the Navy and FWS (U.S. Navy and U.S. Fish and Wildlife Service 1988) under the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act of 1934, and National Wildlife Refuge System Administration Act of 1966. Pertinent language in those statutes includes:

1. “. . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services.” (Fish and Wildlife Act of 1956)
2. “. . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . . .” (Fish and Wildlife Coordination Act of 1934)
3. “. . . consolidate the authorities . . . for . . . the conservation of fish and wildlife. . . .” (National Wildlife Refuge System Administration Act of 1966)

The following additional purposes were included in EO 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

Additionally, PP 8031 established the Papahānaumokuākea Marine National Monument, which covers a much larger area than the Refuge, but also includes the Refuge. The Monument establishing purpose is “. . . protecting the objects described above (coral, fish, birds, marine mammals, and other flora and fauna), all lands and interest in lands owned or controlled by the Government of the United States. . . .”

**National Wildlife Refuge System Mission:**

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended (NWRS Administration Act, 16 U.S.C. 668dd-668ee)).

**Description of Use(s):**

Presidential Proclamation 8031 allows the Secretaries of the Interior and Commerce to issue permits for a variety of activities, for which sustenance fishing may be incidental. This compatibility determination (CD) was prepared to address and evaluate this type of fishing in the Monument at Midway Atoll NWR. Parts of the Proclamation applicable to this evaluation include the following:

“The Secretaries, in their discretion, may issue a permit under this proclamation if the Secretaries find that the activity: (i) is research designed to further understanding of monument resources and qualities; (ii) will further the educational value of the monument; (iii) will assist in the conservation and management of the monument; (iv) will allow Native Hawaiian practices; (v) will allow a special ocean use; or (vi) will allow recreation activities.”

“Sustenance fishing means fishing for bottomfish or pelagic species that are consumed within the monument, and is incidental to an activity permitted under this proclamation. The Secretaries may permit sustenance fishing outside of any Special Preservation Area as a term or condition of any permit issued under this proclamation. The Secretaries may not permit sustenance fishing in the Midway Atoll Special Management Area unless the activity has been determined by the Director of the United States Fish and Wildlife Service or his or her designee to be compatible with the purposes for which the Midway Atoll National Wildlife Refuge was established. Sustenance fishing must be conducted in a manner compatible with this proclamation, including considering the extent to which the conduct of the activity may diminish monument resources, qualities, and ecological integrity, as well as any indirect, secondary, or cumulative effects of the activity and the duration of such effects. The Secretaries would develop procedures for systematic reporting of sustenance fishing.”

The FWS proposes to allow limited sustenance fishing to occur in pelagic (greater than 200 foot depth) waters of the Midway Atoll NWR. Fishing would be primarily for tunas (*Thunnus* spp., *Katsuwonus* spp.), wahoo (*Coryphaena bippurus*), and mahimahi (*Acanthocybium solandri*). The Refuge Manager would allow limited numbers of these fish to be caught for consumption within the Midway Atoll NWR.

Reef fish occur within or near the coral reef system within the Monument and many contain ciguatoxin, which can be dangerous or lethal if consumed by humans. Ciguatoxins are caused by the presence of certain microplankton or dinoflagellates naturally present in the marine ecosystem which bioaccumulate in some reef fish (Center for Disease Control and Prevention 2008). Ciguatera is defined as seafood poisoning due to ciguatoxin, a toxin acquired by eating fish that have consumed these microplankton or dinoflagellates, or fish that have consumed other fish that have become toxic. When humans eat these fish, they suffer seafood poisoning. Therefore, the only type fish suitable for consumption purposes are open-ocean or pelagic fish.

Fishing for bottomfish is allowable under PP 8031. However, due to the depressed populations of bottomfish species (NMFS 2006; Heinemann et al 2005), indicators that food limitation may be a factor in survival of endangered Hawaiian monk seals (Antonelis et al 2004, p. 82), and the potential for direct (harmful) interactions between seals and bottomfish fishing gear; fishing for bottomfish is not deemed biologically compatible at this time. As with many reef fish, bottomfish including some grouper and snapper may also contain ciguatoxin and be poisonous to humans if consumed (Center for Disease Control and Prevention 2008). Therefore the remainder of this CD discusses sustenance fishing for pelagic species only.

This CD discerns two basic groups conducting sustenance fishing for pelagics incidental to their permitted activity. The first is Co-Trustee agency personnel, volunteers, and contractors conducting sustenance fishing incidental to their Conservation and Management Permit. This includes land-based as well as ship-based personnel aboard vessels such as NOAA's *Hi'ialakai*. The second group is permittees operating under one of the five remaining permit types, specifically authorized to conduct sustenance fishing incidental to their primary permit activity. These non-Co-Trustee permittees could include, but are not limited to, both land- and vessel-based researchers, Native Hawaiian practitioners, and environmental educators. Except as noted, conditions and stipulations contained herein apply to both general groups.

Fish would be caught by stiff rod and reel or hand lines and surface trolling a lure (e.g., composed of a jet head, squid squirt, leader) and hook. The lures would be trolled at a boat speed of greater than 7 knots to eliminate the possibility that seabirds would chase after the lure and become hooked. Retrieval will be rapid to avoid losing a fish to a shark and also hooking it in the process. For this reason, a simple hand line made of at least 150-lb test line or greater with a shock chord (e.g., surgical tubing to absorb the energy of the initial fish strike and to indicate that a fish is hooked) is effective and would not allow the fish to take additional line out. Fish would be "muscle" immediately to the boat to lessen shark bycatch. Fish would be bled into a container and iced immediately (but not frozen) to keep the meat fresh.

For Co-Trustee agency personnel, authorization for sustenance fishing within the Monument is given to the Co-Trustee agencies through an annual Conservation and Management Permit. Therefore, sustenance fishing will be limited to those persons whose work and presence at Midway are authorized by that permit. On land, this generally includes FWS, NOAA and State personnel; long-term volunteers, and contractors. All fishing will be conducted from a federally owned, shore-based, power boat operated by an agency-certified boat operator (e.g., for the Department of the Interior, this is the Motorboat Operator Certification Course in accordance with 485 DM 22). For the FWS, the boat operator and anglers will be required to be off-duty in order to participate in this activity. Anglers will troll for pelagic fish with lures

as described previously. All fishing will be conducted for sustenance of the island community at the common table (i.e., the Midway galley called the “Clipper House”). Government vessel-based agency employees, volunteers, and contractors may fish for sustenance in accordance with their permit from their vessel in compliance with the conditions of this CD for the vessel’s common table.

Other island-based permittees who have sustenance fishing listed in their Monument permit as an incidental activity and have access to a private vessel may also be allowed to sustenance fish to provide food for the island’s population. Refuge visitors or other agency personnel who arrive via their own vessel and who have a valid Monument permit that authorizes sustenance fishing will also be allowed to fish subject to notification of their intent to the Refuge Manager and their willingness to comply with Refuge regulations and stipulations as described herein. Unless specifically authorized through their permit, other visitors to Midway (including recreational visitors) are not authorized to conduct sustenance fishing as an incidental activity.

All permittees engaged in sustenance fishing may only catch fish in quantities needed for immediate consumption within the Monument; such that fish will be consumed the same day as caught or refrigerated and eaten within 2 days of take. The intent of sustenance fishing under this CD is to provide fresh food for the common table (e.g., the Clipper House). Therefore, no fish taken under this permit will be frozen for later consumption, and the quantity of fish taken will not exceed what can be consumed by island residents or vessel occupants within that 2-day period. Although a limit on the *number* of fish allowed is stipulated here, if sufficient *poundage* of fish is caught to provide for the common table before the number limit of fish is reached; fishing will cease. An estimate of 50 lbs per fish was used in Figures 1 and 2, below, although the average fish caught by FWS personnel at Midway Atoll NWR in the past was usually only 25 lbs. This conservative estimate is used to favor the continued sustainability and therefore continued compatibility of sustenance fishing.

For Co-Trustee agency personnel, the use would include 26 boat trips each year based out of Midway Atoll, and the NOAA ships *Oscar Elton Sette* and *Hi‘ialakai* deploying 2-4 lines as they transit between research sites within the Monument (approximately 10 transit days at Midway each year). Shore-based boats are limited to 6 people or fewer aboard by the maximum number of trolling lines that can simultaneously be deployed from the stern of a small boat plus a boat operator and lookout, as well as reduce the possibility of multiple fish being simultaneously hooked and inadvertently exceeding the daily limit of fish. No data exists for past sustenance fishing effort or catch by other permittees, therefore, an estimate of up to 15 private vessels (e.g., sailboats) and 5 contract vessels (e.g., barges) may troll for fish enroute to or from Midway, but within Midway’s waters, each year. This estimate of private vessel requests may have to be adjusted based on actual experience over the next few years as the actual demand for sustenance fishing is established. We have no past experience of sustenance fishing from cruise ships, and as such, this use is not considered here.

Collectively we will control the take of no more than 300 fish per year from Midway’s waters (208 to island residents and up to 92 more for vessel-based sustenance fishing). Conservatively this may equate to 15,000 pounds of fish, or 6.8 t. Based on actual experience, poundage would likely be half this estimate. This represents approximately 0.06% of the total catch of the three types of fish considered in this CD landed in 2003 by commercial fishers in both the main Hawaiian Islands and NWHI (WPFMC 2005b).

#### **Availability of Resources:**

For the FWS, this activity occurs during nonworking hours and constitutes a very small portion of FWS staff time. The major cost of this activity is maintenance of FWS vessels, supplying fuel, monitoring the activity, and reporting catches.

Category and Itemization	One time (\$)	Annual (\$/yr)
Administration and Management		\$1,700
Maintenance		\$3,000
Monitoring		\$2,600
Boat Fuel		\$1,950
Offsetting revenues (estimated)		\$30,000

The numbers above reflect the current estimated costs. Estimated costs were calculated using 2% of the base cost of a GS-13 refuge manager and 4% of the base cost of a GS-11 wildlife biologist assuming that activity would use that estimated “portion of a year” to administer. Maintenance would consist of routine maintenance on the powerboats. Fuel would consist of approximately 15 gallons (at \$5 per gallon) of gasoline per fishing trip with approximately one trip occurring every 2 weeks. Monitoring will consist primarily of staff time needed to collect, total, and transmit catch data in the required Monument permit reports and consult with NOAA Fisheries experts. Additional monitoring time will also be required for Refuge staff to conduct literature searches and/or correspond with researchers to stay current with available scientific data and opinion regarding populations of pelagic fish species in the North Pacific. The cost of shipping fresh fish to Midway (i.e., by air, not vessel) is approximately \$9 per pound. The value of fresh fish caught between June 2006 and February 2007 (9 months) (50 fish at approximately 50 lbs each, see Fig. 1) was approximately \$22,500, or \$30,000 per year. Using a more precise estimate of only 25 lbs per fish, this still yields an offsetting savings to the Government of \$15,000.

**Anticipated Impacts of the Use(s):**

Possible impacts from persons involved in sustenance fishing include: (1) disturbance to flying, foraging, and resting seabirds and other migratory birds on the open ocean; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming, feeding, and resting in the open-ocean marine environment; (3) disturbance to spinner dolphins (*Stenella longirostris*) swimming, feeding, and resting in the open-ocean marine environment; (4) disturbance to fish, sharks, cetaceans, and marine invertebrates; (5) accidental release of pollution and contaminants; and (6) the accidental introduction and establishment of nonnative species to the Monument. All sustenance fishing would be designed and managed in a manner to eliminate or minimize these impacts. However, even with proper management and execution of a well planned activity, certain behavioral responses in wildlife may occur that are not easily recognized by the casual observer. Some proposed activities will require further analysis and compliance by the agencies as more detailed information becomes available and specific plans are developed. These requirements may include additional analysis in accordance with NEPA, and consultation under ESA, Marine Mammal Protection Act, NHPA, and other relevant laws.

*Seabirds*

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon et al., 1995 and Kataysky et al., 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. When permittees are fishing near albatrosses, terns, boobies, or other species, they would have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Kitaysky et al. (2003) showed that limited duration disturbance, however, has only minor, short-term effects. Trolling speeds would be maintained at a speed of greater than 7 knots to eliminate the risk of hooking seabirds and boats would steer around groups of fishing seabirds rather than navigating through them.

### *Hawaiian monk seals*

Human activities have played a major role in determining the status and trend of Hawaiian monk seals over the past two centuries (Ragen 1997). From the 1960s to the 1990s, decreases in monk seal populations at several locations (French Frigate Shoals, Midway Atoll, and Kure Atoll) have been associated with human disturbance (Gerrodette 1990). Human activity and disturbance caused incredible declines at Midway Atoll (Kenyon 1972). Beach counts of monk seals at Midway Atoll averaged 56 animals in the late 1950s, but declined severely by the late 1960s with a single seal observed during an aerial survey in 1968. However, interactions between small boats operating in the open ocean and monk seals are very rare. In that rare instance where a passing boat operates near a swimming monk seal, the operator will be instructed to change course away from the seal and leave the area in which the seal is swimming. Any such instances are expected to produce only very short, minimal impacts to monk seals with no cumulative impacts.

### *Invasive species*

Increased use of waters also increases the potential for introductions of nonnative species and interactions (some negative) by ships, boats, or fishermen. One accidental introduction of a nonnative species on a boat or fishing equipment could devastate the Monument. The introduced sea star (*Acanthaster planci*) in Guam killed 1 km of coral in a month in a narrow fringing coral reef and 90% of the coral in a 2.5-year period along 38 km of Guam's coastline (Chesher 1969). Refuge small boats involved in sustenance fishing do not leave Midway waters and therefore have no chance to accumulate and subsequently disperse nonnative species, although care is taken not to further distribute nonnative species from one site to another within the atoll. Visiting ships and boats must meet Monument requirements for hull inspection and cleaning so the chances of introductions coming from those vessels are small.

