

# **Management Framework**

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## **2.0 Management Framework**

Management of the Monument is carried out by the Co-Trustees in accordance with legal mandates, authorities, and policies of several federal and state agencies, and Monument-specific policies and implementing regulations. In their day-to-day management, the Co-Trustees through the Monument Management Board will ensure the coordinated planning and execution of activities so that they are consistent with the legal and policy structure of the Monument.

Management of the Monument focuses on managing activities for the benefit of the ecosystem's health. In establishing the Monument, President George W. Bush recognized the importance of an ecosystem approach to management. This approach is mindful of the interconnectedness of the Monument resources and requires a holistic approach to managing activities so as to preserve ecosystem structure, function, and key processes and recover resources where necessary.

The management framework supporting an ecosystem approach to management of the Monument includes the following key elements:

- (1) A legal and policy foundation for cooperative ecosystem-based management;
- (2) Institutional arrangements to promote and enhance collaboration with jurisdictional partner agencies and other stakeholders;
- (3) Monument regulations that incorporate multiple management tools including prohibitions, zoning, and regulated activities;
- (4) Established Monument vision, mission, guiding principles, and goals;
- (5) Operational goals;
- (6) Desired outcomes, strategies, and activities that implement the Monumentwide goals and are set forth in action plans specific to management subject areas; and
- (7) An iterative and adaptive approach.

Together, these elements provide the framework for managing the Monument ecosystem.

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## 2.1 Legal Framework for the Monument

President George W. Bush issued Presidential Proclamation 8031 (Establishment of the Northwestern Hawaiian Islands Marine National Monument, June 15, 2006), which created the Monument under the authority of the Antiquities Act of 1906, as amended (16 U.S.C. 431-433). Federal partners—NOAA and FWS—promulgated joint implementing regulations on August 29, 2006 (Northwestern Hawaiian Islands Marine National Monument, 50 CFR Part 404). Specifically, these regulations codify the scope and purpose, boundary, definitions, prohibitions, and regulated activities of the Monument. Furthermore, Proclamation 8031 was amended on February 28, 2007, to declare the Native Hawaiian name for the Monument, Papahānaumokuākea, and clarify some definitions (Presidential Proclamation 8112, Establishment of the Papahānaumokuākea Marine National Monument, February 28, 2007).

The Monument includes areas and management authorities that are under the jurisdiction of one or multiple federal agencies or the State of Hawai‘i. For example, the Monument, an area of approximately 139,793 square miles (362,062 square kilometers), includes the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, managed by NOAA’s National Ocean Service (NOS) through the Office of National Marine Sanctuaries; Midway Atoll National Wildlife Refuge/Battle of Midway National Memorial, both managed by FWS; Hawaiian Islands National Wildlife Refuge, managed by FWS; Northwestern Hawaiian Islands Marine Refuge and the State Seabird Sanctuary at Kure Atoll, managed by the State of Hawai‘i, Department of Land and Natural Resources (DLNR). Additionally, NOAA’s National Marine Fisheries Service (NMFS) continues its management of fishing and specific protected species conservation programs, FWS oversees activities under its Endangered Species Act and Migratory Bird Treat Act authorities, and the State of Hawai‘i Historic Preservation Division, with the assistance of the Office of Hawaiian Affairs (OHA), ensures preservation of Native Hawaiian cultural and historic sites, while OHA also assures the perpetuation of Hawaiian cultural resources in the Monument, including the customary and traditional rights and practices of Native Hawaiians exercised for subsistence, cultural, and religious purposes under the Constitution of the State of Hawai‘i, Article XII, Section 7. The legal relationships among the three Co-Trustees and others (including the DOD) have a long history with respect to natural resource management of the NWHI, beginning in 1903 and continuing to modern-day directives that promote the comprehensive and coordinated ecosystem-based management of resources by NOAA, FWS, and the State of Hawai‘i.

Each agency, as laid out in the Proclamation establishing the Monument, retains its spheres of jurisdiction, responsibility, and expertise. They bring different knowledge and strengths to this process. They work together on many aspects of the management process, which can benefit from the synergies of cooperative action. Throughout this process however, each partner will continue carrying out its statutory responsibilities. Even where one of the MMB members has primary responsibility, input from the other board members can often be helpful and is presumed as part of the plan.

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## 2.2 Policy Framework

To achieve a coordinated management scheme, the Proclamation ordered a new level of collaboration that would result in coordinated management of the entire Monument. To that end, the Co-Trustees developed and agreed to operate according to terms and institutional relationships set in a memorandum of agreement (MOA), which includes a provision for an annual MOA review by the Co-Trustees (State of Hawai‘i et al. 2006). The signatories of that MOA are the Co-Trustees, who operate with personnel devoted to the development and implementation of coordinated management. The three Co-Trustees are the State of Hawai‘i, the U.S. Department of the Interior (DOI), and the U.S. Department of Commerce (DOC). To provide context for the current management framework, this section briefly summarizes the involvement of each Co-Trustee in the pre-Monument institutional arrangement, which influences, and in some instances, carries over to the collaborative Co-Trustee management.

### *Institutional Arrangements for Management*

The MOA established the institutional arrangements for management of the Monument. The approach demands coordination by the Co-Trustees as well as collaboration with stakeholders to effectively manage under an ecosystem approach. The institutional arrangements for Monument management are described below. These consist of a Senior Executive Board (SEB) providing policy guidance, and a Monument Management Board (MMB), which consists of field staff who conduct the day-to-day management activities of the Monument.

#### *Senior Executive Board*

Pursuant to the MOA, a SEB provides policy guidance to their respective agency staff assigned to carry out Monument management activities. The SEB is comprised of a senior-level designee from the DOI, the DOC, and the State of Hawai‘i Department of Land and Natural Resources (DLNR). The SEB oversees the implementation of the following management actions by the MMB:

- Develop a management plan;
- Provide support for enforcement purposes;
- Coordinate resource and monitoring efforts;
- Develop a mechanism to access scientific and resource data;
- Provide support to identify locations of cultural and religious significance;
- Manage recreational, educational, and commercial activities;
- Identify and facilitate coordination and partnership opportunities with stakeholders;
- Facilitate opportunities to participate and collaborate on education activities;
- Develop interagency agreements, grants, and other instruments;
- Ensure appropriate monitoring of activities within the Monument; and
- Enhance coordination by jointly issuing permits.

