
APPENDIX A
CULTURAL IMPACT ASSESSMENT

CULTURAL IMPACT ASSESSMENT



Papahānaumokuākea Marine National Monument Management Plan

March 21, 2008

STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES

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1.0 Introduction

The State of Hawai‘i Department of Land and Natural Resources (DLNR), Division of Aquatic Resources has prepared this Cultural Impact Assessment (CIA) associated with the proposed implementation of the Papahānaumokuākea Marine National Monument Management Plan (MMP), and the Environmental Assessment (EA) for proposed MMP activities. The MMP and EA were prepared in compliance with the statutory requirements of the Federal National Environmental Policy Act (NEPA), the State of Hawai‘i Revised Statute (HRS) Chapter 343 Environmental Impact Statements law, and in accordance with the State of Hawai‘i Department of Health’s Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts* as adopted by the Environmental Council, State of Hawai‘i, on November 19, 1997.

The Papahānaumokuākea Marine National Monument (Monument) is the largest protected area in the United States and is the world’s largest fully protected marine area. It was created by Presidential Proclamation under the authorities of the Antiquities Act, 16 U.S.C. §§ 431-433. Creation of the Monument was based on extensive public input, including hearings and the involvement of a broad spectrum of stakeholders and interested persons. Nearly 52,000 public comments were received, the majority of which supported strong protection for the Northwestern Hawaiian Islands (NWHI). Based upon this extensive public input, and in order to provide additional immediate protection to the NWHI, the Monument was created on June 15, 2006, by Presidential Proclamation 8031. National Monument status ensures the immediate, comprehensive, strong, and lasting protection of the resources of the NWHI.

The three principal entities with responsibility for managing lands and waters of the Monument are the Department of Commerce, via the National Oceanic and Atmospheric Administration (NOAA), the Department of the Interior, via the U.S. Fish and Wildlife Service (USFWS), and the State of Hawai‘i (collectively, the Co-Trustees). The Co-Trustees work cooperatively and consult to administer the Monument. The Proclamation provides that the Co-Trustees shall develop a management plan for the region, based upon the draft management plan developed during the sanctuary designation process. The management plan will include provisions for coordinated permitting, research, education, enforcement, cultural practices, and other management related activities. In December 2006, Governor Lingle and the Secretaries of Commerce and the Interior signed a Memorandum of Agreement (MOA) that outlined the roles and responsibilities for the Co-Trustee agencies for coordinated conservation and management of the Monument. The MOA created a governance structure for the Monument and established the Monument Management Board (MMB) which is composed of representatives from the Federal and State agency offices that carry out the day-to-day management and coordination of Monument activities. In addition to the Co-Trustee agencies, the Office of Hawaiian Affairs (OHA) is a member of the MMB and participates in management activities.