### *Fish*

Many pelagic fish considered in this CD for sustenance fishing (including tunas) have high fecundity, with females spawning several million eggs per year. Age and size at first maturity are variable. Skipjack are generally 18 inches at 5 years. Tuna species considered here have high levels of absolute recruitment (WPFMC 2005a). The population dynamics of many pelagic species differ and, as such, affect the impacts of catch. Skipjack tuna, for example, are short lived and fast growing, with high natural mortality and a large standing stock size. These characteristics suggest moderate levels of fishing can be sustained without materially detracting from the population. Likewise, yellowfin tuna are fast growing but they live longer and have more moderate natural mortality and smaller standing stock (WPRFC 2005a).

A 2003 report on commercial fisheries in the main and NWHI documents that long-line, handline, and pole and line fishing landed more than 10,250 t of tuna species (primarily bigeye and yellowfin), 600 t of *Coryphaena* (mahimahi), and 450 t of *Acanthocybium* (ono) (WPFMC 2005b). The annual catch of these pelagic fish probably depends on overall abundance, but the availability of fish to Hawai'i's pelagic fisheries is also highly seasonal (Yoshida 1974), suggesting that highly mobile pelagic fish change their distribution in response to environmental conditions (Mendelsohn and Roy 1986) or to enter different areas for reproduction.

Of sustenance catches, staff fishing aboard NOAA vessels in the Monument caught a total of 130 fish in 2007, 95% of which were pelagic (Fig. 1). No weights were taken on the fish, but catch weight was estimated at 6,500 lbs or 2.95 t (Fig. 1).

By policy FWS staff stationed in the Hawaiian Islands NWR conducted no fishing in 2007 and have not done so for at least the 6 years. The FWS staff based at Midway Atoll NWR engaged in sustenance fishing aboard FWS vessels in the Monument caught a total of 50 fish from June 2006 to February 2007

(9 months, including the most fishing productive summer months), all of which were pelagic. No weights were taken on the fish, but catch weight was estimated at 2,500 lbs or 1.13 t (Fig. 2). By policy FWS sustenance fishing at Midway Atoll has not occurred since February 2007. Obtaining actual weights will be required as part of any future sustenance fishing and subsequent reporting requirements.

Based on fishing reports from FWS and NOAA, a relatively low number of fish have been extracted from the Monument in recent times. If these trends continue at these levels, it appears as though sustenance pelagic fishing would not materially detract from the populations of these fish occurring in the Monument. At this time, data are not available for the last 5-10 years to see how recent catches compare to the past. No data are available on fishing effort, number of sharks caught, and bycatch.

Species	Common Name	Local Name	No. Caught	Year
<i>Acanthocybium solandri</i>	Wahoo	Ono	55	2007
<i>Thunnus spp. (obesus + albacares)</i>	Tuna	'Ahi	55	2007
<i>Euthynnus affinis</i>	Makeral Tuna	Kavakava	9	2007
<i>Thunnus albacares</i>	Yellofin Tuna	Yellowfin 'Ahi	5	2007
<i>Aprion virescens</i>	Green jobfish	Uku	3	2007
<i>Pristipomoides sieboldii</i>	Lavender jobfish	Kalikali	1	2007
undetermined		Red Taka	1	2007
undetermined		Pupu	1	2007

Figure 1. Fish caught (scientific name, common name, local name) by the NOAA vessels in the entire Monument during 2007 under sustenance fishing (NOAA unpub. data). Weights were not taken on these fish, so a liberal average weight of 50 lbs was applied to estimate total weight of the fish at (130 x 50 lbs): 6,500 lbs or 2.95 t.

Species	Common Name	Local Name	No. Caught	Year
<i>Acanthocybium solandri</i>	Wahoo	Ono	13	2006 - 2007
<i>Thunnus spp. (obesus + albacares)</i>	Tuna	'Ahi	15	2006 - 2007
<i>Euthynnus affinis</i>	Makeral Tuna	Kavakava	5	2006 - 2007
<i>Thunnus albacares</i>	Yellofin Tuna	Yellowfin 'Ahi	17	2006 - 2007

Figure 2. Fish caught (scientific name, common name, local name) by shore-based FWS vessels from sustenance fishing in the Midway Atoll NWR from June 2006 to February 2007 (FWS unpub. data). Weights were not available for these fish, so a liberal average weight of 50 lbs was applied to estimate total weight of the fish at (50 x 50 lbs): 2,500 lbs or 1.13 t.

The number of persons presently engaged in this activity is limited, and the catch is insignificant when compared to the quantity of fish landed prior to Monument establishment, and the relative fishing area compared to the size of the Monument. All catch data will be annually summarized and reported to Monument managers to determine if catch levels are acceptable and the activity remains compatible. No short-term impacts from this activity are anticipated. Summarized yearly catch data (including accidental catch of or interactions with seabirds, seals, turtles, sharks, and nontarget fish) will be used by Monument managers to evaluate continuation of this activity.

## Public Review and Comment

This determination was issued for public review and comment as part of the Papahānaumokuākea Draft Monument Management Plan. The plan and associated compatibility determinations were also made available through printed copies upon request and through Monument Web sites at <http://www.fws.gov/pacificsands> and <http://hawaiireef.noaa.gov/>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended, and as determined by the Co-Trustees of the Monument. The Monument is of national interest, therefore, the availability of the draft Monument Management Plan (including the CDs) was advertised at the national level.

### Determination:

Use is Not Compatible

Use is Compatible with Following Stipulations

### Stipulations Necessary to Ensure Compatibility:

#### GENERAL TERMS AND CONDITIONS:

Each permittee would be required to adhere to all general conditions specified by the Monument Co-Trustees in their joint permit (Attachment 1).

A more comprehensive list of Refuge and Monument conditions and restrictions is included in this CD and 50 CFR Part 27. Not all of these conditions and restrictions would apply to every use. Depending upon the type of use and where the activity occurs would drive which are relevant (Attachment 2).

All persons participating in the travel to and from any of the islands must adhere to the “Special Conditions for Movement to and from Islands” which cover quarantine requirements (Attachment 3).

#### SPECIFIC TERMS AND CONDITIONS:

Reporting requirements: For island residents, fish catch (including species, weights, lengths, and GPS location of catch), fishing effort, bycatch (including accidental catch of or interactions with seabirds, seals, turtles, sharks, and nontarget fish), and date of activity will be recorded after each trip and filed in the Refuge office. Vessel based permittees engaged in sustenance fishing will report fish catch (including species, weights, lengths, and GPS location of catch), fishing effort, bycatch (including accidental catch of or interactions with seabirds, seals, turtles, sharks, and nontarget fish), and date of the activity to the Refuge Manager on a trip by trip basis. All catch data will be annually summarized and reported to Monument managers to determine if catch levels are acceptable and the activity remains compatible. All sustenance fishing would be monitored by Refuge staff to ensure the use remains compatible and resources are not impacted. Such monitoring would include but is not limited to: (1) disturbance to flying, foraging, and resting seabirds and other migratory birds on the open ocean; (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green turtles (*Chelonia mydas*) swimming, feeding, and resting in the open-ocean marine environment; (3) disturbance to spinner dolphins (*Stenella longirostris*); (4) disturbance to fish, sharks, cetaceans, and marine invertebrates; (5) accidental release of pollution and contaminants; and (6) the accidental introduction and establishment of nonnative species to the Monument.

Sustenance fishing limits for Midway Atoll residents will be set at no more than 6 fish per day and 208 fish per year, taken on no more than 26 boat trips (with 6 people or fewer aboard). Although a limit on the number of fish allowed is stipulated here, if sufficient poundage of fish is caught to provide for the common table before the number limit of fish is reached; fishing will cease. The annual take limit will ensure that the total take does not exceed an annual average of four fish taken per week. The daily catch limit for Midway residents under this determination is based on the estimated amount that can be reasonably consumed by island residents within 2 days. The Co-Trustee vessels fishing in Midway's waters will also be limited to the number of fish or poundage needed to provide fresh fish for all personnel onboard the ship on that day. Up to 15 private vessels (e.g., sailboats) and 5 contract vessels (e.g., barges) may troll for fish, if authorized, en route to or from Midway, but within Midway waters, each year. Vessel-based sustenance will not take more than 4 fish per day total, up to 92 per year. Sustenance fishing will be conducted from ships by deploying 2- 4 lines as they transit Midway's pelagic waters. Collectively there will be no more than 300 fish taken for sustenance per year from Midway's waters (208 to island residents and up to 92 more for vessel-based sustenance fishing). Conservatively this may equate to 15,000 pounds of fish, or 6.8 t.

Lures will be trolled at a speed of at least 7 knots to prevent hooking albatrosses, boobies, and other seabirds that follow fishing boats. Seabirds are able to ingest lures trolled at slower speeds. Squid, fish, and other animal products would not be allowed for fishing – only artificial bait.

To avoid hooking sharks, predatory reef fish (i.e., giant trevally or white ulua (*Caranx ignobilis*), monk seals, and other nontarget species, only artificial lures will be used and trolling will occur in a water depth of at least 200 feet. Caught fish will be bled so the blood does not enter the ocean and attract sharks during the fishing activity.

In an effort to prevent sharks from eating a hooked fish and also becoming hooked, fish will be brought into the boat as quickly as possible using hand lines or stiff rods with heavy test line (> 150 lbs) set with a heavy drag.

Fishing for bottomfish is not allowed.

All fishing gear will be cleaned using a mild bleach solution before use in the Monument and must also be cleaned according to quarantine procedures (Attachment 3). The bleach solution would be disposed of properly.

Fishing boats are required to navigate around aggregations of foraging (fishing) or resting seabirds, rather than navigate through them.

All fish other than common pelagic fish such as tuna species ('ahi) (*Thunnus* spp., *Katsuwonus* spp.), mahimahi (*Coryphaena bippurus*), and wahoo (ono) (*Acanthocybium solandri*) will be released unharmed.

Permittees engaged in sustenance fishing may only catch fish in a quantity needed for consumption within the Monument. Fish caught by island residents are for consumption by island residents at the common table (i.e., Clipper House). Fish caught by vessel-borne permittees are for consumption by the vessel occupants at the common table.

Island-based vessels involved in fishing are required to return to dock at least 1 hour before sunset, which enhances boat operators' ability to avoid collisions with marine life.

Power boat operators may slow to allow permittee observation of approaching spinner dolphins, but would neither pursue the dolphins nor specifically seek them out.

Only four-stroke outboard motors would be used for permittee boats. These motors are cleaner-running and quieter than two-stroke motors and would not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds would be associated with this program.

**Justification:**

Proclamation 8031 bans most resource extraction but allows the Secretaries to permit sustenance fishing incidental to other permitted activities.

Sustenance fishing will enhance the quality of life for Refuge employees, contractors, volunteers, and other permittees, many of whom are stationed in remote locations and/or on a vessel for extended periods of time. It will also provide a source for fresh fish that is difficult and expensive to transport from commercial sources in Honolulu due to logistical limitations. Sustenance fishing is recognized as part of the culture and practices of Native Hawaiians and is allowed under Proclamation 8031.

Sustenance fishing for pelagic fish has limited impact on the Monument's natural resources with the following guidelines: using artificial lures; trolling at higher speeds in deep water; landing fish quickly; limiting the catch; not removing fish from the Monument; not allowing fishing for bottomfish; keeping only common pelagic fish such as tuna species, mahimahi, and wahoo; and monitoring the impacts and recording catch, fishing effort, and bycatch.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

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**Refuge Determination:**

Refuge Manager  
Approval: \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

FWS Superintendent,  
Papahānaumokuākea Marine National Monument  
\_\_\_\_\_  
(Signature) Date: \_\_\_\_\_

Project Leader,  
Hawaiian and Pacific  
Islands NWRC  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

**Concurrence:**

Refuge Supervisor,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

Regional Chief,  
National Wildlife  
Refuge System  
Pacific Region  
\_\_\_\_\_  
(Signature) Date \_\_\_\_\_

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## **Attachment 1: General Terms and Conditions of a Papahānaumokuākea Marine National Monument Permit**

### **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 Monument official signs the permit and shall remain valid for not more than one (1) year from that date.

Permit Coordinator  
Papahānaumokuākea  
Marine National Monument  
6600 Kalanianaʻole Hwy. Suite 300  
Honolulu, HI 96825

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-Trustees. 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-Trustees, be renewed or reissued. However, there is no right to a renewal or re-issuance of a permit. 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. 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.
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](mailto: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 are 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 refuge regulations. 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 the National Oceanic and Atmospheric Administration, the Department of Commerce, the U.S. Fish and Wildlife Service, the Department of the Interior, the United States Government, the State of Hawai'i, 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, 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. For activities on State lands or within State waters, the permittee must submit a monthly report on the specified form.
  - b. The permittee must maintain a cruise log including, but not limited to: anchoring locations and small boat dive locations. The log must contain a description of cruise activities and the geographic locations of those activities. Within thirty (30) days after the end of the cruise or the expiration date of this permit, the permittee must submit the cruise log and a summary report of activities conducted under this permit. The permittee having authority over the vessel must maintain a 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. Two hard copies and one electronic copy (Microsoft Word preferred, but not required), must be submitted to the Co-Trustees. The annual report is due by the end of the second week of January of the calendar year that follows the year that the permit was in effect or before a new permit is issued, whichever comes first. Subsequent annual reports are required each year until all data collected under research permits are fully analyzed.
  - d. The permittee must debrief the Co-Trustees following the completion of all activities in the Monument covered under this permit. The permittee must schedule the debriefing upon submitting the annual report.

- e. 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.
  - f. 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-200x-xxx. This requirement does not apply to publications or reports produced by the news media.
  - g. 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 redissemination, 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.