#### *Monument Management Board*

Pursuant to the MOA, the MMB promotes coordinated management of the Monument at the field level. The MMB includes a broader range of representatives from the Co-Trustees, specifically:

- State of Hawai‘i, Department of Land and Natural Resources, Division of Aquatic Resources;

- State of Hawai‘i, Department of Land and Natural Resources, Division of Forestry and Wildlife;
- U.S. Fish and Wildlife Service, Hawaiian and Pacific Islands National Wildlife Refuge Complex;
- U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office;
- National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries;
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service; and the
- Office of Hawaiian Affairs.

This group meets on a regular basis to implement the day-to-day management of the Monument. The MMB will operate under an interagency charter, providing details on its roles, responsibilities, and activities. The charter will be regularly reviewed and updated as necessary.

#### *Papahānaumokuākea Interagency Coordinating Committee*

The Co-Trustees authorized the MMB to establish the Papahānaumokuākea Interagency Coordinating Committee (ICC) to assist in implementation of Monument management activities. The ICC includes representatives from the Co-Trustees and other agencies, including, but not limited to, the U.S. Environmental Protection Agency, U.S. Coast Guard 14<sup>th</sup> District Prevention and Response, U.S. Geological Survey, and the DOD. This group is not fixed, meets periodically or as specific topics require, and federal and state agency partners may participate according to the relevancy of their activities and/or mandates related to the Monument.

#### ***The Co-Trustees***

##### *The U.S. Department of Commerce: National Oceanic and Atmospheric Administration*

Two NOAA line offices have mandates that apply to activities in the Monument –NOS and NMFS. In 2000, the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve (Reserve) was established via Executive Order 13178 (as amended by Executive Order 13196) to preserve and protect coral reef ecosystems of the NWHI. Responsibility for managing the Reserve was assigned to NOS through the National Marine Sanctuary Program (NMSP) under the authority of the National Marine Sanctuaries Act (16 U.S.C 1431 et seq.) and the National Marine Sanctuaries Amendments Act of 2000, Public Law 106-513, and other applicable statutes. Executive Order 13178 directed NOAA, in consultation with federal and state partners, to initiate a process to designate the Reserve as a national marine sanctuary pursuant to sections 303 and 304 of the National Marine Sanctuaries Act of 2000.

In January 2001, NOAA declared the Reserve an active candidate for sanctuary designation (5509 FR 66). A Reserve Advisory Council (RAC) was established to provide advice and recommendations on the designation and management of any sanctuary and to develop a Reserve Operations Plan for managing the Reserve. Throughout this process, the public and other stakeholders were engaged to seek input and gather information toward developing a unified plan for Reserve operations and the proposed sanctuary. A series of ten public scoping meetings were hosted in Hawai‘i and Washington, D C., with more than 13,000 comments received during the initial scoping period. Throughout the designation process, additional input was collected from the public, stakeholder groups, and interagency partners via science workshops (Gittings et

al. 2004), focus group discussions (SRG 2004b), and RAC and associated subcommittees meetings. In total, more than 100 meetings were held and close to 52,000 public comments were received that guided the direction and development of a draft sanctuary management plan to direct management of the anticipated sanctuary upon its designation. Simultaneously, a Reserve Operations Plan (ROP) was drafted and finalized with extensive consultation with partner agencies and the RAC (NOAA 2005a). The ROP guides the management of the Reserve and served as the primary foundation from which the draft sanctuary management plan was developed. In addition, a State of the Reserve Report was developed to provide a comprehensive summary of 5 years of Reserve operations (NOAA 2006).

The draft sanctuary management plan has several companion documents packaged into the draft designation proposal, including a draft environmental impact statement and draft implementing regulations. When the Monument was designated in 2006 by Presidential Proclamation, the processing of these documents was halted. However, the Proclamation recognized the extensive public input and the relevancy of the NMSP public processes and resulting draft sanctuary documents, and directed the Co-Trustees to modify, as appropriate, the draft sanctuary management plan in developing a plan to manage the Monument (Presidential Proclamation 8031, 36443 FR 71).

NMFS executes mandates and exercises authority under several statutes that are relevant to natural resource management in the Monument. Among others, these statutes include the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act, the Marine Mammal Protection Act, the Fish and Wildlife Coordination Act, the Coral Reef Conservation Act, the Global Change Research Act, the Lacey Act Amendments, and the Fish and Wildlife Improvement Act of 1978, as well as various executive orders and proclamations. Since the 1970s, the national and regional management by NMFS (under NMFS' Southwest Region) has included management activities such as conservation, research, and emergency response, and fisheries management in the NWHI. Since its establishment in 2003, the Pacific Islands Regional Office and the Pacific Islands Fisheries Science Center have worked together to build on these programs and fulfill NMFS' functions in the Pacific Region, including the area that is within the Monument. All NMFS programs, Habitat Conservation, Sustainable Fisheries, and Protected Resources are relevant to NMFS' contribution to the Monument complement of programs.

NOAA's line offices collaborate to fulfill NOAA's Co-Trustee responsibilities under the Monument management arrangement. The Monument office of NOAA's Office of National Marine Sanctuaries (ONMS) and NMFS Pacific Islands Region, both headquartered in Honolulu, Hawai'i, represent NOAA at the field level and coordinate with the NOAA headquarters to ensure unified representation in the Co-Trustee arrangement.

*The U.S. Department of the Interior: U.S. Fish and Wildlife Service*

The U.S. Fish and Wildlife Service is a bureau of the U.S. Department of the Interior that works with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. Two program offices of FWS, Endangered Species and the National Wildlife Refuge System, have statutory authority for Monument resources and

program representatives are members on the MMB. Both coordinate with FWS and DOI headquarters to ensure unified representation in the Co-Trustee arrangement.

The FWS Pacific Islands Fish and Wildlife Office shares the responsibility for administration of the ESA with NMFS and has conservation oversight for all terrestrial species including seabirds. This office also administers coastal conservation and conservation partnerships programs through its habitat conservation division, and provides assistance with invasive species issues and emergency response throughout the Pacific islands.

The FWS also administers the 97-million acre National Wildlife Refuge System, including 548 refuges throughout the United States and its territories. The Hawaiian Islands and Midway Atoll NWRs, located within the Monument, are managed from Honolulu through the FWS Hawaiian and Pacific Islands NWR Complex. This Complex of refuges is in turn administered through the Pacific Regional Office, Regional Refuge Chief, headquartered in Portland, Oregon.

