9.

Mālamalama ka lā nui a Kane puka i Ha'eha'e
'Apakau ke kukuna i ka 'ili kai o nā kai 'ewalu
He 'ike makawalu ka'u e 'ano'i nei,
'O nā au walu o Kanaloa Haunawela noho i ka moana nui
He Hu'akai ka makani o Lehua 'au i ke kai
Ku'ono'ono ka lua o Kūhaimoana i ke kapa 'ehukai o Ka'ula
'O Kū i ka loulu, ulu a'e ke aloha no Nihoa moku manu
Manu o kū i ka 'ahui, he alaka'i na ka lahui
'O Hinapūko'a
'O Hinapuhalako'a
'O Hina kupukupu
'O Hinaikamalama
Hua ka 'ōhua, lu'u ke kohola
Aloha kahi limu kala, kia'i 'ia e ka 'ākala noho i uka
Hānau ka pe'a, puka ka pe'ape'a i ke kai
He 'ina'i ka 'ina, 'ono i ka huna o ka pa'akai
Manomano ka 'ike li'u o ka houpō o Kanaloa
Koiko'i lua ho'i no ka lehulehu, 'o ku'u luhi ia
Hanohano wale ka 'āina kūpuna, 'o nā moku lē'ia
No Papahānaumokuākea lā he inoa