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## **Attachment 2: Refuge and Monument Conditions and Restrictions**

- When replacing collected organisms into the ecosystem, they must be released as near as possible to the collection location. Precautions must be taken at every step in their handling to minimize harm and prevent mortality.
- Algae collected as bycatch in traps or other collecting equipment must be frozen as soon as possible for the purpose of transport to the main Hawaiian Islands.
- Collecting and sampling equipment must be deployed in low relief pavement or on sandy substrate where corals are known to be absent.
- Permittee is required to be accompanied by a U.S. Fish and Wildlife Service representative for the purpose of escorting all authorized personnel named on this permit on XX Island. This Monument representative will provide on-site real-time natural, cultural, and historic resource protection and disturbance prevention training and guidance.
- All scientific fishing gear must be checked at least at 4-hour intervals during daylight hours.
- Placement of equipment in waters greater than 100 meters deep must occur in locations determined to be flat, sandy substrate using multibeam bathymetry (if available).
- Swimming, SCUBA, and snorkeling are allowed only for vessel maintenance, emergency operations, and non-recreational support of vessel and research activities.
- The permittee must track all sustenance or subsistence fishing conducted in Monument waters outside of Special Preservation Areas. Permittee must also provide data as requested in the Monument Sustenance Fishing Data Sheet (attached) within 30 day of expiration of this permit.
- Permittee is required to work in conjunction with the U.S. Fish and Wildlife Service, Hawaiian Islands National Wildlife Refuge regarding any arrangements to visit Nihoa Island, Necker Island, the islands of French Frigate Shoals, Gardner Pinnacles, Laysan Island, Lisianski Island, and the islands of Pearl and Hermes Atoll respectively.
- Drifter buoys deployed and debris upon which they are attached that subsequently become fouled on the reefs of the Papahānaumokuākea Marine National Monument must be retrieved.
- All organisms in or on collection devices shall be removed, documented, photographed, labeled, and preserved prior to leaving the Monument.
- Any permanent or semi-permanent installation on the sea floor must be located on sandy substrate only.
- All samples and specimens must be dead during transport within and outside of the Monument.
- This permit does not allow access to emergent land except at XX island.
- Permittee must take every precaution to minimize the impact to surrounding nests and birds when working within the seabird colonies.
- This permit is not to be used for nor does it authorize the sale of collected organisms. Under this permit, the authorized research 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.
- The permittee and those working under the authority of this permit must be familiar with the “Marine Wildlife Viewing Guidelines,” accessible at NOAA’s National Marine Fisheries Service website: [http://www.fpir.noaa.gov/PRD/prd\\_laws\\_policies\\_guidelines1.html](http://www.fpir.noaa.gov/PRD/prd_laws_policies_guidelines1.html)

- If there is any Hawaiian monk seal or any other protected species in the area when performing any permitted activity, the activity shall cease until the animal(s) depart the area.
- Permittee must adhere to Papahānaumokuākea Marine National Monument Special Conditions and Rules for Moving Between Islands and Atolls and Packing for Field Camps attached to this permit.
- All insects must be dead before departure from the Monument.
- Permittee must carefully evaluate each bird to ensure each individual is healthy prior to the fixation of satellite tags and collection of blood as stated in the permitted activities above.
- The permittee will implement the “Best Practices for Minimizing the Impact of Artificial Light on Sea Turtles” Pacific Islands regional Office, NOAA National Marine Fisheries service, Rev. Nov. 9, 2007, as applicable. See the attached document.
- The taking of any animal, vegetable, or mineral matter, except as authorized in the permit is prohibited on all refuge lands and waters. Beach combing or removal of flotsam from the beaches (including Japanese floats) is not allowed within the boundaries of the refuge without permission from the Superintendent.
- Entry in to the seabird colonies is prohibited unless expressly authorized by permit. Care must be taken to minimize disturbance to nesting birds and their habitat to avoid nest burrow cave-ins.
- Artificial light sources must be reduced at night to prevent disorienting seabirds and turtles.
- On-site refuge staff have the authority to regulate and restrict activities more stringently than defined in a permit if, in their opinion, such action is necessary to limit disturbance to wildlife, to protect government equipment, or to insure the safety of personnel.
- There will be no tolerance of any intentional disturbance to wildlife of any kind. If intentional disturbance is witnessed by Service staff, the individual(s) may be removed from the Refuge immediately at the Service staff’s discretion. All costs of personnel transfer from the Refuge will be the responsibility of the Permittee.
- Disturbance to sea turtles and monk seals must be avoided. Minimum distances of 150 feet from all monk seals and sea turtles, and 300 feet from female seals with pups must be maintained. No harassment of any kind will be tolerated.
- Divers must be responsible by making sure your equipment is secured, you are weighted properly, check the water for submerged coral before exiting boats, and be careful not to touch or stand on living coral or other biota unless specifically permitted to do so.
- Disturbance or collection of archaeological materials such as bottles, dishes, cartridge cases, hospital materials, carvings, and human remains is strictly prohibited. However, the Service does recognize some of the native Hawaiian cultural/spiritual practices may involve moving stones which would not be considered disturbance.
- Prior to any ship or barge entering the Refuge, the hull must be inspected for fouling marine organisms. Any vessel found to have a fouled hull will be required to have the entire hull cleaned. Re-inspection of the cleaned hull before the vessel is allowed to enter the Refuges. All expenses relating to inspections and cleaning will be the responsibility of the Permittee. Results of all hull inspections must be submitted to the Refuge Manager prior to the vessel departure from Honolulu. Following the initial hull inspections, follow up inspections will be required once per year at a minimum for all vessels that will be operating within the Refuges of the Pacific Remote Islands NWR Complex.
- No discharge of ballast water will be allowed by any vessel within Refuge boundaries.

- No discharge of sewage, gray water, bilge water, trash or waste of any kind will be allowed by any vessel within Refuge boundaries.
- Small boat traffic within the Refuge is only permitted between 30 minutes after sunrise and one hour before sunset.
- If boating near shore or any emergent land, small boats must be kept a minimum distances of 150 feet from all monk seals and sea turtles, and 300 feet from female seals with pups that may be on shore. If a small boat is anchored in the water and a seal or turtle approaches the boat, passengers in the boat must remain in the boat, and the boat must remain anchored with its engine turned off until the animal leaves the area.
- All materials that are brought to the Refuge by the Permittee that become waste must be removed by the Permittee.
- Power boat operators may slow to allow observation of approaching dolphins and cetaceans, but will neither pursue them nor specifically seek them out. If cetaceans are encountered during transit between two points, FWS will allow the boat to slow and/or stop for observation, but entering the water will not be allowed.
- To eliminate anchoring impacts on coral, boat operators will anchor in sandy substrate only. Anchors will be lowered into place rather than tossed overboard.
- Snorkeling will be limited to persons accompanying Service staff during normal research and management activities and under no circumstances will it be allowed for solely recreational purposes.
- Only four-stroke outboard motors will be used for small boat operations. These motors are quieter than two-stroke motors and will not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals and have fewer emissions. No other loud sounds will be associated with this activity.
- Under no circumstances will Service employees or other Permittees disturb any native Hawaiian cultural sites.
- Photography of native Hawaiian iwi (bones, remains) is strictly prohibited at all times.
- Any sustenance fishing may be included as part of an existing permit for onsite activities, vessels, and boats passing through Monument waters or for native Hawaiian practitioners.
- The permit will limit both the kind and amount of fish available for taking
- In the event a determination is made that the activity is negatively influencing Monument resources, sustenance fishing will cease immediately until further regulations can be developed.
- Any onsite environmental education will be closely supervised by Service staff.
- Any students will be subject to the same restrictions (e.g., beach closures, distance limitations from wildlife, etc.) as other visitors.
- No more than 12 people will be led at one time on guided walks.
- All visitors will attend an orientation upon (or before) arrival and be given appropriate narrative and graphic material to clearly indicate which areas are open for public use and to clarify regulations in force to protect wildlife and habitat.
- Signing along trails will identify approved areas for beach access, wildlife observation, etc. Refuge staff will monitor public use to assess and respond to incidents of noncompliance with refuge

regulations. Vegetative screening will be used to ensure that visitors do not walk off trails. (This would occur if a much larger program were developed as a result of increased funding and staff.)

- “Field talks” will be located outside, on roads or trails along the edge of nesting seabird colonies or at a safe distance from other wildlife species. Only trained Service staff conducting the talk will be entering nesting colonies for brief periods.
- Interpreters will clearly explain the rationale for access restrictions and the action that will be taken to enforce regulations.
- Any spiritual or cultural offerings must be in compliance with the refuge quarantine requirements. This will make most plant materials unsuitable, although some salt free of organisms and their reproductive bodies may be suitable.

### **Attachment 3: Papahānaumokuākea Marine National Monument Special Conditions and Rules for Moving Between Islands and Atolls and Packing for Field Camps, June 2007**

The islands and atolls of Papahānaumokuākea Marine National Monument (Monument) and the Hawaiian Islands National Wildlife Refuge are special places providing habitat for many rare, endemic plants and animals. Many of these species are formally listed as Endangered under the Endangered Species Act. Endemic plants and insects, and the predators they support, are especially vulnerable to the introduction of competing or consuming species. Such introductions may cause the extinction of island and reef endemics, or even the destruction of entire island or reef ecological communities. Notable local examples include: the introduction of rabbits to Laysan Island in 1902 which caused the extinction of numerous plant and insect species, and 3 endemic landbird species; the introduction of rats to many Pacific Islands causing the elimination of many burrowing seabird colonies; the introduction of the annual grass, sandbur, to Laysan Island where it has crowded out native bunch grass thus, eliminating nesting habitat for the Endangered Laysan finch; and, the introduction and proliferation of numerous ant species throughout the Pacific Islands to the widespread detriment of endemic plant and insect species.

Several of the islands within the Monument are especially pristine, and as a result are rich in rare and special plants and animals. Nihoa Island has at least 17 endemic and rare insect species, 5 Endangered plants and 2 Endangered birds. Necker Island has Endangered plants and 11 endemic insects. Laysan Island has Endangered plants, 9 endemic arthropods and the Endangered Laysan finch and Laysan duck. Other islands in the Monument such as Lisianski, and islets in Atolls such as Pearl and Hermes Reef and French Frigate Shoals provide homes for a variety of endemic and/or endangered species and require special protection from alien species.

Other Pacific Island such as Kure and the “high islands” (Oahu, Hawaii, Maui, Kauai, etc.) as well as, certain islands within Midway Atoll, Pearl and Hermes Reef and French Frigate Shoals have plants and/or animals that are of high risk for introduction to the relatively pristine islands discussed above. Of special concerns are snakes, rats, cats, dogs, ants and a variety of other insect and plant species. Harmful plant species of highest concern that we know of are *Verbesina encelioides*, *Cenchrus echinatus*, and *Setaria verticillata*.

The Co-trustees are responsible for the management and protection of the islands, reefs and wildlife of the Monument. No one is permitted to set foot within the Monument without the express permission of the Co-trustees through the permitting process. Because of the above concerns, the following restrictions on the movement of personnel and materials throughout the Monument exist.

**The following conditions and rules apply to the all islands within the Monument with the exception of those at French Frigate Shoals and Midway Atoll:**

#### **Definitions:**

“new” means off the shelf and never used anywhere but the island in question.

“clothing” is all apparel, shoes, socks, over and under garments.

“soft gear” is all gear such as daypacks, fannypacks, packing foam or similar material, camera bags, camera/binocular straps, microphone covers, nets, holding or weighing bags, bedding, tents, luggage, or any fabric, fiber, paper or material capable of harboring seeds or insects.

1. Any personnel who will be landing boats, and staying within the boats, at any island should have clean clothes and shoes.

2. Any personnel going ashore at any island and moving inshore from the immediate area in which waves are breaking, or beyond the intertidal area, at the time of landing must have new footwear, new or island specific clothes and new or island specific soft gear. All must be frozen for at least 48 hours prior to landing.
3. Any personnel entering any vegetated area, regardless of how sparse the vegetation, must have new footwear, new clothes and new soft gear all frozen for at least 48 hours prior to landing.
4. To avoid transport of seeds from within small boats the following protocol should be followed. For islands with safe or sandy landing conditions, one should keep quarantine shoes/socks inside quarantine containers until the island is reached. One should go ashore bare foot, and then don the quarantine shoes. Non quarantine shoes should be removed in the small boat, put into a bucket or some kind of sealed container, and left enclosed in that container until the person departs the island. The sealed container, if clean on the outside, may go ashore, but should not be opened ashore. For landings which are rocky, rough, and relatively unsafe (such as Necker and Nihoa) for safety reasons, quarantine shoes should be donned when inside the small boats, but care should be taken to look for seeds and insects which may be in the small boat.
5. Soft gear may not be moved between islands. Hard gear must be thoroughly cleaned and frozen for at least 48 hours between islands.
6. During transit, clothing and gear coming off Kure, Midway, or any islet of French Frigate Shoals must be carefully sequestered to avoid contamination of gear bound for cleaner islands. Special care must be taken to avoid contaminating gear storage areas and quarters aboard transporting vessels with seeds or insects from these islands.
7. Regardless of origin or destination, inspect and clean all equipment, supplies, etc., just prior to any trip to the Monument. Carefully clean all clothing, footwear and softgear following use to minimize risk of cross contamination of materials between islands.
8. Pack supplies in plastic buckets with fitted lids or other sealable metal or plastic containers since they can be thoroughly cleaned inside and out. **Cardboard is not permitted on islands.** Cardboard boxes disintegrate in a short time and harbor seeds, animals, etc., which cannot be easily found or removed. **Wood is not permitted unless sealed (painted or varnished) on all surfaces and frozen for 48 hours.**  
  
Wooden boxes can also harbor insects and seeds and therefore are only allowed if well constructed (tight fitting seams are required). All wood must be treated, and inside and outside surfaces must be painted or varnished to provide a smooth, cleanable finish that seals all holes.
9. Freeze or tarp and fumigate then seal all equipment (clothes, books, tents, everything) just prior to departure. Food and cooking items need not be fumigated but should be cleaned and frozen, if freezable. Cameras, binoculars, radios, and other electronic equipment must be thoroughly cleaned, including internal inspection whenever possible, but do not need to be frozen or fumigated. Such equipment can only be packed in wooden crates if treated as in #2 above. Any containers must contain new, clean packing materials and be frozen or fumigated.
10. At present, Tern Island is the singular exception to the above rule, having less stringent rules due to the large number of previously established alien species. Careful inspection of all materials and containers is still required. However, it is acceptable to use wooden and cardboard containers for transporting supplies to Tern Island. Also, there is no requirement for freezing or fumigating

items disembarked at Tem. Although requirements for Tem Island are more lax, the Refuge is still concerned about the possibilities of new introductions. Do not wear clothing to Tern Island that has been worn at Pearl and Hermes, Midway Atoll or Kure Atoll.

