

**Assessment of Additional Marine Resources for Possible Inclusion
in the
Hawaiian Islands Humpback Whale National Marine Sanctuary**



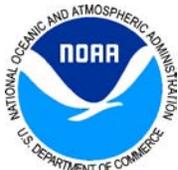
NATIONAL MARINE
SANCTUARIES TM

HAWAIIAN ISLANDS
HUMPBACK WHALE

**Prepared for
Governor Linda Lingle, State of Hawai‘i**

**By the
Hawaiian Islands Humpback Whale National Marine Sanctuary Program
National Ocean Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce**

**and the
Division of Aquatic Resources
Department of Land and Natural Resources
State of Hawai‘i**





Hawaiian Islands Humpback Whale National Marine Sanctuary



Flip Nicklin/Minden Picture

Endangered Hawaiian monk seal and pup



Cheryl King

Endangered hawksbill sea turtle



Doug Perrine/seapics.com

False killer whale and calf



HURL

World War II Dauntless dive bomber in sanctuary waters

For more information please contact:

*Naomi McIntosh
Sanctuary Superintendent
National Oceanic and Atmospheric
Administration
Hawaiian Islands Humpback Whale
National Marine Sanctuary
6600 Kalaniana'ole Hwy, Ste. 301
Honolulu, HI 96825
tel: 808-397-2651
fax: 808-397-2650
naomi.mcintosh@noaa.gov*

*Jeffrey S. Walters, Ph.D.
Co-Manager
State of Hawai'i
Department of Land and Natural Resources
Hawaiian Islands Humpback Whale
National Marine Sanctuary
tel: 808-587-0106
fax: 808-587-0115
jeffrey.s.walters@hawaii.gov*

**<http://hawaii.humpbackwhale.noaa.gov>
<http://www.hawaii.gov/dlnr/dar>**



Hawaiian Islands Humpback Whale National Marine Sanctuary

Table of Contents

Executive Summary	6
I. Additional Marine Resources for Review by the Hawaiian Islands Humpback National Marine Sanctuary	7
II. Evaluation of Population and Management Status of Marine Mammals and Sea Turtles in Hawaii	8
Cetacean Species of Hawai'i.....	8
Hawaiian Monk Seal.....	12
Sea Turtles of Hawai'i.....	14
Sanctuary Role.....	17
Conservation Needs	19
III. Maritime Heritage Resources in the Main Hawaiian Islands.....	21
Existing Inventory.....	21
Current Management Status.....	23
Current Threats.....	24
IV. Fulfilling Needs: NMSP's Resource Management Capacity.....	25
V. Looking Forward: Enhancing Protection for Humpback Whales, Emerging Issues, and Additional Marine Resources.....	28
Appendix A. Agency Matrices.....	33
Appendix B. Maritime Heritage Resources Inventory.....	37
Appendix C. Maritime Heritage Sites in the Main Hawaiian Islands.....	44
Appendix D. Letters of Support.....	45



Executive Summary

The Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) was congressionally designated by the Hawaiian Islands National Marine Sanctuary Act (HINMSA) to protect the humpback whale and its habitat in Hawai‘i. The HINMSA also mandated the sanctuary to identify and evaluate other resources and ecosystems of national significance for possible inclusion in the sanctuary. The sanctuary extends out from the shoreline to the 100-fathom isobath (600-foot depth), and is composed of five separate areas accessible from six of the main Hawaiian Islands (MHI). This 1,370 square miles of federal and state waters within the MHI is one of 14 sites overseen by the National Marine Sanctuary Program (NMSP), which is authorized by Congress to “identify, designate, and manage areas of the marine environment of special national, and in some cases international, significance due to their conservation, recreational, ecological, historical, research, educational, or aesthetic qualities.” The sanctuary is administered jointly by the U.S. Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA) and the State of Hawai‘i through a memorandum of understanding.

To fulfill the initial step of identifying and evaluating additional marine resources for possible inclusion in the sanctuary, NOAA and DLNR have prepared this summary report to provide background information on living marine resources and maritime heritage resources being considered by federal, state, and community partners. The sanctuary’s assessment of these resources provides information on their occurrence, threats, management, conservation needs, and the potential role that the sanctuary could play if these resources are added to the sanctuary. After conducting this initial assessment of additional resources, the preliminary findings conclude that the sanctuary program may benefit the management and conservation of marine mammals, sea turtles and maritime heritage sites in Hawai‘i. This may require the sanctuary to expand existing programs, to develop new strategies for management, and to acquire support from the sanctuary’s regional and national maritime heritage program.

Pending the Governor’s approval, the sanctuary recommends moving forward with the process to further evaluate the inclusion of additional resources under the sanctuary’s authority. With continued federal, state, and community support the sanctuary will continue to evaluate additional resources, further develop its existing programs, and assess its capacity to address emerging threats to humpback whales and their habitat in Hawai‘i through its Management Plan Review Process.



I. Additional Marine Resources for Review by the Hawaiian Islands Humpback Whale National Marine Sanctuary

Introduction

On November 4, 1992, the Hawaiian Islands Humpback Whale National Marine Sanctuary (sanctuary) was designated by the Hawaiian Islands National Marine Sanctuary Act (HINMSA) (Subtitle C of Public Law 102-587, the Oceans Act of 1992). In 1997, the sanctuary's management plan and final environmental impact statement was completed. Later that year, the Governor of the State of Hawai'i approved the plan and its regulations as applied in state waters. Through a cooperative agreement, the sanctuary is co-managed by the National Oceanic and Atmospheric Administration (NOAA) and the State of Hawai'i Department of Land and Natural Resources (DLNR). Section 2304 of the HINMSA established the purpose of the sanctuary. Section 2304(b)(4) and the subsequent revised management plan of 2002 require the sanctuary to identify and evaluate other resources and ecosystems of national significance for possible inclusion in the sanctuary.*

This document provides an internal review of resources already identified through public scoping meetings held in March 1993 and March 1994, public hearings and comments on the Draft EIS/MP, recommendations from the council, and recommendations from DLNR. The marine resources listed for evaluation by state and community partners include other whales and dolphins, Hawaiian monk seals, sea turtles, and maritime heritage resources such as historic downed aircraft and sunken ships.

NOAA and DLNR have prepared this summary of protected living marine resources and maritime heritage resources in the main Hawaiian Islands (MHI). Pursuant to the NMSA and related NOAA policy, whether these resources will be included in the sanctuary will depend on their national significance, the need to supplement existing management authorities, and the degree of public and state support for the decision.

Upon the Governor's concurrence to proceed, the sanctuary will evaluate all candidate resources for national significance and assess the ability of the sanctuary to protect them. The assessment will include feasibility and practicality of adding resources given current and projected funding and staff levels. This process, expected to start in 2008, will also include opportunities for public review and comment through statewide public scoping meetings, the development of action plans to address priority issues, and the release of a draft and final management plan.

* Section 2304 of the HINMSA establishes the sanctuary's purposes: (1) to protect humpback whales and their habitat within the sanctuary; (2) to educate and interpret for the public the relationship of humpback whales to the Hawaiian Islands marine environment; (3) to manage human uses of the sanctuary consistent with the HINMSA and Title III of the Marine Protection, Research and Sanctuaries Act (MPRSA), as amended; and (4) to provide for the identification of marine resources and ecosystems of national significance for possible inclusion in the sanctuary (Subtitle C of Public Law 102-587, the Oceans Act of 1992).

II. Evaluation of Population and Management Status of Marine Mammals and Sea Turtles in Hawai‘i

Hawai‘i’s marine mammals and sea turtles are afforded state, national, and international protections due to a combination of factors that include declining populations and lack of information regarding population viability. All marine mammals and sea turtles are listed under State of Hawai‘i Wildlife Law, under the United States Endangered Species Act (ESA) or the Marine Mammal Protection Act (MMPA), and under the International Union for the Conservation of Nature (IUCN) Red List. The sanctuary’s initial evaluation of these protected species provides a summary of their stock definitions and occurrence in the main Hawaiian Islands, threats to their recovery and conservation, current management status, conservation needs, and the potential role that the Hawaiian Islands Humpback Whale National Marine Sanctuary could play if these species are included in the sanctuary.

Cetacean Species of Hawai‘i

Stock Definitions and Occurrence in the Main Hawaiian Islands

The order Cetacea (dolphins and whales) consists of two suborders: Odontocetes (toothed cetaceans) and Mysticetes (baleen whales). Generally, a useful distinction between them is one of size because the great whales are all Mysticetes, with the exception of the sperm whale, which is an Odontocete. Sizes of cetaceans in Hawai‘i at maturity range from the spinner dolphin at 6 feet long and approximately 180 lbs. to the blue whale at 100 feet long and up to 200 tons. This section covers all known species of cetaceans in Hawai‘i except the humpback whale.

Nearshore Species

Four species of cetaceans are more commonly seen in nearshore areas for at least part of their daily activities: spinner dolphins (*Stenella longirostris*), bottlenose dolphins (*Tursiops truncatus*), pantropical spotted dolphins (*Stenella attenuata*) and false killer whales (*Pseudorca crassidens*). Of these species, the spinner dolphin and the bottlenose dolphin are the most frequently sighted.

The nearshore populations of cetaceans are distributed throughout Hawai‘i. Recent evidence indicates that resident island-associated populations exist for at least 3 of these 4 species. Population subdivision and patterns of structure are becoming increasingly evident within the Hawaiian Islands Exclusive Economic Zone (EEZ) due to genetic, morphological and tagging studies (Andrews et al., 2006; Chivers et al., 2007; Baird et al., 2007). Therefore, while most stock assessments estimate abundance for the entire EEZ, further studies are needed to determine abundance of island specific populations.

Genetic data indicate that limited exchange occurs between spinner dolphins associated with each MHI and that multiple, demographically-independent units of spinner dolphins may exist within the Hawaiian Island Chain (Andrews et al., 2006). During the day spinner dolphins use bays and other nearshore habitats at regular sites around the main Hawaiian Islands to rest and care for their young. Distribution and abundance are thought to correlate with the amount

Hawaiian Islands Humpback Whale National Marine Sanctuary

of available resting habitat on each island and total abundance in the MHI is estimated at 1,488 individuals (Barlow, 2006).

Bottlenose dolphins primarily have a coastal range; however, some populations occur in offshore deepwater areas as well. Recent research on the stock structure of bottlenose dolphins in the MHI also suggests that individuals are resident to the islands and that multiple, demographically-independent populations of island-associated bottlenose dolphins exist (Baird et al., 2007). There are as many as four discrete populations of bottlenose in the MHI that correspond to the four main island groupings of Kaua‘i and Ni‘ihau, O‘ahu, the 4-island-area (Maui, Moloka‘i, Lana‘i, and Kaho‘olawe), and Hawai‘i island (Baird et al., 2007). A total of 336 distinct bottlenose dolphins were identified around all the MHI (Baird et al., 2007) and Barlow (2006) estimated a population size of 465 individuals in the MHI.

Around Maui and Lana‘i, spotted dolphins usually remain in shallower, nearshore water ranging from 100 to 300 meters but they are found in deeper water off Hawai‘i, Kaua‘i, Lana‘i, and Ni‘ihau (Baird et al., 2001). The estimate for spotted dolphins in the entire Hawai‘i Exclusive Economic Zone is 10,260 (CV=0.41; Barlow, 2006); however, spotted dolphins have small home ranges and may not move between islands (CWCS, 2005).

False killer whales are found in both shallow and deep water in the MHI and a recent study documented their occurrence off the islands of Hawai‘i, O‘ahu, and the 4-island-area. Significant genetic differentiation of false killer whales in the nearshore waters of the Hawaiian Islands suggests that there are at least two populations within the currently recognized Hawaiian stock: an island-associated population and a pelagic population (Chivers et al., 2007). Current estimates for population abundance in the Hawaiian Archipelago indicate it is a relatively small population. Around the main Hawaiian Islands there are two abundance estimates: 121 (CV=0.47; Mobley et al. 2000, from aerial surveys), and 123 (CV=0.72; Baird et al. 2005 using mark-recapture analyses). There is an estimate of 236 individuals (CV=1.13; Barlow 2006) for the entire Hawaiian EEZ, based on a large-vessel survey.

Nearshore cetaceans are usually found in small groups; that range from 1-10 for bottlenose dolphins and 30-120 for spotted dolphins and spinner dolphins (Baird, personal communication). Sightings of certain species with other dolphins or whale species have also been documented. Feeding strategies vary among nearshore cetacean species in the MHI. For instance, bottlenose dolphins feed primarily on fish and invertebrates that live near the bottom of the ocean, while spinner dolphins feed on mesopelagic prey that includes squid, fish, and shrimp.

Pelagic Species

Mysticete populations have been documented in offshore areas of Hawai‘i: minke whale (*Balaenoptera acutorostrata*), sei whale (*Balaenoptera borealis*), Bryde’s whale (*Balaenoptera edeni*), blue whale (*Balaenoptera musculus*), fin whale (*Balaenoptera physalus*), and northern right whale (*Eubalaena japonica*).

The offshore Odontocete species that have been documented in Hawai‘i are as follows: short-finned pilot whale (*Globicephala macrorhynchus*), pygmy killer whale (*Feresa attenuata*), Risso’s dolphins (*Grampus griseus*), Longman’s beaked whale (*Indopacetus pacificus*) pygmy sperm whale (*Kogia breviceps*), dwarf sperm whale (*Kogia sima*), Fraser’s dolphin (*Lagenodelphis hosei*), Blainville’s beaked whale (*Mesoplodon densirostris*), killer whale (*Orcinus orca*), melon-headed whale (*Peponocephala electra*), sperm whale (*Physeter macrocephalus*), striped dolphin (*Stenella coeruleoalba*), rough-toothed dolphin (*Steno bredanensis*), and Cuvier’s beaked whale (*Ziphius cavirostris*).

There is limited quantitative information on deep-water cetacean abundance in Hawai‘i; however recent studies are obtaining information on abundance and distribution. The logistics of data collection on these species are inherently difficult and most studies have been done by small boat surveys (Baird, personnel communication), large vessels (Barlow, 2006) or aerial survey (Mobley, 2000). Research is needed to determine population abundance, habitat use, site fidelity and movements around the MHI and the entire island chain to understand the population dynamics and requirements of these species.

The primary habitat of these species is deep, offshore waters of 100 meters or more but they can occur within State waters, especially in areas such as Hawai‘i and Southwest Maui County that have steep drop-offs. Short-finned pilot whales show high site fidelity off the coast of Kona, Hawai‘i and off southwest Lana‘i but also also move among islands. Evidence suggests that there are also resident island-associated populations of pygmy killer whales, dwarf sperm whales, Cuvier’s beaked whales, Blainville’s beaked whales, melon-headed whales, and rough-toothed dolphins (McSweeney et al., 2007; Baird, personal communication).

Population Trends

The population trend for all of Hawai‘i’s cetacean species except for humpback whales is unknown. Due to Hawai‘i’s isolated location and the transient and migratory behavior of many species, it is important to determine the trend for these populations and whether Hawaiian cetaceans are distinct stocks or have some exchange with populations elsewhere in the Pacific in order to determine effective management and conservation measures.

Threats to Recovery and Conservation

The types and extent of threats to these species varies in relation to distance from the MHI. More detailed information on population status and subdivision of cetaceans within Hawaiian waters is important for management and conservation efforts in Hawai‘i (Baird et al., 2007).