The overarching legislation and guidance for managing the Hawaiian Islands and Midway NWRs are derived from the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee); the Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4), as amended; 50 CFR (Wildlife and Fisheries); and the Fish and Wildlife Service Manual (administrative policy). Of all the laws governing the activities on NWRs, the National Wildlife Refuge System Improvement Act (Improvement Act) (Public Law 105-57, October 9, 1997) exerts the greatest influence. The Improvement Act amended the National Wildlife Refuge System Administration Act of 1966 by including a unifying mission for all NWRs to be managed as a system, a new process for determining compatible uses on refuges, and requiring that each refuge will be managed under a Comprehensive Conservation Plan, developed in an open public process.

The Improvement Act states that the Secretary of the Interior shall provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System as well as ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained. House Report 105-106, accompanying the Improvement Act, states, “the fundamental mission of our System is wildlife conservation: wildlife and wildlife conservation must come first.” Biological integrity, diversity, and environmental health are critical components of fish and wildlife conservation. The FWS Biological Integrity, Diversity, and Environmental Health Policy states that “the highest measure of biological integrity, diversity, and environmental health is viewed as those intact and self-sustaining habitats and wildlife populations that existed during historic conditions (601 FW 310).”

The purpose for which a refuge was established or acquired is of key importance to refuge planning. Refuge purposes and the Refuge System’s mission form the foundation for management decisions. The purposes of a refuge are specified or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum that establishes, authorizes, or expands a refuge.

The legal authority that established the area now known as the Hawaiian Islands National Wildlife Refuge (HINWR)—Executive Order 1019, signed by President Theodore Roosevelt on

February 3, 1909—set aside the islets and reefs extending from Nihoa to Kure, excepting Midway Atoll, as the Hawaiian Islands Reservation “...for use...as a preserve and breeding ground for native birds.” President Roosevelt took this action to provide additional protections for the seabirds after reports that hundreds of thousands of Laysan albatross were being slaughtered for the millinery trade in violation of the Lacey Act of 1900. In 1940, President Franklin Roosevelt signed Presidential Proclamation 2416, renaming the area the HINWR. The authorities, mandates, and policies that govern the activities of the FWS have resulted in the conservation of island, atoll, and nearshore habitats within the HINWR.

The HINWR has been closed to the public since its establishment and will remain closed to the public under the Monument Management Plan. Access to HINWR prior to Monument establishment was regulated by FWS Refuge Special Use Permit regulations. These permits were issued only to conduct research, education, or to film documentaries to promote public understanding of refuge resources and improve refuge management. In addition, the Secretary of the Interior and the President of the United States in 1974 considered all of the refuge’s emergent lands except Tern Island to be ecologically appropriate for inclusion into the National Wilderness Preservation System, as outlined in the Wilderness Act of 1964 (16 U.S.C 1132-1136). Congress, however, has not acted to designate this area within the wilderness system.

The FWS has also been assisting the U.S. Navy with wildlife management issues for almost 50 years at Midway Atoll. A cooperative management plan developed by the Navy and FWS in the early 1980s further defined responsibilities and led to the establishment of an “overlay” NWR on Midway in 1988. On October 31, 1996, President William Clinton signed Executive Order 13022, directing the Secretary of the Interior, through FWS, to administer Midway Atoll NWR. The purposes of the refuge, as defined in the Executive Order, are to maintain natural biological diversity; conserve fish and wildlife and their habitats; fulfill international wildlife treaty obligations; provide for research, education, and compatible wildlife-dependent recreation; and recognize and maintain the atoll’s historic significance. In addition, in accordance with language in the Fiscal Year 2000 Interior Appropriations Act, Secretary of the Interior Bruce Babbitt signed Secretary’s Order 3217, designating the lands and waters of Midway Atoll NWR as the Battle of Midway National Memorial.

### *The State of Hawai‘i*

In 1893, the Kingdom of Hawai‘i, which included most of the Northwestern Hawaiian Islands, was overthrown with the involvement of certain United States officials and others. Some involved in the overthrow and others went on to create a provisional government and then the Republic of Hawai‘i, which assumed control of approximately 1.8 million acres of crown, government, and public lands of the Kingdom of Hawai‘i, including certain submerged and fast lands of the Northwestern Hawaiian Islands. Upon its annexation, the Republic ceded these lands to the United States in 1900. A majority of these lands were again ceded, this time to the State of Hawai‘i, upon statehood in 1959.

Under the terms of the statute admitting Hawai‘i as a state in 1959, the federal government granted title to Hawai‘i to most of the previously ceded lands and mandated that these ceded lands be held by Hawai‘i in public trust. In accordance with the Hawaii Organic Act of April 30, 1900, c 339, 31 Stat 141, and the Hawaii Admission Act of March 18, 1959, Pub L 86-3, 73 Stat

4, most of the islands of the Hawaiian Archipelago that were part of the Territory of Hawai‘i became part of the State of Hawai‘i as part of the public land trust. Hawai‘i’s lands continue to hold a considerable amount of legal, historical, and sentimental significance to Native Hawaiians. Pursuant to Section 5(f) of the Hawaii Admission Act, one purpose for which the ceded lands are held in trust by the State is “for the betterment of the conditions of native Hawaiians.” Proclamation 8031, designating the Monument, specifically states, “Nothing in this proclamation shall be deemed to diminish or enlarge the jurisdiction of the State of Hawai‘i.”

The State of Hawai‘i DLNR has stewardship responsibility for managing, administering, and exercising control over the public trust and submerged lands (most of which are ceded lands), ocean waters, and marine resources, around each of the Northwestern Hawaiian Islands, except at Midway Atoll, Section 171-3 Hawaii Revised Statutes. In 2005, Hawai‘i Governor Linda Lingle established the Northwestern Hawaiian Islands Marine Refuge (0 to 3 nautical miles around all emergent lands, except Midway Atoll) under Sections 187A-5 and 188-53(a), Hawaii Revised Statutes (established as ch. 60.5, Hawaii Administrative Rules). Unless otherwise authorized by law, it is unlawful for any person to enter the refuge without a permit except for freedom of navigation, innocent passage, interstate commerce, and activities related to national defense or enforcement, foreign affairs, and in response to emergencies.