**Additional Special Conditions for Travel to Nihoa and Necker (Mokumanamana) Islands:**

Nihoa and Necker are the most pristine locations in the Monument. Nihoa is home to the highest number of federally listed endangered species in the Monument. Many areas of these small rugged islands are inaccessible. Introduction of any alien species could have disastrous results in a very short time. It would be almost impossible to mount any kind of control or eradication program on these islands should an alien species become established. Because of these reasons, access to Nihoa and Necker are strictly limited, and rules governing entry are more stringent.

1. Access to Nihoa and Necker by permittees will only be allowed under the accompaniment and supervision of a U.S. Fish and Wildlife Service (USFWS) Representative. The representative, who shall be appointed by the U.S. Fish and Wildlife Service Monument Manager will work with permittees to assure careful compliance with all rules for inspection, handling and preparation of equipment. The USFWS Representative will have the authority to control and limit access to various parts of the island to protect animals, plants and archaeological sites, especially endangered species. The USFWS Representative will have the authority to disallow access to the island, or order an immediate departure from the island if conditions for working on the island are not met or are violated in some way.
2. All field equipment made out of fabric material or wood must be new, and never previously used in the Northwestern or main Hawaiian Islands. Equipment previously purchased or made for use on Nihoa and Necker that has been carefully sealed and stored while away from Nihoa and Necker, and not used elsewhere, may also be brought onto the island. Rules for freezing and/or fumigating are as described for other sites in the Monument (see above).
3. Clothing, footwear (shoes, slippers, socks, etc.), daypacks (soft gear) must be new, unused, or previously only used on Nihoa (or Necker) and carefully sealed and stored while off of the island. Hard gear such as camera, and equipment must be thoroughly cleaned and inspected.

**Additional Special Conditions for Travel Within Pearl and Hermes Atoll:**

In recent years *Verbesina encelioides* has been introduced to Southeast Island within Pearl and Hermes Atoll. This noxious weed has taken over a large portion of the island. To prevent the further spread of this weed to the other islets within this atoll the following precaution must be taken:

1. Every person should have one set of quarantine gear and clothing for Southeast Island and one set of quarantine gear and clothing for all other islets in the atoll. For instance the same clothing, and if needed camping gear, may be used at north and seal kittery, but anything used at southeast needs to stay off all other islets in the atoll. Do not use the outer islet clothing and gear on Southeast Island.
2. Carefully inspect small boats and their associated equipment when traveling between islets at Pearl and Hermes Atoll. Since folks likely take one anchor ashore and put one anchor in the water there is potential for seed dispersal on anchor lines as well as from within the small boats. This needs to be watched very carefully.

**Additional Special Conditions for Food:**

Fresh foods such as fruits, vegetables, leafy vegetables and tubers are not permitted on quarantine enforced islands (Necker, Nihoa, Laysan, Garner Pinnacles, Lisianski and Pearl and Hermes Reef). Concern is not only that certain species such as tomatoes could easily become established but that decomposing organic waste can also harbor microbes and insects and can act as an introduction vector. Soil can contain many seeds, eggs, larvae, etc., and cannot be transported to or between islands.

All other food that can be safely frozen (this does not apply to food in cans or glass jars) must be packaged in air tight containers just as all other gear and frozen for 48 hours.

**The following Compatibility Determinations  
were completed and approved  
in May 2007 as part of the  
Midway Atoll Interim Visitor Services Plan.**

**They remain valid until their  
specified re-evaluation date.**

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### **Compatibility Determination**

**Use:** Wildlife Observation and Photography

**Refuge Name:** Midway Atoll National Wildlife Refuge and Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay NWR under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy (Navy). The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to the FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;

4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

### **National Wildlife Refuge System Mission**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee.]

### **Description of Use(s):**

Compatible wildlife observation and photography are priority general public uses as designated in the National Wildlife Refuge System Improvement Act of 1997. As such, most refuges, including Midway Atoll, seek means to allow these uses in an appropriate and compatible manner.

The abundance of wildlife at Midway Atoll will allow the public endless opportunities to observe and photograph many different species in their natural habitat. The seasonal activity of species such as the Laysan albatross may drive increased visitor interest during certain seasons. However, the diversity of fauna and flora, both marine and terrestrial, should encourage year- round public access.

On Sand Island, land-based observation and photography are enabled by trails, access to open beach areas, and observation towers. A stationary wildlife viewing blind will be erected to facilitate viewing Laysan ducks and migratory birds. Additional native vegetation will be added near Turtle Beach to serve as an observational screen. The possibility of a portable viewing blind for other species remains open for future visitor use.

On Eastern Island, wildlife observation and photography will occur under the guidance of FWS-approved staff during walking tours of the island. Due to the sensitive nature of species such as sooty and gray-backed terns, red-footed boobies, and short-tailed albatross, tours of Eastern Island will be limited in duration and frequency.

On land, most wildlife observation and photography would be conducted on foot, by bicycle, or by golf cart. Means to observe marine wildlife species will include snorkel, diving, kayak, and power boat. Snorkel and diving observational tours will be led by experienced FWS-approved staff and/or guides under tightly controlled group tours to specific locations. These locations will include known reef locations with safe swimming conditions, interesting coral formations, and abundant reef fish, but not sites of particular importance to endangered Hawaiian monk seals or threatened Hawaiian green sea turtles. Known shallow depth submerged artifacts such as World War II-era aircraft or vessels may be included as dive sites as they typically harbor abundant reef fish. Kayak tours will also be led by qualified personnel with groups limited to six kayaks or fewer traveling to specific locations. Wildlife observation from power boats will only be opportunistic as the boats are used to ferry visitors to and from snorkel/dive locations or Eastern Island. This will be the most frequent means for visitors to observe spinner dolphins. Hawaiian monk seals and Hawaiian green sea turtles may also be observed on refuge beaches where they frequently haul out to rest.

**Availability of Resources:**

Current refuge staffing is not adequate to properly run a quality visitor program. For Fiscal Year 2007 it is anticipated that the refuge will add at least one refuge ranger on-island to work with visitors. Additional staff support will be provided by the Hawaiian and Pacific Islands NWR Complex for periods of peak visitor use. To properly support the full visitor program envisioned in 2008 and beyond, two additional visitor services specialists and a law enforcement officer will be required in addition to increased staffing needs by the refuge infrastructure support contractor. Certain refuge infrastructure improvements will also be needed to support the visitor program. These will include improved signing, larger and safer boats, on-island transportation (bicycles or golf carts), and kayaks.

Midway Atoll NWR has been charged by Congress and the FWS with developing a visitor program that is self-sustaining financially. To help us meet this goal Congress has also given the refuge receipts authority, which allows the refuge to keep reasonable fees collected for services provided at Midway Atoll. These fees will be used to offset costs of implementing the visitor services program. Estimated costs for implementation of this use and off-setting income are shown below:

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$17,740
Maintenance		1,000
Monitoring		
Special equipment, facilities or improvements	\$8,000	1,000
Offsetting revenues		\$165,000

Estimated costs were calculated using 35% of the base cost of a GS-7 refuge ranger assuming that this priority use would use that portion of a year to administer. Off-setting revenues are fees paid by visitors for their stay on Midway Atoll.

**Anticipated Impacts of the Use(s):**

Possible impacts from visitors involved in wildlife observation and/or photography include (1) disturbance to nesting seabirds, (2) disturbance to Hawaiian monk seals (*Monachus schauinslandi*) and/or green sea turtles (*Chelonia mydas*) swimming or resting on beaches, (3) disturbance to spinner dolphins (*Stenella longirostris*), and (4) disturbance to fish and marine invertebrates. Visitor programs will be designed and managed to eliminate or minimize these impacts. However, even with proper management and execution of a well run program, certain behavioral responses in wildlife may occur that are not easily observable.

Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, Nimon *et al.* 1995 and Kataysky *et al.* 2003). Studies, however, have not been conducted to document long-term cumulative effects of human disturbance. Albatrosses in the developed part of Sand Island are clearly acclimated to the presence of people but may still have elevated stress hormone levels. When visitors are observing albatrosses, terns, boobies, Laysan ducks, or other species in the less visited areas, they will have the potential of greatly elevating stress hormone levels if the duration of the disturbance is excessive. Studies have shown (Kitaysky, *et al.* 2003) that limited duration disturbance, however, has only minor, short term effects. Observation periods for any particular bird or group of birds away from the town area of Sand

Island will be kept to 15 minutes or less for this reason. Observance of the rare short-tailed albatross, for example, will be managed under this guideline.

Increased use of refuge waters also increases the potential for interaction/disturbance by boats, kayaks, or snorkelers/divers with monk seals, sea turtles, and spinner dolphins. Any action of pursuit or annoyance from boats potentially disturbs marine mammals in the wild by causing disruption of their behavioral patterns or displacement from essential habitat areas, especially if the dolphins or seals are in a rest phase. Snorkel or dive operations also include the added risk of damage to living coral on the refuge. Improper boat operation or visitor behavior could result in localized impacts to the coral reef from repeated anchoring, touching, standing, or other avoidable physical disturbance to the coral.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006 through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- The beaches on Spit and Eastern Island will be closed to visitors as well as the southern and western beaches on Sand Island (see Figure 3.1.1 in the interim visitor services plan). Power boats will not be allowed to travel closer than 500 feet from these closed beaches, except for guided tours to tie up to the pier on Eastern Island (see Figure 3.1.2). Guided kayak tours may only travel more than 150 feet from closed beaches from Rusty Bucket counterclockwise to Frigate Point as described in the interim visitor services plan.
- Visitors and residents are provided orientation materials and related information to minimize disturbance to wildlife (“wildlife viewing etiquette”). Specific restrictions (e.g., 150-foot approach distance for seals, prohibition of access to heavily burrowed areas, etc.) are strictly enforced. The orientation materials include specific indicators of wildlife behavioral responses to disturbance, especially for the Hawaiian monk seal and green sea turtle, as well as appropriate visitor response to being approached by wildlife. The orientation also includes a visual demonstration of a 150-foot distance. Information on the nesting locations of particularly rare species (e.g., white-tailed tropicbirds) may be withheld to protect these birds from disturbance. All visitors and new residents are required to go through orientation immediately upon arrival or early the next day in the case of an unusually late arrival.
- Professional photographers who desire access to areas not generally open to the public will be required to obtain the appropriate monument permit type (i.e., education or special ocean use). These permits stipulate more detailed access restrictions and regulations to protect wildlife. At the discretion of the refuge manager, FWS-approved staff and/or guides may be assigned to accompany professional photographers into particularly sensitive areas.

- All trips to Eastern Island for wildlife observation and/or photography will be closely supervised by FWS-approved staff and/or guides. Visitor tours of Eastern Island will be offered no more than once a week, unless specifically authorized by the refuge manager, and generally will be completed within a 3-hour period. Boats will tether to either end of the 150-foot pier, and disembarking passengers will be briefed on proper behavior to minimize disturbance to Hawaiian monk seals or green sea turtles that may be present. During periods of intensive tern nesting, routes will be carefully selected to minimize disturbance. Visitors will be advised to travel in single file in an expeditious manner through the colony. Photography will be allowed at the beginning and end of such a transit, not in the middle, to reduce the length of disturbance to the core nesting population. Restrictions on access to sensitive areas will be enforced. Spit Island will be off limits for wildlife observers and photographers unless they accompany FWS-approved staff and/or guides or permitted researchers during authorized project visits.
- Visitors will not be allowed to approach closer than 150 feet to Laysan duck seeps. The blind at the water catchment basin will allow visitors to see the species without disturbing the birds.
- Guided kayaking tours will be closely supervised by FWS-approved staff and/or guides. Buffer zones using the NOAA Watchable Wildlife suggested distance of 150 feet will be enforced as well as closures of selected lagoon areas to minimize disturbance of marine life, for example, a monk seal with pup. Visitors will be advised of proper actions to avoid disturbance and specific indicators of wildlife behavioral responses to disturbance, and all tours will follow planned routes designed to minimize disturbance and avoid sensitive areas. Kayak guides will be trained at estimating the 150-foot distance and will be responsible for keeping the entire group together. Since West Beach is a known pupping area, the buffer zone around known mother/pup pairs will be increased to 500 feet during the entire time the pair is on the beach. The NOAA-Fisheries seal biologist on Midway will keep refuge staff informed of new mother/pup pairs and their known locations. No kayaking will be allowed near Eastern or Spit Islands.
- Vessels involved in visitor activities will be required to return to dock at least 1 hour before sunset, which will also enhance boat operators' ability to avoid collisions with marine life. Within the inner harbor, boats must remain within speed limits of 10 knots. Visitors planning to engage in water-related activities during the albatross fledging season (June-July) will be thoroughly briefed on watching for shark activity, and water-related activities are not permitted during peak shark foraging times (½ hour before dusk to ½ hour after sunrise).
- Power boat operators may slow to allow visitor observation of approaching spinner dolphins, but will neither pursue the dolphins nor specifically seek them out. If dolphins are encountered during transit between two points, we will allow the boat to slow and/or stop for visitor observation, but entering the water will not be allowed. Routes to and from snorkeling/dive sites will be plotted to avoid known resting areas of spinner dolphins in the lagoon (see figure 1.1 below), as well as preferred Hawaiian monk seal haulout, molting, and pupping sites .