Hawaiian Islands Humpback Whale National Marine Sanctuary

Direct Take—As a result of centuries of whaling, diminished populations of large baleen whales exist around the globe. Although whaling has been banned in most places, there are still areas where take is allowed such as the scientific and aboriginal hunting that occurs for minke and Bryde’s whales outside of Hawai‘i’s EEZ.

Entanglement—One of the primary threats to Odontocetes in Hawai‘i is entanglement in fishing gear. Operational, discarded, and lost fishing gear, such as drift gillnets, longlines, and purse seines have been documented as a source of entanglement. It is important to note that the use of both drift gill nets and pelagic purse seine are prohibited gears in Hawai‘i. Therefore, interactions with whales and dolphins may be caused by gears that do not originate in Hawai‘i. Fishing lines and hooks are thought to be a primary threat to many species, especially false killer whales in Hawai‘i. These types of interactions may lead to dorsal fin disfigurement, hooking, scarring, and death. Certain species may steal bait and catch from fishermen, which can result in intentional harm to these whales.

Ship Collisions—Collision with vessels has proven to be the leading human-caused mortality for some species of whales in other parts of the world and is a potential threat to Hawai‘i’s cetaceans.

Increased Human Interactions—Swim with dolphin and dolphin watching tourism industry in Hawai‘i can pose a significant threat to species of dolphins. These industries have mainly focused their activities on spinner dolphins in Hawai‘i. Spinner dolphins use nearshore shallow waters and bays throughout the MHI to rest, care for their young, and avoid predators. Because they are nocturnal feeders, the disruption to their resting patterns may disrupt fitness rates. Energy reserves, care of young, and feeding behavior may be affected in addition to their ability to survive. They may also abandon necessary habitats due to continued disruption of their resting areas by tourism operations.

Pollution—Man-made noise in the marine environment is a potential threat to Hawai‘i’s cetacean species. Disturbance from ship traffic, noise from ships, sonar, aircraft, and other anthropogenic sounds has been identified as a potential impact to cetacean species.

Habitat degradation from coastal runoff is a threat primarily to nearshore species of cetaceans. Another type of pollution that has posed a specific threat in Hawai‘i is the accumulation of plastic particles. These particles can cause internal injury if ingested and contain harmful chemicals such as PCBs (Polychlorinated biphenyls) and DDE (dichlorodiphenyldichloroethylene), contaminants that persist in the environment and build up in the tissues of animals.

Hawaiian Monk Seal

Stock Definition and Occurrence in Main Hawaiian Islands

Īlīoholoikauāua, or Hawaiian monk seals (*monachus schauinslandi*), are endemic to the Hawaiian Archipelago and occur primarily in the Northwestern Hawaiian Islands (NWHI) at six major breeding locations. However, an increase of monk seal occurrence in the MHI within the last decade has been observed, with over 70 individuals identified (NMFS unpublished data). Hawaiian monk seals are the most endangered pinniped in the Exclusive Economic Zone (EEZ) of the United States, with a current total population estimate of 1100-1200 individuals (Litnann, personal communication). Although monk seals are known to move among the NWHI subpopulations, observed exchange of individuals between the NWHI and MHI is extremely rare, and research is underway to determine whether these populations should be designated as separate stocks.

Monk seals prefer to haul out on sandy beaches and lava benches and use similar beaches with adjoining shallow water areas for giving birth. Data indicates a wide variation in feeding strategies, and prey has been known to include bottom and reef fish, eels, octopus, squid, and crustaceans at depths ranging primarily from 75 to 90m. Recent research, however, has documented monk seals diving to depths greater than 500 m. The life span of monk seals is believed to be 25-30 years of age, with females reaching maturity at 5-10 years. Monk seals measure up to 7'10" and 600 lbs. at maturity.

Population Trends

Although trends in abundance vary considerably among the six subpopulations in the NWHI, current research shows a log-linear regression of estimated population abundance at an average yearly decline in the NWHI of -3.8% a year (95% CI = -5.5% to -2.1% yr⁻¹) from 1998 to 2004 (Caretta et al. 2006).

It is estimated that approximately 10% of the Hawaiian monk seal population may occur within the MHI. These islands provide the only large area of unoccupied habitat within the current range of monk seals, and the island beaches are increasingly being used to give birth. Most MHI haul-outs have occurred on the islands of Ni'ihau and Kaua'i; however, sightings and births have been reported on all of the MHI.

The population growth of monk seals in the MHI is significant in many aspects including the following: (1) relevance to viability analyses, (2) possible differences in life history related to spatial differences in the environment, (3) potential impacts of commercial and recreational fisheries, (4) potential for Section 7 consultations under the ESA, (5) legal issues associated with the status of a population that was in part translocated, and (6) the effectiveness of management actions in mitigating monk seal interactions with human activities around the MHI. The increase in observations of monk seals around the MHI and the use of these islands for breeding is significant for species' recovery.

Threats to Recovery and Conservation

Marine Debris—Throughout their range, monk seals are highly threatened by entanglement in marine debris. Monk seals have the highest documented entanglement rates from marine debris and derelict fishing gear than any other pinniped species.

Increased Human Interaction—In the MHI, threats related to direct interactions with humans and domesticated animals (e.g., dogs and cats) have increased, resulting in adverse impacts to the monk seal population. The development of beaches increases this interaction and reduces suitable habitat for haul-outs and pupping. The increase in human-monk seal interactions can be dangerous to both monk seals and humans, especially because mothers with pups are very protective and can be aggressive if threatened.

Incidental Take by Nearshore Fisheries—Monk seal injury and death from accidental hookings and entanglement in fishing gear (e.g., slide bait rigs, lay gill nets) associated with nearshore fishing activities in the MHI appears to be an increasing threat to conservation and recovery. Two seal deaths have been attributed to drowning in lay gill nets set off O‘ahu over the past year. More than eight hooking incidents have been responded to over the past year around Kaua‘i, with at least three of these incidents resulting in serious injury to the seals.

Vessel Strikes—Vessel strikes are a concern as the monk seal population increases in the MHI. Known cases of monk seal injuries and deaths from vessel collisions are thought to have occurred in the NWHI.

Disease Transmission—Disease transmission is a primary concern for monk seals. Due to the highly endangered population status of the Hawaiian monk seal, natural threats such as a disease epidemic could lead to extinction. Domestic animals in the MHI are a major concern for disease transmission to the monk seal population.

Male Aggression—Aggression by adult male seals has been known to occur in the NWHI, in some instances leading to death of females and pups. This is usually the result of an unbalanced sex ratio or sub-adult aggression and has not been documented in the MHI.

Food Limitation—The decreased fitness and survival rate of pups is a growing concern for the NWHI population. The pups in the MHI seem to have a higher birth weight and fitness level in comparison to those of the NWHI. Limited prey resources may be both a natural and anthropogenic threat as a result of oceanographic processes and overfishing.

Predators—Predation by sharks is another natural threat of increased concern as the monk seal population declines. There has been a significant increase in recent years of shark predation on pre-weaned monk seal pups born at French Frigate Shoals.

Climate Change and Oceanographic Conditions—Climate change and storms have resulted in a loss of pupping islands in the NWHI. Changes in sea-level or alterations in currents may continue to reduce the available terrestrial habitat. The loss of these islands may be detrimental to reproduction. Oceanographic processes may affect the distribution of both prey and predators.

Sea Turtles of Hawai'i

Stock Definitions and Occurrence in the Main Hawaiian Islands

Five species of sea turtles are found in the nearshore and pelagic environments around the Hawaiian Islands: *honu* or green turtle (*Chelonia mydas*), *honu 'ea* or 'ea hawksbill turtle (*Eretmochelys imbricata*), leatherback turtle (*Dermochelys coriacea*), loggerhead turtle (*Caretta caretta*), and olive ridley turtle (*Lepidochelys olivacea*).

Nearshore Species

The nearshore species include the commonly observed green turtle and the uncommon hawksbill turtle. The range of the green turtle extends from their feeding grounds in the MHI to their nesting areas in the NWHI. The green turtle is primarily vegetarian and feeds on limu growing on coral reefs and rocks in shallow coastal waters throughout the islands. Green turtles in Hawai'i are some of the best known in the Pacific Ocean due to their nearshore benthic foraging areas around the MHI. Important foraging areas have been identified along the coastlines of O'ahu, Moloka'i, Maui, Lana'i and Hawai'i Island. Approximately 400-1000 female green turtles nest annually in the NWHI, with 90% nesting at French Frigate Shoals (Kubis and Balazs, personal communication). Research indicates that this stock is specific to the Hawaiian archipelago and Johnston Atoll to the south, where algal foraging pastures occur (CWCS 2005). Green turtles measure about three feet long and weigh up to 400 lbs. at maturity.

The total number of hawksbill breeding females is approximately 60 individuals (CWCS 2005) with 20-30 females nesting annually in the MHI (NMFS and USFWS 1998). Nesting areas have been identified on the islands of Hawai'i, Maui, Moloka'i and O'ahu. Satellite and radio telemetry have shown the Hamakua Coast of Hawai'i island to be an important area for hawksbills. Overall, only limited data on all aspects of hawksbill life history exist for the MHI. Hawksbills measure approximately three feet long and weigh up to 200 lbs. at maturity. They have a long, narrow beak which is used to feed primarily on sponges.

Pelagic Species

Offshore species of turtles include the leatherback, loggerhead, and olive ridley sea turtles. Leatherbacks are found in deep waters off the Hawaiian Islands and migrate vast distances across the Pacific Ocean. Leatherbacks in Hawaiian waters are believed to originate from nesting beaches in Mexico, Costa Rica, Irian Jaya, and possibly Malaysia. A rare incident of a leatherback nesting on Lana'i was documented in 1997 although none of the eggs were fertilized, and there have been no other reported incidents of leatherbacks nesting on Hawaiian beaches. Leatherbacks measure up to eight feet long and weigh up to 2,000 lbs. at maturity, making them the world's largest sea turtle.

Pacific loggerhead turtles found in U.S. Pacific waters originate from Japanese nesting areas, where approximately 1,000 females nest annually (Kamezaki et al., 2003). Loggerheads have been tracked migrating across the Pacific, from Baja to Japan and have a complex life history as evidenced through studies based on direct satellite tracking and oceanographic overlay

Hawaiian Islands Humpback Whale National Marine Sanctuary

(Polovina et al., 2006). Loggerheads reach up to three feet at maturity and weigh approximately 250 lbs.

The olive ridley is the smallest and most abundant sea turtle and reaches up to approximately two feet at maturity. Olive ridleys are rare in Hawaiian coastal waters; however, they may have historically inhabited the coasts of all the islands, and sightings have recently been increasing. They are the most commonly caught species in offshore fishing operations (Kubis and Balazs, personal communication).

Population Trends

The hawksbill and leatherback turtles are listed as endangered and the green, loggerhead and olive ridley are listed as threatened under the ESA. With limited baseline data on population abundance and historical distribution, many unknowns remain regarding current population trends for most species of sea turtles. Certain species in Hawai‘i have more detailed information on trends in comparison to populations distributed elsewhere in the Pacific. The green sea turtle population has been increasing in Hawai‘i over the last few decades (Balazs and Chaloupka, 2004) (Balazs and Chaloupka, 2006). This increase raises new questions for wildlife managers regarding human interaction, indigenous harvest, and possible de-listing. The hawksbill sea turtle population trend remains unknown, and a historical abundance for this population is lacking. The loggerhead turtle is declining in the North Pacific (Polovina et al., 2006).

Threats to Recovery and Conservation

Lack of Information—Although there is information on the Hawaiian green turtles, a major issue for other sea turtle populations throughout the Pacific is lack of knowledge, making management for recovery extremely difficult due to the lack of baseline information on population sizes, health, and critical nesting and foraging areas that may need protection.

Direct Harvest—Native inhabitants have harvested sea turtles for centuries. Harvest of sea turtles and their eggs for food or their shell occurs both on land and at sea. Green turtles have historically been used for food, hawksbills for trade (tortoiseshell crafts), and all species’ eggs have been consumed for food. The loss of traditional restrictions limiting the number of turtles taken resulted in a severe overharvest of populations in the Pacific throughout the last century. Commercial exploitation has replaced subsistence harvest for market products and international trade. In Hawai‘i this is considered a moderate threat because illegal poaching may be occurring, making it difficult to determine the effects on population status.

Coastal Development—Threats to sea turtles occur when increased development of nesting beaches results in loss of habitat. This is a major concern for hawksbills and greens in the MHI. Disruption of nesting beaches, damage of reef habitats, beach camping and fires, litter and other refuse, and disrespectful beach goers are all issues that may be problematic. Artificial light on nesting beaches caused by street lights, hotels, restaurants, and other commercial and recreational lights can also disorient hatchlings causing them to fall prey to predators, be crushed by cars, or die of exhaustion or sun exposure. In Hawai‘i, many reefs that sea turtles depend on for food and refuge have been degraded due to coastal construction and sedimentation, non-point source pollution, overfishing, and

Hawaiian Islands Humpback Whale National Marine Sanctuary

overuse. Environmental contaminants and pollution near urban areas are considered potential problems for Hawai‘i’s nearshore sea turtles and their associated ecosystems. Marine debris, including discarded or abandoned fishing gear, plastics, styrofoam and other refuse can result in the death of sea turtles by entanglement or ingestion.

Increased Human Presence—Major concerns are those associated with habitat loss due to development and urbanization and the associated increase of residents and tourists in the MHI.

Introduced Species—Nest predation by feral predators including mongooses, cats, dogs, birds, rats, and feral pigs is considered a major problem. Introduced plant species can also have a detrimental effect--displacing native dune and beach vegetation through shading and chemical inhibition. The roots of these introduced species have entangled eggs and hatchlings and can prevent access to nesting females

Incidental Take—Incidental take of sea turtles occurs in several commercial, subsistence and recreational fisheries. Incidental catches of all five species of sea turtles are known to occur. Hawksbills have been taken primarily by nearshore gillnets. Serious sea turtle injuries and mortalities have also been documented in Hawai‘i from boat strikes and other ocean recreational equipment.

Fibropapilloma—The green sea turtle was affected by the increased scope and magnitude of fibropapilloma disease, reaching epidemic rates in the 1990’s; however, prevalence and severity of fibropapilloma has decreased over the last few years at some sites in the MHI. This disease can result in mortalities from fibrous growths that occur on the eyes, neck, flippers, and in the mouth of sea turtles.

Climate Change (Rising Sea Levels)—Climate Change may destroy coral reefs or result in loss of nesting areas, increase the likelihood of disease outbreaks among sea turtles, and impact natural sex ratios of hatchlings.

Current Management Status

Sanctuary Role

Established for the purpose of conservation, research, and education, the sanctuary develops programs and takes initiatives that strengthen resource protection measures and ensure the long-term recovery of humpback whales. The primary focus of such efforts lies in educating the public about existing regulations that protect humpback whales, enhancing the enforcement of these laws, and working cooperatively with other agencies to increase awareness of humpbacks and their habitat. The sanctuary's primary goal is to protect the humpback whale and its habitat in Hawai'i; however, through its partnership with the state, programs have been developed that support the conservation of cetaceans, monk seals, and sea turtles in Hawai'i.