The State of Hawai‘i, DLNR’s Division of Forestry and Wildlife manages the emergent lands of the State Seabird Sanctuary at Kure Atoll. The State Historic Preservation Division and the State Historic Preservation Officer oversee cultural and historic resources statewide. DLNR’s Division of Conservation and Resource Enforcement maintains full police powers, including the power of arrest, within all lands and waters within the State’s jurisdiction. The State is represented on the MMB by DLNR’s Division of Aquatic Resources and Division of Forestry and Wildlife.

#### *Office of Hawaiian Affairs*

Established by a 1978 amendment to the Constitution of the State of Hawai‘i, Office of Hawaiian Affairs (OHA) serves as the principal agency working for Native Hawaiians. OHA was created for various purposes including bettering the conditions of Native Hawaiians. OHA manages a property and monetary trust, creating its fiduciary duty to Native Hawaiians. The OHA trust is funded in part by a pro rata share of income derived from the ceded lands portion of the public land trust.

Under the direction of nine publicly elected trustees, OHA fulfills its constitutional and statutory mandates. Section 10-1(a), Hawaii Revised Statutes, states: “The people of the State of Hawaii and the United States of America as set forth and approved in the Admission Act, established a public trust which includes among other responsibilities, betterment for conditions of Native Hawaiians. The people of the State of Hawaii reaffirmed their solemn trust obligation and responsibility declared in the state constitution that there be an office of Hawaiian affairs to address the needs of the aboriginal class of people of Hawaii.” OHA serves as a member of the MMB and, along with the Native Hawaiian Cultural Working Group, represents a voice of the Native Hawaiian community on Monument matters (see Native Hawaiian Community Involvement Action Plan, Section 3.5.3).

***Public Involvement***

Stakeholder and community involvement is an integral component to achieving the goals of the Monument. Engaging an informed constituency will further the successful protection of the ecosystems of the NWHI. Monument staff currently conduct diverse constituency building and outreach activities related to the Monument. Staff will continue to cultivate an informed, involved constituency that supports and enhances conservation of the natural, cultural, and historic resources of the Monument. Strategies and activities to further public involvement in Monument management activities are found throughout the Monument Management Plan.

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## 2.3 Initial Management

### *Regulations Implementing the Proclamation*

The initial Monument regulations were issued to implement the provisions in Presidential Proclamation 8031, and rulemaking was 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. These regulations can be evaluated and updated as necessary.

Monument regulations: (For a full text, see Appendix D.)

- Prohibit unauthorized access to the Monument;
- Provide for carefully regulated educational and scientific activities;
- Preserve access for Native Hawaiian cultural activities;
- Establish marine zones to manage human activities;
- Provide for visitation in a special area around Midway Atoll;
- Phase out commercial fishing over a 5-year period;
- Ban exploring for, developing, or producing oil, gas, or minerals and using or attempting to use poisons, electrical charges, or explosives in the collection or harvest of Monument resources;
- Prohibit introducing alien species from within or into the Monument; and
- Prohibit anchoring on corals.

The prohibitions required by the Proclamation do not apply to the activities and exercises of the Armed Forces (including those carried out by the Coast Guard) that are consistent with applicable laws. However, it requires them to conduct activities and exercises in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on Monument resources and qualities. Proclamation 8031 also requires that “in the event of threatened or actual destruction of, loss of, or injury to a monument resource or quality resulting from an incident, including but not limited to spills and groundings, caused by a component of the Department of Defense or the USCG, the cognizant component shall promptly coordinate with the Secretaries for the purpose of taking appropriate actions to respond to and mitigate the harm and, if possible, restore or replace the monument resource or quality.”

As the prohibitions of the Proclamation were effective upon issuance, there was a pressing need to resolve the permitting scheme as directed by the Proclamation. Thus, the Co-Trustees have collaborated to develop a joint permit system, essentially streamlining all discrete permitting processes into one Monument permit according to the six permit categories iterated in the Proclamation:

1. Research
2. Education
3. Conservation and management
4. Native Hawaiian practices
5. Special ocean use
6. Recreational activities within Midway Atoll

### ***Management Zones***

Monument regulations define three types of marine zones to manage activities. The zones are: Special Preservation Areas, Ecological Reserves, and the Midway Atoll Special Management Area (SMA) (Figure 2.1). Each zone addresses protection of habitat and foraging areas of threatened and endangered species; inclusion of a representative range of the diverse array of marine habitats, including shallow coral reef environments, as well as deepwater slopes, banks, and seamounts; and minimization of risks associated with specific activities such as fishing and recreational activities. Zones also protect the ecological linkages between habitats. The location and description of activities prohibited and allowed in each zone are defined in the Monument regulations (see Appendix D).