- Na Kainani Kahaunaele a me Halealoha

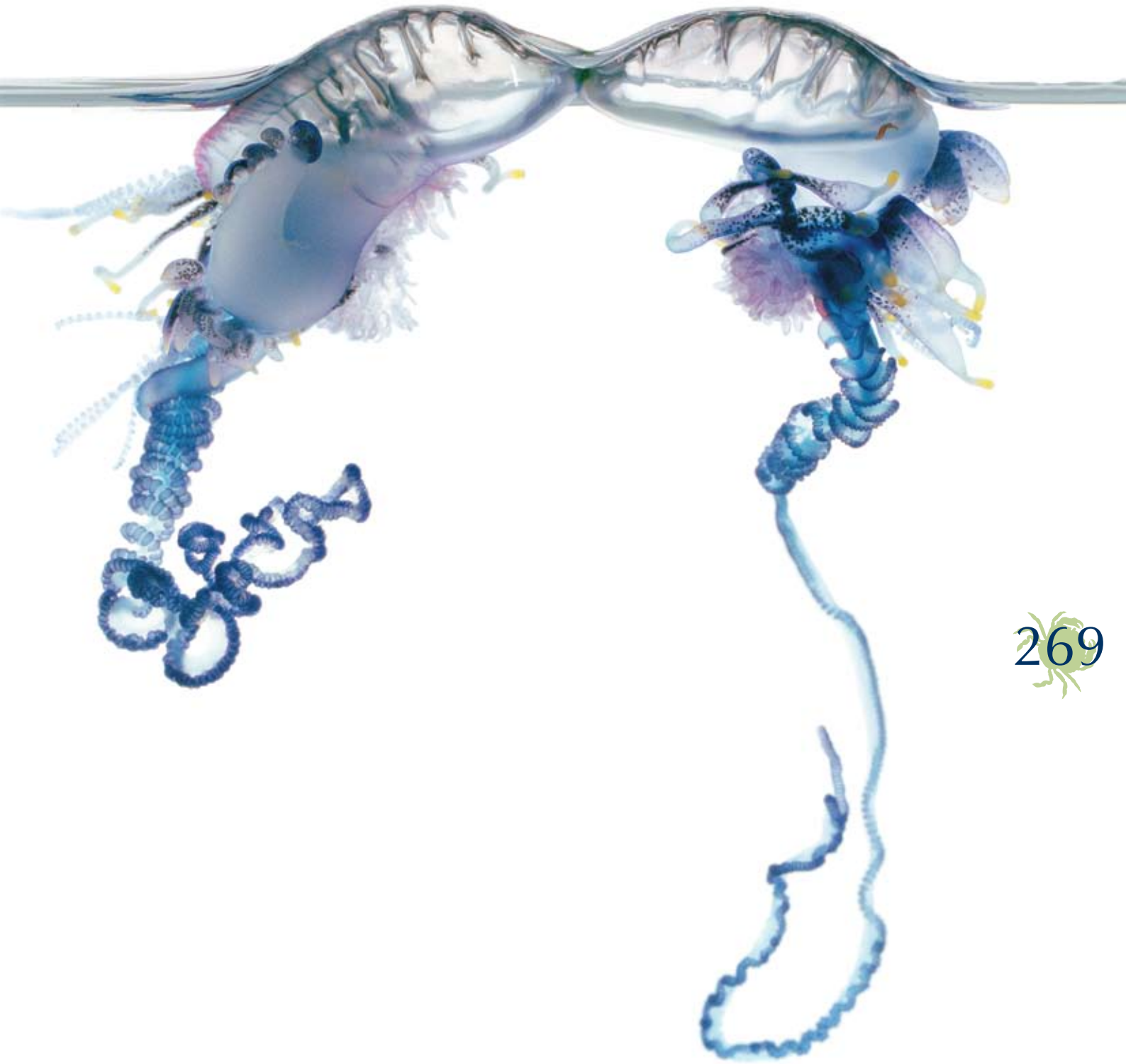
Signature on Behalf of the State Party

9. Signature on Behalf of the State Party

Section 9. Signature on Behalf of the State Party

Lyle Laverty
Assistant Secretary
Fish and Wildlife and Parks
U.S. Department of the Interior

Date



Portuguese Man-of-War or pa'imalua
(Photo: Susan Middleton & David Liittschwager)

GLOSSARY

Abiotic: Pertaining to the non-living components of the environment.

Abyssal (zone): Relating to the bottom waters of oceans, usually below 1000 m.

Adaptive management: The process of adjusting management actions and/or directions as new and better information emerges about the ecosystem

Adaptive reuse: A process that changes a disused or ineffective item into a new item that can be used for a different purpose.

Alien species (exotic, nonnative): With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.

Anthropogenic: Caused by humans.

Apex predator: A species (e.g., fish) at the top of the food chain.

Appropriate Use (NWR): A proposed or existing use on a refuge that meets the criteria in 603 FW 1.

Aquaculture: Cultivation of aquatic organisms under controlled or semi-controlled conditions.

Archipelago: A group or cluster of islands.

Ballast water: Any water and associated sediments used to manipulate the trim and stability of a vessel

Bathymetry: Study and mapping (benthic mapping) of seafloor elevations and the variations of water depth; the topography of the seafloor.

Battle of Midway: A naval battle in the Pacific Theater of World War II. It took place from June 4, 1942 to June 7, 1942, approximately one month after the Battle of the Coral Sea, about five months after the Japanese capture of Wake Island, and six months after the Empire of Japan's attack on Pearl Harbor that had led to a formal state of war between the United States and Japan.

Benthic habitat: Of the seafloor, or pertaining to organisms living on or in the seafloor.

Biodiversity: Defined as the number of different organisms or species that inhabit a given ecosystem or the earth overall. It can also refer to the variability within species and among species living on the earth or in a particular community. Many ecologists also include the interaction of species the environment when describing biodiversity. All biodiversity has its origins in the different combinations of genetic material (DNA) and how this is expressed in different organisms.

Biogeographical: Of relating to or involved with biogeography, a branch of biology that deals with the geographical distribution of animals and plants.

Biological community: A naturally occurring assemblage of plants and animals that live in the same environment and are mutually sustaining and interdependent.

Biological inventory or Biodiversity inventory: Catalog of all biota in a given area. Inventories of large clades (a clade is a related group with a common ancestor) of organisms that are likely to contain many undescribed species or otherwise require major revision to complete their taxonomy.

Biomass: The total weight of all the living organisms, or some designated group of living organisms, in a given area.

Bioprospecting: Search for new chemicals compounds, genes and their products in living things that will have some value to people.

Biota: All the organisms, including animals, plants, fungi and microorganisms, living components of an ecosystem.

Biotic: Pertaining to any aspect of life, especially to characteristics of entire populations or ecosystems.

Bishop Museum: Founded in 1889, the Bishop Museum is the largest museum in Hawai'i and the premier natural and cultural history institution in the Pacific, recognized throughout the world for its cultural collections, research projects, consulting services and public educational programs. It also has one of the largest natural history specimen collections in the world.