To this end, the sanctuary is already playing an active role in the conservation of marine mammals and sea turtles in Hawai'i. The sanctuary has the potential to expand its current programs if additional resources are added to the sanctuary. The sanctuary focuses its efforts on a variety of issues, including supporting research; coordinating and participating in community outreach projects; developing educational displays; and working cooperatively with local organizations, agencies, and volunteers to address resource protection, conservation efforts, and public awareness. Programs offered include lectures, school site visits, student and educator workshops, exhibits and activity booths, publications and additional media outreach, ocean users workshops, interpretive signs, and naturalist training. All education and outreach is intended to enhance public stewardship and responsible wildlife viewing.

The State sanctuary office has enhanced DLNR marine mammal conservation activities through improved coordination and communication with NOAA Fisheries and local-non-profit groups. The State Point of Contact (POC) and Coordinator provides staff for field, technical and administrative support, and assists development and resubmission of the State's ESA Section 10 Incidental Take Permit application.

Over the past five years the sanctuary has established staff whose roles involve monk seal conservation on the islands of Kaua'i and Hawai'i Island. With funding provided by NOAA Fisheries PIRO, Kaua'i's sanctuary team member has coordinated monk seals pupping events at popular beaches, removed fishing hooks from injured seals, and responded to hundreds of seal "haul outs" on beaches to ensure public safety, education, and marine mammal protection. On the Hawai'i Island sanctuary staff play a similar active role in responding to monk seal haul outs, pupping events, disentanglements, and relocation. The Sanctuary Co-Manager has served as a member of the Hawaiian Monk Seal Recovery Team.

The National Marine Sanctuary Program and NOAA Fisheries partnered to develop the Ocean Etiquette program to promote ocean stewardship. This program provides public guidance on minimizing impacts to Hawai'i's protected species. Sanctuary staff are also involved in the development of new spinner dolphin regulatory measures and provide support to the South Maui Sea Turtle Stranding Network. In addition, the sanctuary has a highly qualified large whale disentanglement team that is determining ways to reduce entanglements by working with the fishing industry. Staff support the NOAA Marine Debris Program by participating in marine debris clean-ups and various education and outreach activities.

These efforts demonstrate how the sanctuary is already actively involved in protecting other marine species and the potential for their enhanced conservation should additional resources be added to the sanctuary as a result of the upcoming Management Plan Review Process.

NOAA Fisheries and Other Federal Agencies Role

NOAA Fisheries is the principal federal agency responsible for conserving, protecting, and enhancing marine wildlife and their habitats. NOAA Fisheries Protected Resources Division (PRD) has implemented and continues to monitor several legal mandates for the protection of endangered and threatened marine life and their ecosystems, including the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the National Environmental Policy Act (NEPA). NOAA Office of Law Enforcement (OLE) enforces numerous Federal laws and regulations including those that pertain to protected species.

NOAA Fisheries and the U.S. Fish and Wildlife Service (FWS) share responsibility for the research, management, and recovery of sea turtle populations in Hawai‘i. NOAA Fisheries is primarily responsible for recovery actions in the marine environment, and the FWS for recovery actions in the terrestrial environment, although both agencies work together on several sea turtle recovery programs in Hawai‘i. The National Park Service is also involved in the monitoring of nesting beaches on Hawai‘i Island.

The Coast Guard also plays a vital role in the protection of our natural resources. This agency’s Ocean Steward Strategic Plan aims to sustain healthy populations of protected species and marine habitats through enforcement of the ESA, MMPA, and National Marine Sanctuaries Act. The Coast Guard works with federal partners including NOAA Fisheries, National Ocean Service, U.S. Fish and Wildlife and state and local agencies to meet the goals of Ocean Steward.

State of Hawai‘i Role

State of Hawai‘i Wildlife Law affords protection to listed species in state waters and outlines conservation programs that mandate continued research on listed species. The State Wildlife Law was written to conserve, manage, protect, and enhance endangered, threatened, and indigenous wildlife. This law prohibits activities involving the possession and exportation of endangered and threatened indigenous wildlife in Hawai‘i. Law enforcement officials are given broad arrest and search and seizure provisions to enforce these acts (HI ST § 195D-4 – 21).

The State of Hawai‘i’s Department of Land and Natural Resources manages Hawai‘i’s natural and cultural resources. Its Division of Aquatic Resources (DAR) and Division of Conservation and Resource Enforcement (DOCARE) are the primary state agencies responsible for the management and protection of marine mammals and sea turtles in Hawai‘i. The state office of the Hawaiian Islands Humpback Whale National Marine Sanctuary is located in DAR, and DAR staff are on Kaua‘i, O‘ahu, Moloka‘i, Maui and the Hawai‘i Island. DAR issues permits for scientific research involving marine protected species and works in

Hawaiian Islands Humpback Whale National Marine Sanctuary

close collaboration with DOCARE, NOAA Fisheries, and NOAA's National Marine Sanctuary Program in its marine protected species management efforts. DOCARE enforces all State laws and rules including those pertaining to aquatic life and coastal zones.

Current interpretation of the MMPA pre-empts state law regarding protection of marine mammals not listed as endangered or threatened species in accordance with the U.S. Endangered Species Act (ESA). According to the MMPA, states do not have authority to enforce state laws relating to the taking of non ESA-listed species unless the Secretary has transferred authority for the conservation and management of that species to the State. [16 U.S.C. Sec. 1379(a)]. Currently the State of Hawai'i has no authority of protection laws for non-ESA-listed marine mammals, and NOAA Fisheries is the sole agency with protection authority for species such as spinner dolphins and many of the toothed whales and dolphins found in Hawaiian waters. If marine mammals are included in the sanctuary's authority, it would strengthen the conservation regime for non-listed marine mammals. Through the Federal and State co-management of the sanctuary, there would be a regulatory nexus for the State to assist in the management of non-listed marine mammals.

Conservation Needs

During 2006 and 2007, interagency meetings were held among managers from NOAA Fisheries Pacific Islands Regional Office, Pacific Islands Fisheries Science Center, NOS, and DLNR to discuss conservation needs of marine mammals and sea turtles in Hawai'i and to evaluate whether the sanctuary could play a more substantive role should these resources be added to the sanctuary. Agency personnel reviewed the conservation needs identified in ESA Recovery Plans, the Biennial Report to Congress on the Recovery Program for Threatened and Endangered Species (2004), and the State Comprehensive Wildlife Conservation Strategy (CWCS). Conservation needs that were determined applicable to these species in the MHI were listed in matrices and distinguished by one of three program categories: research, management, and education and outreach. These agencies also reviewed management authorities and programs in place to address each need. The letters "L", "CL", "D", and "S" represent Lead, Co-Lead, Dedicated Support, and Support as Available (see appendix A).

Eleven main conservation needs were identified:

1. Research on abundance and distribution, population dynamics, life history, foraging behavior, and threats
2. Minimize and monitor fishery-related interactions or impact
3. Conduct regulatory reviews/permitting to reduce and mitigate adverse impacts to protected species
4. Support rescue response to injuries, entanglements, strandings, etc.
5. Protect habitat, foraging sites, and prey base
6. Manage haul-out sites and pupping events
7. Decrease marine debris
8. Control introduced species in nesting habitat
9. Enforcement
10. Conduct education and outreach to enhance public stewardship, wildlife viewing, support conservation efforts, etc.
11. Develop and manage volunteer networks to help achieve the above

Hawaiian Islands Humpback Whale National Marine Sanctuary

While the matrix showed that NOAA Fisheries is responsible for taking the lead on many of the conservation needs for these species, other organizations in Hawai‘i provide both dedicated support and support as available to these efforts. It was determined that the sanctuary is currently playing an active role in addressing many of the conservation needs for marine mammals and sea turtles in Hawai‘i.

The matrix also revealed that the management authorities in place benefit from the additional support efforts of the sanctuary. For example, although PIRO is designated by statute as the lead agency for education and outreach, only two O‘ahu-based PIRO staff are currently dedicated to this purpose for all marine protected species throughout the Pacific Region. Therefore, PIRO’s lead role for education and outreach for marine mammals and sea turtles in Hawai‘i could be supplemented with additional support from the sanctuary, especially considering the sanctuary’s expertise in community-based education and outreach and the presence of sanctuary staff in all four Hawai‘i counties. Similarly, PIRO has the lead on all rescue response to marine mammal entanglements, strandings, and monk seal pupping events, however, PIRO has only one primary staff position, the Marine Mammal Response Coordinator, in charge of coordinating all of these activities throughout the Pacific Region. In an effort to increase marine mammal response capacity, PIRO has been building a network of state, local, and nongovernmental response participants. The sanctuary has become a significant member of this network, and the addition of marine mammals to the sanctuary could enhance this partnership.

These efforts demonstrate the sanctuary’s contribution to the conservation needs of these marine resources. If these resources are added to the sanctuary, the sanctuary may strengthen and expand its existing programs to further support the conservation needs identified in the matrices. The sanctuary will do so in collaboration with other responsible agencies and in conjunction with determining whether the sanctuary is able to adequately protect these resources while maintaining its existing programs to protect the humpback whale and its habitat in Hawai‘i.

III. Maritime Heritage Resources in the Main Hawaiian Islands

The term maritime heritage resource refers to the cultural, archaeological, and historical remains which relate to our seafaring past. These include shipwreck sites, historic aircraft sites, the remains of landings and dock facilities, prehistoric archaeological sites, and other types of materials. Maritime heritage itself is a broader term which incorporates documentary evidence, oral history, folklore, and seafaring traditions. Currently the sanctuary does not have the capacity to fully address all Native Hawaiian cultural resources, such as stone fishponds and fish traps, as part of its maritime heritage. (The sanctuary does, however, include information on Native Hawaiian cultural heritage in its public outreach and education efforts). The State Historic Preservation Division actively manages coastal fishponds, many of which have been listed in the State Inventory of Historic Places. In addition, several fish ponds are listed on the National Register of Historic Places. This is an opportunity for complimentary co-management: the National Marine Sanctuary Program in Hawai'i has the capacity to address submerged shipwreck sites, historic aircraft, landings, etc., and the State Historic Preservation Division manages coastal fishponds and fish traps.

Existing Inventory

The existing maritime heritage resource inventory for resources within the sanctuary's boundaries is comprised of two categories of site information: 1) vessels and historic aircraft reported lost within the sanctuary, and 2) vessels and historic aircraft wreck sites confirmed by survey within the sanctuary (Appendix B). The inventory has been compiled from various sources, such as historical documents (Thrum's *Hawaiian Annual*, Thomas' *Hawaiian Registered Vessels*, *Pacific Commercial Advertiser*); federal databases (Naval Historical Center aviation and shipwreck databases, inventory report *US Navy Shipwrecks in Hawaiian Waters: an Inventory of Submerged Naval Properties*); non-agency researchers (Mr. Bob Lewis, Mr. Rick Rogers); and field site investigations (University of Hawai'i Marine Option Program, Hawai'i Undersea Research Laboratory, Smithsonian Institute).

The inventory currently lists 185 ship and aircraft losses in the HIHWNMS pre-1957, all 50 years old or older. Of these 185 losses, some have been salvaged and some completely broken up and lost over time. Twenty-two sites have been confirmed by some level of field investigation. There is little doubt that many other sites exist, but systematic survey has not been initiated for these types of resources. Consequently and for simplicity's sake, the inventory map portrays the relative positions of resources located within the general area of their reported (yellow) or confirmed (red) loss. The map also includes approximately 220 reported ship losses outside sanctuary boundaries. Of some 1,500 naval aircraft lost in Hawaiian waters, the total number within state jurisdiction has yet to be determined (Appendix C).

Hawaiian Islands Humpback Whale National Marine Sanctuary

Maritime heritage resources in the Hawaiian Islands are representative of important phases in Hawai‘i’s history:

- 19th century whaling shipwrecks represent some of the earliest sites in the MHI. These sites are the physical record from a critical contact period when British, French, and American whalers substantially influenced the social, economic, and political climate of the Hawaiian Kingdom. Whaling shipwrecks are exceedingly rare worldwide and may possess data about the technological advancement of the industry as well as the personal histories and affects of the sailors.
- 19th and early 20th century inter-island commercial vessels, both sail and steam, make up most of the vessel losses, many from the formative days of Hawai‘i’s plantation period. A variety of vessel types reflect the Hawaiian, American, and Pacific/Asian multicultural setting among the islands. Provisioning ships crossing the Pacific necessitated increased commercial trade among Hawai‘i’s landings. Sandalwood was also exported in massive quantities. Local shipping concentrated on a variety of agricultural products: potatoes, rice, sugar cane, and pineapple. Cattle ranching became popular in the 1860’s, and special vessels transported herds between the islands. Locally built sampans, originally designed in Japan, opened the tuna industry beginning in 1900. The variety of sailing brigs (sandalwood), sailing schooners (agricultural products), inter-island steamers (sugar and plantation building supplies), and fishing vessels reflect the changing nature of Hawaiian economy and society.
- The U.S. Navy has an important history among the islands. Of the many types of military properties lost in Hawaiian waters (approximately 80 USN ships and submarines), two types highlight critical innovations in naval strategy: amphibious vessels and naval aircraft. Landing craft, a whole new class of vessels, mark the locations of training areas used during the 1930’s and 1940’s to refine tactics and methods for the island-hopping campaign in the Pacific. And of the many aircraft lost in Hawaiian waters, more than 70 historic civilian, army, and navy aircraft were lost within the current sanctuary/state boundaries alone. The technical development of flying boats in Hawai‘i dates back to the 1920’s and 1930’s as do the oldest submerged aviation crash sites (located). Many of these wrecks and aircraft crashes are also grave sites that deserve appropriate respect and protection.

Within these broad themes, individual heritage resources may merit varying degrees of preservation efforts. The definition of significance for heritage properties is covered by the National Register for Historic Places. The Register establishes four primary criteria for site evaluation: 1) association with an important historic individual, 2) association with a major historic event, 3) representative of a distinctive class or style of construction, and 4) having potential for historical and/or archaeological information on site. Secondary considerations also play a part, such as site integrity, context, and setting. The State of Hawai‘i places further importance on resources associated with traditional beliefs, events, or oral accounts of Native Hawaiians and other ethnic groups in the islands. Determinations of site significance are made following the location and assessment of maritime heritage resources. Evaluation is an important part of resource preservation management. Where survey and site evaluation are lacking, resource management is often not possible.

Current Management Status

Specific state and federal laws have been established for the management, preservation, and protection of submerged heritage resources. Some of the important statutes are as follows:

- Hawai‘i Revised Statute Chapter 6E establishes and defines the Historic Preservation Program, specifically including submerged historic shipwrecks and aviation properties older than 50 years. The statute establishes state title to historic properties on state lands whether ashore or underwater, and provides for distinct consultation, administration, project review, enforcement, and penalty processes. The declaration of intent for HRS 6E-1 states: “that it shall be the public policy of this State to provide leadership in preserving, restoring, and maintaining historic and cultural property, to ensure the administration of such historic and cultural property in a spirit of stewardship and trusteeship for future generations, and to conduct activities, plans, and programs in a manner consistent with the preservation and enhancement of historic and cultural property.” [L 1976, c 104, pt of §2] Guidelines for the conduct of archaeological work have been established by the State of Hawai‘i Administrative Rules (HAR).
- The Abandoned Shipwreck Act of 1987 grants the United States title to abandoned vessels within three nautical miles of the baseline which are 1) embedded in state submerged lands, 2) embedded in coral formations on state lands, or 3) located on state submerged lands and determined eligible for the National Register (evaluation necessary). The U.S. then transfers this title to the state. Guidelines to the ASA recommend to states active management of these resources, including survey, research, and appropriate access, for the public benefit.
- The National Historic Preservation Act of 1966 encourages the preservation and protection of America’s historic and cultural resources. The NHPA 1) created the National Register of Historic Places, 2) provides for the designation of the State Historic Preservation Officer (to carry out statewide survey of historic properties, assist federal agencies in preservation efforts, etc.), and 3) created the Advisory Council on Historic Preservation. NHPA section 106 describes federal agency responsibilities to protect resources from damage during any federal undertakings or development, and section 110 directs federal agencies to develop preservation programs which inventory, assess, and nominate eligible properties to the National Register (similar to the role of the SHPO at the state level).
- The Sunken Military Craft Act of 2004 protects all U.S. military ships and aircraft from prohibited damage or removal as property of the federal government and recognizes parallel expressions of sovereign intent by foreign owners of sunken military craft. The statute provides for the protection of military ships and aircraft, protection for the graves of lost military personnel, protection of sensitive archaeological artifacts and historical information, and codifies existing case law supporting federal ownership of sunken military vessels.