2.0 Affected Area Description

2.1 Physical and Natural Setting

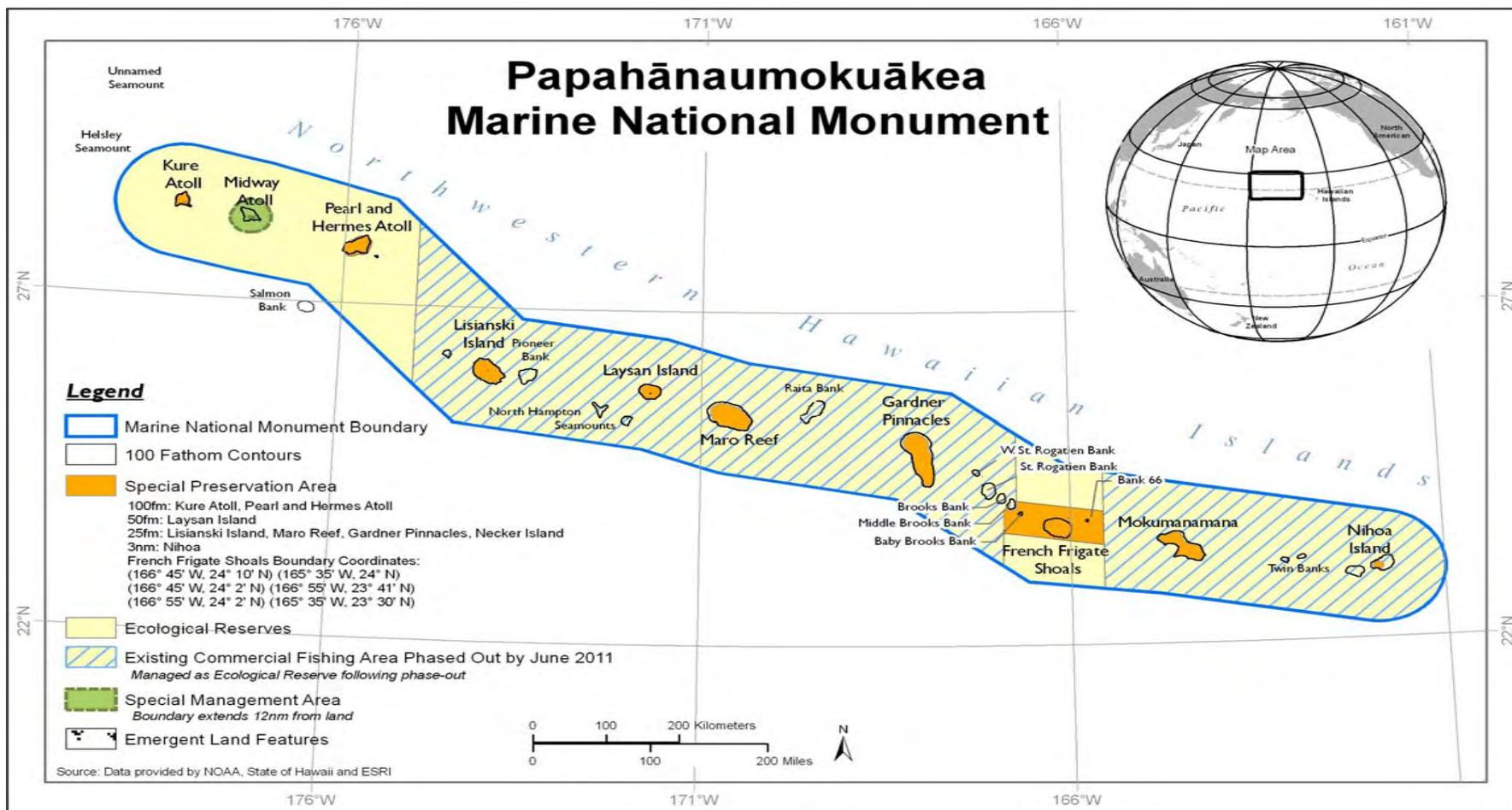
The Papahānaumokuākea Marine National Monument is located in the northwestern portion of the Hawaiian Archipelago, and encompasses the NWHI (Fig. 1). The Monument is located between approximately 22°N and 30°N latitude and 161°W and 180°W longitude, and is roughly 1,200 miles long and 100 miles wide, with a total area of more than 140,000 square miles.

Beginning 125 miles from the main Hawaiian Island of Kaua‘i, the ten islands and atolls are referred to as the NWHI, or in past decades as the Leeward Islands. None of these islands are more than 2–3 square kilometers in size, and all but four have an average mean height of less than 10 m. As a group, they represent a classic geomorphological sequence, consisting of highly eroded high islands, near-atolls with volcanic pinnacles jutting from surrounding lagoons, true ring-shaped atolls with roughly circular rims and central lagoons, and secondarily raised atolls, one of which bears an interior hypersaline lake. These islands are also surrounded by numerous submerged ancillary banks and seamounts. This geological progression along the Hawaiian Ridge continues northwestward beyond the last emergent island, Kure Atoll, as a chain of submerged platforms that makes a sudden northward bend to become the Emperor Seamounts, which extend across the entire North Pacific to the base of the Kamchatka Peninsula in Russia.

The Monument contains a wide range of marine and terrestrial habitats ranging from ocean basins more than 15,000 feet below sea level, to emergent land with hills and cliffs rising to 900 feet above sea level. These habitats include deep and shallow coral reefs, lagoons, littoral shores, dunes, dry grasslands, and shrub lands that support a wide variety of plants and animals. More than 7,000 marine species are found in the NWHI, of which 25% are endemic (NOAA 2006). High densities of apex predators such as sharks, groupers, and jack dominate the marine environment. These species thrive because of minimal anthropogenic stressors. Friedlander et al. (2005) noted that the NWHI are one of the few large-scale, intact predator dominated reef ecosystems in the world. The physical isolation of the Hawaiian Archipelago explains the relatively low species diversity and high endemism levels of its biota (DeMartini and Friedlander, 2004) and the direction of flow of surface waters explain biogeographic relationships between the NWHI and other sites such as Johnston Atoll to the south as well as patterns of endemism and population structure and density of reef fish within the archipelago (DeMartini and Friedlander, 2006).

The majority of the Monument consists of deep pelagic waters that surround the island platforms. At least 13 banks lie at depths between 100 and 1,300 feet (30 and 400 meters) within the Monument, providing important habitat for bottomfish and lobster

Figure 1. Papahānaumokuākea Marine National Monument



species, although only a few of these banks have been studied in any detail (Kelley and Ikehara, 2006). These waters represent important deep water foraging grounds for endangered Hawaiian monk seals, as well as a spatial refugium for pelagic fishes such as tunas and their allies that are currently in declared states of overfishing throughout the Pacific region.