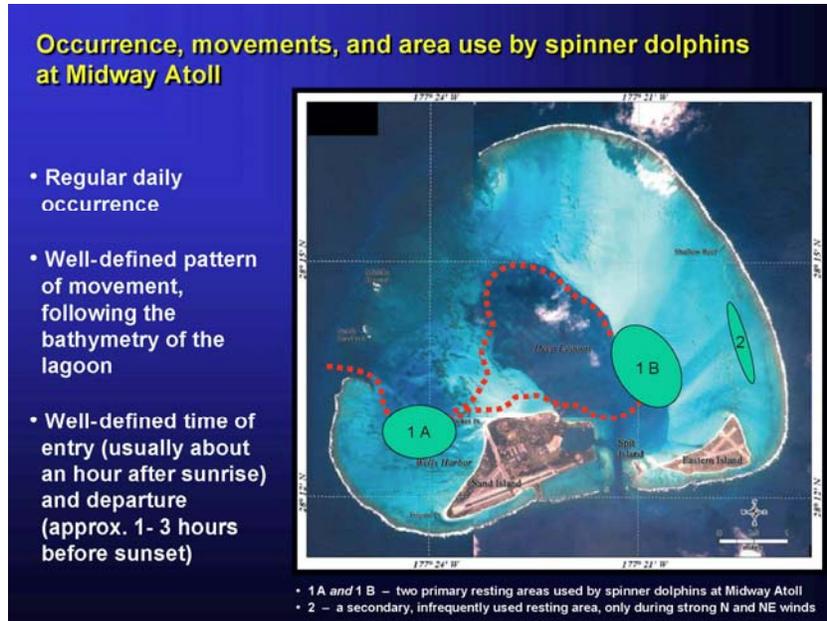


Figure 1.1. Occurrence, movements, and area use by Hawaiian spinner dolphins at Midway Atoll (courtesy of Dr. Leszek Karczmarski)

- To eliminate anchoring impacts on coral, boat operators will be required to anchor in known sand areas. If a selected visitor use area has no suitable sand for anchoring, then a mooring buoy will be set in a manner to prevent the boat from damaging any living or dead coral.
- Snorkel trips will be limited to eight persons per guide and dive trips to six persons per guide. This will help ensure that the group stays together for safety reasons and to prevent visitors from straying into sensitive areas, approaching swimming monk seals, or damaging coral.
- Visitors and their luggage will go through an inspection for insects and plants prior to departing Honolulu, and again when leaving Midway to reduce the possibility of alien species introductions. Visitors will be asked to clean their shoes and other clothing before coming to Midway through advance introductory materials. Anyone bringing their own snorkel or dive gear to Midway will be required to treat the gear to prevent the inadvertent introduction or transmission of alien species (see Appendix \_ for protocol).
- Only four-stroke outboard motors will be used for visitor program boats. These motors are quieter than two-stroke motors and will not exceed the Level A or Level B acoustic threshold for disturbance to marine mammals. No other loud sounds will be associated with this program.
- Power boats taking visitors to Eastern Island or snorkeling or diving may encounter spinner dolphins or, less frequently, green sea turtles while traversing the lagoon. Hawaiian monk seals are only rarely observed swimming in the lagoon. Boat operators will be fully briefed on known resting areas of spinner dolphins in the lagoon (Figure 1.1 above) and routes to and from snorkel and dive sites will be plotted to avoid these areas as well as preferred Hawaiian monk seal haulout, molting, and pupping sites .
- Refuge biological staff will work with the NMFS seal biologist stationed on Midway to develop a monitoring plan to assess impacts to Hawaiian monk seals from the visitor program. This plan will be based on the existing data set of seal sightings on Sand Island over the past 10 years and available for public review. This monitoring plan will be drafted after approval of the Midway

Atoll Interim Visitor Services Plan but prior to implementation of the full scale visitor services program. Long term trend analysis of use of the Sand Island beaches by monk seals should allow the biologists to determine if there is a noticeable change (geographic shift or decrease) in seal beach use over time.

- A review of files documenting past visitor violations of closed beaches and/or monk seal disturbance shows that many of the people had not received orientation to the refuge and closed areas. Strict compliance with the orientation policy will address many of those types of violations in the planned visitor program. Some of the documented violations were clearly due to poor or nonexistent signing. A new sign plan will be developed by refuge staff and all signs put in place in 2008. Temporary signs may be used prior to that time. However, records also clearly show the need for a law enforcement officer who works in the field ensuring that refuge regulations are enforced. An officer will be stationed at Midway prior to implementation of the full scale visitor program. Prior to that time, law enforcement needs will be met through periodic use of officers on short-term details. Documented violations that occur during periods without an officer in place will be handled through an affidavit process by which the officer is provided specific details of the incident that are legally adequate for issuance of a Notice of Violation.

**Justification:**

Wildlife observation and photography are priority public uses of the National Wildlife Refuge System, and Midway Atoll NWR provides unique wildlife observation opportunities, not possible elsewhere in the United States.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for non-wildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**References Cited:**

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Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. J. Orn. 120:299-310.

Kitaysky, A., M. Benowitz-Fredericks, Z. Kitaiskaia, M. Shultz, and B. Zaun. 2003. Effects of tourist disturbance on stress physiology of wedge-tailed shearwaters (*Puffinus pacificus*) chicks at Kilauea Point National Wildlife Refuge, Kauai, Hawaii. Unpubl. refuge report.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. Nature 374:415.

**Refuge Determination:**

Refuge Manager  
Approval:

Benny Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Benny W. Stegall  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Laurent W. Lamer  
(Signature)

Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn Bohan  
(Signature)

Date 5/23/07

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### **Compatibility Determination**

**Use:** Environmental Education and Interpretation

**Station Name:** Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll NWR (NWR) was established in 1988 as an overlay NWR under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to the FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following additional purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the U.S. Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;

4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

### **National Wildlife Refuge System Mission**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (16 U.S.C. 668dd et seq.)

### **Description of Use(s):**

Both environmental education and interpretation strive to convey an understanding and appreciation of refuge resources and the issues that affect them. For this reason these two uses have been combined in one compatibility determination.

Due to Midway's remote location and limited accessibility, onsite environmental education programs will be limited. However, with new technology, we will be able to offer offsite programs through satellite transmissions to schools around the world. Recognizing the role of teachers and educators in conveying environmental education to their students, refuge staff and partners will develop biennial teachers' workshops to be held on Midway. These workshops will be linked to existing curriculums such as Navigating Change. Refuge staff will also facilitate opportunities for cooperative organizations to conduct college level courses or informal education camps on Midway.

Interpretation of the natural and historic resources on Midway Atoll NWR and cultural resources of the Northwestern Hawaiian Islands will take many forms, including (1) guided walks and bicycle tours with FWS interpreters, (2) self-guided interpretive walks to selected historical sites, (3) regularly scheduled "field talks" with FWS interpreters or cooperators who will demonstrate research techniques or natural history phenomena (e.g., evening petrel flights), and (4) indoor evening programs on various topics relative to Midway's cultural, historic, and natural history. Visitors will also be able to participate on scheduled 3-hour field trips to Eastern Island, where they will be led on guided walks by FWS-approved staff and/or guides.

Visitors will be encouraged to come to the visitor center for further interpretation of refuge resources, environmental issues, and the Battle of Midway National Memorial. New exhibits will be developed that highlight the new Papahānaumokuākea Marine National Monument.

This use also includes visitors who arrive via cruise ship and are led on 2-hour interpretive tours by FWS-approved staff and/or guides.

### **Availability of Resources:**

Current refuge staffing is not adequate to properly run a quality visitor program. For Fiscal Year 2007 it is anticipated that the refuge will add at least one refuge ranger on-island to work with visitors. Additional staff support will be provided by the Hawaiian and Pacific Islands NWR Complex for periods of peak visitor use. To properly support the full visitor program envisioned in 2008 and beyond, two

additional visitor services specialists and a law enforcement officer will be required in addition to increased staffing needs by the refuge infrastructure support contractor. Certain refuge infrastructure improvements will also be needed to support the visitor program. These will include improved signing, larger and safer boats, on-island transportation (bicycles or golf carts), and kayaks.

Midway Atoll NWR has been charged by Congress and FWS with developing a visitor program that is self-sustaining financially. To help us meet this goal Congress has also given the refuge receipts authority, which allows the refuge to keep reasonable fees collected for services provided at Midway Atoll. These fees will be used to offset costs of implementing the visitor services program.

<b>Category and Itemization</b>	<b>One time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management		\$ 17,140
Maintenance		1,000
Monitoring		
Special equipment, facilities or improvements	30,000	2,000
Offsetting revenues	\$165,000	\$165,000

Estimated costs were calculated using 35% of the base cost of a GS-7 refuge ranger assuming that this priority use would use that portion of a year to administer. Off-setting revenues are fees paid by visitors for their stay on Midway. Monitoring of impacts would be completed by the refuge ranger as part of their time committed to this use.

**Anticipated Impacts of the Use(s):**

*Environmental Education*

Impacts from visitors attending scheduled workshops and participating in walking or biking interpretive tours or self-guided tours on Sand Island will be minimal. All of these activities will occur on hard surfaced roads with very limited wildlife disturbance.

Minimal to no impact on refuge resources is anticipated from offsite programs, since educational demonstrations will be conducted or supervised by trained FWS-approved staff and/or guides.

*Interpretation*

Minimal impact to refuge resources is anticipated as described in the above “guided walks and bicycle tours” section. Additional potential impact to nesting seabirds, monk seals, and green sea turtles may occur if visitors and residents wander off self-guided interpretive walks. Impacts include destroying nesting burrows of Bonin petrels or wedge-tailed shearwaters; injuring or killing an egg, chick, or adult by stepping on a bird or nest; decreasing nesting success of breeding birds; or disturbing or deterring a resting monk seal or green sea turtle from a preferred haulout, molting, or pupping location. Studies conducted in seabird colonies with ecotourism operations have documented that birds located away from frequently visited areas react strongly to any human activity. Birds were observed to habituate to high levels of constant visitation, but not to less constant (although regular) visitation (Fowler 1995). Therefore, birds located far from trails are most likely to be disturbed from wandering visitors or residents. Monk seal research has documented that pregnant females would abandon preferred pupping locations due to human disturbance (Kenyon 1972).

Cruise ships that visit Midway Atoll are required to stay outside the harbor entrance channel and to ferry their passengers to shore via ship's tenders. Possible damage to coral could occur if the ship anchored in shallow water or drifted into coral areas. Additional damage could occur from discharge of gray or black water from the ship during the anchorage period at Midway.

*Regularly scheduled "field talks" at selected locations by FWS-approved staff and/or guides*

Minimal to no anticipated impacts on refuge resources are associated with regularly scheduled "field talks." Talks will be located near seabird colonies, but leaders and participants will not enter into the main area of the colony for these talks. Keeping the group at the edge of the colony will limit stress to the few birds actually closest to the group. Studies have shown that birds can adapt to repeated disturbance, so selection of an area where the birds are regularly passed by residents and visitors on town roads will minimize the impact of this activity.

Potential impacts include brief disturbance to nesting seabirds. Only trained FWS-approved staff and/or guides conducting the talk will be entering nesting colonies for brief periods.

*Evening programs at various indoor locations*

No anticipated impacts are anticipated due to indoor locations.

*Eastern Island tours*

Minimal impacts include disturbance to nesting birds (primarily Laysan and black-footed albatrosses (*Diomedea immutabilis* and *Diomedea nigripes*, respectively), and sooty and gray-backed terns (*Sterna fuscata* and *Sterna lunata*, respectively)) along tour routes. Tours will be restricted to the historic runways, limiting the disturbance to shrub and burrow nesters such as the red-footed booby (*Sula sula*), great frigatebird (*Fregata minor*), and Christmas shearwater (*Puffinus nativitatis*). During the sooty tern nesting season, tours will be adjusted as needed to minimize disturbance to nesting sooty terns on runways. Visitors will be advised to travel in single file in an expeditious manner through the colony. Photography will be allowed at the beginning and end of such a transit, not in the middle, to reduce the length of disturbance to the core nesting population.