Board of Land and Natural Resources: An appointed Board of the State of Hawai'i composed of seven members, one from each land district and two at large, and the Chairperson, the executive head of the Department. Members are nominated and, with the consent of the Senate, appointed by the Governor for a 4-year term. The BLNR convenes twice monthly to review and take action on department submittals, including Monument permits.

Bottomfish species: means bottomfish management unit species as defined at 50 CFR 660.12.

Bottomfishing: Fishing for bottomfish species using hook-and-line method of fishing where weighted and baited lines are lowered and raised with electric, hydraulic, or hand-powered reels.

Calderas: A crater whose diameter is many times that of the volcanic vent because of the collapse of subsidence of the central part of a volcano or because of explosions of extraordinary violence.

Catch-per-unit-effort (CPUE): The average number of fish caught in a discrete amount of time.

Categorical Exclusion: A category of actions that the agency has determined does not individually or cumulatively have a significant effect on the quality of the human environment.

Ciguatera toxin: Toxins produced by a marine microalgae called *Gambierdiscus toxicus*. These toxins become progressively concentrated as they move up the food chain from small fish to large fish that eat them, and reach particularly high concentrations in large predatory tropical reef fish.

Co-Trustees: U.S. Department of Commerce, through the National Oceanic and Atmospheric Administration, the Department of the Interior through the Fish and Wildlife Service, and the State of Hawai'i.

Commercial Fishing: Fishing in which the fish harvested, either in whole or in part, and are intended to enter commerce through sale, barter or trade.

Compatible use: A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge.

Comprehensive Conservation Plan: A document that describes the desired future conditions of the refuge, and provides long-range guidance and management direction for the refuge manager to accomplish the purposes of the refuge, contribute to the mission of the System, and to meet other relevant mandates.

Coral bleaching: When zooxanthellae, symbiotic algae that live in coral tissue, leave the coral as a result of thermal and other types of stress.

Crustacean: A member of the phylum Crustacea, such as a crab, shrimp, or lobster.

Cultural literacy: The art and understanding of the intangible meanings and emotions conveyed through a particular written cultural language.

Cultural resources: Any resources whether they are tangible or intangible such as stories, people, structures, or artifacts that identifies a certain native people's culture inherent in the way they live and practice their traditions.

Cumulative effects (NEPA): Cumulative impact of the direct and indirect effects of the proposed action and its alternatives when added to the aggregate effects of past, present, and reasonably foreseeable future actions.

Customary rights: Rights customarily and traditionally exercised for subsistence, cultural, and religious purposes and possessed by ahupuaʻa tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778.

Derelict: Abandoned, especially by the owner or occupant; forgotten unused.

Direct effects (NEPA): Effects caused by the action and occurring at the same time and place.

Distance-learning: Education initiated on-site at a remote location offered to others often times providing two way communication through audio and/or video technology links.

Ecological: Of, or having to do with, the environments of living things or with the pattern of relations between living things and their environments.

Ecological impacts: The effect that a human-caused or natural activity has on living organisms and their environment.

Ecological Reserve: An area of the Monument consisting of contiguous, diverse habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life, and also to protect and preserve natural assemblages of habitats and species within areas representing a broad diversity of resources and habitats found within the monument.

Ecosystem: A geographically specified system of organisms (including humans), the environment, and the processes that control its dynamics.

Ecosystem Health: A condition in which structure and functions allow the desired maintenance over time of biological diversity, biotic integrity, and ecological processes.

Ecosystem Integrity: A condition determined to be characteristic of an ecosystem that has the ability to maintain its function, structure, and abundance of natural biological communities, including rates of change in response to natural environmental variation.

Ecosystem Services: the natural processes by which the environment produces resources. Common examples are water, timber, and habitat for fisheries, and pollination of native and agricultural plants.

Ecosystem-based management approach: Management that carefully considers impacts to all species and trophic interactions, including maintenance of biological communities and the protection of natural habitats, populations and ecological processes. The approach emphasizes the inherent value of ecosystems and recognizes the importance of species interactions and conservation of habitats, and only permits resource utilization in a manner that is consistent with the Monument's primary goal of resource protection.