Scientists using deep-diving submersibles have recorded the presence of deep-water precious coral beds within the Monument at depths of 1,200-1,330 feet (365–406 m); these include ancient gold corals whose growth rate is now estimated to be only a few centimeters every hundred years and whose ages may exceed 2,500 years (Roark et al., 2006). At depths below 1,640 feet (500 meters), a diverse community of octocorals and sponges flourish. These deepwater sessile animals prefer hard substrates devoid of sediments (Baco-Taylor et al., 2006). Even deeper yet, the abyssal depths of the Monument, while harboring limited biomass, are home to many poorly documented fishes and invertebrates with remarkable adaptations to this extreme environment. The deep-waters are also important insofar as they support an offshore mesopelagic boundary community (Benoit-Bird et al. 2002), a thick layer of pelagic organisms that rests in the deep ocean (1,300-2,300 feet or 400–700 m) during the day, then migrates up to shallower depths (from near zero to 1,300 feet or 400 m) at night, providing a critical source of nutrition for open-ocean fishes, seabirds, and marine mammals. Overall, the fauna of the Monument's waters below standard SCUBA diving depths remains poorly surveyed and documented, representing an enormous opportunity for future scientific research in a system largely undisturbed by recent trawling or other forms of resource extraction.

The marine and coastal areas of the Monument are home to several species of marine mammals. Over 20 species of whales and dolphins are found in the Monument, of which 6 species are listed as endangered or threatened under the federal Endangered Species Act. The NWHI support a majority of the critically endangered Hawaiian monk seal population. Additionally, five species of sea turtles use the coastal areas for nesting.

The rates of marine endemism in the NWHI are unparalleled in the world. In addition, the mass of apex predators in the marine system is simply not seen in areas subject to higher levels of human impact. The Monument represents one of the last unspoiled marine wilderness areas remaining on the planet.

In contrast to its marine systems, the terrestrial area of the Monument is comparatively small but supports significant endemic biodiversity. This includes six species of endemic plants, including a palm, and four species of endemic birds, including remarkably isolated species such as the Nihoa finch, Nihoa millerbird, Laysan finch, and Laysan duck, one of the world's rarest ducks. In addition, over 14 million seabirds nest on the tiny islets in the chain, including 99 % of the world's Laysan albatrosses and 98 % of the world's black-footed albatrosses. Although still poorly documented, the terrestrial invertebrate fauna also shows significant patterns of precinctive speciation, with endemic species present on Nihoa Island, Mokumanamana Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes Atoll, and Kure Atoll.

2.2 Cultural Setting

More than 1,500 years ago, Polynesian voyagers arrived in the Hawaiian Archipelago, the Polynesian Triangle's most northern point, where they found islands filled with all the natural resources needed to sustain a vibrant society, from fertile soil to reefs rich with fish. Over the next millennia, Native Hawaiians, the descendents of the first Polynesians who discovered Hawai'i, would alter the islands' landscapes, creating agricultural terraces along the hillsides; extensive water paddies for their staple food, kalo (taro), in the valleys; and impressive fishponds over the shallow reefs.

The first discoverers of the Hawaiian Archipelago, Native Hawaiians inhabited these islands for thousands of years prior to Western contact. During this time, Native Hawaiians developed complex resource management within these islands. Native Hawaiians continue to maintain their strong cultural ties to the land and sea and continue to understand the importance of managing the islands and waters as inextricably connected to one another (Beckwith 1951; Lili'uokalani 1978). Poetically referred to as *ke kai popolohua mea a Kāne* (the deep dark ocean of Kāne), the ocean was divided into numerous smaller divisions and categories, beginning from the nearshore to the deeper pelagic waters (Malo 1951). Likewise, channels between islands were also given names and served as connections between islands, as well as a reminder of their larger oceanic history and identity.

More specifically the ocean played an important role to Native Hawaiians as it was used for resources and physical and spiritual sustenance in their everyday lives. In Hawaiian traditions, the NWHI are considered a sacred place, a region of primordial darkness from which life springs and spirits return after death (Kikiloi, 2006). Much of the information about the NWHI has been passed down in oral and written histories, genealogies, songs, dance, and archaeological resources. Through these sources, Native Hawaiians are able to recount the travels of seafaring ancestors between the NWHI and the main Hawaiian Islands. Hawaiian language archival resources have played an important role in providing this documentation, through a large body of information published over a hundred years ago in local newspapers (e.g., Kaunamano 1862 in *Hoku o ka Pakipika*; Manu 1899 in *Ka Loea Kalai'aina*; Wise 1924 in *Nupepa Kuoko'a*). More recent ethnological studies (Maly 2003) highlight the continuity of Native Hawaiian traditional practices and histories in the NWHI. Only a fraction of these have been recorded, and many more exist in the memories and life histories of kūpuna (elders).