Impacts will also be associated with the increased number of boat landings on the island. Boat landings (boat and people noise) may occasionally disturb resting endangered Hawaiian monk seals and threatened green sea turtles on Eastern Island beaches as well as those that are prospecting safe haulout locations (Kenyon 1972). All trips to Eastern Island will be closely supervised by FWS-approved staff and/or guides. Visitor tours of Eastern Island will be offered no more than once a week, unless specifically authorized by the refuge manager, and generally will be completed within a 3-hour period. Boats will tether to either end of the 150-foot pier, and disembarking passengers will be briefed on proper behavior to minimize disturbance to Hawaiian monk seals or green sea turtles that may be present.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- All onsite environmental education will be closely supervised by FWS-approved staff and/or guides, as well as by accompanying teachers.
- All students will be subject to the same restrictions (e.g., beach closures, distances from monk seals, etc.) as other visitors.
- All guided Sand Island tours will be led by FWS-approved staff and/or guides and will be adjusted on the spot to avoid disturbance of Hawaiian monk seals and green sea turtles and to minimize conflicts with nesting seabirds.
- No more than 25 people will be led at one time on guided walks and bicycle tours. Tour groups from cruise ships, which walk along paved roads with clear markings and tour guides to ensure the group remains together, may exceed this number, up to a total of 50 people per group.
- All visitors will attend an orientation upon (or before) arrival and be given appropriate narrative and graphic material to clearly indicate which areas are open for public use and to clarify regulations in force to protect wildlife and habitat. Cruise ship visitors receive an orientation from a FWS-approved staff and/or guides onboard ship or by handouts specific to their visit to Midway Atoll.
- Signing along self-guided trails will identify approved areas for beach access, wildlife observation, etc. Monument staff will monitor public use to assess and respond to incidents of noncompliance with refuge regulations. Vegetative screening will be used to ensure that visitors do not walk off trails.
- “Field talks” will be located outside, on roads or trails along the edge of nesting seabird colonies or at a safe distance from other wildlife species. Only trained FWS-approved staff and/or guides conducting the talk will be entering nesting colonies for brief periods.
- Interpreters will clearly explain the rationale for access restrictions and the actions that will be taken to enforce regulations.
- The frequency, duration, and route of guided Eastern Island tours will be modified, as needed, to avoid disturbance to Hawaiian monk seals and green sea turtles and to minimize disturbance to seabirds.
- Cruise ships will be given a specific location for safe anchorage outside the channel entrance. FWS personnel will work with NOAA to identify the best location for this anchorage prior to the first cruise ship arrival under the new monument regulations.
- Cruise ships will be prohibited from discharging of any gray or black water during their anchorage period and for the entire period they are within monument waters, in accordance with their monument permit conditions. They will be advised of this requirement during event

planning and reminded again just prior to arrival. Any detected violation of this requirement will be cause for barring of this cruise line from any future stops at Midway Atoll NWR and will be pursued as a violation of monument regulations. Refuge staff will seek assistance from NOAA to use currently available sonar or other technology to assess the suitability for anchoring cruise ships just out from the harbor channel entrance. Sites determined to be suitable will be marked by GPS and that site transmitted to visiting ships. Cruise ships will also be advised that due to possible impacts to monk seals and sea turtles, the speed limit for their tenders within the harbor is 10 knots.

- Due to concern over the introduction of invasive marine species into Midway Atoll and the monument, all cruise ships and sailboats must meet the hull inspection requirements required under Presidential Proclamation 8031..

**Justification:**

Midway Atoll NWR provides unique educational opportunities, not found elsewhere in the United States. Compatible environmental education and interpretation are priority general public uses of the National Wildlife Refuge System as designated in the National Wildlife Refuge System Improvement Act of 1997.

**References Cited:**

Kenyon, K.W. 1976. Man versus the monk seal. *J. of Mammal.* 53(4):687-696.

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Refuge Manager  
Approval:

Barry Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Steig  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Lawrence W. Comer  
(Signature)

Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn L. Bohan  
(Signature)

Date 5/23/07

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge/Battle of Midway National Mem.

Use: Participatory Research

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: Barry Christensen

Date: May 14, 2007

If found to be Not Appropriate, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found Not Appropriate outside the CCP process, the refuge supervisor must sign concurrence.

If found to be Appropriate, the refuge supervisor must sign concurrence.

Refuge Supervisor: [Signature] Date: May 14, 2007

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319  
02/06

FINDING OF APPROPRIATENESS OF A REFUGE USE; ATTACHMENT 1

USE: Participatory Research

Supplemental information for Decision Criteria (e) and (i):

(e) Is the use consistent with goals and objectives in an approved management plan or other document?

Involving visitors in hands-on habitat and historic restoration projects and limited wildlife monitoring activities is consistent with the draft goals and objectives identified in the Midway Atoll Interim Visitor Services Plan, as well as the purposes of the refuge and the mission of the National Wildlife Refuge System. Refuges are encouraged to use volunteers in accordance with FWS policy (150 FW 1.4):

- To provide people with opportunities to assist us in the accomplishment of our mission by contributing to the preservation and conservation of our natural and cultural resources.
- To enhance our performance through the creativity and innovations, labor, and expertise contributed by volunteers.
- To provide opportunities for students and others to gain experience in areas of interest for future careers.
- To complete projects and other work that we would not otherwise accomplish without the use of volunteers.
- To encourage stewardship of wildlands, wildlife, and other natural and cultural resources through public participation in and contribution to FWS programs and operations.

(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural and cultural resources, or is the use beneficial to the refuge's natural or cultural resources?

By volunteering for these hands-on activities, visitors will gain a far better understanding of the importance of protecting habitat for migratory seabirds, shorebirds, marine mammals, and sea turtles. They will learn firsthand the threats from invasive plant species and the difficulty of eradicating them to restore native habitats. They will also gain a new knowledge and caring for America's historic resources and learn more about methods to protect them. In turn, the refuge's remarkable natural and historic resources will gain significantly from the additional work visitors will be able to accomplish that limited staff cannot address.

### **Compatibility Determination**

**Proposed Use:** Participatory Management/Research Program

**Refuge Name:** Midway Atoll National Wildlife Refuge and Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge was established in 1988 as an overlay National Wildlife Refuge (NWR) under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy (Navy). The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. "... for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. "... shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;

3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

### **National Wildlife Refuge System Mission**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee.])

### **Description of Use(s):**

Specific visitor programs at Midway Atoll NWR will be designed to have visitors participate in a variety of wildlife monitoring and/or research activities, habitat management projects, and historic resource protection projects. Projects include (1) seabird population monitoring (e.g., nest abundance, nesting chronology, nesting success/chick survival, banding, etc.), (2) habitat restoration (e.g., clearing of exotic vegetation, planting native vegetation, etc.), and (3) historic site preservation/restoration (e.g., rehabilitation of historic buildings or gun emplacements). All projects are under the close supervision of FWS-approved staff and/or guides.

### **Availability of Resources:**

Current refuge staffing is not adequate to properly run a quality visitor program. For Fiscal Year 2007 it is anticipated that the refuge will add at least one refuge ranger on-island to work with visitors. Additional staff support will be provided by the Hawaiian and Pacific Islands NWR Complex for periods of peak visitor use. To properly support the full visitor program envisioned in 2008 and beyond, two additional visitor services specialists and a law enforcement officer will be required in addition to increased staffing needs by the refuge infrastructure support contractor. Certain refuge infrastructure improvements will also be needed to support the visitor program. These will include improved signing, larger and safer boats, on-island transportation (bicycles or golf carts), and kayaks. The participatory research program will be closely integrated with our existing volunteer program which is adequately supported by available funds. Existing refuge staff and experienced and qualified refuge volunteers will be used to orient and train visitors who will participate in this program.

Midway Atoll NWR has been charged by Congress and FWS with developing a visitor program that is self-sustaining financially. To help us meet this goal Congress has also given the refuge receipts authority, which allows the refuge to keep reasonable fees collected for services provided at Midway Atoll. These fees will be used to offset costs of implementing the visitor services program.

Costs shown below were determined by allowing 5 days of extra work by the refuge biologist to complete the needed administrative work to enroll visitors as volunteers, provide the needed orientation and instruction, monitor their work, and complete the needed reporting requirements. Offsetting revenues

shown are generated by multiplying the daily visitor fee (\$55) times the anticipated number of participants (125) under a fully operating program.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		\$1,000
Maintenance		
Monitoring		\$650
Special equipment, facilities or improvements		
Offsetting revenues		\$6,875

**Anticipated Impacts of the Use(s):**

1. *Seabird population monitoring.* Minimal impact is anticipated from activity of participatory research volunteers within nesting seabird colonies. Potential impacts include destroying nesting burrows of Bonin petrels or wedge-tailed shearwaters, temporary disturbance to nesting birds, or disturbing a resting monk seal or green sea turtle from a nearby haulout location. Stress reactions (elevated heart rate, elevated levels of corticosterone, and behavioral responses) have been documented in several species of nesting seabirds at several ecotourism locations as a result of human activities in nesting colonies (Jungius and Mirsch 1979, Fowler 1995, and Nimon *et al.* 1995). Studies, however, have not been conducted to document the long-term cumulative effects of this human disturbance. Another study on Xanthus' murrelets (*Synthliboramphus hypoleucus*) documented an increased stress response when birds were handled for a longer period during research activities (Newman *et al.* 1997). Short-term participatory research volunteers will be working at a slower pace than a trained FWS biologist or volunteer, potentially increasing the amount of disturbance to nesting seabirds involved in the study or in the area.
  
2. *Habitat restoration.* Minimal to no impact to nesting seabirds found within the targeted habitat restoration area is anticipated. Impacts include temporary disturbance to surface-nesting adults or chicks or injury or death of Bonin petrel or wedge-tailed shearwater adult/egg/chick after crushing a burrow. See above (1) for seabird/human disturbance concerns.
  
3. *Historic site preservation.* Minimal to no impact on nesting seabirds or other wildlife from actions to stabilize historical structures or to remove invasive trees and shrubs is expected.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- All participating visitors will attend the initial orientation and will be thoroughly briefed by the FWS-approved staff and/or guides on the approved and prohibited activities.
- Participants involved in seabird projects will be shown how to collect data to avoid or minimize nesting bird disturbance, including burrowing species. Orientation will include a demonstration of how to clear a petrel burrow after cave-in. Field activity will be timed to avoid exposure of chicks and eggs to intense sun.
- Participants in habitat restoration projects will be supervised by FWS-approved staff and/or guides. They will avoid areas where nesting (including burrowing) birds will be disturbed.

**Justification:**

Participation of visitors in research, monitoring, habitat restoration, and historic preservation projects will contribute to the achievement of refuge objectives. Projects will be completed that would not be possible given limitations on staff. Participants will also benefit by the educational experience and by the opportunity to contribute directly to refuge projects.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

  X   Mandatory 10-year reevaluation date (for nonwildlife dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

   Categorical Exclusion without Environmental Action Statement

   Categorical Exclusion and Environmental Action Statement

  X   Environmental Assessment and Finding of No Significant Impact

   Environmental Impact Statement and Record of Decision

**References Cited:**

Fowler, G.S. 1995. Ecotourism, field studies and stress: behavioral and hormonal responses of Magellanic penguins to nest site disturbance. Abstracts to Pacific Seabird Group Annual Meeting, 1995.

Jungius, H. and U. Mirsch. 1979. Changes in heartbeats in nesting birds at Galapagos by human disturbance. *J. Orn.* 120:299-310.

Nimon, A.J., R.C. Schroter, and B. Stonehouse. 1995. Heart rate of disturbed penguins. *Nature* 374:415.

**Refuge Determination:**

Refuge Manager  
Approval:

Benny Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Stogd  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Carroll W. Laneo  
(Signature) Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn L. Bohan  
(Signature) Date 5/23/07

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge/Battle of Midway National Mem.

Use: Airport Operations (Nonadministrative)

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: Barry Christensen

Date: May 14, 2007

If found to be Not Appropriate, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found Not Appropriate outside the CCP process, the refuge supervisor must sign concurrence.

If found to be Appropriate, the refuge supervisor must sign concurrence.

Refuge Supervisor: Forest W. Cameron

Date: May 14, 2007

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319  
02/06

FINDING OF APPROPRIATENESS OF A REFUGE USE; ATTACHMENT 1

USE: Airport Use for nonadministrative purposes

Supplemental information for Decision Criteria (e) and (i):

(e) Is the use consistent with goals and objectives in an approved management plan or other document?

Although not a specific refuge purpose, Midway Atoll has been charged by Congress with the continued operation of Henderson Airfield for use as an emergency diversion airport for twin-engine jets flying over the Pacific. In cooperation with the Federal Aviation Administration (FAA), FWS, through its contractor, operates Henderson Airfield to meet appropriate Part 139 Standards. No additional refuge acreage has been taken or altered for this use. Over time the abandoned runway will be restored to natural habitat appropriate for that part of the island. Henderson Airfield operation is managed to the maximum degree possible to minimize harm to refuge resources – primarily seabirds such as albatrosses, white terns, and brown noddies.

(i) Does the use contribute to the public’s understanding and appreciation of the refuge’s natural and cultural resources, or is the use beneficial to the refuge’s natural or cultural resources?

Operation of Henderson Airfield allows the refuge staff, other agencies, and the public the opportunity to come to Midway by airplane instead of relying solely on ships. This one logistical factor makes Midway unique among the Northwestern Hawaiian Islands and is the pivotal reason FWS is able to plan a visitor program at Midway. With the airport, far more visitors will be able to come to Midway than by ship alone, allowing them the opportunity to observe and learn about the diverse wildlife species and varied historic resources that make Midway a unique location to visit and a culturally important site for all Americans.

### **Compatibility Determination**

**Use(s):** Airport Operation (for Nonadministrative Purposes)

**Refuge Name:** Midway Atoll National Wildlife Refuge and Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge was established in 1988 as an overlay National Wildlife Refuge (NWR) under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy (Navy). The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to the FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following additional purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the U.S. Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;

3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;
4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee.]

**Description of Use(s):**

Although not a specific refuge purpose, Midway Atoll has been charged by Congress with the continued operation of Henderson Airfield for use as a Part 139 airport for twin-engine jets flying over the Pacific. In cooperation with the FAA, FWS, through its contractor, operates Henderson Airfield to meet appropriate Part 139 Standards.

Modern large passenger airplanes are extremely safe and reliable so use of Henderson Airfield for this purpose is very rare. In fact, in the past 3 years only one large passenger airliner has landed at Midway due to an in-flight emergency. However, many other aircraft use Henderson Airfield on a regular basis. Nonrefuge administrative/management flights that would be covered by this use include FAA required navigational aid flight checks, flights by other agencies that have business or equipment on Midway, and visitor program flights. For the period of this plan (less than 5 years), nonadministrative flights are estimated at 50 per year. This is a maximum figure based on 4 visitor flights per month for 9 months and 14 other agency flights.

Use also includes operation of a fuel truck to fuel a limited number of non-FWS related aircraft. At the present time this includes the Coast Guard but not general transient aircraft as the FWS has issued a Notice to Airmen that fuel sales at Midway have been discontinued.