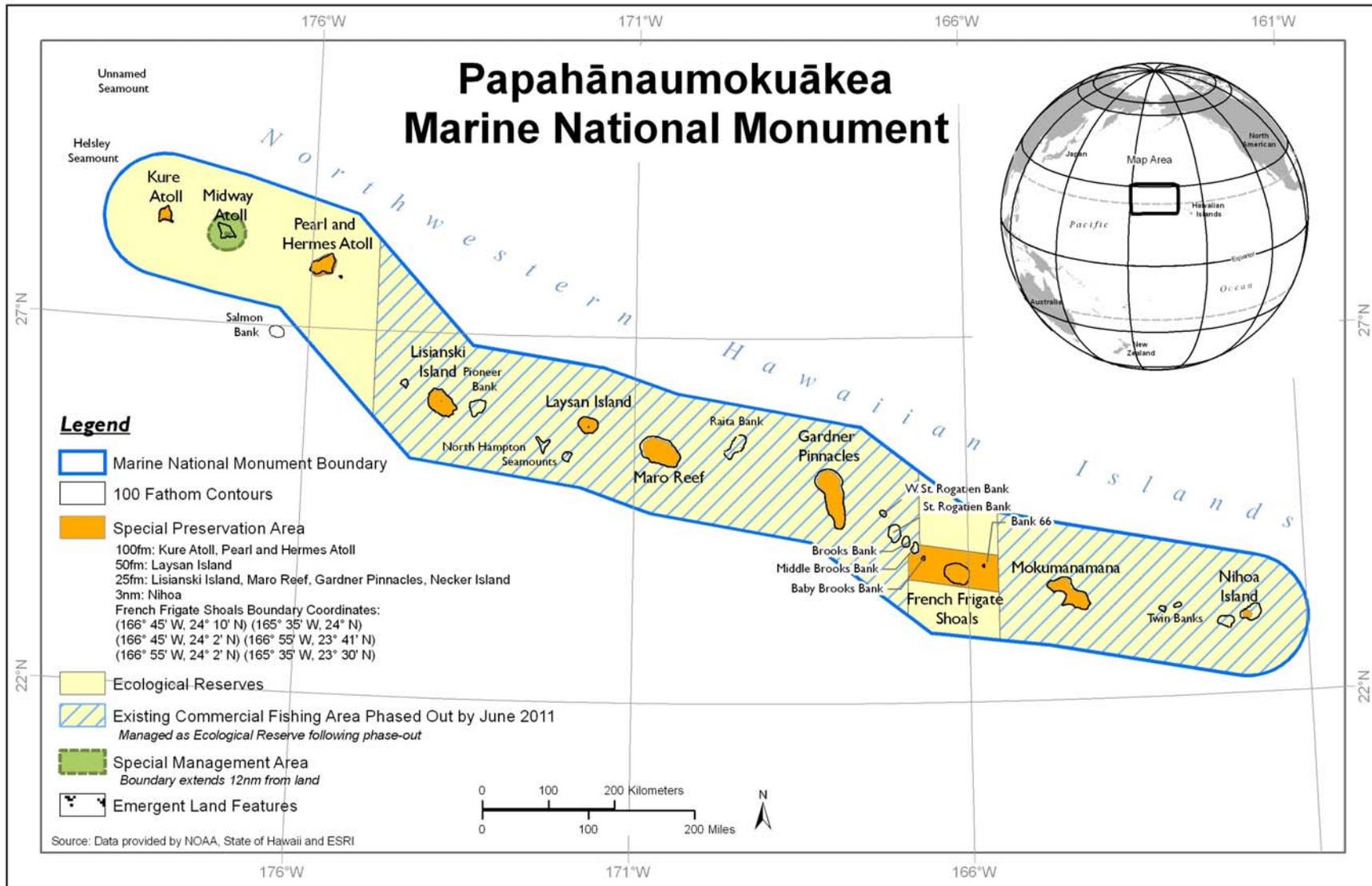


Figure 2.1 Map of the Papahānaumokuākea Marine National Monument and Zones.

Zoning provides protection to highly sensitive habitats, particularly shallow coral reefs. Discrete, biologically important areas of the Monument are designated as Special Preservation Areas, and resource harvest and almost all forms of discharge are prohibited. Other areas designated as Ecological Reserves consist of contiguous, diverse habitats that provide natural spawning, nursery, and permanent residence areas. Resource extraction is highly restricted within the Ecological Reserves. In the Midway Atoll SMA and other NWR areas, proposed activities are subject to findings of appropriateness (603 FW 1) and compatibility determinations (16 U.S.C. 668dd-668ee and 603 FW 2) by the FWS to ensure the activities meet the purposes for establishing the Hawaiian Islands and Midway Atoll NWRs and the mission of the National Wildlife Refuge System. Recreational activities in the Monument are restricted to the Midway Atoll SMA. Due to the vast size of the Monument, the existing zones extend over large areas and include a variety of habitat types and an extensive diversity of species. As new information becomes available, additional zones may be created to further the protection and conservation of the natural and cultural resources of the NWHI.

#### *Toward Ecosystem-Based Management*

An ecosystem approach to management for the NWHI requires that multiple steps be implemented in a comprehensive and coordinated way. The Monument approach is unique in that it includes:

- Ecosystem level planning
- Cross-jurisdictional management goals
- Co-management
- Adaptive management
- Marine zoning
- Habitat restoration
- Long-term ocean and coastal observing, monitoring, and research.

#### *Ecosystems, Ecosystem-Based Management, and Ecological Integrity*

Over the last decade, considerable scientific discussion and debate have been devoted to developing an understanding of concepts and terms used to describe an ecosystem, ecosystem-based management, and ecological integrity. For the purposes of this plan, an ecosystem is defined as a dynamic and interrelating complex of plant and animal communities and their associated nonliving environment with humans as an integral part of the system. Ecosystems are organized structurally into populations, species, and communities of organisms that interact with each other and with abiotic features of the environment and, functionally, into production and consumption components that process energy and materials (Limburg et al. 1986). Ecosystems vary in size, often with smaller systems embedded within larger ones. Ecosystems have been described as moving targets, with multiple potential futures that are uncertain and unpredictable (Walters 1986). The scale of ecosystems depends on the spatial extent of the system dynamics that are to be studied and influenced by management (Sissenwine and Murawski 2004).

Ecosystem-based management is an approach that recognizes the relationships and interconnectedness among living and nonliving ecosystem components that are affected by a number of natural and anthropogenic factors that vary over space and time. The goal of ecosystem-based management is to maintain ecosystems in a healthy, productive, and resilient

condition for their intrinsic value as well as to provide for needed ecosystem services.

Ecosystem-based management:

- Provides protection of marine and terrestrial ecosystem structure and function
- Is place-based, focusing on a specific ecosystem and the range of activities affecting it
- Explicitly accounts for the interconnectedness within systems, recognizing the importance of interactions between key species or services
- Integrates ecological, social, economic, and institutional perspectives, recognizing their strong interdependencies.