Native Hawaiians made detailed observations of the oceanic environment, its interrelation to the terrestrial environment, seasonal and lunar patterns, and species life cycles, and used this information to develop and conserve their resources (Kamakau 1976; Malo 1951; Beckwith 1951). Kapu, or restrictions, on resource extraction were implemented based on these ecological understandings (Pukui and Handy 1950; Handy et al. 1972). Other traditional strategies were set up to naturally enhance marine resources through increased protection, growth, and reproduction (Kikiloi 2003).

2.2.1 Archaeological Background

Physical remnants of wahi kūpuna (ancestral places), Hawaiian language archival and oral resources, and historical accounts provide evidence of the various past uses of the NWHI and the surrounding ocean by Native Hawaiians (Kaunamano 1862 in Hoku a ka Pakipika; Manu 1899 in *Ka Loea Kalaiaina*; Wise 1923 in *Nupepa Kuokoa*). Evidence indicates that the area served as a home and a place of worship for centuries. It is posited that the first Native Hawaiians to inhabit the archipelago and their descendants frequented Nihoa and Mokumanamana for at least a 500- to 700-year period (Emory 1928; Cleghorn 1988; Irwin 1992). They brought many of the skills necessary to survive with them from their voyaging journeys throughout Polynesia. Over time, they developed complex resource management systems and additional specialized skill sets to survive on these remote islands with limited resources (Cleghorn 1988).

The impressions left by ancient Hawaiians can be seen through the distinctive archaeology of Nihoa and Mokumanamana. The ceremonial terraces and platform foundations with upright stones found on both Nihoa and Mokumanamana are not only amazing examples of unique traditional Hawaiian architectural forms of stone masonry work, but they also show similarities to samples from inland Tahiti (Emory 1928). The structures are some of the best preserved early temple designs in Hawai‘i, and have played a critical role in understanding Hawai‘i’s strong cultural affiliation with the rest of Polynesia, and the significant role of Native Hawaiians in the migratory history and human colonization of the Pacific (Cleghorn 1988).

It is believed that Mokumanamana played a central role in Hawaiian ceremonial rites and practices a thousand years ago because it is directly in line (23° 34.5’ N latitude) with the rising and setting of the equinoctial sun along the Tropic of Cancer. Because Mokumanamana sits on the northernmost limit of the path the sun makes throughout the year, it sits centrally on an axis between two spatial and cultural dimensions: *po* (darkness, creation, and afterlife) and *ao* (light, existence). During the summer solstice (the longest day of the year), the sun travels slowest across the sky on this northern passage, going directly over Mokumanamana.

Archaeological surveys on Nihoa and Mokumanamana have documented numerous archaeological sites and cultural material (Emory 1928; Cleghorn 1988; Ziegler 1990; Graves and Kikilo, 2006.). Nihoa Island and Mokumanamana (Necker Island) are both listed on the National Register of Historic Places, with 140 archaeological sites documented thus far on these two islands. Though quite barren and seemingly inhospitable to humans, the number of cultural sites they support is testimony to their occupation and use prior to European discovery. On Nihoa Island, 88 cultural sites have been documented so far, including residential features, agricultural terraces, ceremonial structures, shelters, cairns, and burial sites. This island also has sufficient soil development for limited agriculture, along with stone terraces that suggest expenditure and investment in agricultural food production. On Mokumanamana, at least 52 cultural sites exist, including 33 ceremonial features, making it the highest concentration of such

religious sites found anywhere in the Hawaiian Archipelago. All of these sites are strategically placed and act as physical reminders of the important spiritual role these sites play in Hawaiian culture. The sites and structures on these islands are believed to be channels for the creation of new life, and facilitate Native Hawaiians' return to their spiritual source after death (Liller 2000). Several archaeological surveys have collected cultural artifacts from both of these islands which are now stored in the Bernice Pauahi Bishop Museum and the University of Hawai'i Archaeological Laboratory. The range in types of cultural artifacts stored in these collections is testimony to the various uses these islands and the surrounding oceans served for Native Hawaiians. These ancient sites on Nihoa and Mokumanamana provide important examples of how human colonization and settlement can occur even in seemingly marginal environments, and provide enduring monuments to the adaptive tenacity of the ancient Polynesian explorers of the Pacific.

2.2.2 Historical Period

By the time of Western European contact with the Hawaiian Islands, little was collectively known about the NWHI by the majority of the population, as relatively few individuals traveled to these remote islands and had seen them with their own eyes, except families from Kaua'i and Ni'ihau who voyaged to these islands to perpetuate subsistence fishing practices (Maly 2003). Within the next century, a number of expeditions were initiated by Hawaiian ali'i to visit these islands and bring them under Hawaiian political control and ownership. The accounts of these historical expeditions were published in great detail in the Hawaiian newspapers from 1857 through 1894, as they related to each visit.