Ecotourism: Travel to natural areas to foster environmental and cultural understanding, and appreciation and conservation. The Proclamation defines Ocean-Based Ecotourism as a class of fee-for-service activities that involves visiting the Monument for study, enjoyment, or volunteer assistance for purposes of conservation and management.

Effects (Impacts): As defined by NEPA (direct, indirect, cumulative): Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

El Niño: A climatic phenomenon characterized by a large scale weakening of the trade winds and warming of the surface layers in the eastern and central equatorial Pacific Ocean. El Niño events occur irregularly at intervals of 2-7 years, although the average is about once every 3-4 years. and typically last 12-18 months. During El Niño, unusually high atmospheric sea level pressures develop in the western tropical Pacific and Indian Ocean regions, and unusually low sea level pressures

develop in the southeastern tropical Pacific. Southern Oscillation tendencies for unusually low pressures west of the date line and high pressures east of the date line have also been linked to periods of anomalously cold equatorial Pacific sea surface temperatures sometimes referred to as **La Niña**.

Endangered species: An animal or plant species in danger of extinction throughout all or a significant portion of its range.

Endemic: Referring to species native to and confined to a particular region, thus often having a comparatively restricted distribution.

Environmental Assessment (EA): A concise public document, prepared in compliance with the National Environmental Policy Act, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact.

Environmental Impact Statement (EIS): Documentation that assesses the impacts of major Federal actions significantly affecting the quality of the human environment as required by section 102(2)(C) of NEPA.

Exclusive Economic Zone (EEZ): A zone contiguous to the territorial sea, including zones contiguous to the territorial sea of the United States, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands (to the extent consistent with the Covenant and the United Nations Trusteeship Agreement), and United States overseas Territories and possessions extending to a distance of 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Fathom: A unit of length equal to 1.8m (6ft) used to measure water depth.

Field camp (camp): In this document refers to both seasonal camps that are placed on Lisianski, Pearl and Hermes, Kure, and Nihoa; and one permanent camp at Laysan Island. Seasonal camps are established for specific activities such as monk seal research. The Laysan Island camp is staffed year-round to work on restoration of the island. Camps depend on tents, import all water, and have very limited communications and physical access.

Field station: In this document is used to refer to permanent infrastructures on Tern Island or Midway Atoll. These stations have buildings, water-making abilities, greater power sources, advanced communication, and regular access by boat and aircraft.

Fishery: The act, process, or season of taking fish or other sea products for sale or consumption.

Friends of Midway Atoll NWR: Association whose mission is "[t]o support the Midway Atoll National Wildlife Refuge in its efforts to preserve, protect and restore the biological diversity and historic resources of Midway Atoll, while providing opportunity for wildlife-dependent recreation, education and scientific research."

Geographic Information System (GIS): A system of spatially referenced information, including computer programs that acquire, store, manipulate, analyze, and display spatial data.

Geomorphologic: Relating to geomorphology, a science that deals with land and submarine relief features of the earth's surface.

Hazardous material: A substance or material that is capable of posing an unreasonable risk to health and safety or property when transported in commerce and has been designated as hazardous under the federal Hazardous Materials Transportation Law (49 USC 5103).

Hazardous Waste: The Resource Conservation and Recovery Act (RCRA) specifically defines a hazardous waste as a solid waste (or combination of wastes) that, due to its quantity, concentration, physical, chemical, or infectious characteristics, can cause or significantly contribute to an increase in mortality. RCRA further defines a hazardous waste as one that can increase serious,

irreversible, or incapacitating reversible illness or pose a hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise managed.

***Hiʻialakai*:** NOAA research vessel. Hiʻialakai means embracing pathways to the sea in the Hawaiian language.

Hōkūleʻa: a traditional Hawaiian double hulled voyaging canoe recreated by the Polynesian Voyaging Society in the 1970s which signified a rebirth of ancient voyaging and navigation and a new cultural renaissance period in Hawaiian history. [*Hōkūleʻa* is Hawaiian for star of gladness].

Hypersaline: Salinity well in excess of that of seawater; found in enclosed water bodies.