When discovered on the seafloor, submerged heritage sites can serve as unique windows into the past, providing opportunities for historians, archaeologists, sport divers, and the general public to experience and appreciate these public resources in a responsible manner. Many states feature interpretive shipwreck “trails” and vocational training programs that involve the public directly in stewardship of our common maritime heritage. The inventory, assessment,

and preservation of submerged heritage properties are all directed towards the benefit of the public and the protection of the resource.

Unfortunately, in the State of Hawai'i there have been few, if any, cases of active preservation management for submerged resources, and little, if any, enforcement of the above mandates. There is no state-initiated resource inventory, no maritime preservation program, no outreach or educational effort to the interested public, no field capacity for survey and assessment, and in general little recognition of the heritage potential of the submerged heritage resource for Hawaiian waters.

Current Threats

The current situation has persisted despite state and federal undertakings requiring NHPA section 106 review and despite an active sport diving industry which stands to benefit from access and interpretation of wreck sites. Motivated by profits or simply by a passion for history (yet often unaware of preservation guidelines and laws), many divers remove artifacts from both civilian and military submerged sites with relative freedom. Maritime heritage resources in the MHI have been negatively impacted from a number of different directions for many years.

Presently, two cases provide recent examples of resource damage. On O'ahu, in violation of state and federal laws, a dive boat operator placed a non-permitted mooring attachment to an F4U-1 Corsair navy aircraft ditched in Mamala Bay in 1944. This attachment damaged the engine, airframe, and cowling of the historic federal property for many years. It was first removed in 1999 following informal notification to the dive operator, but then it was reestablished by a different individual and has only recently been removed again. On Maui sport divers have located a PB4Y-1 navy aircraft which ditched near Maalaea Bay in 1944. Photographs from the site indicate that the aft turret 50-cal machine guns have been illegally removed. Both of these sites lie in state and sanctuary waters, and both cases may be violations of HRS Chapter 6E and the Sunken Military Craft Act. The true number of sites being negatively impacted remains unknown.

The present situation will likely remain unchanged, given a continuation of the lack of resource management in this area. However, the statutes of the State of Hawai'i recognize the value of conserving historic and cultural property for the public good and officially declare that it is in the public interest to engage in a comprehensive program of historic preservation at all levels of government to promote the use and conservation of such property for the education, inspiration, pleasure, and enrichment of its citizens (Chapter 6E).

IV. Fulfilling Needs: NMSP's Resource Management Capacity

The National Marine Sanctuaries Act (NMSA) authorizes the Secretary of Commerce to designate and manage areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. The primary objective of the NMSA is to protect marine resources, such as marine mammals, sunken historical vessels, and unique habitats. This assessment of additional marine resources is the initial step in fulfilling the mandate to identify and evaluate other resources of national significance for possible inclusion in the sanctuary. After conducting this initial assessment of additional resources, the findings conclude that the sanctuary program may benefit the management and conservation of marine mammals, sea turtles and maritime heritage sites in Hawai'i. Pending governor approval, the sanctuary recommends moving forward with the process to further evaluate the inclusion of additional resources under the sanctuary's authority in the Management Plan Review Process. If additional resources are added to the sanctuary, the sanctuary will use its expertise and authority to enhance resource protection programs and regulations that currently exist.

The NMSA is unique in that it provides for the protection of nationally significant resources in addition to considering the benefits of these resources to humans. The NMSA indicates that the purposes and policies of sanctuaries are intended "to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities" [NMSA section 301(b)(5), see 16 U.S.C. 1431(b)(5)]. The purposes and policies of the NMSA therefore, among other things, are meant to support compatible human activities such as ecotourism, citizen advisory councils, and public educational activities.

The Hawaiian Islands Humpback Whale National Marine Sanctuary has demonstrated its ability for management of marine resources over the past 10 years through its programs on resource protection, research, education and outreach for humpback whales. Based on working cooperatively with the State of Hawai'i, sanctuary programs have developed effective resource protection strategies to improve management decision making, build capacity, and promote public awareness of and voluntary compliance with federal and state regulations. Since the sanctuary's inception, sanctuary managers have formed strategic partnerships with a variety of federal and state agencies to facilitate marine resource management in Hawaiian waters. This cooperative management strategy has been particularly effective in instances where the sanctuary's strengths in education and outreach fill an important role in helping to conserve, protect, and enhance the biodiversity of our oceans. In addition, sanctuary programs support activities that nurture a cultural awareness based upon the Native Hawaiian tradition of respect for the ocean and its resources. The sanctuary program maintains relationships with Native Hawaiian groups and cultural practitioners, sponsors cultural lectures, and educates the public about cultural values pertaining to the sanctuary.

Since its establishment in 1996, the Sanctuary Advisory Council (council) has contributed significantly to sanctuary policies and programs that embody a collaborative management approach. The council was established by federal law in order to assure public advisory participation in the management of the sanctuary. The council provides a unique opportunity

Hawaiian Islands Humpback Whale National Marine Sanctuary

for NOAA and DLNR to develop a community partnership in Hawai‘i. Members representing a variety of local and federal agencies, user and industry groups, and each of the counties, provide input into the development and management of the sanctuary. This council is an example of the unique role that the sanctuary can bring in providing value added to managing additional marine resources.

The sanctuary may benefit the management and conservation of marine mammals, sea turtles, and maritime heritage resources through expanding current programs, developing new strategies for management, and by existing support from the regional and national maritime heritage program. If the sanctuary decides that other resource responsibilities are to be added to the sanctuary, all sanctuary programs will be evaluated and may need to be adjusted accordingly, including the expansion of scope and type of research, monitoring, education and outreach programs, and enforcement efforts.

One of the primary areas of the sanctuary’s expertise is education and outreach—the sanctuary has been a leader in developing public education and outreach products about the marine environment in Hawai‘i. Numerous educational programs for the humpback whale and its habitat in Hawai‘i range from education in the classrooms to ocean awareness trainings, which offer volunteers and marine tour operators the essential interpretive skills and content necessary to be prepared to educate Hawai‘i visitors about marine resource in Hawai‘i. Many of these programs already include information on other marine resources in Hawai‘i and could be expanded if marine resources are added to the sanctuary.

The sanctuary also has a rescue and response program for humpback whales that could be expanded if additional resources are added to the sanctuary. The sanctuary program already has staff on many of the main islands able to provide management and emergency response to living marine resources. For example, the sanctuary has State staff on the islands of Kaua‘i and Hawai‘i who respond to monk seal haul outs and pupping events. In addition, sanctuary staff and volunteers are active in the sea turtle stranding network on Maui.

Furthermore, none of the marine mammals or sea turtles evaluated have critical habitat designation in the MHI. The sanctuary may provide an alternative means to designating critical habitat for these species, as was done with the humpback whale. The sanctuary also has the ability to enforce existing regulations or to create new regulations for managing these resources.

Maritime Heritage

In addition to providing a management and conservation tool for marine species and ecosystems, the NMSA provides strong protections to the submerged maritime heritage resource. The act prohibits the unauthorized removal of heritage property, and persons undertaking such actions can be found liable if the activity results in damage to, loss of, or injury to underwater cultural property. But real compliance and protection of resources does not just stem from laws, but from the nurturing of a preservation ethic, the focus of the National Marine Sanctuary Program.

The NOAA National Marine Sanctuary Program (NMSP) has been involved in the preservation of maritime heritage resources for more than 30 years. In 2002, the NMSP

Hawaiian Islands Humpback Whale National Marine Sanctuary

initiated an organized national maritime heritage effort. The Maritime Heritage Program's (MHP) mission is to promote, protect, and explore our maritime heritage, embracing heritage resources within our evolving ocean stewardship for the benefit of the public.

The specific objectives of the NOAA Maritime Heritage Program include the following:

- Promote and coordinate the location, inventory and assessment of maritime heritage resources;
- Promote, coordinate and conduct archaeological research directed at maritime heritage resources;
- Promote and coordinate the protection and preservation of maritime heritage resources;
- Increase appreciation of our historical and cultural ties to the sea through the discovery and promotion of maritime heritage;
- Promote a better understanding of and appreciation for maritime heritage resources through a comprehensive education and outreach program.

The public benefit and the preservation ethic are key features in each of these objectives.

The NMSP has experience with successful management strategies for maritime heritage resources. Thunder Bay Sanctuary in Alpena, Michigan, works in partnership with the state to provide responsible public access to shipwreck resources, including a site mooring program and shipwreck trail designation. Like the Maritime Heritage Program itself, Thunderbay emphasizes research and exploration, education, resource protection, recreation, and community involvement.

While heritage objectives remain consistent, not all management activities are alike. Activities are tailored for the specific needs of the individual sanctuary. For instance, in lieu of emphasizing recreational activities, heritage resource management in the Papahānaumokuākea (Northwestern Hawaiian Islands) Marine National Monument focuses on “bringing the place to the people” via a variety of outreach products (including internet materials) due to the fragile and remote nature of the region.

The MHP has developed internal capacity for supporting much of the necessary activity, including maritime archaeologists, historians, educators, and the small craft and equipment necessary for maritime archaeology survey. Such survey helps to meet established preservation mandates and provides a rich source of heritage data to the public to enhance appreciation of the resource. In Hawai‘i the NMSP employs two MHP personnel in the Pacific Islands regional office whose duties include supporting heritage management needs in the Papahānaumokuākea (Northwestern Hawaiian Islands) Marine National Monument and American Samoa. The partnership between NOAA and the State of Hawai‘i in the management of the HIHWNMS will aid the State in incorporating submerged heritage sites into the State Inventory of Historic Places and in developing strategies for the management of maritime resources beyond sanctuary boundaries.

V. Looking Forward: Enhancing Protection for Humpback Whales, Emerging Issues, and Additional Marine Resources

In designating the sanctuary, Congress recognized the significant and unique marine resources and ecosystems within the Hawaiian Islands, in addition to humpback whales and their habitat. Section 2304(b)(4) of the HINMSA required the sanctuary to identify and evaluate resources and ecosystems of national significance for possible inclusion in the sanctuary. Adding other marine resources to the sanctuary may require different and additional types of management strategies and regulations to ensure the comprehensive protection of these resources.

NOAA Fisheries has been a partner in the initial review of living marine resources that may be considered for addition to the sanctuary and has expressed willingness for the sanctuary to move forward with the public scoping process to further identify and assess the ability of the sanctuary to support the protection of those resources. As discussed above, in collaboration with NOAA Fisheries and other partners, the sanctuary program has already demonstrated its effectiveness in supporting protected species incident response (e.g., monk injury response) and education and outreach efforts regarding marine mammal and sea turtle conservation. The Naval Historical Center and the National Park Service Submerged Resources Center contributed to material on shipwrecks and also support moving forward with the public scoping process for maritime heritage resources. Over the past few years, the sanctuary has received various State letters of support that address priorities for the addition of resources to the sanctuary (Appendix E). In addition, the State's Comprehensive Wildlife Conservation Strategy (CWCS), completed in 2005, and the most recent draft of the State's Ocean Resources Management Plan (ORMP) in 2007 recognize the importance of adding other marine resources to the sanctuary. The Marine Mammal Commission (MMC) has also supported adding marine mammals and sea turtles to the sanctuary.

Since its inception, the sanctuary's primary goal has been to conserve, enhance, and protect humpback whales and their habitat. The addition of other marine resources should not come at the expense of maintaining current programs to protect humpback whales. The sanctuary has made significant achievements in resource protection, research, operations, education, and community outreach in its efforts since its original management plan was finalized in 1997. The goals and objectives of the sanctuary resource protection program were developed to complement and coordinate existing management and regulatory efforts, fill gaps, enhance public participation and awareness and to address some specific identified priority issues related to protection of humpback whales in Hawai'i. However, the sanctuary recognizes that certain unforeseen issues may pose additional threats to humpback whales. The sanctuary will assess the adequacy of the existing management plan and regulations to protect the humpback whale and its habitat in the Management Plan Review Process. Upon the Governor's approval, the sanctuary will also address emerging issues and further evaluate additional marine resources during this process.

Over the past five years the sanctuary has been addressing a number of issues that continue to be of concern for the humpback whale and its habitat in Hawai'i. These issues include entanglement, vessel-whale interactions, thrillcraft impacts, water quality concerns, open ocean aquaculture development, and shark attraction. In collaboration with its partner permitting agencies, including NOAA Fisheries Service and DLNR, the sanctuary works with

Hawaiian Islands Humpback Whale National Marine Sanctuary

ocean industries to help design and modify projects in order to minimize negative impacts on humpback whales and other marine wildlife. The sanctuary continues to consult with representatives of Hawaii Superferry, Inc. in an ongoing collaborative effort to reduce the collision risks that may be associated with the new, high speed, inter-island transportation service. Sanctuary staff also regularly consult with open ocean fish farm operators off O‘ahu and Hawai‘i Island (Kona), providing information and recommendations on potentially whale-friendly design modifications and marine mammal impact monitoring techniques. In addition, the sanctuary is working with state and county partners to address vessel wastewater discharge concerns by supporting truck-base pump-out services on Maui while new state harbor pump-out facilities are under construction. Recent actions by the Hawai‘i State Legislature in 2007 highlight the need to address vessel speed limits and water quality.

With continued federal, state, and community support the sanctuary will further develop its existing programs and evaluate its capacity to address emerging threats to humpback whales and their habitat in Hawai‘i through a community-based process to review and revise its management plan. If the Governor approves, the sanctuary will also begin the necessary regulation changes and proceed with an EIS/EA to add the marine resources identified, which will include opportunities for public review and comment. In keeping with NOAA policy, additional resources will be considered only after a very thorough review and public process. The impacts of adding resources to the scope of the sanctuary management program would not be known until a detailed analysis is completed of added management measures, if any are determined to be needed.

The sanctuary’s Management Plan Review Process promises to greatly enhance the support NOAA’s National Marine Sanctuary Program provides for marine conservation in Hawai‘i. Funding, technical and administrative support will be needed, however, as will continued local community and state-level backing at every stage in the process. By working together as, we have thus far, the way forward is full of promise for community-based stewardship of Hawai‘i’s precious marine resources.