Contact between the main Hawaiian islands and the NWHI seems to have slowed for a period until the 19th century, when Hawaiian monarchs exhibited a strong interest in reuniting the entire Hawaiian Archipelago by consolidating the NWHI into the Kingdom of Hawai'i. Title to the islands and waters of the NWHI was vested in the Kingdom of Hawai'i throughout the 1800s (Mackenzie and Kaiama 2003). In 1822, Queen Ka'ahumanu organized and participated in an expedition to locate and claim Nihoa Island under the Kamehameha Monarchy. In 1856, Nihoa was reaffirmed as part of the existing territory of Hawai'i by authority of Alexander Liholiho, Kamehameha IV (March 16, 1856 Circular of the Kingdom of Hawai'i). The following year, King Kamehameha IV voyaged to Nihoa and then returned to Honolulu. He instructed Captain John Paty on the vessel *Manuokawai* to explore the rest of the northwestern region to annex any lands discovered during the expedition. Paty traveled to Nihoa, Mokumanamana, Gardner, Laysan, Lisianski, and Pearl and Hermes. Later in 1857, the islands of Laysan and Lisianski were declared new lands to be included into the domain of the Kingdom (Kingdom of Hawai'i 1857).

In 1885, the most famous visit by Hawaiian royalty was made by then princess Lydia Lili'uokalani and her 200 person party who visited Nihoa on the ship *Iwalani*. In 1886, King David Kalakaua, through Special Commissioner Colonel James Harbottel annexed Kure Atoll (Ocean Island) and announced formal possession of the island (Harbottel-Boyd 1886). In 1893, Queen Lydia Lili'uokalani was illegally overthrown by the self-

proclaimed provisional government, with the assistance of U.S. Minister John L. Stevens. In 1898, the archipelago, inclusive of the NWHI, was collectively ceded to the United States through a domestic resolution, called the “New Lands Resolution”.

The sovereignty, life (ea), and responsibility (kuleana) for the entire Hawaiian Archipelago continues to exist in the hearts and minds of many Native Hawaiians. The “Apology Bill” (U.S. Public Law 103-150), a joint resolution of Congress that was signed by the President in 1993, recognizes that “the health and well-being of the Native Hawaiian people is intrinsically tied to their deep feelings and attachment to the land.” The Apology Bill “apologizes to Native Hawaiians on behalf of the people of the United States for the overthrow of the Kingdom of Hawaii on January 17, 1893 with the participation of agents and citizens of the United States, and the deprivation of the rights of Native Hawaiians to self-determination.”

2.2.3 Contemporary Connections to the Northwestern Hawaiian Islands

Today, Native Hawaiians remain deeply connected to the NWHI on genealogical, cultural, and spiritual levels. Kaua‘i and Ni‘ihau families voyaged to these islands indicating that they played a role in a larger network for subsistence practices into the 20th century (Tava and Keale 1989; Maly 2003). The NWHI as a region qualifies as an important traditional place of Native Hawaiian culture worthy of global recognition. The Monument includes a collection of wahi pana (places of great cultural significance and practice) (OHA, wahi pana list) that are linked together throughout the expanse of the ten main atolls and islands. Wahi pana benefit all Hawaiian people - past, present and future-born, as well as inspiring generations of all cultures. The wahi pana and geography of this remote area includes storied names that give connotative value and meaning. Much of the cultural information about the NWHI has been passed down in oral and written histories, genealogies, songs, dance, and via archaeological sites. Through these sources, Native Hawaiians are able to recount the travels of seafaring ancestors between the NWHI and the main Hawaiian Islands in centuries past. Hawaiian language archival resources have played an important role in providing this documentation, through a large body of information published more than a hundred years ago in local newspapers. More recent ethnological studies have highlighted the continuity of Native Hawaiian traditional practices and histories in the NWHI. Only a fraction of these have been recorded, and many more exist in the memories and life histories of kūpuna (elders).

In recent years, Native Hawaiian cultural practitioners voyaged to the NWHI to honor their ancestors and perpetuate traditional practices. In 1997, Hui Malama i Na Kupuna o Hawai‘i Nei repatriated sets of human remains to Nihoa and Mokumanana that were collected by archaeologists in the 1924-25 Bishop Museum Tanager Expeditions (Ayau and Tengan 2002). In 2003, a cultural protocol group, Na Kupu‘eu Paemoku, traveled to Nihoa on the voyaging canoe Hokule‘a to conduct traditional ceremonies. In 2004, Hokule‘a sailed over 1,200 miles to the most distant end of the island chain to visit Kure Atoll as part of a statewide educational initiative called “Navigating Change.” In 2005, Na Kupu‘eu Paemoku sailed to Mokumanana to conduct protocol ceremonies on the longest day of the year, June 21, the summer solstice. Cultural practitioners

(Kamakakokalani Center for Hawaiian Studies and the Edith Kanaka‘ole Foundation) continued this practice in 2006 and in 2007.