Impacts: See **Effects**

Indirect effects (NEPA): Those are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

In situ [Latin]: In place

In-reach: Purposefully communicating to personnel working within your agency, or Co-Trustees.

Indigenous (species): Existing within a historical ecological range, usually within a balanced system of coevolved organisms.

Infrastructure: In this document refers to physical buildings and structures, roads, and utility and communications systems.

Interagency: Involving two or more public or government agencies.

Introduced Species:
1. A species (including, but not limited to, any of its biological matter capable of propagation) that is nonnative to the ecosystem(s) protected by the Monument; or
2. Any organism into which genetic matter from another species has been transferred in order that the host organism acquires the genetic traits of the transferred genes.

"Introduction" means the intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity.

Invasive species: A nonindigenous species that may threaten the diversity or abundance of native species or the ecological stability and or uses of infested waters and the introduction of which into an ecosystem may cause harm to the economy, environment, human health, recreation, or public welfare.

Invertebrates: Any animal that is not a vertebrate, that is, whose nerve cord is not enclosed in a backbone of bony segments.

Island-specific: Pertains to a specific island of the Monument and may not be translated to other islands.

Knowledge-base: Information and ideas acquired through pre-existing experiences and cumulative education.

La Niña: see **El Niño**

Larval: An immature stage of any invertebrate animal that differs dramatically in appearance from the adult.

Lead-based paint: paint that contains high levels of lead, generally found in houses and apartments built before 1978, when the federal government banned it from housing.

Longline Protected Species Zone: The area in the Northwestern Hawaiian Islands where longline fishing is prohibited, described as within a 50 nm radius from the geographic centers of Nihoa Island, Mokumanamana, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, Pearl and Hermes Atoll, Midway Atoll, and Kure Atoll.

Management Zones: Special Preservation Areas, Ecological Reserves, and the Midway Atoll Special Management Area (SMA) as defined in Monument regulations (50 CFR 404).

Marine debris: Any persistent solid material and contents that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment.

Maritime: Of or relating to navigation or commerce on the sea.

Memorandum of Agreement or Understanding (MOA/U): A nonbinding agreement between state or federal agencies, or divisions within an agency, that delineates tasks, jurisdiction, standard operating procedures or other matters which the agencies or units are duly authorized and directed to conduct.

Meta-population: A subdivided population of a single species.

Midway Atoll Special Management Area: The area of the monument surrounding Midway Atoll out to a distance of 12 nautical miles, established for the enhanced management, protection, and preservation of Monument wildlife and historical resources.

Migratory bird: Birds that are listed in Title 50 of the Code of Federal Regulations, Section 10.13.

Mitigate (mitigation): To make less severe. An action or series of actions that offset the environmental impact, or reduce the severity or consequences. Usually done by sequestering or reducing contact thereby reducing risk or by compensating, enhancing, or restoring areas adversely affected.

Mobile transceiver unit: A vessel monitoring system or VMS device installed on board a vessel that is used for vessel monitoring and transmitting the vessel's position as required by Presidential Proclamation 8031.

Monument Management Board (MMB): The MOA established a locally based Monument Management Board (MMB) to guide field level coordination. The seven-member MMB includes representation of the Co-Trustee agencies and the Office of Hawaiian Affairs.

Monument Regulations: Initial regulations prescribed by the Presidential Proclamation 8031 completed jointly by the FWS and NOAA on August 29, 2006 (71 FR 51134). Monument regulations, codified under 50 CFR Part 404, establish the scope and purpose, boundary, definitions, prohibitions, marine zones, and regulated activities for managing the Monument.

National Historic Landmark: Nationally significant historic places designated by the Secretary of the Interior possessing exceptional value or quality in illustrating or interpreting the heritage of the United States.

National Historic Properties: Properties listed in, or eligible for listing in the National Register of Historic Places (National Historic Preservation Act of 1966, as amended; implementing regulation for evaluation and determination of eligibility are in 36 CFR 60). "National Register of Historic Places."

National Marine Sanctuary Foundation: A private, nonprofit, 501(c)(3) tax-exempt organization created to assist the federally managed National Marine Sanctuary Program with education and outreach programs designed to preserve, protect, and promote meaningful opportunities for public interaction with the nation's marine sanctuaries.