References

- Andrews K. R., Karczmarski L., Au, W. W. L., Rickards, S. H., Vanderlip, C. A., and Toonen, R. J. 2006. Patterns of genetic diversity of the Hawaiian spinner dolphin (*Stenella longirostris*). *Atoll Research Bulletin* 543:65-73.
- Baird R.W., Gorgone A.M., McSweeney D., Ligon A.D., Deakos M.D., Webster D.L., Schorr G.S., Martien K.K., Salden D.R., and Mahaffy S.D. 2007. Population structure of island-associated dolphins: I. Evidence from photo-identification of common bottlenose dolphins in the main Hawaiian Islands. Submitted to *Biological Conservation*, June 13, 2007.
- Baird R.W., Gorgone A.M., Webster D.L., McSweeney D.J., Durban J.W., Ligon A.D., Salden D.R., and Deakos M.H. 2005. False killer whales around the Main Hawaiian Islands: an assessment of inter-island movements and population size using individual photo-identification. National Marine Fisheries Service, Pacific Islands Fisheries Science Center. 24 pp.
- Baird R.W., Ligon A.D., Hooker S.K., and Gorgone A.M. 2001. Subsurface and nighttime behavior of pantropical spotted dolphins in Hawaii. *Canadian Journal of Zoology*. 79: 988-996.
- Baker and Johanos. 2004. Abundance of the Hawaiian monk seal in the main Hawaiian Islands. *Biological Conservation*. 116 (2004) 103-110.
- Balazs G. The Sea Turtle Stranding Research Network in the Hawaiian Islands. Marine Turtle Research Program. NOAA Fisheries. Pacific Islands Fisheries Science Center. April 2006. <<http://www.turtles.org/strandingresearchnetwork.pdf>>
- Balazs and Chaloupka. 2004. Thirty-Year Recovery Trend in the Once Depleted Hawaiian Green Sea Turtle Stock. *Biological Conservation* 117 (2004) 491-498.
- Balazs and Chaloupka, 2006. Recovery Trend Over 32 Years at the Hawaiian Green Turtle Rookery at French Frigate Shoals. *Atoll Research Bulletin* 543:147-158.
- Barlow J. 2003. Cetacean Abundance in Hawaiian waters during summer/fall of 2002. Administrative Report. La Jolla, California: National Marine Fisheries Service, Southwest Fisheries Science Center. Report nr LJ-03-12. 20 pp.
- Barlow J. 2006. Cetacean abundance in Hawaiian waters estimated from a summer/fall survey in 2002. *Marine Mammal Science* 22(2):446-464.
- Carretta J.V., Forney K.A., Lowry M.S., Barlow J., Baker J., Hanson B., and Muto M.M. 2007 draft. U.S. Pacific marine mammal stock assessments. La Jolla, California: National Marine Fisheries Service, Southwest Fisheries Science Center. NOAA-TM-NMFS-SWFSC-XXX.

Hawaiian Islands Humpback Whale National Marine Sanctuary

- Carretta J.V., Forney K.A., Muto M.M., Barlow J., Baker J., Hanson B., and Lowry M.S. 2006. U.S. Pacific marine mammal stock assessments. La Jolla, California: National Marine Fisheries Service, Southwest Fisheries Science Center. NOAA-TM-NMFS-SWFSC-398.
- Chaloupka and Balazs. 2007. Using Bayesian state-space modeling to assess the recovery and harvest potential of the Hawaiian green sea turtle stock. *Ecological Modelling* 205 (2007) 93-109.
- Chivers S.J., Baird R.W., McSweeney D.J., Webster D.L., Hedrick N.M., and Salinas J.C. 2007. Genetic variation and evidence for population structure in eastern North Pacific false killer whales (*Pseudorca crassidens*). *Canadian Journal of Zoology* 85:783-794.
- Hawai'i's Aquatic Species of Greatest Conservation Need. 2005. Hawaii's Comprehensive Wildlife Conservation Strategy (CWCS). State of Hawai'i Department of Land and Natural Resources and Division of Aquatic Resources. <<http://www.hawaii.gov/dlnr/dar/sawcs.htm>>
- Hawai'i's Marine Protected Species. Ocean Users Handbook. The Laws and Regulations for Federally Protected Marine Resources. 2007-2008. Hawaiian Islands Humpback Whale National Marine Sanctuary. 51pp.
- Kamezaki N., Matsuzawa Y., Abe O. et al. 2003. Loggerhead turtles nesting in Japan. In: Bolten AB, Witherington B (eds) *Loggerhead Sea Turtles*. Smithsonian Books, Washington DC, pp 210-218.
- King C.S., Gilmartin W.G., Hau S., Bernard H.J., Canja S.M., Nakai G., Grady M.J., Williams S., and Hebard A.G. In Press. Nesting hawksbill turtles (*Eretmochelys imbricata*) on the Island of Maui, Hawai'i from 1996-2003. *Proceedings of the Twenty-fourth Annual Symposium on Sea Turtle Biology and Conservation*.
- Littnan C.L., Stewart B.S., Yochem P.K., and Braun R. 2006. Survey for Selected Pathogens and Evaluation of Disease Risk for Endangered Hawaiian Monk Seals in the Main Hawaiian Islands. *EcolHealth* DOI: 10.1007/s10393-006-0059-z
- NOAA Fisheries, 2007. NOAA Fisheries Office of Protected Resources, Marine Turtles. <<http://www.nmfs.noaa.gov/pr/species/turtles/>>
- National Marine Fisheries Service. 2007. Recovery Plan for the Hawaiian Monk Seal (*Monachus schauinslandi*). Second Revision. National Marine Fisheries Service, Silver Spring, MD. 165 pp.
- National Marine Fisheries Service. Biennial Report to Congress on the Recovery Program for Threatened and Endangered Species. October 1, 2002 – September 30, 2004. National Oceanic and Atmospheric Administration. U.S. Department of Commerce. 165 pp.

Hawaiian Islands Humpback Whale National Marine Sanctuary

- National Marine Fisheries Service and U.S. Fish and Wildlife Service. (US) [NMFS and USFWS]. 1998. Recovery plan for U.S. Pacific Populations of the green sea turtle (*Chelonia mydas*). Silver Spring, MD: National Marine Fisheries Service. 95pp.
- National Marine Fisheries Service and U.S. Fish and Wildlife Service. (US) [NMFS and USFWS]. 1998. Recovery plan for U.S. Pacific Populations of the hawksbill sea turtle (*Eretmochelys imbricata*). Silver Spring, MD: National Marine Fisheries Service. 95pp.
- National Marine Fisheries Service and U.S. Fish and Wildlife Service. (US) [NMFS and USFWS]. 1998. Recovery plan for U.S. Pacific Populations of the leatherback turtle (*Dermochelys coriacea*). Silver Spring, MD: National Marine Fisheries Service. 77pp.
- National Marine Fisheries Service and U.S. Fish and Wildlife Service. (US) [NMFS and USFWS]. 1998. Recovery plan for U.S. Pacific Populations of the loggerhead turtle (*Caretta caretta*). Silver Spring, MD: National Marine Fisheries Service. 72pp.
- National Marine Fisheries Service and U.S. Fish and Wildlife Service. (US) [NMFS and USFWS]. 1998. Recovery plan for U.S. Pacific Populations of the olive ridley sea turtle (*Lepidochelys olivacea*). Silver Spring, MD: National Marine Fisheries Service. 95pp.
- Marine Mammal Commission 2003a. Annual report to Congress.
- Marine Mammal Commission 2003b. Workshop on the Management of Hawaiian Monk Seals on Beaches in the Main Hawaiian Islands.
- McSweeney D.J., Baird R.W., and Mahaffy S.D. 2007. Site fidelity, associations, and movements of Cuvier's (*Ziphius cavirostris*) and Blainville's (*Mesoplodon densirostris*) beaked whales off the island of Hawai'i. *Marine Mammal Science*, 23(3):666-687.
- Mobley J.R., Spitz S.S., Forney K.A., Grotefendt R., and Forestell P.H. 2000. Distribution and abundance of odontocete species in Hawaiian waters: preliminary results of 1993-98 aerial surveys. Southwest Fisheries Science Center Administrative Report LJ-0014C.
- Polovina J., Uchida, I., Balazs, G., Howell, E.A., Parker, D., and Dutton, P. 2006. The Kurushio Extension Bifurcation Region: A pelagic hotspot for juvenile loggerhead sea turtles. *Deep-Sea Research II* 53 326-339.
- U.S. Fish and Wildlife Service. Pacific Islands - Endangered Species. Threatened and Endangered Animals in the Pacific Islands.
<<http://www.fws.gov/pacificislands/wesa/monkhi.html>>
- Western Pacific Regional Fishery Council. Hawaii: A Center for Pacific Sea Turtle Research and Conservation. 48 pp.

Appendix A. Conservation Needs Matrices and Explanation of Matrices

Cetaceans		Conservation Needs in MHI	NOAA Fisheries		Other Agencies, NGO's, Academia	Sanctuary		Other
			PI Regional Office	PI Science Center		NOS	DLNR	
Programs	Research	1 Researching nearshore and offshore habitat for detailed population size, distribution, and threats	L	L	S	S	S	DLNR
		1 Minimize and monitor fishery-related impact	L	S				
Management	2 Conduct regulatory reviews/permitting to reduce and mitigate adverse impacts to protected species	L				S	S	
		L						
	3 Support rescue response to injuries, entanglements, strandings, etc.	L	S		D	S	D	S
	4 Protect Habitat	CL					D	CL
	5 Decrease marine debris				L			
	6 Enforcement				L*			
Education and Outreach	1 Conduct education and outreach to enhance public stewardship, responsible wildlife viewing, support conservation efforts, etc.	L	S		S	S	D	S
	2 Develop and manage volunteer networks to help achieve the above	L	S		S		D	

* includes NOAA OLE, Coast Guard

Key	Definitions
L - Lead	L - Indicates the lead agency currently addressing the specified conservation need.
CL - Co-Lead	CL - Indicates an agency that currently serves as a co-lead in addressing the specified conservation need.
D - Dedicated Support	D - Indicates agencies or organizations that currently provide dedicated support to the lead or co-lead agencies, meaning staff and resources are allocated on a full time basis to support the lead agency. In many cases, especially regarding field response activities, dedicated support is not provided state-wide, but rather on an island-by-island basis.
S - Support as Available	S - Indicates agencies or organizations that provide less than full-time support, meaning staff and resources are provided as available and/or as resources allow.

Monk Seals

Programs	Conservation Needs In MHI Research on abundance and distribution, population dynamics, life history, foraging behavior, and threats.	NOAA Fisheries			Other Agencies, NGO's, Academia	Sanctuary		Other	
		PI Regional Office	PI Science Center	NOS		DLNR	DLNR		
Research	1	L	L		D				
	1	L	S	S	D	S	D	S	
	2	CL	D				CL	D	
	Management	3	CL					D	CL
		4	L	S	S	D	S	D	S
		5	L					S	D
	Education and Outreach	6		CL		CL			CL**
7					CL*				
1		L	S			S	D	D	
2		L	S			S	D	D	

* Includes NOAA OLE, Coast Guard; ** includes DOCARE

Key

Key	Definitions
L - Lead	L - Indicates the lead agency currently addressing the specified conservation need.
CL - Co-Lead	CL - Indicates an agency that currently serves as a co-lead in addressing the specified conservation need.
D - Dedicated Support	D - Indicates agencies or organizations that currently provide dedicated support to the lead or co-lead agencies, meaning staff and resources are allocated on a full time basis to support the lead agency. In many cases, especially regarding field response activities, dedicated support is not provided state-wide, but rather on an island-by-island basis.
S - Support as Available	S - Indicates agencies or organizations that provide less than full-time support, meaning staff and resources are provided as available and/or as resources allow.

Sea Turtles

Programs	Conservation Needs in MHI	NOAA Fisheries			Other Agencies, NGO's, Academia	Sanctuary		Other
		PI Regional Office	PI Science Center	NOS		DLNR	DLNR	
Research	1 Research on abundance and distribution, population dynamics, life history, foraging behavior, and threats		L		D			S
	1 Minimize and monitor fishery-related impact	CL	D					CL
Management	2 Conduct regulatory reviews/permitting to reduce and mitigate adverse impacts to protected species	CL					S	CL
	3 Support rescue response to injuries, entanglements, strandings, etc.	S	L		D		S	S
	4 Protecting sea turtle nesting and foraging habitats	L	S		D			D
	5 Control introduced species in nesting habitat				CL*			CL
	6 Enforcement				CL*			CL**
	1 Conduct education and outreach to enhance public stewardship, responsible wildlife viewing, support conservation efforts, etc.	L	S		D		S	D
Education and Outreach	2 Develop and manage volunteer networks to help achieve the above	L	S		D			

* includes NOAA OLE, Coast Guard; ** includes DOCARE

Key Definitions

L - Lead	L - Indicates the lead agency currently addressing the specified conservation need.
CL - Co-Lead	CL - Indicates an agency that currently serves as a co-lead in addressing the specified conservation need.
D - Dedicated Support	D - Indicates agencies or organizations that currently provide dedicated support to the lead or co-lead agencies, meaning staff and resources are allocated on a full time basis to support the lead agency. In many cases, especially regarding field response activities, dedicated support is not provided state-wide, but rather on an island-by-island basis.
S - Support as Available	S - Indicates agencies or organizations that provide less than full-time support, meaning staff and resources are provided as available and/or as resources allow.

Explanation of Matrices

PIRO as Lead and Co-Lead Agency

Pursuant to the ESA, MMPA, and associated federal regulations, PIRO represents NMFS as the lead federal agency ultimately responsible for all activities and policies directly related to the management and conservation of Hawaiian monk seals, cetaceans, and sea turtles throughout the US EEZ in the Pacific Islands Region. In the case of some Hawaiian monk seal conservation needs, PIRO serves as a co-lead agency with DLNR pursuant to the ESA and state statute (HRS 195D). In the case of sea turtle rescue response, PIRO has designated its lead agency function to PIFSC.

DLNR as Lead and Co-Lead Agency

Pursuant to HRS 195D and associated state regulations, DLNR-DAR is the lead state agency ultimately responsible for all activities and policies directly related to the management and conservation of Hawaiian monk seals and sea turtles throughout waters under Hawai'i State jurisdiction. Marine mammals not listed as threatened or endangered under the ESA, are under the sole management and conservation authority of NMFS pursuant to the MMPA, which explicitly preempts state authority over non-ESA-listed marine mammal species. In the case of certain conservation needs of Hawaiian monk seals and sea turtles, DLNR-DAR serves with PIRO as a co-lead agency pursuant to the ESA and state statute (HRS 195D). In the case of certain conservation needs of Hawaiian monk seals, the state office of the sanctuary (housed within DLNR-DAR) currently serves with PIRO as the co-lead agency under state authority (HRS 195D).

PIFSC as Lead Agency

PIFSC is the lead federal agency for scientific research of marine mammals and sea turtles and the lead federal agency for rescue response of sea turtles.

OLE

OLE is the lead federal agency responsible for enforcing the ESA and MMPA and associated regulations. It serves as a co-lead agency for enforcement with DOCARE.

USCG

USCG serves as supporting agency in federal law enforcement.

DOCARE

DOCARE is the lead state agency responsible for enforcing HRS 195D and associated state regulations. It serves as a co-lead agency for enforcement with OLE.

Other Agencies, Organizations, Etc.

For conservation needs related to habitat conservation, and marine debris reduction and removal, other agencies and organizations serve as leads and/or co-leads in some cases.