2.2.4 Cultural Access for Native Hawaiian Practices

Presidential Proclamation 8031 recognizes that the NWHI has great cultural significance to Native Hawaiians and provides a means to issue permits for Native Hawaiian practices. The Proclamation defines these practices as cultural activities conducted for the purposes of perpetuating traditional knowledge, caring for and protecting the environment, and strengthening cultural and spiritual connections to the Northwestern Hawaiian Islands that have demonstrable benefits to the Native Hawaiian community. This may include, but is not limited to, the non-commercial use of Monument resources for direct personal consumption while in the Monument. Monument goals and objectives reinforce this position and the MMP includes several activities that support access and use of the NWHI for Native Hawaiian practices.

3.0 Monument Management Plan

The Monument Management Plan (MMP) was developed cooperatively by the State of Hawai‘i Department of Land and Natural Resources (DLNR), Office of Hawaiian Affairs (OHA), the U.S. Fish and Wildlife Service (FWS), and National Oceanic and Atmospheric Administration (NOAA), and was based on the earlier draft NOAA Sanctuary management plan. The MMP outlines current and future planning, administrative, and field activities to enhance the conservation and protection of the natural, cultural, and historic resources in the NWHI.

The draft MMP will be available for public review and comment in mid-2008. The MMP consists of 22 Action Plans that describe the wide-ranging and coordinated management process necessary to achieve the vision, mission, and guiding principles, and desired outcomes of the Monument. The mission of the Monument is to: “carry out seamless integrated management to achieve strong, long-term protection and perpetuation of NWHI ecosystems, Native Hawaiian tradition and customary cultural and religious practices, and heritage resources for current and future generations”

The vision, mission, guiding principles, and goals outlined in the MMP honor and protect the significance of the NWHI for Native Hawaiians. Monument Goal no. 6 specifically is written to: “support Native Hawaiian practices consistent with long-term conservation and protection.”

The MMP includes a Native Hawaiian Cultural and History Action Plan, and a Native Hawaiian Community Involvement Action Plan, with the goal to increase the understanding and appreciation of Native Hawaiian cultural values related to Papahānaumokuākea Marine National Monument.

The desired outcome for the Native Hawaiian Cultural and History Action Plan is to:

“Increase the understanding and appreciation of Native Hawaiian histories and cultural practices related to Papahānaumokuākea Marine National Monument and effectively manage resources for their cultural, educational and scientific value”.

Five strategies have been identified to achieve this outcome.

1: Identify and prioritize scientific and Native Hawaiian cultural research needs.

- 1.1: Identify and research needs that can be accomplished through anthropological, archaeological, historical, and Hawaiian cultural methods.
- 1.2: Develop cultural research priorities alongside associated management challenges and opportunities.

2: Conduct, support, and facilitate Native Hawaiian cultural and historical research of the NWHI.

- 2.1: Continue to compile information and conduct new cultural and historical research about the NWHI.
- 2.2: Continue to provide direct financial and logistical support.
- 2.3: Facilitate field research and cultural education opportunities annually during the field season.
- 2.4: Convene a Native Hawaiian nomenclature working group.
- 2.5: Incorporate cultural resources information into the Monument Information System.
- 2.6: Support Native Hawaiian cultural accesses to assure cultural research needs are met.
- 2.7: Establish agreements with local universities and museums to address possible curation, research, use, return, and repatriation of collections.

3: Increase cultural resource management capacity across MMB agencies.

- 3.1: Assess Monument cultural resource capacity.
- 3.2: Engage Native Hawaiian practitioners and cultural experts and the Native Hawaiian Cultural Working Group in the development and implementation of the Monument’s management activities.
- 3.3: Increase knowledge base of Native Hawaiian values and cultural information through “in-reach” programs for resources managers.
- 3.4: Identify and integrate Native Hawaiian traditional ecological knowledge and management concepts into Monument management.

4: Plan, develop, and implement a Monument Cultural Resources Program.

- 4.1: Prepare a Cultural Resources Program Plan.
- 4.2: Develop and implement specific preservation plans, as appropriate, to protect cultural sites and collections on Nihoa and Mokumanamana.
- 4.3: Initiate implementation of the Monument Cultural Resources Program.

5: Provide cultural outreach and educational opportunities to the Native Hawaiian community and the general public.