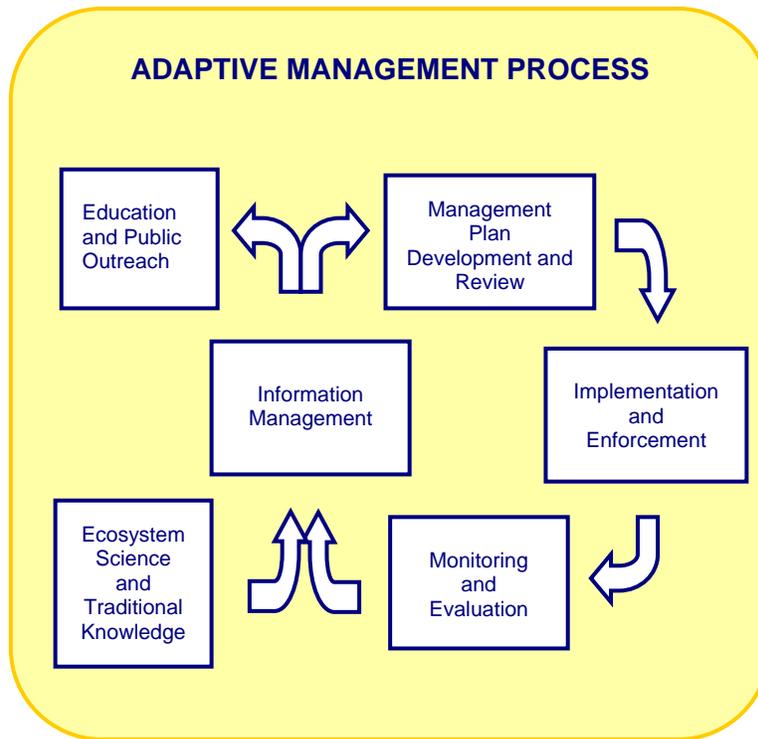
This approach requires managers to have access to extensive information and data including baseline conditions, the interactions among the components of the ecosystem, and the consequences of natural influences and individual and cumulative human activities. Ecosystem-based management also recognizes that humans are inseparable from and co-evolved with ecosystems. Surrounding any ecosystem are a multiplicity of perspectives and knowledge systems. Attention to the human dimensions assumes that humans affect, and are affected by, the oceans in both positive and negative ways and that these complex relationships between people and the ocean are dynamic, diverse and may differ among the various perspectives. The availability of scientific information, together with Native Hawaiian traditional knowledge, is essential for ecosystem-based management of the Monument.

Maintaining ecological integrity is often cited as the primary goal of ecosystem-based management. Ecological integrity is the capability to support and maintain a balanced, integrated, adaptive community of organisms having species composition, diversity, and functional organization comparable to that of natural habitats of the region (Karr and Dudley 1981). A system will retain its integrity if it preserves all its components, as well as the functional relationships among those components (De Leo and Levin 1997). Kay (1991) described ecological integrity as the ability to maintain ecosystem function and structure in the face of changing environmental conditions, where “environment” refers to the biotic and external abiotic components that affect it, including humans. Considering the dynamic nature of ecosystems, the goal of ecosystem-based management should not be to eliminate all forms of disturbance, but rather to maintain processes within limits or ranges of variation that may be considered natural, historical, or acceptable (Noss 1995). Such an approach must be flexible, adaptive, and experimental at scales compatible with the scales of critical ecosystem functions (Walters 1986).

Ecological integrity is defined for the Monument as “a condition determined to be characteristic of an ecosystem that has the ability to maintain the function, structure, and abundance of natural biological communities, including rates of change in response to natural environmental variation” (50 CFR 404.3). This definition builds on this extensive body of research on ecosystem form and function and the Co-Trustee agencies’ experience and mandates.

### *Adaptive Management*

The Monument offers an unprecedented opportunity to take incremental and informed steps toward ecosystem-based management at a large scale. To progress consistently toward an ecosystem approach to management, new information and data will be used to inform and refine management strategies and activities, consistent with Monument goals and desired outcomes.



**Figure 2.2 Adaptive Management Cycle to Inform Management and Decisionmaking.**

Adaptive management is a continuous learning cycle designed to inform management actions and decisionmaking based on implementation of management strategies and actions, conducting monitoring and evaluation, and providing feedback to management on the success of meeting the desired outcomes and strategies (Figure 2.2). The Monument’s adaptive management process includes the following elements: management plan development and review, implementation and enforcement, monitoring and evaluation, integration of ecosystem science and traditional knowledge, scientific research, information management, and education and public outreach. Ecosystem science and traditional knowledge are inputs to the learning process, together with the results of monitoring and evaluation. A comprehensive information management system facilitates the compilation of information and data from research, monitoring, plan review, education, and public outreach and also helps to inform research and management priorities. An effective adaptive management process provides managers with timely feedback and information. If the desired outcomes and goals are achieved, then this approach confirms the management strategies and activities are on the right course. If the results are not achieved, then feedback into the management framework can help identify whether it is a specific action or group of strategies or activities that may need to change. Periodic updates of the Monument Management Plan will incorporate feedback from our adaptive management process and result in refined and sometimes new management strategies and activities to meet our overall Monument goals and desired outcomes.

### *Human dimensions*

Humans are integral to ecosystems, and the human dimensions of ecosystems are an integral focus of the science needed to achieve ecosystem-based management. Understanding the impact of humans on the ocean, the impact of the ocean on humans, and the human aspects of ocean governance provides the scientific basis for ensuring ocean health and quality of life for this and future generations (Joint Subcommittee on Ocean Science and Technology, 2007). The relationships between humans and ocean ecosystems are complex, dynamic, and coupled, and recognizing the importance of human-ocean relationships in the management of the NWHI assumes that human “impacts” on oceans are not necessarily negative, but also may restore and foster human and ocean well-being. In the planning, management, and evaluation of the Monument, human dimensions are critical for long-term success.

Marine science and policy institutions in the United States and worldwide recognize that a deeper understanding of the human dimensions of ecosystems—human causes, consequences, and responses to ecosystem stress—is needed to foster improved support for coastal and ocean decisionmaking. Examples include statements by the Joint Subcommittee on Ocean Science and Technology (2007), United States Commission on Ocean Policy (2004), Pew Oceans Commission (2003), International Human Dimensions Programme on Global Environmental Change, and NOAA’s External Ecosystem Task Team (2006).

The resilience of ecosystems is integrally connected to that of human systems. According to resilience thinking, a multiplicity of perspectives surrounds a given ecosystem. In the highly diverse Hawaiian archipelago, the idea of a “multiplicity of perspectives” captures the notion that within the community are a variety of perspectives and values about the oceans that vary depending upon people’s historical, cultural, social, political, economic, spiritual, or other contexts. These and other human dimensions insights are important considerations in providing a more integrative ecosystem understanding, promoting ecosystem resilience, and ensuring a holistic ecosystem-based management approach.

### *Incorporation of Traditional Knowledge*

*Ua lehulehu a manomano ka ‘ikena a ka Hawai‘i.  
Great and numerous is the knowledge of the Hawaiians.  
—Pukui (1983)*

There are many similarities between an ecosystem-based management approach for the NWHI and the traditional 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 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; Kikiloï 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; Department of Land and Natural Resources 2003b).