Appendix B. Maritime Heritage Resources Inventory

within the Hawaiian Islands Humpback Whale National Marine Sanctuary boundaries

**data updated by Hans Van Tilburg October 3rd 2006 (does not include Native Hawaiian heritage resources)
185 ship and aircraft losses pre-1957 within the NMS: 22 sites confirmed to date**

	island	approximate area	vessel name	type	date lost	information source	site confirmed
1	Lana'i NMS	Shipwreck beach	<i>Mary Alice</i>	schooner	1884	site survey UH MOP	Y
2		Shipwreck beach	<i>Golden Gate</i>	schooner	1901	local historic documents	
3		Shipwreck beach	unknown	steamship	unknown	site evidence	Y
4		Shipwreck beach	unknown	steamship	unknown	site evidence	Y
5		Shipwreck beach	unknown	steamship	unknown	site evidence	Y
6		Shipwreck beach	<i>Hornet</i>	steamship	1927	site survey UH MOP; dive location	Y
7		Shipwreck beach	<i>Charlotte C</i>	yawl	1931	local historic documents	
8		Shipwreck beach	<i>Helene</i>	schooner	1927	local historic documents	
9		unknown	<i>London</i>	ship (British)	1826	local historic documents	
10		Manele Bay	<i>Owana</i>	schooner	1875	local historic documents	
11		Shipwreck beach	<i>Malolo</i>	schooner	1887	local historic documents	
12		Shipwreck beach	<i>Tradewind</i>	yacht	1934	local historic documents	
13		Keomoku	<i>Manukiiwai</i>	launch	1929	local historic documents	
14		Keomoku	<i>Akamai</i>	launch	1929	local historic documents	
15		Keomoku	<i>Nunu Lawe Leke</i>	launch	1929	local historic documents	
16		Manele Bay	<i>Naia</i>	sampan	1954	local historic documents	
17		unknown	<i>Kaipolia</i>	schooner	1850	local historic documents	
18		Kaunolu	<i>Warwick</i>	schooner	1867	local historic documents	
19		Shipwreck Beach	<i>Oregon Reefer</i>	freighter	1954	local historic documents	
20		Shipwreck beach	<i>YOGN-42</i>	navy fuel tanker	1950's	site survey Rogers/UH MOP	Y
21		Shipwreck beach	<i>YO-21</i>	navy harbor oiler	1950's	site survey UH MOP; dive location	Y

22		Shipwreck beach	naval landing craft	LCM	1940's	site evidence	Y
23		Shipwreck beach	naval landing craft	LCM	1940's	site evidence	
24		Manele	naval aircraft	F4U-1 Corsair	1943	NHC aviation database	
25		Kaena Point	naval aircraft	SB2C-5 Helldiver	1945	NHC aviation database	
26		unknown 0.5 mi	naval aircraft	SB2C-1C Helldiver	1944	B Lewis database 2006	
27		Kaunolu 3 mi. east	naval aircraft	TBM-1C Avenger	1945	B Lewis database 2006	
28	Maui NMS	Lahaina	<i>Kilohana</i>	steamship	1899	local historic documents	
29		Lahaina	<i>Drymo</i>	whaleship	1845	local historic documents	
30		Lahaina	<i>Becket</i>	brig	1839	local historic documents	
31		Lahaina	<i>William</i>	schooner	1851	local historic documents	
32		Lahaina	<i>Union</i>	sloop	1866	local historic documents	
33		Lahaina	<i>Orion</i>	ship	1882	local historic documents	
34		Lahaina	<i>Paulina</i>	whaling bark	1860	local historic documents	
35		Lahaina	<i>Young Hero</i>	whaleship	1858	local historic documents	
36		Lahaina	<i>South Wind</i>	schooner	1852	local historic documents	
37		Lahaina	<i>Islander</i>	sampan	1947	local historic documents	
38		Kihei	<i>Vega</i>	ketch	1939	local historic documents	
39		Kihei	<i>Starling</i>	schooner	1851	local historic documents	
40		Lahaina	<i>Nishino Maru</i>	sampan	1950	local historic documents	
41		Kihei	<i>Hale Moana</i>	sampan	1940	local historic documents	
42		Kihei	<i>Luika</i>	sloop	1866	local historic documents	
43		Kihei	<i>Hamakua</i>	steamer	1917	local historic documents	
44		Kihei	naval landing craft	LVT(A) Amtank	unknown	diving location	Y
45		Kihei	naval landing craft	LVT-4	unknown	diving location	Y
46		Kihei	naval landing craft	LVT	unknown	diving location	Y
47		Kihei	naval landing	LVT	unknown	diving location	Y

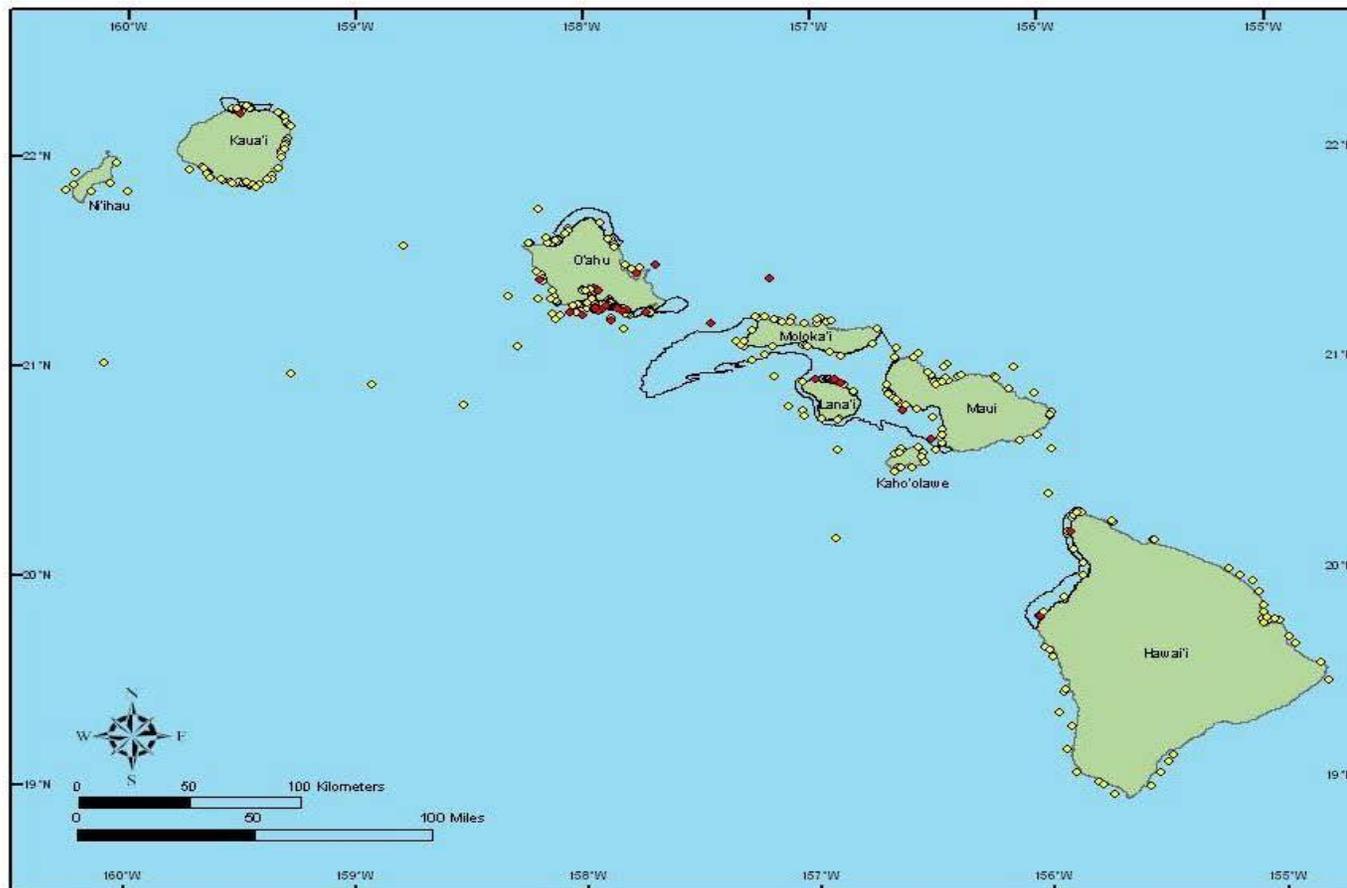
			craft				
48		Auau Channel	Naval landing craft	LCT-984	1944	naval resources inventory	
49		Auau channel	Naval landing craft	LCT-988	1944	naval resources inventory	
50		Maalea	naval aircraft	PB4Y-1 Liberator	1944	site survey Robinson; dive location	Y
51		Kihei	naval aircraft	F6F Hellcat	unknown	diving location	Y
52		Auau Channel	naval aircraft	DT-2 Douglas	1925	NHC aviation database	
53		Lahaina	naval aircraft	UO-1 Piper	1925	NHC aviation database	
54		Auau Channel	naval aircraft	F4U-1D Corsair	1945	NHC aviation database	
55		Auau Channel	naval aircraft	F4U-1D Corsair	1945	NHC aviation database	
56		Maalea	naval aircraft	FG-1A Corsair	1945	NHC aviation database	
57		Maalea	naval aircraft	FM-2 Corsair	1945	B Lewis database 2006	
58		Lahaina	naval aircraft	SOC-3 Seagull	1941	B Lewis database 2006	
59		Maalea	naval aircraft	SB2C-1C Helldiver	1944	NHC aviation database	
60		Maalea	naval aircraft	SB2C-1C Helldiver	1944	NHC aviation database	
61		Maalea	naval aircraft	SB2C-4 Helldiver	1944	NHC aviation database	
62		Maalea	naval aircraft	SB2C-4 Helldiver	1944	NHC aviation database	
63		Auau Channel	naval aircraft	TBM-1C Avenger	1945	NHC aviation database	
64		Auau Channel	naval aircraft	SB2C-5 Helldiver	1945	NHC aviation database	
65		Auau Channel	naval aircraft	TBM-3N Avenger	1949	NHC aviation database	
66	Kaua'i NMS	Hanalei Bay	<i>Mary Ellen</i>	schooner	1880	local historic documents	
67		Hanalei Bay	<i>Nahienaena</i>	schooner	1851	local historic documents	
68		Hanalei Bay	<i>Fairy Queen</i>	schooner	1878	local historic documents	
69		Hanalei Bay	<i>Cleopatra's Barge</i>	schooner	1824	site excavation Smithsonian Museum	Y
70		Hanalei Bay	<i>Kekauluohi</i>	schooner	1884	local historic documents	
71		Hanalei Bay	<i>Jefferson</i>	whaling ship	1842	local historic documents	
72		Hanalei Bay	<i>Mokulele</i>	schooner	1889	local historic documents	
73		Hanalei Bay	<i>Makaainana</i>	schooner	1851	local historic documents	

74		Kilauea	<i>George Thatcher</i>	ship	1852	local historic documents	
75		Kilauea	<i>Kalihiwai</i>	unknown	1862	local historic documents	
76		Hanalei Bay	<i>Hoopohala</i>	schooner	1852	local historic documents	
77	O'ahu NMS	Diamondhead	<i>Eskbank Barr</i>	bark (British)	1878	local historic documents	
78		Diamondhead	<i>SC Allen</i>	bark	1913	local historic documents	
79		Diamondhead	<i>Oscar</i>	whaler	1838	local historic documents	
80		Diamondhead	<i>Helvetius</i>	whaleship	1834	local historic documents	
81		Diamondhead	<i>Helga</i>	bark	1910	local historic documents	
82		Diamondhead	<i>Fortunio</i>	brig	1851	local historic documents	
83		Diamondhead	<i>Emma</i>	brig	1858	local historic documents	
84		Diamondhead	<i>William Carson</i>	unknown	1900	local historic documents	
85		Diamondhead	<i>Mary E. Foster</i>	schooner	1923	local historic documents	
86		Mamala Bay	<i>Kaala</i>	schooner	1883	local historic documents	
87		Kahuku	<i>Norma</i>	schooner	1900	local historic documents	
88		Kahuku	<i>Giovani Apiana</i>	schooner	1882	local historic documents	
89		Punalu`u	<i>Wailele</i>	sloop	1871	local historic documents	
90		Kahuhu	<i>Kaala</i>	steamer	1898	local historic documents	
91		Kahuku	<i>Wiaola</i>	Schooner	1876	local historic documents	
92		Punalu`u	<i>Liliu</i>	schooner	1887	local historic documents	
93		Punalu`u	<i>Wailele</i>	schooner	1884	local historic documents	
94		Punalu`u	<i>Marion</i>	schooner	1885	local historic documents	
95		Punalu`u	<i>Manuokawai</i>	schooner	1888	local historic documents	
96		Punalu`u	<i>Iwa</i>	steamer	1899	local historic documents	
97		Punalu`u	<i>Mille Morris</i>	Schooner	1901	local historic documents	
98		Punalu`u	<i>Live Yankee</i>	Schooner	1878	local historic documents	
99		Diamondhead	<i>Navy tug</i>		1925	local historic documents	
100		Makapu	naval aircraft	O2U-4 Corsair	1933	NHC aviation database	
101		Kahuku	army aircraft	P-36-A Hawk	1935	B Lewis database 2006	
102		Kahuku	army aircraft	P-36-A Hawk	1938	B Lewis database 2006	
103		Kahuku	naval aircraft	SBD-2 Dauntless	1941	NHC aviation database	
104		Kahuku	army aircraft	P-36 Hawk	1941	B Lewis database 2006	

105		Kahuku	naval aircraft	OJ2U-1	1941	B Lewis database 2006	
106		Kahuku	army aircraft	A-12 Shrike	1941	B Lewis database 2006	
107		Kahuku	army aircraft	BT2B Douglas	1941	B Lewis database 2006	
108		Kahuku	army aircraft	P-36-A Hawk	1941	B Lewis database 2006	
109		Kahuku	army aircraft	P-40B Warhawk	1941	B Lewis database 2006	
110		Kahuku	army aircraft	P-40E Warhawk	1942	B Lewis database 2006	
111		Diamondhead	naval aircraft	SBD-3 Dauntless	1942	B Lewis database 2006	
112		Kahuku	naval aircraft	TBF-1 Avenger	1942	B Lewis database 2006	
113		Makapu	naval aircraft	SBD-5 Dauntless	1944	B Lewis database 2006	
114		Makapu	naval aircraft	SBD-5 Dauntless	1944	B Lewis database 2006	
115		Kahuku	army aircraft	P-47D Thunderbolt	1944	B Lewis database 2006	
116		Kahuku	army aircraft	P-47D Thunderbolt	1944	B Lewis database 2006	
117		Diamondhead	naval aircraft	F6F-3 Hellcat	1944	B Lewis database 2006	
118		Mamala Bay	naval aircraft	TBM-1C Avenger	1944	B Lewis database 2006	
119		Kahuku	army aircraft	P-51-A Mustang	1945	B Lewis database 2006	
120		Kahuku	army aircraft	P-51-A Mustang	1945	B Lewis database 2006	
121		Mamala Bay	naval aircraft	AD4F Skyraider	1953	B Lewis database 2006	
122		Kahuku	army aircraft	P-47 Thunderbolt	1949	B Lewis database 2006	
123		Kahuku	naval aircraft	FJ-4 Fury	1957	B Lewis database 2006	
124		Kahuku	naval aircraft	T-6 trainer	1956	B Lewis database 2006	
125		Kahuku	naval aircraft	F4U-4 Corsair	1945	NHC aviation database	
126		Kahuku	naval aircraft	TBM-3E Avenger	1945	NHC aviation database	
127		Mamala Bay	naval aircraft	SBD-5 Dauntless	1943	NHC aviation database	
128		Makapu	naval aircraft	PBY-5A Catalina	1942	NHC aviation database	
129		Makapu	naval aircraft	PBY-5 Catalina	1943	NHC aviation database	
130		Makapu	naval aircraft	SOC3-1 Seagull	1942	NHC aviation database	
131		Kahuku	naval aircraft	TBF-1 Avenger	1942	NHC aviation database	
132		Mamala Bay	naval aircraft	F4U-1 Corsair	1944	site survey UH MOP; dive location	Y
133		Mamala Bay	naval aircraft	SBD-5 Dauntless	unknown	site survey HURL	Y