National Monument: An area on lands owned or controlled by the Government of the United States designated by the President of the United States under the Antiquities Act of 1906, to recognize historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest.

National Register of Historic Places: The Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources.

National Wildlife Refuge System: All lands, waters, and interests therein administered by the U.S. Fish and Wildlife Service as wildlife

refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas for the protection and conservation of fish, wildlife, and plant resources.

Native Hawaiian: Any individual who is a descendent of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawai'i.

Native Hawaiian practices: 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 noncommercial use of monument resources for direct personal consumption while in the Monument.

Native species: A species (plant or animal) within its natural range or natural zone of dispersal without human aid.

Natural variability: Uncertainties that stem from inherent or assumed randomness and unpredictability in the natural world.

Northwestern Hawaiian Islands (NWHI): Beginning 155 miles (249.4 kilometers) from the main Hawaiian Island of Kaua'i, the 10 islands and atolls of this chain that extend for 1,200 miles (1,931 kilometers) to Kure Atoll. In past decades, also known as the Leeward or Kūpuna Islands, and now as Papahānaumokuākea.

NOWRAMP or NWHIRAMP: The Northwestern Hawaiian Islands Coral Reef Assessment and Monitoring Program, which began in 2000, to rapidly evaluate and map the shallow water reef habitats in the NWHI.

Oceania: Collective name for the islands scattered throughout most of the Pacific Ocean.

Oceanographic: Of or relating to oceanography, a science that deals with the ocean and its phenomena.

Outreach: The act of communicating activities and conceptual ideas to public audiences outside the administering agency/ agencies and actively involving them in Monument activities.

Pacific Rim: includes the countries that lie along the Pacific Ocean, plus the island countries of the Pacific.

Passage without interruption: A vessel passing through waters within the Monument boundary without stopping anywhere within the boundary of the Monument.

Pelagic: Referring to the open ocean.

Pelagic species: From the Proclamation: Pelagic Species means Pacific Pelagic Management Unit Species as defined at 50 CFR 660.12.

Permit: As used in the Monument Management Plan, authorization by the Co-Trustees to conduct an activity within the Monument that: (i) is research designed to further understanding of monument resources and qualities; (ii) will further the educational value of the monument; (iii) will assist in the conservation and management of the monument; (iv) will allow Native Hawaiian practices; (v) will allow a special ocean use; or (vi) will allow recreational activities.

Petrels: Any of numerous seabirds constituting the families Procellariidae and Hydrobatidae.

Polynesian Voyaging Society (PVS): A society founded in 1973 to research how Polynesian seafarers discovered and settled on the islands in the Pacific Ocean before European explorers arrived in the 16th century.

Pono: [Hawaiian] Appropriate, correct, and deemed necessary by traditional standards in the Hawaiian culture.

Precautionary approach: In the decision-making process, if there is a reasonable suspicion of harm, this approach urges a full evaluation of available alternatives for the purpose of preventing or minimizing harm. When consequences are uncertain, managers

err on the side of caution thereby giving the benefit of the doubt to nature, public health, and community well-being.

Predator-dominated marine ecosystem: Reef ecosystems that have relatively greater abundance of large fish, such as sharks and jacks and fewer smaller fish that graze on the coral and algae.

Presidential Proclamation 8031: Establishment of the Northwestern Hawaiian Islands Marine National Monument, A Proclamation by the President of the United States of America, June 15, 2006. (also **Proclamation**, **Presidential Proclamation** and **Proclamation 8031**)

Productivity: Rate of energy fixation or storage per unit time; not to be confused with production.

Prohibitions: Actions prohibited by authority of law.

Recreational Activity: For the purposes of the Monument, an activity conducted for personal enjoyment that does not result in the extraction of Monument resources and that does not involve a fee-for-service transaction. This includes, but is not limited to, wildlife viewing, SCUBA diving, snorkeling, and boating.

Remediation: Rehabilitation of a section of the environment that has been polluted or degraded from a sustainable (self-repairing) state.

Repatriation: The transfer of legal interest in and physical custody of Native American cultural items to lineal descendants, culturally affiliated Indian tribes, and Native Hawaiian organizations.

Resiliency: The ability of an ecosystem to recover from, or adjust to, stress or change.