Through detailed observations of the oceanic environment, its interrelation to the terrestrial environment, seasonal and lunar patterns, and species life cycles, species of the ocean and land realms were taxonomically partnered, and systems for resource management developed (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). Understanding the Native Hawaiian worldview of ecosystems and relationships, along with traditional approaches to resource management, aids in moving toward an ecosystem-based management approach for the NWHI. These core principles include viewing ecosystems holistically, recognizing variations in space and time, and continuously building a knowledge base to inform management and successfully care for the environment. The perspective that Native Hawaiian traditional knowledge and resource management approaches bring to the Monument can provide insight into ecosystems and relationships.

## 2.4 Monument Management Policy Framework: The Vision, Mission, Guiding Principles, and Goals for Managing Papahānaumokuākea Marine National Monument

The Monument vision, mission, and guiding principles establish the overarching policy direction and guidance for Monument management (Figure 2.3 and Table 2.1). The vision describes the long-term management desire of the Monument to maintain the health and diversity of the NWHI ecosystem in perpetuity. The mission establishes the need for integrated management in order to achieve the long-term protection of NWHI ecosystems and the perpetuation of Native Hawaiian practices and heritage resources. The guiding principles provide direction for making informed decisions about human activities consistent with the vision and mission for the Monument. The Monument goals are the unifying elements of successful monument management. They identify and focus management priorities, resolve issues, and link to the public interest in preserving and caring for the historic and scientific objects within the Monument.



**Figure 2.3 Monument Management Policy Framework.**

**Table 2.1 Monument Vision, Mission, Guiding Principles, and Goals**

<b>Vision</b>
To forever protect and perpetuate ecosystem health and diversity and Native Hawaiian cultural significance of Papahānaumokuākea.
<b>Mission</b>
Carry out seamless integrated management to ensure ecological integrity and achieve strong, long-term protection and perpetuation of NWHI ecosystems, Native Hawaiian culture, and heritage resources for current and future generations.
<b>Guiding Principles</b>
<p>The Monument shall be managed in a manner that—</p> <ul style="list-style-type: none"> <li>• Is consistent with the Vision and Mission;</li> <li>• Recognizes that the resources of the NWHI are administered by the Co-Trustees for the benefit of present and future generations;</li> <li>• Affirms that the NWHI and its wildlife are important, unique, and irreplaceable;</li> <li>• Honors the significance of the region for Native Hawaiians;</li> <li>• Honors the historic importance of the region;</li> <li>• Incorporates best practices, scientific principles, traditional knowledge, and an adaptive management approach;</li> <li>• Errs on the side of resource protection when there is uncertainty in available information on the impacts of an activity;</li> <li>• Enhances public appreciation of the unique character and environment of the NWHI;</li> <li>• Authorizes only uses consistent with Presidential Proclamation 8031 and applicable laws;</li> <li>• Coordinates with federal, state, and local governments, Native Hawaiians, relevant organizations, and the public; and</li> <li>• Carries out effective outreach, monitoring, and enforcement to promote compliance.</li> </ul>
<b>Monument Goals</b>
<b>Goal 1:</b> Protect, preserve, maintain, and where appropriate restore the physical environment and the natural biological communities and their associated biodiversity, habitats, populations, native species, and ecological integrity.
<b>Goal 2:</b> Support, promote, and coordinate research, ecosystem characterization, and monitoring that increases understanding of the NWHI, improves management decisionmaking, and is consistent with conservation and protection.
<b>Goal 3:</b> Manage and only allow human activities consistent with Proclamation 8031 to maintain ecological integrity and prevent or minimize negative impacts for long-term protection.
<b>Goal 4:</b> Provide for cooperative conservation including community involvement that achieves effective Monument operations and ecosystem-based management.
<b>Goal 5:</b> Enhance public understanding, appreciation, and support for protection of the natural, cultural, and historic resources.
<b>Goal 6:</b> Support Native Hawaiian practices consistent with long-term conservation and protection.
<b>Goal 7:</b> Identify, interpret, and protect Monument historic and cultural resources.
<b>Goal 8:</b> Offer visitor opportunities at Midway Atoll to discover and appreciate the wildlife and beauty of the NWHI, enhance conservation, and honor its unique human history.

## 2.5 Management Action Plans

Action plans are composed of specific strategies to address six priority management needs. Each action plan is guided by a desired outcome, a specific need for action, and strategies and associated activities designed to achieve that need. Strategies and activities implement Monument regulations, research and educational partnerships, habitat management and restoration conservation targets, threatened and endangered species recovery, historic preservation, Native Hawaiian cultural practices, and appropriate public uses programmed over a 15-year period, with 5-year reviews.

### *Monument Management Plan Development and Review*

The management plan will be reviewed every five years. The review represents an essential element of the adaptive management process and includes public involvement, characterization of issues, and review and evaluation of action plans.

This Monument Management Plan was developed based on the current state of knowledge on the most appropriate management measures. These management measures consist of regulations and action plans to govern the first five years of Monument management and project activities over a 15-year timeframe, where appropriate. Action plans will be implemented, and where regulations apply, enforced, through interagency collaborative mechanisms based on the jurisdiction of each government agency. After five years, the Monument Management Plan will be reviewed, incorporating lessons learned and new data and information from monitoring, ecosystem science, and traditional knowledge, and a comprehensive evaluation to develop or refine management strategies and actions.

### *Six Priority Action Plan Groupings*

The core of the Monument Management Plan is contained in 22 action plans, organized under six priority management needs. Priority management needs were identified considering legal mandates and inputs from numerous public scoping meetings and workshops, as well as the status of Monument resources based on the multiple temporal and spatial scales of management issues, and meetings conducted with managers, scientists, and other stakeholders. Priority management needs address multiple Monument goals by defining specific areas for focused action, including improving our understanding of the NWHI, conserving wildlife and habitats, reducing threats to the ecosystem, managing human uses, facilitating collaboration and partnerships, and achieving effective Monument operations.

Action plans describe specific strategies to address the six priority management needs for the Monument. Each action plan is guided by a desired outcome and provides the context and history of the particular issue or management activity. Action plans also highlight a specific need for action

#### **Note to Readers Regarding Terminology and FWS Refuge Comprehensive Conservation Program Requirements**

The Proclamation stated that, “to manage the Monument, the Secretary of Commerce, in consultation with the Secretary of the Interior and the State of Hawaii, shall modify, as appropriate, the plan developed by NOAA’s National Marine Sanctuary Program through the public sanctuary designation process, and will provide for public review of that plan.” Sanctuary management plans are structured differently than NWR management plans. As a result, this plan includes desired outcome statements, strategies, and activities as a part of the action plans that direct Monument management actions. For those familiar with refuge management plans, these statements, strategies, and activities are equivalent to goals, objectives, and strategies respectively.