**Availability of Resources:**

Adequate personnel and funding are available for operation of Henderson Airfield. Current funding for airport operations comes from the FAA at the direction of Congress. Refuge personnel assist with airport operations from time to time, but this is an infrequent demand on refuge resources and within our available staffing and funding. Nonrefuge/FAA flights are charged a landing fee, which can be used to offset personnel and equipment costs of staffing the airport and is adequate to cover costs incurred by the charged flight. The costs detailed below are calculated using an estimated 36 visitor flights per year (9 months at 4/mo.) and 14 other agency flights per year for a total of 50. Revenues from landing and ramp fees vary by the amount of services provided and range from a low of \$464 to a maximum of \$1,547. For the purposes of this analysis an average rate of \$1,130 is used based on the most common services provided.

<b>Category and Itemization</b>	<b>One time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management	\$300	\$15,000
Maintenance	100	5,000
Monitoring	64	3,200
Special equipment, facilities or improvements	666	33,300
Offsetting revenues	\$1,130	\$56,500

**Anticipated Impacts of the Use(s):**

The 2 million seabirds that use Midway during the peak breeding season make aircraft flights to the island potentially hazardous to both the birds and the aircraft. Albatrosses, both Laysan and black-footed, use the airport runway as a soaring area as they travel on feeding forays during the day (363 seabird runway crosses per minute, Dolbeer and Arrington, 1996). Bird use of the runway declines dramatically at night (6 seabird runway crosses per minute, Dolbeer and Arrington, 1996) however, so flights then have a much reduced chance of hitting birds. During the primary albatross season, November through July, flights are scheduled to arrive and depart during dark, thus minimizing impacts to albatross and other seabirds. During the months of August, September, and October flights arrive during the day and may occasionally hit a white tern or brown noddy. It is not possible to reduce the bird strike risk at Henderson Airfield to zero at any time of day or year short of suspending all administrative and nonadministrative flight operations. However, the small number of annual flights to the island and the requirement of night flights for most of the year make the overall impact to refuge resources minimal.

Extensive use of lights at the airport hangar causes problems for seabirds, especially Bonin petrels. These birds are disoriented by the bright flood lights at the hangar and as a result frequently fly into the side of the building and roof. During peak petrel season, this activity can result in death or injury of up to 6 birds per night. Currently this type of use and impact occurs during night arrivals in the months from November through May. The frequency of aircraft arrival at Henderson Airfield will go up upon implementation of this plan to from the current 3 per month to as many as 8 per month at full operation.

Proper operation of the fuel truck presents no hazards to refuge resources. In the event of a spill, fuel containment supplies and equipment are stored at the airport hangar for immediate response.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Except for emergency landings, flights will be required to land and depart in the dark during the months from November through July.
- To reduce the time during which aircraft fly at heights used most frequently by birds (1,000 feet or less), aircraft will be advised to use steeper than normal landing and take-off flight paths. For landings, pilots will be advised to use a 1,500-foot displaced threshold and then descend at a 5 degree glide slope. For take-offs, pilots will be advised to be airborne by midfield and then to climb out at a path of 10-11 degrees pitch up for first 1,000 feet of elevation.
- Lights used to illuminate airport passenger and baggage handling areas must be designed and installed to reduce impacts to Bonin petrels, which are negatively affected by artificial light.
- Prior to each landing and take off, airport staff will ensure the runway is clear of all birds. Frequently this involves physically removing them by hand.

**Justification:**

Operation of Henderson Airfield at Midway Atoll NWR increases safety of all flights crossing the northern Pacific and is congressionally mandated. Use of the airport by other agencies with official business at Midway can be allowed by using proper procedures that reduce the impacts to Midway's wildlife resources to a very minimal level. Flights to accommodate the visitor program will greatly increase the number of people who can experience, learn about, and enjoy the wildlife and historic resources found at Midway Atoll.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

X  Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

X  Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**References Cited:**

Dolbeer, R., and D. P. Arrington. 1996. Can albatrosses and aircraft coexist on Midway Atoll? In Bird Strike Committee Europe, London.

**Refuge Determination:**

Refuge Manager  
Approval:

Barry Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Stigley  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Laurel W. Cameron  
(Signature)

Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Cecily A. Bohan  
(Signature)

Date 5/23/07

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge/Battle of Midway National Mem.

Use: Nonwildlife-Dependent Beach Use

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: Barry Christensen Date: May 14, 2007

If found to be Not Appropriate, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found Not Appropriate outside the CCP process, the refuge supervisor must sign concurrence.

If found to be Appropriate, the refuge supervisor must sign concurrence.

Refuge Supervisor: Forest W. Cannon Date: May 14, 2007

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319  
02/06

## FINDING OF APPROPRIATENESS OF A REFUGE USE; ATTACHMENT 1

USE: Nonwildlife-dependent Beach Use

Supplemental information for Decision Criteria (e) and (i):

(e) Is the use consistent with goals and objectives in an approved management plan or other document?

This use is consistent with the approved 1996 Public Use Plan. Allowance for this use of North Beach of Sand Island on Midway Atoll NWR is also provided in FWS policy for long-term island residents in remote locations.

Both island residents and visitors are aware through an orientation given to all persons when they first arrive on the island that this privilege is allowed only as long as it has no negative impacts to fish or wildlife resources using the area. No negative impacts to Hawaiian monk seals, seabirds, or other wildlife have been detected by refuge staff during casual, periodic monitoring during the past 4 years. A more rigid and quantifiable impact analysis will be developed prior to full scale implementation of this visitor program. Detected negative impacts to sensitive wildlife species, notably monk seals, will require that the use parameters be changed or the use discontinued.

(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?

Swimming or sunbathing does not directly contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, nor is the use beneficial to the refuge's natural or cultural resources. However, if the refuge rules for use of the beach are followed, neither do they detract from them.

Although not a priority public use as determined by the National Wildlife Refuge System Improvement Act of 1997, nonwildlife-dependent beach use at Midway Atoll NWR is popular and compatible. The opportunity to relax on the beach and swim in the lagoon waters will enhance the quality of life for Midway residents, many of whom are stationed at the refuge for extended periods, without access to amenities normally available in a typical urban setting. Although their primary interest may be swimming or sunbathing, the abundance of birdlife that continually flies overhead makes these activities a wildlife observation opportunity as well.

These opportunities will also be available for refuge visitors, to improve their experience without jeopardizing Midway's wildlife resources or conflicting with the high priority wildlife-dependent activities.

### **Compatibility Determination**

**Use(s):** Nonwildlife-dependent Beach Use

**Refuge Name:** Midway Atoll National Wildlife Refuge and Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge was established in 1988 as an overlay National Wildlife Refuge (NWR) under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy (Navy). The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to the FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following additional purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the U.S. Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;

4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (16 U.S.C. 668dd et seq.)

**Description of Use(s):**

Midway Atoll NWR residents and visitors use North Beach for nonwildlife-dependent beach activities such as sunbathing and swimming. Although all of North Beach is open for visitor use, most activities occur in the small area between Captain Brooks and the Clipper House. The entire North Beach is open as a "trail" for wildlife observation and receives use from refuge residents and visitors. Impacts to refuge resources under that use are covered in the Wildlife Observation Compatibility Determination.

A small number (6) of heavy, plastic lounge chairs will be set out for visitor use. This type of solid chair with no openings has been in use on North Beach for nearly 10 years and has caused no negative impacts on nearby seabirds or monk seals. Visitors and residents typically spend only a small part of a day on the beach (less than 1 hour), usually to relax and swim during the afternoon. Swimming is typically of short duration and is restricted to areas close to shore. In the interest of public safety, a pole with a throw line and life saving ring are mounted in the center of this use area. Beach users will be advised that swimming will be allowed from ½ hour after sunrise until ½ hour before sunset. Sunrise/sunset tables will be posted in the Captain Brooks beach facility.

**Availability of Resources:**

Current refuge staffing is not adequate to properly run a quality visitor program. For Fiscal Year 2007 it is anticipated that the refuge will add at least one refuge ranger on-island to work with visitors. Additional staff support will be provided by the Hawaiian and Pacific Islands NWR Complex for periods of peak visitor use. To properly support the full visitor program envisioned in 2008 and beyond, two additional visitor services specialists and a law enforcement officer will be required in addition to increased staffing needs by the refuge infrastructure support contractor.

Midway Atoll NWR has been charged by Congress and the FWS with developing a visitor program that is self-sustaining financially. To help us meet this goal Congress has also given the refuge receipts authority, which allows the refuge to keep reasonable fees collected for services provided at Midway Atoll. These fees will be used to offset costs of implementing the visitor services program. Costs for administration of this use are estimated below:

<b>Category and Itemization</b>	<b>One-time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management	\$	\$
Maintenance		
Monitoring		1350
Special equipment, facilities or improvements	400	
Offsetting revenues	\$0	\$27,500

Monitoring costs were calculated based on 1.5 hours per week for 9 months for a GS-7 refuge ranger. Special equipment includes the one time purchase of new beach chairs. Offsetting revenues were calculated for 500 visitors paying a daily refuge access fee of \$55, part of which would be used to support this use.

**Anticipated Impacts of the Use(s):**

Minimal to no negative impacts to refuge resources are expected from this activity. Visitors could displace resting monk seals from preferred beach areas if refuge visitor guidelines regarding beach use are not followed. Sea turtles have not been seen on North Beach, but should one choose to haul out there, the standard 150-foot viewing distance would be required. Since no seabird or Laysan duck nesting occurs in the areas used for this activity, no impacts to albatrosses, petrels, shearwaters, Laysan ducks, or other birds are expected. If a monk seal has hauled out in an area frequently used by visitors, the area will be signed as temporarily closed until the seal changes locations, thereby preventing disturbance to the seal.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- As part of their orientation, visitors will receive information on how to avoid disturbance to wildlife, especially Hawaiian monk seals and green sea turtles, and how to recognize behavioral indicators of disturbance.
- Beach areas occupied by resting monk seals will be signed with small portable seal shaped placards placed 50 yards from the seals to advise visitors of the seals' presence so they do not inadvertently cause disturbance.

- Swimmers will be advised to leave the water if a monk seal or sea turtle approaches them in the water.
- Beach users will be advised how to respond if approached on the beach by a monk seal or sea turtle.

**Justification:**

Although not a priority general public use as determined by the National Wildlife Refuge System Improvement Act of 1997, compatible nonwildlife-dependent beach use at Midway Atoll NWR is a popular activity. Visitors and residents alike benefit from the chance to sit and relax on North Beach. Although their primary interest may be sunbathing, reading, or relaxing, the abundance of birdlife continually flying overhead makes this activity a wildlife observation opportunity as well.

Alternative recreational opportunities will enhance the quality of life for Midway residents, many of whom are stationed at the refuge for extended periods, without access to amenities normally available in a typical urban setting.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

\_\_\_\_\_ X \_\_\_\_\_ Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_ Categorical Exclusion and Environmental Action Statement

X Environmental Assessment and Finding of No Significant Impact

\_\_\_ Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Refuge Manager  
Approval:

Barry Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Stegall  
(Signature)

Date: 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Louise W. Cameron  
(Signature) Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn L. Boher  
(Signature) Date 5/23/07

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge/Battle of Midway National Mem.

Use: Nonwildlife-Related Outdoor Sports

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: *Barry Chintanam* Date: May 14, 2007

If found to be Not Appropriate, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found Not Appropriate outside the CCP process, the refuge supervisor must sign concurrence.

If found to be Appropriate, the refuge supervisor must sign concurrence.

Refuge Supervisor: *James J. ...* Date: May 14, 2007

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319  
02/06

## FINDING OF APPROPRIATENESS OF A REFUGE USE; ATTACHMENT 1

USE: Nonwildlife-dependent outdoor sports

Supplemental information for Decision Criteria (e) and (i):

(e) Is the use consistent with goals and objectives in an approved management plan or other document?

Nonwildlife-dependent sports on Midway are consistent with the right-sizing plan completed by contractors for FWS in 2003. That planning document, which is used by FWS to make long-term commitments for infrastructure improvements, acknowledges the need for island residents and visitors to participate in sporting activities by leaving for future use structures such as the gym and All Hands Club.

This use is considered appropriate only due to the unique circumstances that make Midway Atoll both a NWR and a remote, functioning community of 60-85 persons. Normally, refuge staff and visitors have many alternative locations to participate in sports activities and do not need to conduct them on a refuge. However, Midway's location, a remote island over 1,200 miles from the nearest other community with sports facilities, means that island residents and visitors have no alternative to use of the refuge for this purpose. Allowance of this use, especially for refuge residents, helps the participants stay in good physical shape and contributes toward overall morale and improved mental health.

(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?

Although not a priority general public use as determined by the National Wildlife Refuge System Improvement Act of 1997, nonwildlife-dependent sports at Midway Atoll NWR are popular. Alternative recreational opportunities will enhance the quality of life for Midway residents, many of whom are stationed at the refuge for extended periods without access to amenities normally available in a typical urban setting. Although their primary interest may be biking or jogging, the abundance of birdlife that continually flies overhead or literally covers the field along the road makes these activities a wildlife observation opportunity as well.

These opportunities will also be available for refuge visitors, to improve their experience without jeopardizing Midway's wildlife resources or conflicting with the high priority wildlife-dependent activities.

### **Compatibility Determination**

**Use(s):** Nonwildlife-related Outdoor Sports

**Refuge Name:** Midway Atoll National Wildlife Refuge and Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay NWR under a cooperative agreement with the U.S. Navy (Navy). Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy. The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuges Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, . . . and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following additional purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the U.S. Navy to the U.S. Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;

4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway’s historic significance.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (16 U.S.C. 668dd et seq.)