SCUBA: A self-contained underwater breathing apparatus and includes, but is not limited to, open circuit and rebreather technology.

Seamount: Submerged volcanic mountain rising above the deep-seafloor.

Secretaries: For the Monument, collectively refers to the Secretary of Commerce and the Secretary of the Interior

Sessile invertebrates: Organism being attached to a substrate.

Shoal: Elevation of the sea bottom comprising any material except rock or coral (in which case it is a reef) and which may endanger surface navigation.

Socioeconomic: Relating to or involving a combination of social and economic factors.

Spawning: The direct release of sex cells into the water for reproduction.

Special Ocean Use: An activity or use of the Monument that is engaged in to generate revenue or profits for one or more of the persons associated with the activity or use, and does not destroy, cause the loss of, or injure monument resources. This includes ocean-based ecotourism and other activities such as educational and research activities that are engaged in to generate revenue, but does not include commercial fishing for bottomfish or pelagic species conducted pursuant to a valid permit issued by NOAA.

Special Preservation Area (SPA): Discrete, biologically important areas of the Monument within which uses are subject to conditions, restrictions, and prohibitions, including but not limited to access restrictions. SPAs are used to avoid concentrations of uses that could result in declines in species populations or habitat, to reduce conflicts between uses, to protect areas that are critical for sustaining important marine species or habitats, or to provide opportunities for scientific research.

Stakeholder: Any and all interested parties; an organization, governmental entity, or individual that has a stake in, or may be impacted by, a given approach to environmental regulation or other agency action.

Submersible: A research submarine, designed for manned or remote operation at great depths.

Substrate: The material making up the base on which an organism lives or to which it is attached.

Substratum: The bottom of the bay, the soils of the bay bottom. May also refer to any surface that allows for the colonization of marine life.

Sustenance Fishing: For the Monument, sustenance fishing means fishing for bottomfish or pelagic species in which all catch is consumed within the Monument, and that is incidental to an activity permitted.

Symbiotic: Situation in which two dissimilar organisms live together in close association.

Temporary Structure (Non Permanent): A structure with no permanent foundation that is easy to assemble, dismantle, and transport and is removed from a site between periods of actual use except as specifically permitted otherwise.

Terrestrial species: Plants and animals living on land.

Threatened species: Any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Topographic: General elevation pattern of the land surface or the ocean bottom.

Traditional knowledge: A way of knowing and learning that is acquired through expressions of dance or other forms of art, orally, or thru actual hands-on experiences passed down from generation to generation.

Trolling: Fishing using one or more lines with hooks or lures attached and drawn through the water behind a moving vessel.

Trophic: Relating to nutrition; the position of an organism in a food chain or food pyramid.

Unexploded Ordnance (UXO): Munitions that contain explosive components. In the Monument, refers to lost or abandoned military items.

Unified Ocean Governance: An integrated ecosystem-based management approach using an overall governance framework of shared principles and authority, clear communications and protocols.

Unusual Mortality Events: Criteria used to determine if mortalities seen in the Hawaiian Monk Seal are significantly abnormal to indicate an underlying vector. Criteria include: a marked increase in the magnitude of strandings is occurring when compared with prior records; animals are stranding at a time of the year when strandings are unusual; an increase in strandings is occurring in a very localized area; the species, age, or sex composition of the stranded animals is different; stranded animals exhibit similar or unusual pathologic findings, or the general physical condition; mortality is accompanied by unusual behavior patterns; and critically endangered species are stranding.

Vessel Monitoring System (VMS): Means a vessel monitoring system or mobile transceiver unit approved by the NOAA Office for Law Enforcement for use on vessels permitted to access the Monument in accordance with the Proclamation and 50 CFR 404. The hardware and software used by vessels to track and transmit their positions to a receiver in a remote location.

Wayfinding: Noninstrument navigation. Wayfinding involves navigating on the open ocean without sextant, compass, clock, radio reports, or satellites reports. The wayfinder depends on observations of the stars, the sun, the ocean swells, and other signs of nature for clues to direction and location of a vessel at sea.

Zooxanthellae: A group of dinoflagellates living symbiotically in association with one of a variety of invertebrate groups and found in corals and other marine organisms.