- 5.1: Integrate Native Hawaiian values and cultural information into general outreach and education programs.
- 5.2: Develop a culturally based strategy for education and outreach to the Native Hawaiian community.
- 5.3: Integrate Native Hawaiian values and cultural information into the Monument permittee education and outreach program.

The desired outcome of the Native Hawaiian Community Involvement Action Plan is to:

“Engage the Native Hawaiian community in active and meaningful involvement in Papahānaumokuākea Marine National Monument management.

Three strategies have been identified to achieve this outcome.

1: Regularly involve the Native Hawaiian community.

- 1.1: Formalize, expand, and convene the Native Hawaiian Cultural Working Group.
- 1.2: Engage the Native Hawaiian Cultural Working Group in the development of a Monument Cultural Resource Program.
- 1.3: Establish an annual cultural resources exchange.

2: Develop and annually maintain partnerships with Native Hawaiian organizations and institutions.

- 2.1: Continue to expand and explore opportunities to partner with institutions serving Native Hawaiians.

3: Identify and integrate Native Hawaiian traditional ecological knowledge and management concepts into Monument management annually.

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

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

The development of the MMP included extensive consultation with the Native Hawaiian community and Native Hawaiian cultural practitioners. Initial consultations with the Native Hawaiian community occurred at the inception of the designation of the NWHI as a Coral Reef Ecosystem Reserve in 2000 and continued during the process to designate this area as a sanctuary through the National Marine Sanctuary Program. During this process a Native Hawaiian Cultural Working Group (CWG) was formed as a part of the Reserve Advisory Council. Over 200 individuals in the Native Hawaiian community were consulted in the development of the draft sanctuary management plan. The formation of the CWG increased Native Hawaiian involvement in the planning process for the Monument. The CWG and additional Native Hawaiian practitioners were consulted by DLNR during the development of the State's NWHI Marine Refuge. The consultation resulted in a recommendation that cultural importance should be weighed equally with biological importance during the review of proposed activities within the NWHI. This recommendation was subsequently incorporated into the MMP and the Co-Trustees joint permitting process.

In summary, the implementation of the MMP will expand the current Monument efforts to incorporate Native Hawaiian traditional and customary cultural and religious practices and research needs into the day-to-day management of the Monument. Native Hawaiian cultural research needs will continue to be identified and prioritized through consultation with OHA and other Native Hawaiian institutions and organizations. The MMB will continue to assess capacity needs to support cultural resource management activities. Native Hawaiian traditional ecological knowledge and management concepts will continue to inform management decisions in the Monument.

4.0 Native Hawaiian Community Consultation

As indicated above, the development of the draft sanctuary management plan for the NWHI included extensive consultation with the Native Hawaiian community and Native Hawaiian cultural practitioners. The CWG was maintained after Presidential Proclamation 8031 established the Monument, and is now hosted by OHA. OHA worked with MMB members to convene four workshops on proposed Native Hawaiian practices in the NWHI as a part of the process to revise the draft sanctuary management plan. The outcome of these workshops provided the basis for the action plan strategies and activities outlined in the Native Hawaiian Cultural and History Action Plan of the MMP.

Several additional Native Hawaiian organizations and individuals were contacted in 2008 by DLNR to provide supplementary information regarding Native Hawaiian cultural practices and resources in the Papahānaumokuākea Marine National Monument in relation to the implementation of the MMP. Individuals and organizations that received scoping letters were identified in consultation with OHA and using the Native Hawaiian

Cultural Working Group member lists. The following organizations and individuals were contacted via consultation request letters as part of the consultation process (Table 1):

Table 1. Native Hawaiian organizations and individuals contacted during the 2008 DLNR Cultural Impact Assessment.

Name	Affiliation
Marilyn Leimomi Khan	Association of Hawaiian Civic Clubs
Buzzy Agard	Kūpuna
Professor Carlos Andrade	University of Hawai‘i at Manoa
Kehaulani Souza	Cultural Surveys Hawai‘i
Edward Halealoha Ayau	Hui Malama I Na Kupuna O Hawai‘i Nei
Vicky Takamine & Wayne Kaho’onei Panoke	‘Ilio‘ulaokalani Coalition
State Historic Preservation Program - Burial Councils	Burial Councils for: <ul style="list-style-type: none"> • Hawai‘i • O‘ahu • Kaua‘i/Ni‘ihau • Moloka‘i • Maui/Lana‘i
Issac & Tammy Harp	Kama‘āina
Dr. Emmett Aluli, Chair	Kaho‘olawe Island Reserve Commission
Sol Koho’ohalahala	Kaho‘olawe Island Reserve Commission
Kainani Kahaunaele	Kama‘āina
Kaliko Amona	Kama‘āina
Kamana’opono Crabbe	Kama‘āina
Kekuewa Kikilo	Kamehameha Schools
Nainoa Thompson	Kamehameha Schools
Kepa Maly	Kumupono Consultants
Laura Thompson	Kama‘āina
Manu Boyd	Kama‘āina
Mahealani Kama’u-Wendt	Native Hawaiian Legal Corporation
Clyde Namu’o	Office of Hawaiian Affairs
Oswald Stender	Office of Hawaiian Affairs
Kim Birnie	Papa Ola Lokahi
Professor Isabella Abbott	University of Hawai‘i at Manoa
Professor Lilikala Kame‘eleihia	University of Hawai‘i at Manoa
Pua Kanaka’ole Kanahale	Kama‘āina
Representative Mina Morita	Hawai‘i State Legislature
State Historic Preservation Program	State Historic Preservation Office
William Aila	Wai‘anae Harbor Master
Wilma Holi	Kama‘āina