134	Hawai'i NMS	Upolu Point	<i>Likelike</i>	steamship	1897	local historic documents	
135		Upolu Point	<i>Emma Rooke</i>	schooner	1864	local historic documents	
136		Mahukona	<i>Ella</i>	bark	1890	local historic documents	
137		Mahukona	<i>Kauai</i>	steamship	1913	site survey UH MOP; dive location	Y
138		Mahukona	<i>Jenny Pitts</i>	bark	1881	local historic documents	
139		Kawaihae	<i>Empire</i>	steamship	1901	dive location	Y
140		Kawaihae	<i>Liliu</i>	schooner	1880	local historic documents	
141		Kawaihae	<i>Upolu</i>	steamship	1901	local historic documents	
142		Mahaiula	<i>Maui</i>	steamship	1917	site survey UH MOP; dive location	Y
143		Mahaiula	<i>YP-183 (Fuji Maru)</i>	patrol craft/sampan	1943	site survey UH MOP; dive location	Y
144		Upolu Point		sampan	1938	local historic documents	
145		Upolu Point		sampan	1927	local historic documents	
146		Kawaihae	<i>Hapuku</i>	sampan	1951	local historic documents	
147		Kawaihae	naval aircraft	SNJ-5 Trainer	1945	B Lewis database 2006	
148		Upolu Point	civilian aircraft	Beechcraft 18	1954	B Lewis database 2006	
149		Upolu Point	naval aircraft	F6F-5 Hellcat	1945	NHC aviation database	
150		Upolu Point	naval aircraft	F6F-5 Hellcat	1945	B Lewis database 2006	
151		Upolu Point	naval aircraft	F4U-1 Corsair	1945	NHC aviation database	
152		Upolu Point	naval aircraft	SB2C-4 Helldiver	1945	NHC aviation database	
153		Upolu Point	naval aircraft	TBM-1C Avenger	1945	NHC aviation database	
154		Upolu Point	naval aircraft	F4F-3 Wildcat	1942	NHC aviation database	
155	Moloka'i NMS	Papohaku	<i>Carrier Dove</i>	Schooner	1921	local historic documents	Y
156		Kalohi Channel	<i>Ka Moi</i>	Schooner	1873	local historic documents	
157		Kalohi Channel	<i>James I Dowsett</i>	unknown	1886	local historic documents	
158		Papohaku	<i>Jean C</i>	Sampan	1949	local historic documents	

159		Papohaku	<i>Wilcox</i>	Iron bark	1894	local historic documents	
160		Kalohi Channel	<i>Louise</i>	Tug	1930	local historic documents	
161		Kalohi Channel	<i>Nellie</i>	Sloop	1892	local historic documents	
162		Kalohi Channel	<i>Kaulilua</i>	Schooner	1898	local historic documents	
163		Kalohi Channel	<i>Stanley J Cochrane</i>	Freighter	1941	local historic documents	
164		Kalohi Channel	<i>32-A-731</i>	Sampan	1947	local historic documents	
165		Kalohi Channel	<i>Denis</i>	Sampan	1956	local historic documents	
166		Kalohi Channel	<i>John P West</i>	Whaler	1892	local historic documents	
167		Kalohi Channel	<i>Mokuola</i>	Schooner	1950	local historic documents	
168		Kalohi Channel	<i>Kinau</i>	Schooner	1878	local historic documents	
169		Kalohi Channel	<i>Rainbow</i>	schooner	1909	local historic documents	
170		Kalohi Channel	naval aircraft	SBD-2P Dauntless	1942	NHC aviation database	
171		Kalohi Channel	naval aircraft	F6F-5 Hellcat	1944	NHC aviation database	
172		Kalohi Channel	naval aircraft	SBD-4 Dauntless	1943	B Lewis database 2006	
173		Kalohi Channel	naval aircraft	TBM-1C Avenger	1944	B Lewis database 2006	
174		Kalohi Channel	naval aircraft	SB2C-4 Helldiver	1947	B Lewis database 2006	
175		Kalohi Channel	naval aircraft	F4U Corsair	1950	B Lewis database 2006	
176		Kalohi Channel	civilian aircraft	Aeronca L-16	1950	B Lewis database 2006	
177		Papohaku	civilian aircraft	Aerocoup	1950	B Lewis database 2006	
178		Papohaku	naval aircraft	T-6 Trainer	1954	B Lewis database 2006	
179		Halawa	naval aircraft	AD-4 Skyraider	1953	B Lewis database 2006	
180		Kalohi Channel	naval aircraft	F9F Panther	1954	B Lewis database 2006	
181		Kalohi Channel	naval aircraft	F6F-5 Hellcat	1945	NHC aviation database	
182		Kalohi Channel	naval aircraft	FG-1A Corsair	1945	NHC aviation database	
183		Penguin Bank	naval aircraft	SBD-5 Dauntless	1944	NHC aviation database	
184		Kalohi Channel	naval aircraft	SB2C-1C Helldiver	1944	NHC aviation database	
185		Papohaku	naval aircraft	TBM-1C Avenger	1944	NHC aviation database	



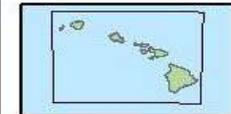
Map Key

- Sanctuary Boundary
- Maritime Heritage sites approximate locations
- Maritime Heritage sites known locations

Approximate locations of historic losses are based on reports and unconfirmed by field survey. Known resource locations are based on site survey data.

By definition, the Hawaiian Islands Humpback Whale National Marine Sanctuary boundary extends to the 100 fathom isobath. Discrepancies between boundary and 100 fathom isobath depicted on map are due to differences in data sources. All data depicted on map are intended for visual purposes only, and are not intended for legal purposes.

Location:



Contact Information

Hawaiian Islands Humpback Whale
National Marine Sanctuary
6600 Kalaniana'ole Hwy, Suite 301
Honolulu, Hawaii 96825
(808) 397-2651

Hawaiihumpback@hale.noaa.gov
hihumpbackwhale@noaa.gov

Appendix D. Letters of Support



EXECUTIVE CHAMBERS

HONOLULU

BENJAMIN J. CAYETANO
GOVERNOR

September 6, 2002

Conrad C. Lautenbacher, Jr., Ph.D.
Under Secretary of Commerce for Oceans and Atmosphere
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
14th Street and Constitution Avenue, N.W., Room 5128
Washington, DC 20230

Dear Admiral Lautenbacher:

In response to your letter of August 2, 2002, I am pleased to provide my approval of the revised management plan for the Hawaiian Islands Humpback Whale National Marine Sanctuary. I know the revised plan reflects extensive input and support from Hawaii's government agencies, the Sanctuary Advisory Council, and many other concerned citizens, and I feel confident that the plan charts an appropriate course for the Sanctuary over the next 5 years.

I would like to express my particular support for initiating the process of identifying new resources for management under the Sanctuary (Strategy NRP-5 of the revised management plan). The Sanctuary has demonstrated its value in protecting humpback whales through research, education and public outreach. I believe this management approach, which complements the efforts of NOAA Fisheries and the Hawaii Department of Land and Natural Resources, should be extended to the conservation of other marine resources in Hawaii. Hawaiian monk seals, sea turtles, and other whales and dolphins, for instance, are species that appear to be suitable candidates for enhanced conservation via the Sanctuary's community-based approach.

Thank you for the opportunity to express my support for the Sanctuary's new management plan and enhanced role in marine management in Hawaii. I look forward to the continuation of our productive federal-state partnership in sustaining Hawaii's precious ocean resources.

With warmest personal regards,

Aloha,

BENJAMIN J. CAYETANO



EXECUTIVE CHAMBERS
HONOLULU

LINDA LINGLE
GOVERNOR

July 3, 2003

Joshua Ginsburg, Ph.D.
Chair, Hawaiian Monk Seal Recovery Team
c/o Wildlife Conservation Society
2300 Southern Boulevard
Bronx, NY 10460

Dear Dr. Ginsburg:

Thank you for your letter of May 8, 2003, regarding recommendations of the Hawaiian Monk Seal Recovery Team. My staff and I are grateful for the team's thoughtful comments and suggestions concerning actions the State of Hawaii can take to assist with monk seal conservation and recovery.

We concur with your recommendation that the State should establish a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA) under Section 6 of the Endangered Species Act. I have directed Division of Aquatic Resources (DAR) staff to request information from the newly established NOAA Pacific Islands Regional Office regarding the most appropriate way to begin developing the cooperative agreement.

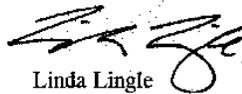
Regarding your comments and suggestions concerning seals in the Northwestern Hawaiian Islands (NWHI), we are currently in the process of establishing administrative rules that would create the State NWHI Marine Refuge, thereby further protecting monk seals in areas of state jurisdiction in the NWHI. In addition, we will certainly continue to place high priority on monk seal conservation as we work with NOAA and other partners over the course of establishing a national marine sanctuary in the NWHI.

Regarding monk seal conservation in the main Hawaiian Islands, the idea of adding monk seals as new resources for conservation under the Hawaiian Islands Humpback Whale National Marine Sanctuary appears to have a great deal of merit. However, I feel it is important to consult further with various stakeholder groups before any formal position is taken on this issue. To that end, DAR staff members are currently exploring the issue internally and with ocean users, and will soon develop an analysis and recommendation(s) for

my consideration. I will also consult with the Advisory Council of the Hawaiian Islands Humpback Whale National Marine Sanctuary regarding the Council's position(s) with respect to adding monk seals to the sanctuary.

My point of contact on monk seal issues, Dr. Jeff Walters of DAR (808-587-0106), will be contacting you soon to follow-up on the various actions mentioned in this letter. I look forward to continuing our productive collaboration with the recovery team and NOAA on the conservation and recovery of Hawaiian monk seals. As you know, these endangered species are precious to the people of Hawaii, and I very much appreciate all the time and effort expended by the recovery team on monk seal protection.

Sincerely,



Linda Lingle

cc: Samuel Pooley, NOAA-NMFS-PIRO
Naomi McIntosh, NOAA-NMSP-HIHWNMS
David Laist, U.S. Marine Mammal Commission

9 May 2003

Governor Linda Lingle
State Capitol
Executive Chambers
Honolulu, HI 96813

Dear Governor Lingle:

I'm writing to you in my capacity as Chair of the Hawaiian Monk Seal Recovery Team, a group of independent experts appointed by the National Marine Fisheries Service (NMFS) to assist in recovering monk seals. As I'm sure you know, monk seals are listed as endangered under both the federal Endangered Species Act and the State of Hawaii's wildlife statutes. Numbering only about 1,400 individuals, Hawaiian monk seals are one of the most critically endangered marine mammals in the world. In the wild, they occur only in Hawaii.

The Monk Seal Recovery Team recently concluded a meeting in Honolulu where we continued our efforts to draft a revised Recovery Plan for this species. Several times in the course of our discussions participants mentioned the important role the State of Hawaii has played in recovery of monk seals. While under provisions of the Marine Mammal Protection Act the federal government is charged with monk seal conservation, lands and nearshore waters belonging to the State provide essential habitats used for pupping, resting, and feeding. The State has an exceptional staff of biologists, resource managers, and enforcement officers in place that currently do many things to help with monk seal conservation. Speaking for the Recovery Team, I encourage you to direct your staff to continue and enhance their collaboration with the federal agencies and other involved parties in this important effort.

I would like to bring to your attention three major issues regarding State of Hawaii involvement in monk seal recovery. First, the federal Endangered Species Act (ESA) contains specific provisions in Section 6 that allow and encourage federal-state cooperation in recovering endangered species. Central to this is the ability for states to request funding to help cover the costs of their efforts. The Recovery Team was informed that the NMFS budget includes some funds to distribute to states through Section 6 agreements. I encourage you to direct your staff to pursue development of a Section 6 agreement with NMFS so that they may be provided resources necessary to enhance their ability to serve as partners in monk seal recovery efforts. Proceeding with this now is especially important with the increasing occurrence of monk seals in the main Hawaiian Islands.

Second, the Team discussed mechanisms for protection of monk seal habitat in the Northwestern Hawaiian Islands, the area where 90% of the population lives. The recent creation of the Northwest Hawaiian Islands Coral Reef Ecosystem Reserve is a very promising step toward protection of important monk seal habitat. However, as you know the Reserve does not include nearshore waters belonging to the State. We understand that the State is currently considering designating those waters as a marine protected area with restrictions on human activities that complement those of the Reserve. We applaud that initiative, and encourage you to conclude this designation as soon as practicable. Also, we encourage you to consider allowing State waters and State lands at Kure Atoll to be included

in a Northwest Hawaiian Islands Coral Reef Ecosystem National Marine Sanctuary, if one is created in the future.

Finally, one of the most promising trends for monk seal recovery is the recent increase in monk seal sightings, and births of seal pups, in the main Hawaiian Islands. While this will undoubtedly present management challenges, experts agree that such an increase in their range may substantially lower the likelihood that monk seals will go extinct. In that regard, we understand that NOAA and the State of Hawaii will soon be considering the addition of new marine resources to the Hawaiian Islands Humpback Whale National Marine Sanctuary. We recommend that, in the State's capacity as Sanctuary co-manager, you consult with NOAA regarding the possibility of adding monk seals to the resources protected by the Sanctuary. We believe the Sanctuary's emphasis on education and community outreach can accomplish a great deal toward monk seal recovery without duplicating the regulatory, research, and enforcement efforts of NOAA.

Experience shows that the State of Hawaii and the people of Hawaii care deeply for their natural resources. Their efforts to protect humpback whales and green sea turtles are two very good examples. The Recovery Team hopes that the future will bring a similar success story for Hawaiian monk seals. We are convinced that this can only happen by fully engaging the resources of the State of Hawaii in the recovery effort, and we thank you for your help in making that happen.