LINE ART GLOSSARY

Hawaiian Green Turtle (*Chelonia mydas*), or *honu*. The islands and atolls of Papahānaumokuākea encompass over 90% of the total nesting area for the Hawaiian population of the Green Turtle.

***Makau*, or the Hawaiian fishhook**, has been used by expert Hawaiian fishers since ancient times. A wide range of fishing activities occurred in the Hawaiian Islands in antiquity, as evidenced by the presence of one-, two-, and multiple piece fishhooks.

***Ulua*, or the Giant Trevally (*Caranx ignobilis*)**, represents one of the abundant and wide-ranging apex predators of Papahānaumokuākea's coral reef ecosystems. These predator-dominated systems are characteristic of reefs prior to human exploitation, a concept embodied in the Hawaiian term *ʻāina momona* (place of abundance).

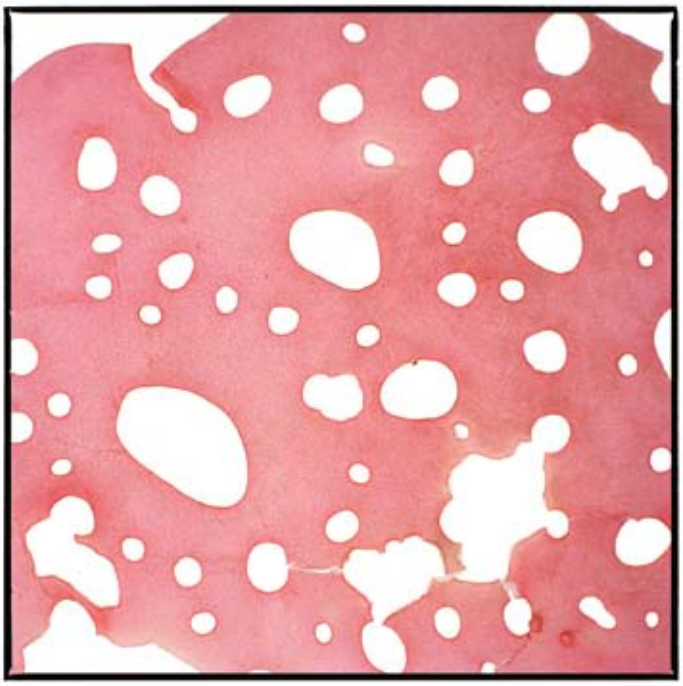
Galapagos sharks (*Carcharhinus galapagenesis*), are significant both ecologically and culturally. Sharks, *manō*, are the most common *ʻaumakua* (family guardian spirits) of fishing families, and represent the physical form of such highly revered gods as Kamohoaliʻi, who guided his sister Pele through Papahānaumokuākea (Beckwith 1970).

Representation of Papahānaumokuākeaʻs several species of **terns** Papahānaumokuākea protects colonies of global significance for 14 million seabirds, representing 21 species. It is the largest tropical seabird rookery in the world.

Representation of the **traditional Hawaiian voyaging canoe**, *Hōkūleʻa*. As in generations past, the contemporary apprentice wayfinder's first open-ocean training ground takes them into Papahānaumokuākea.

Native Hawaiian practitioners utilize **conch shells** in cultural protocol. For instance, by blowing a conch shell and chanting, Native Hawaiian practitioners greet their ancestors (*kūpuna*), give thanks, and ask their permission to land on Nihoa and Mokumanamana.

Crab, or *pāpaʻi*, represent the benthic shallow-water invertebrates of Papahānaumokuākea, many of which are just being identified and dozens are species new to science. Many invertebrates, such as *pāpaʻi*, are important for subsistence and cultural activities, and today, in bridging traditional and Western practices in the management of Papahānaumokuākea.



Red Algae
(Photo: Susan Middleton & David Liittschwager)

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° W
Zone 3
Reef coral growth ceases, continued subsidence, atolls drown to form guyots
Zone 2
Barrier reefs become atolls, continued subsidence
Darwin Point
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a level
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28
PACIFIC LITHOSPHERIC PLAT
Subduction
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Darwin Point
-0.025
Subsidence
ubduction
30°
Latitude – North Pacific