The consultation letters sent by DLNR requested kōkua and guidance regarding the following aspects of the assessment:

- General history, and current and past uses of the land and marine resources in the NWHI.
- Knowledge of cultural sites that may be impacted by activities taking place in the Monument, including natural resource research activities and cultural practices and research activities.
- Knowledge of traditional gathering practices and rights in the NWHI.
- Legends and traditional uses of the NWHI.
- Referrals of kūpuna and kama‘āina who might be willing to share their cultural knowledge of the NWHI.
- Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the NWHI.

The responses received as a result of DLNR’s solicitation of the above members of the Native Hawaiian Community in regard to the implementation of the MMP were favorable. Responses received acknowledged that the MMB were actively striving to incorporate Native Hawaiian histories and cultural practices into Monument management strategies.

Additionally, the activities and programs (undertakings) implemented by the MMP will be subject to review under the National Historic Preservation Act of 1966 (NHPA). Specifically, Section 106 of the NHPA requires the Monument Co-Trustees agencies to take into account potential effects of MMP undertakings on historic and cultural properties. The NHPA requires consultation with Native Hawaiian organizations regarding historic properties with religious or cultural significance to the Native Hawaiian community during the Section 106 review process.

5.0 Assessment of Cultural Impacts

There are many similarities between the MMP ecosystem-based management approach for the NWHI and the traditional ecological knowledge and practices implemented by Native Hawaiians to manage their natural resources. Both approaches share the view of nature as a holistic and dynamic system of interrelated parts and emphasize the need for long-term sustainability and health of our natural resources.

The Native Hawaiian traditional ecological knowledge and worldview is valued for its rich base of empirical knowledge and practical methods of resource management, developed over hundreds of years of living and interacting with the lands and ocean waters of Hawai‘i (Titcomb and Pukui 1952; Kikuchi 1976; Titcomb et. al. 1978; Poepoe et. al 2003; Kikiloi 2003). Traditional management practices take advantage of understanding seasonal patterns in weather, patterns of biological species, and the designation of ecological zones (Handy et al. 1972; Kelly 1989; Gon 2003).

The significance of the NWHI natural, cultural, and historical resources led to the establishment of the Papahānaumokuākea Marine National Monument to protect these resources. In developing a management framework for the Monument, consultation with the Native Hawaiian community was sought to address how to best conserve cultural sites and practices. Ongoing consultation and engagement with the Native Hawaiian community is an important aspect for the success of the Monument's management through the implementation of the MMP. Protection of cultural resources and access to the NWHI is of high importance to the Native Hawaiian community to maintain traditional practices. Proclamation 8031 recognizes the cultural significance of the NWHI and outlines specific procedures to grant access to the Monument to engage in Native Hawaiian practices. In addition, when prioritizing management objectives for the Monument Management Plan, the MMB developed two action plans within the MMP to specifically address Native Hawaiian cultural practices and involvement in the Monument.

The MMP action plan strategies and activities strengthen the relationship between the Monument Co-Trustees and the Native Hawaiian community, and increase Native Hawaiian participation in the management process. Potential impacts to cultural and historic resources are carefully considered with science and management when assessing the applicability of a project or action. Additionally, cultural assessments by members of the Native Hawaiian community are part of the permit application review process for allowing access to the Monument. All activities proposed in permit applications for cultural access are assessed to determine if the purpose and intent of the activity are appropriate and deemed necessary by traditional standards in the Native Hawaiian culture (pono) and demonstrate an understanding of, and background in, the traditional practice, and its associated values and protocols. All persons entering the Monument pursuant to a Monument permit are required to attend a cultural briefing on the significance of the NWHI resources to Native Hawaiians.

Monument goals as implemented through the MMP reinforce the area's great cultural significance to Native Hawaiians. The implementation of the MMP will have a beneficial cultural impact and will provide increased opportunities for Native Hawaiians to play a significant role in the management of the NWHI, an area of great natural, historic, and cultural importance.

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