Sincerely,

Josh Ginsberg

cc: Peter Young, HI DLNR
Bill Devick, HI DLNR DAR
Sam Pooley, NOAA NMFS PIR
David Cottingham, US MMC

June 28, 2006

Ms. Naomi McIntosh
2006.1971
National Oceanic and Atmospheric Administration
6600 Kalaniana'ole Highway, Suite 300
Honolulu, Hawai'i 96825

LOG NO:

DOC NO: 0606AJ14
Archaeology

Dear Ms. McIntosh:

**SUBJECT: National Historic Preservation Act (NHPA) Section 106 Review –
Request to Incorporate Maritime Heritage Resources into the Hawaiian Island
Humpback Whale National Marine Sanctuary Management Plan
Waters of Kaua'i, O'ahu, Moloka'i, Lana'i, Maui, Hawai'i
Pacific Ocean**

We understand that the management plan of the Hawaiian Islands Humpback Whale National Marine Sanctuary (HIWHNMS) will soon be under review and renewal. The purpose of this letter is to request that NOAA consider incorporating maritime heritage resources into the sanctuary management plan. This request is made in addition to our previous requests to consider the addition of dolphins, Hawaiian Monk Seals, and sea turtles to the sanctuary's conservation mandate.

As you know, the State of Hawaii has a long and rich maritime history. This includes not only the initial discovery of the island chain by Polynesian voyagers, but, also, pre-Contact utilization of near-shore areas and inland channels, the sandalwood trade, historic whaling, inter-island shipping and trade, and the World War II (WWII) history of the islands. As with terrestrial cultural resources, maritime heritage resources are a limited and valuable part of Hawai'i's history.

Historical sources (*e.g.*, *Thomas Thrum's 'Hawaiian Annual Almanac'*) list numerous casualties of shipping and whaling in the Hawaiian Islands and Pacific from the late nineteenth through early twentieth centuries. Additionally, research by Van Tilburg (2003, *U.S. Navy Shipwrecks in Hawaiian Waters: an Inventory of Submerged Naval Properties*) has shown that there have been numerous Naval properties, other than those at Pearl Harbor, lost in Hawaiian waters. However, to date, no systematic survey to identify and inventory the maritime heritage resources located in State waters has been conducted.

These resources are of national significance and can provide valuable information about various facets of Hawai'i's maritime heritage. For example, Ha'aheo O Hawai'i (Cleopatra's Barge), which was excavated in the mid-1990s, was located within what are now sanctuary waters. This vessel contained a wealth of information regarding the life styles of the Hawaiian monarchy in the early nineteenth century. Also, the WWII era military vessels lost in Hawaiian waters reflect Hawai'i's role and importance in that global conflict.

A particular issue of concern is the damage being done to submerged aircraft within sanctuary waters. There are several documented cases of submerged aircraft being impacted by sport divers. For example, a WWII-era Navy Corsair, located in sanctuary waters off Hawaii Kai, was damaged due to the anchoring of an illegal mooring buoy to the aircraft. Also, we believe that a Navy PB4Y aircraft, which was lost in 1944 and is located in HIHWNMS waters off of Maui, is subject to continued tampering with and looting by dive enthusiasts. The above are examples of *documented* cases of maritime heritage resources, located in HIHWNMS waters, being damaged. There are at least thirty-nine (39) other downed naval aircraft within sanctuary waters (Hans Van Tilburg, personal communication).

Many of the divers who tamper with these resources are unfamiliar with the various laws that protect these historic wrecks (*e.g.* Sunken Military Vessels Act), and are unaware of the illegal nature of their actions (*e.g.*, taking a souvenir). They also do not fully consider the impact that tampering with a submerged vessel may have on the integrity of the property.

Maritime heritage resources, and submerged cultural properties, are protected under State laws regarding Historic Preservation (Hawai'i Revised Statutes 6E). However, the State Historic Preservation Division (SHPD) previously has not focused on the protection of maritime heritage resources. In addition, the SHPD does not, at this time, have the ability to properly manage these resources.

After some preliminary discussions with sanctuary co-manager Jeff Walters, we are hopeful that incorporating the protection and management of maritime heritage resources into the sanctuary management plan will allow NOAA's Maritime Heritage program to most effectively work in partnership with the SHPD in the enhanced protection and management of these resources through the identification of historically significant properties, and education and outreach. Therefore, we sincerely request that these resources, in addition to the marine mammals and sea turtles we have previously discussed, be considered for incorporation into the revised HIHWNMS management plan.

Thank you for considering this request. We look forward to discussing this request at your convenience. Mr. Adam Johnson will serve as my staff point of contact on this request and will continue communications and coordination with our sanctuary co-manager Jeff Walters. Please feel free to contact Mr. Johnson at (808) 692-8015 should any further information be desired.

Aloha,

Peter Young, Chair
State Historic Preservation Officer

AJ:cmm



DEPARTMENT OF THE NAVY
NAVAL HISTORICAL CENTER
805 KIDDER BREESE STREET SE
WASHINGTON NAVY YARD DC 20374-5080

IN REPLY REFER TO

5000
Ser UA/00301
11 JAN 06

Peter T. Young
Chairman
Department of Land and Natural Resources
State of Hawaii
Kalanimoku Building
1151 Punchbowl Street
Honolulu HI 96813

Dear Mr. Young:

I was recently notified of an existing threat to a potentially historic naval aircraft in Hawaiian waters. Dr. Hans Van Tilburg, of NOAA's Maritime Heritage Program Pacific Islands Region (NOAA MHP) informed me that divers might be inadvertently damaging the site of a Corsair sunk off Kokohead Point in Maunalua Bay, Hawaii. I request your assistance in protecting this wreck site as well as other historic naval ship and aircraft wrecks in Hawaiian waters to preserve our common cultural heritage.

The U.S. Navy has more than 1,500 documented historic ship and aircraft wrecks in Hawaiian state waters, but only a handful have been confirmed through field observation. In 2003, Dr. Van Tilburg, then with the University of Hawaii's Marine Option Program, wrote an inventory and management plan for these important properties for the Naval Historical Center (NHC). In the segment of the report (attached) that covers this Corsair, Dr. Van Tilburg identified this wreck site based upon local information. The control panel with the plane's Bureau Number was removed some time ago making a positive identification difficult. Nonetheless, it is highly likely the aircraft is the Marine Corps Corsair BuNo 49668 as he describes. Dr. Van Tilburg's discussion reveals that the site has been damaged several times previously and he now tells me that it is still highly threatened.

According to Dr. Van Tilburg, the mooring buoy attached to the Corsair wreck site is in violation of the State of Hawaii's Department of Ocean Boating and Recreation State law. The Navy has no objection to divers visiting the site, however, under the Sunken Military Craft Act (SMCA), 10 U.S.C. §113 (2005); Pub. L.

108-375 any disturbance of this site is illegal without prior authorization.

With this legal protection, the potential for irreversible harm to important historical resources is significantly reduced. The new law codifies commonly understood principles of international law and existing case law confirming that sunken U.S. military vessels and aircraft are sovereign property. This new statute provides for federal archaeological research permits and civil enforcement measures, including substantial penalties, to prevent unauthorized disturbance. For more information please see our webpage at www.history.navy.mil in the Underwater Archaeology section.

As you are aware, education is essential to site protection. Teaching the diving community and the general public about why we protect these resources and about the laws that protect them will hopefully make these incidents less common. I request your assistance in mitigating the threats to this site through diver education, and removal of any moorings attached to the wreck, or any near the site that could damage the aircraft. Because my staff cannot be on site to monitor activity I appreciate the assistance of State and Federal agencies, and look forward to cooperation in the future regarding U.S. Navy wrecks in Hawaiian waters. Should you have any questions please contact Barbara Voulgaris, Cultural Resources Manager in the Underwater Archeology Branch, at 202-433-7562 or barbara.voulgaris@navy.mil.

Sincerely,



P. E. TOBIN
Rear Admiral, U. S. Navy (Ret.)
Director of Naval History

Separate Mailing: 1. Excerpt from *U.S. Navy Shipwrecks in Hawaiian Waters: an Inventory of Submerged Naval Properties*, pp. 355-359.



DEPARTMENT OF THE NAVY
NAVAL HISTORICAL CENTER
805 KIDDER BREESE STREET SE
WASHINGTON NAVY YARD DC 20374-5060

IN REPLY REFER TO
5000
Ser UA/00300
11 JAN 06

Allen Tom
National Marine Sanctuary Program
Regional Coordinator
726 South Kihei Road
Kihei, HI 96753

Dear Mr. Tom:

I am writing to extend my appreciation for the support of the NOAA Maritime Heritage Program Pacific Islands Region (NOAA MHP) in protecting one of the Navy's sunken, potentially historic aircraft. The site that is of a Corsair, which sank off Kokohead Point, Maunaloa Bay, Hawaii. It is a popular dive destination, but unfortunately some divers do not realize their actions damage the aircraft. I have heard that some divers mark the site with a buoy attached to the aircraft's propeller hub. This damages the site when tides and waves pull the buoy, causing stress to the aircraft wreck. Dr. Hans Van Tilburg tells me that he and other archaeologists with the NOAA MHP are aware of the challenges to preservation efforts for aviation resources in Hawaii and have notified State enforcement officials about this particular site's threatened status. Dr. Van Tilburg's efforts include attempting to educate divers about the laws protecting these kinds of sites and discouraging anyone from disturbing historic wrecks.

As this office is unable to closely monitor the wreck, I appreciate the assistance of NOAA MHP and NOAA's Marine Sanctuary Program in the field of submerged cultural resources and heritage preservation and look forward to more cooperation in the future.

Sincerely,

P. E. TOBIN
Rear Admiral, U. S. Navy (Ret.)
Director of Naval History



United States Department of the Interior
NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
Post Office Box 728
Santa Fe, New Mexico 87504-0728



In Reply Refer to:
H24(IMSFS-SRC)

November 30, 2006

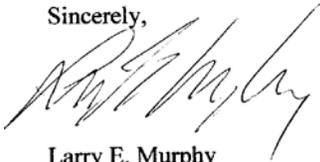
Ms. Naomi McIntosh, Sanctuary Manager
Hawaiian Islands Humpback Whale National Marine Sanctuary
6600 Kalaniana'ole Highway, Suite 301
Honolulu, Hawai'i 96825

Dear Ms. McIntosh:

I am writing to advocate NOAA's extension of the core management mandate of the Hawaiian Islands Humpback Whale Marine Sanctuary to include cultural resources and incorporate this extension into your revised Sanctuary Management Plan. Hawai'i has been intimately tied to the sea since the beginning of human history in the area and within the sanctuary there are many cultural resources that should be managed on parity with natural resources. Beyond native Hawaiian traditions, the sanctuary contains within its waters whaling ships and schooners as well as military ships and aircraft that together contain important information about the islands' role in American and international maritime history. NOAA is uniquely qualified to expand its management responsibilities to protect these irreplaceable and non-renewable cultural resources for future generations. I have every confidence that NOAA's Maritime Heritage Program staff have the ability to make significant contributions to effective management of cultural resources in the sanctuary.

As you may know, NPS and NOAA have a long and fruitful relationship and professional exchange involving developing and refining science-based management of submerged natural and cultural resources. Recent examples of this partnership in your area include working jointly on the Japanese midget submarine lost off of Pearl Harbor, conducting side scan sonar survey to locate wrecks and material related to the Pearl Harbor attack, and together teaching underwater archeological skills to many NOAA diving scientists that are likely to encounter cultural materials in the course of their work. I fully expect this partnership will continue and grow. The National Park Service and the Submerged Resource Center will assist in any way we can to contribute to this important expansion of NOAA's important preservation mandate. Please feel free to contact me at any time. I appreciate the opportunity to comment.

Sincerely,



Larry E. Murphy
Chief, Submerged Resources Center

Cc: Jeff Walters, Sanctuary Co-Manager

Peter Young, Chairperson
State of Hawai'i Department of Land and Natural Resources

Dan Basta, Director
NOAA National Marine Sanctuary Program

The Honorable Linda Lingle, Governor
State of Hawai'i



**ISLAND DIVERS
HAWAII**

377 Keahole St - Honolulu, HI - 96825

Ph., 808-394-0852



Hawaii Technical Divers

www.oahuscubadiving.com

April 30, 2007

Allen Tom
Pacific Islands Region Superintendent
HI Humpback whale NMS
726 S. Kihei Road
Kihei, HI 96753

Dear Allen Tom:

I wanted to send my appreciation for the help of your staff in the Pacific Islands Regional Office on Oahu; specifically Hans VanTillburg, and Kelly Gleason for their help in working with Island Divers technical dive team (Hawaii Technical Divers) to help identify the wreck of the SBC-3 Helldiver off Kahe Point in west Oahu.

Hans, Kelly and Ray Boland played key roles in helping to bring our team closer to a positive identification of this wreck site. It is really great when government agencies and private groups can work together by combining their resources and information to arrive at an objective.

The Island Divers Hawaii and the HaTeD team look forward to working with the Pacific Islands Regional Office on the conclusion of this project and future projects.

Sincerely

Chris Liles
Island Divers Hawaii

UNIVERSITY OF HAWAII AT MĀNOA

College of Natural Sciences
Marine Option Program

November 6, 2006

Naomi McIntosh, Sanctuary Manager
Jeffrey Walters, Sanctuary Co-Manager
Hawaiian Islands Humpback Whale National Marine Sanctuary
6600 Kalaniana'ole Highway, Suite 301
Honolulu, Hawai'i 96825

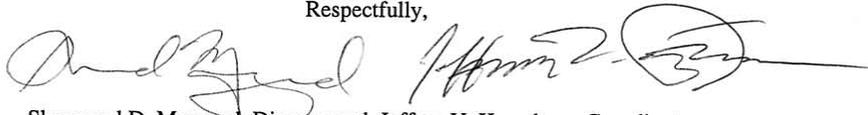
Dear Ms. McIntosh and Dr. Walters:

We understand that the HIHWNMS management plan will be reviewed soon and request that you include maritime archaeological research within the Sanctuary's mission. Significant submerged cultural resources, some involving our whaling past, pepper these waters, and there is a serious lack of priority and coordination in studying these sites. The Sanctuary Program has already taken the lead on maritime archaeology at many of its mainland sites as well as in the Northwestern Hawaiian Islands. Extending this effort to the Sanctuary waters in the Main Hawaiian Islands would protect these valuable cultural resources state-wide.

The University of Hawai'i Marine Option Program (MOP) has been conducting maritime archaeology field schools since the early 1990's. Most of these were under the coordination of Dr. Hans Van Tilburg, Maritime Heritage Coordinator, NOAA National Marine Sanctuary Program. A MOP/Sanctuary Program partnership through such a field school would allow us to offer our students opportunities in underwater archaeology, and would help the Sanctuary Program map and document its cultural sites.

Your organization has done a stellar job of raising humpback whale awareness in Hawai'i. Over the past decade, MOP has enjoyed a healthy partnership with the Sanctuary. Diversifying your mission by including the study of significant maritime archaeological sites would strengthen the Sanctuary's role in the community and would bring more visibility to your program and ours. If you do this, the Sanctuary, MOP, and the state of Hawai'i will reap the benefits. We hope that you give this some serious consideration.

Respectfully,



Sherwood D. Maynard, Director and Jeffrey Y. Kuwabara, Coordinator,
UH Mānoa Marine Option Program

Cc: Daniel Inouye, Senator, State of Hawai'i
Linda Lingle, Governor, State of Hawai'i
Dan Basta, Director, NOAA National Marine Sanctuary Program
Peter Young, Chairperson, Hawai'i DLNR

2450 Campus Rd., Dean Hall 105A, Honolulu, Hawai'i 96822 U.S.A.
Telephone: (808) 956-8433, Facsimile: (808) 956-2417, Email: manoamop@hawaii.edu, Website: <http://www.hawaii.edu/mop>
An Equal Opportunity / Affirmative Action Institution