**Description of Use(s):**

Several forms of nonwildlife-dependent recreation will be permitted at Midway Atoll for visitors and residents. Permitted outdoor recreation will include bicycling, jogging, volleyball, and tennis. Most sports will continue to be concentrated within the most developed areas of Sand Island. Volleyball will be allowed only in the designated sand court area adjacent to the Captain Brooks facility. Jogging and exercise bicycling will be restricted to hard surface roads in the town and industrial/historical area of Sand Island during daylight hours only (sunrise to sunset) to avoid wildlife collisions and promote safety. The tennis court is located on concrete under the roofline of the airport hangar.

**Availability of Resources:**

The proposed use is conducted by refuge residents and visitors during their free time, thus no refuge staff time is needed for direct supervision or involvement. However, periodic oversight will be required to ensure that this use is not having unexpected impacts on wildlife. Adequate biological staff is available for that review, but a refuge officer is needed on island to handle any law enforcement situation that may arise from residents or visitors who do not follow refuge rules regarding closed areas. Annual cost estimates below were calculated using the cost for a GS-11 biologist for one day and a GS-7 refuge officer for one day. Monitoring will be occasional in nature and is not expected to exceed 8 hours per year for each person. All biking and jogging will occur on existing roads and trails that are also used for refuge administrative purposes, therefore no new maintenance costs will occur. All other costs associated with this use are born by the island Morale, Welfare, and Recreation fund.

Category and Itemization	One-time (\$)	Annual (\$/yr)
Administration and Management		
Maintenance		
Monitoring		\$520
Special equipment, facilities or improvements		
Offsetting revenues	\$0	\$0

**Anticipated Impacts of the Use(s):**

Occasional disturbance to nesting albatrosses or albatross chicks may occur around the outdoor volleyball court, but the court has a nest-free margin of 20-30 feet, giving the birds an adequate buffer from court activity and stray balls. The court area is free of petrel or shearwater burrows, so no impacts will occur to those ground nesting birds. The court area is at the extreme edge of the typical beach use area by monk seals (300 feet from the water's edge) so direct or even indirect impacts to seals from volleyball in this location is unlikely. No sea turtles have been observed on North Beach. Bicycling and jogging will also result in little or no impact on wildlife because bikers and joggers will remain on paved roads or marked trails. Joggers will be directed to stay on the paved/gravel roads due to the high risk of stepping into or collapsing a petrel burrow.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Compatibility Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Closed areas will be posted and regulations strictly enforced. Residents and visitors will be informed about closed area restrictions through orientation sessions and posted notices.
- Bicycling and jogging will be limited to paved and gravel roads and trails during daylight hours only (sunrise to sunset).
- A 150-foot approach restriction for seals and turtles will be strictly enforced. If a seal moved to within this distance of the volleyball court, the area would not be used (or the game stopped) until the seal voluntarily left the area.
- The volleyball net will be taken down and stored when not in use to eliminate the threat of injuring a bird in flight.

**Justification:**

Although not a priority general public use as determined by the National Wildlife Refuge System Improvement Act of 1997, compatible nonwildlife-dependent sports at Midway Atoll NWR are popular. Alternative recreational opportunities will enhance the quality of life for Midway residents, many of whom are stationed at the refuge for extended periods, without access to amenities normally available in a typical urban setting. Although their primary interest may be biking or jogging, the abundance of birdlife that continually flies overhead or literally covers the field along the road makes these activities a wildlife observation opportunity as well.

These opportunities will also be available for refuge visitors, to improve their experience without jeopardizing Midway's wildlife resources or conflicting with the high priority wildlife-dependent activities.

**Mandatory 10- or 15-year Reevaluation Date:**

Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Refuge Manager  
Approval:

Barry Christenson  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Stultz  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Lance W. Cameron  
(Signature)

Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn L. Bohan  
(Signature)

Date 5/23/07

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**FINDING OF APPROPRIATENESS OF A REFUGE USE**

Refuge Name: Midway Atoll National Wildlife Refuge/Battle of Midway National Mem.

Use: Amateur Radio Use

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?		✓
(h) Will this be manageable in the future within existing resources?		✓
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will generally not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes  No

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate

Appropriate

Refuge Manager: Barry Christensen

Date: May 14, 2007

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor: Garrett W. Cameron Date: May 14, 2007

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319  
02/06

FINDING OF APPROPRIATENESS OF A REFUGE USE; ATTACHMENT 1

USE: Amateur Radio Operation

Supplemental information for Decision Criteria (e) and (i):

(e) Is the use consistent with goals and objectives in an approved management plan or other document?

Amateur radio operation at Midway Atoll NWR does not automatically conflict with refuge purposes or the National Wildlife Refuge System mission. The unique infrastructure in place at Midway can allow for this use without negative impacts on refuge resources if certain special conditions are met pertaining to the radio antennae. These conditions are specified in the *Stipulations Necessary to Ensure Compatibility* section of the Compatibility Determination.

(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?

Amateur radio operation at Midway Atoll NWR will not directly contribute to the public's understanding and appreciation of the refuge's natural, historic, or cultural resources, nor is it beneficial to the refuge's natural, historic, or cultural resources. However, any visitor to Midway, even one whose primary reason for visiting does not relate to the refuge mission or purpose, cannot spend a week on the refuge without gaining some understanding of its historical significance and its diverse wildlife. Both the history and the wildlife are so direct, obvious, and unavoidable that all visitors garner some appreciation of both through observation or discussions with island residents or refuge staff. In addition, amateur radio operators have the opportunity to educate people around the world about the refuge and Papahānaumokuākea Marine National Monument.

### **Compatibility Determination**

**Use(s):** Amateur Radio Operation

**Refuge Name:** Midway Atoll National Wildlife Refuge and the Battle of Midway National Memorial

**City/County and State:** Midway Atoll is the penultimate western atoll in the Northwestern Hawaiian Islands, is an unincorporated territory of the United States, and lies outside the State of Hawaii.

**Establishing and Acquisition Authority(ies):**

Midway Atoll National Wildlife Refuge (NWR) was established in 1988 as an overlay NWR under a cooperative agreement with the U.S. Navy. Under this agreement, administrative responsibility for the refuge was shared by the U.S. Fish and Wildlife Service (FWS) and the U.S. Navy (Navy). The Naval Air Facility at Midway was operationally closed in 1993. Facility cleanup was completed by June 30, 1997, when the Navy and its contractors departed. Custody and accountability for Midway Atoll were officially transferred from the Navy to FWS in May 1996. Executive Order 13022, signed by President Clinton on October 31, 1996, superseded earlier orders that assigned responsibility for Midway to the Navy. Secretary of the Interior Babbitt signed Secretary's Order 3217 on September 13, 2000, designating Midway Atoll NWR concurrently as the Battle of Midway National Memorial. On June 15, 2006, President Bush signed Presidential Proclamation 8031 making Midway Atoll NWR part of the newly established Papahānaumokuākea Marine National Monument. Under that Proclamation, Midway has unique authority and responsibility as a Special Management Area.

**Refuge Purpose(s):**

Midway Atoll NWR was established pursuant to the Fish and Wildlife Act of 1956 and the Fish and Wildlife Coordination Act of 1934. Pertinent language in those statutes includes:

1. ". . . for the development, advancement, management, conservation and protection of fish and wildlife resources . . . for the benefit of the U.S. Fish and Wildlife Service, in performing its activities and services." (Fish and Wildlife Act of 1956)
2. ". . . shall be administered by the Secretary of the Interior directly in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon . . ." (Fish and Wildlife Coordination Act of 1934).

The following purposes were included in Executive Order 13022, dated October 31, 1996, which transferred jurisdiction and control over the Midway Islands from the Navy to the Department of the Interior:

1. Maintaining and restoring biological diversity within the refuge;
2. Providing for the conservation and management of fish and wildlife and their habitats within the refuge;
3. Fulfilling the international treaty obligations of the United States with respect to fish and wildlife;

4. Providing opportunities for scientific research, environmental education, and compatible wildlife-dependent recreational activities; and
5. In a manner compatible with refuge purposes, recognizing and maintaining Midway's historic significance.

### **National Wildlife Refuge System Mission**

The mission of the National Wildlife Refuge System is:

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (16 U.S.C. 668dd-668ee)

### **Description of Use(s):**

Midway Atoll NWR receives occasional requests from amateur radio enthusiasts for permission to travel to the refuge for the purpose of broadcasting as an amateur radio operator. Amateur radio operators are those who use radio transmitters and receivers to communicate with other amateur radio operators as a hobby. The demand for this use at Midway Atoll NWR stems from a list of geographic locations which are designated as "countries." It is an objective of these amateur radio enthusiasts to receive and/or transmit from these "countries" and certain remote, uninhabited, or otherwise difficult to reach sites become desirable sites from which to broadcast and receive due to the rarity of transmissions from those sites.

At Midway, amateur radio operators are able to set up and transmit from inside existing buildings. In the past, the airport hangar has been used for this purpose. In most cases, the operators would set up temporary antennas for transmission, usually on the roof of the building. Newer technology allows transmissions with smaller antennae (typically less than 30 feet) than previously possible. Since the goal of the individual or group is to maximize transmissions, the station is normally operated 24 hours a day during the visit period. These visitors are primarily interested in operating their radios but their proximity to Midway's wildlife will ensure that they also spend time observing and learning about our nesting seabirds and marine life.

### **Availability of Resources:**

Current refuge staffing is not adequate to properly run a quality visitor program. For Fiscal Year 2007 it is anticipated that the refuge will add at least one refuge ranger on-island to work with visitors. Additional staff support will be provided by the Hawaiian and Pacific Islands NWR Complex for periods of peak visitor use. To properly support the full visitor program envisioned in 2008 and beyond, two additional visitor services specialists and a law enforcement officer will be required in addition to increased staffing needs by the refuge infrastructure support contractor. Certain refuge infrastructure improvements will also be needed to support the visitor program. These will include improved signing, larger and safer boats, on-island transportation (bicycles or golf carts), and kayaks.

The estimated costs below were calculated for 20 hours of management oversight and 8 hours of biological monitoring. They will also use an indeterminate amount of refuge electricity and special improvements to accommodate their equipment. The off-setting revenue shown is the cost of a Special Use Permit at Midway Atoll NWR for an activity by a third party that has no link to refuge purposes or mission. These fees are being re-evaluated as part of the new monument designation.

<b>Category and Itemization</b>	<b>One-time (\$)</b>	<b>Annual (\$/yr)</b>
Administration and Management	\$1,150	\$
Maintenance		
Monitoring	320	
Special equipment, facilities or improvements	400	
Offsetting revenues	\$5,000	\$

Midway Atoll NWR has been charged by Congress and FWS with developing a visitor program that is self-sustaining financially. To help us meet this goal Congress has also given the refuge receipts authority, which allows the refuge to keep reasonable fees collected for services provided at Midway Atoll. These fees will be used to offset costs of implementing the visitor services program.

**Anticipated Impacts of the Use(s):**

The antenna for transmitting the radio signal is the only aspect of this use that has potential for impacting refuge resources. The high density of nesting seabirds on Sand Island makes installation of additional tall antennae, even for a short period, a concern as they are a strike hazard for flying birds. Shorter antennae, locations away from primary flight lanes, attachment or close proximity to large objects avoided by the birds (e.g., the water tower) and time of year are all means to reduce this impact. With proper use of the above techniques, minimal or no impacts are expected to refuge resources.

The administrative oversight necessary to allow this use takes time from refuge staff that could be used for other, higher priority refuge business. It is expected that each applicant (or group) will require up to 1 day for permit review, communication, etc. Additionally, once on Midway the group will require special handling and more time due to the complexity of their use and possible impacts. It is estimated that a week visit from a radio group will use 8-12 hours of staff time for oversight while they are on-island – an indirect impact to refuge resources.

**Public Review and Comment:**

This determination was issued for public review and comment as part of the Draft Interim Visitor Services Plan from the period of December 8, 2006, through February 6, 2007. The plan and associated compatibility determinations were made available through printed copies upon request and through the FWS Website at <http://www.fws.gov/midway>. This level of review and comment was selected to meet FWS requirements under the National Wildlife Refuge System Administration Act of 1966, as amended.

**Determination:**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- Use of freestanding antennae greater than 5 feet will be allowed only during the months of August, September, and October when albatross are off-island, unless installed in close proximity to other large objects, such as the water tower, so as not to incur an additional flight hazard to

seabirds. The location must be approved by the refuge manager to ensure that other species (Bonin petrel, wedge-tailed shearwaters, white terns) are not affected.

- Allowance of this use will only be scheduled if it does not displace a visitor whose purpose is one of the Refuge System's wildlife-dependent public uses.

**Justification:**

Although not a priority public use, amateur radio operation can be allowed at Midway Atoll NWR due to the refuge's extensive existing infrastructure. Amateur radio operators can use existing facilities and/or mount their antennae in a manner that will not materially interfere with or detract from achievement of the refuge's primary purposes or the Refuge System mission.

**Mandatory 10- or 15-year Reevaluation Date:**

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

  X   Mandatory 10-year reevaluation date (for nonwildlife-dependent public uses)

**NEPA Compliance for Refuge Use Decision (check one below)**

\_\_\_\_\_ Categorical Exclusion without Environmental Action Statement

\_\_\_\_\_ Categorical Exclusion and Environmental Action Statement

  X   Environmental Assessment and Finding of No Significant Impact

\_\_\_\_\_ Environmental Impact Statement and Record of Decision

**Refuge Determination:**

Refuge Manager  
Approval:

Barry Christensen  
(Signature)

Date: 5/21/07

Project Leader,  
Hawaiian and Pacific  
Islands NWRC

Barry W. Steg  
(Signature)

Date 5/21/07

**Concurrence:**

Refuge Supervisor  
National Wildlife  
Refuge System  
Pacific Region

Lawrence W. Cameron  
(Signature)

Date 5/23/07

Regional Chief,  
National Wildlife  
Refuge System

Carolyn L. Bohan  
(Signature)

Date 5/23/07

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