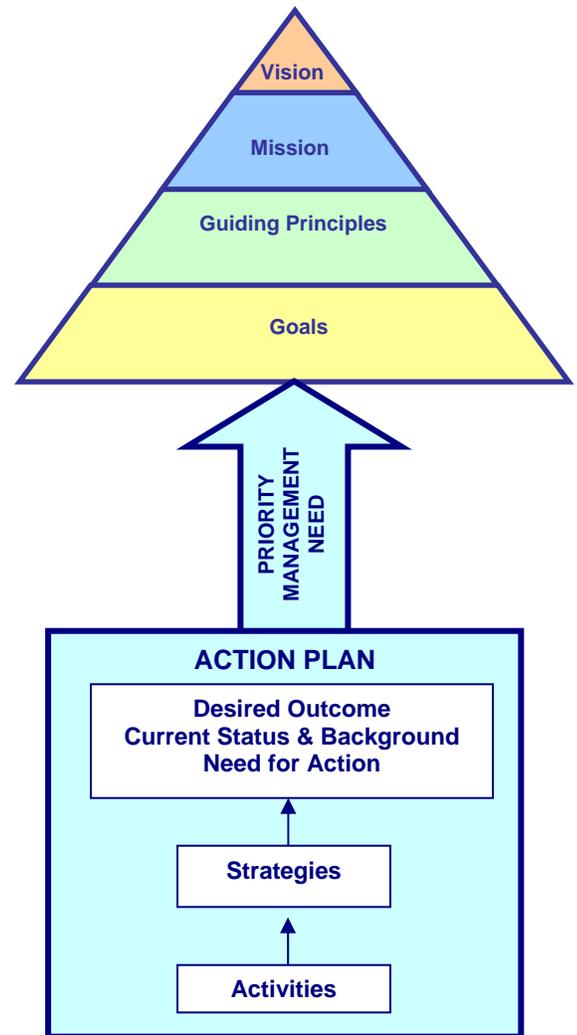
and identify strategies and associated activities designed to address that need. Ultimately, all strategies and activities are designed to help achieve the desired outcome of the action plan (Figure 2.4).

#### *Understanding and Interpreting the NWHI*

The NWHI represent a unique opportunity to advance our understanding of ecosystem science through research, monitoring, and the incorporation of traditional knowledge. In turn, coordinated research and long-term monitoring is needed to deepen our understanding of the composition, structure, and function of NWHI ecosystems and to provide the predictive tools to make informed management decisions consistent with the conservation and protection of the region. The continued development of a long-term monitoring program is needed to provide vital data and information necessary to monitor changes in ecosystem status over time and to evaluate the effectiveness of management measures in protecting and restoring ecological integrity. The integration of human dimensions with ecological ones in both research and management will further ecosystem-based management of the Monument. Additionally, the incorporation of indigenous knowledge into management practices will enrich and inform the MMB's approach to long-term planning. The further characterization of Native Hawaiian cultural relationships to the NWHI through the study of oral histories, place names, and practices associated with the region will enhance the physical record of activities in the NWHI. The unique aspects of island and Pacific maritime history, as well as historical and archaeological resources, collectively can provide a basis for developing effective management of resources.

#### *Conserving Wildlife and Habitats*

The Presidential Proclamation establishing the Monument highlights that it is in the public interest to preserve marine and terrestrial areas in the NWHI through active conservation and management of wildlife and their habitats. “This diverse ecosystem is home to many species of coral, fish, birds, marine mammals, and other flora and fauna including the endangered Hawaiian monk seal, the threatened green sea turtle, and the endangered leatherback and hawksbill sea turtles” (Presidential Proclamation 8031, 2006). Action plans to address this priority management need contain strategies to maintain the biological integrity, diversity, and environmental health of the Monument and identify activities to assist in the recovery of threatened and endangered species; manage migratory bird populations; and conserve, manage, and, where appropriate, restore the habitats of the Monument's native flora and fauna.



**Figure 2.4 Organization of Action Plan by Priority Management Need.**

### *Reducing Threats to the Ecosystem*

Despite their remote location, marine and terrestrial ecosystems of the NWHI are at risk from a range of threats from human activities within and outside the Monument. Natural and anthropogenic threats to the Monument include habitat alteration or damage from marine debris, the changing climate including increased storm intensity and frequency, rising sea level and ocean temperature, introduction of alien species, potential vessel and aircraft impacts, release of hazardous materials from landfills, vessel grounding, and past human impacts. Development and implementation of threat reduction protocols and monitoring are needed to protect, preserve, maintain and, where appropriate, restore natural communities, including habitats, populations, native species, and ecological processes, and function as a public trust for current and future generations. In addition to threat reduction, emergency response in the Monument will be coordinated under a series of plans and systems.

### *Managing Human Activities*

The NWHI has experienced a long history of human use, with periods of overexploitation, that have contributed to the current endangered status of some species, including land birds, several plants, sea turtles, and the Hawaiian monk seal. Although the extent of resource exploitation has been limited in recent years, human activities and the use of Monument resources will be carefully managed considering historical uses and new threats. Action plans for managing human activities address the need for permitting, enforcement, and managing specific human uses, including Native Hawaiian cultural practices and visitors at Midway Atoll.

### *Coordinating Conservation and Management Efforts*

Comprehensive and coordinated conservation and management of the Monument can be achieved only through effective interagency coordination and partnerships with a broad range of stakeholders. Coordination between the MMB members and other stakeholders is needed to maintain existing resource protection measures, increase the efficiency and effectiveness of management and enforcement, and reduce conflicts and duplication of Monument management activities. Education and outreach efforts will require coordination among government agencies, nongovernmental organizations, and other stakeholder groups. Coordination with stakeholders and the public will provide a forum for advice and input on Monument management and improve awareness and understanding of the ecological, Native Hawaiian cultural significance, and historic significance of the NWHI. Coordination with international initiatives is needed to address Pacific regional and global management issues affecting the Monument.

### *Achieving Effective Monument Operations*

Monument operations include central and field operations, information management, and overall program evaluation. Central and field operations are essential to support action plans to address all other priority management needs. Central operations are located in the main Hawaiian Islands and include support offices, interpretive facilities, and information management facilities. Field operations include shipboard and research diving operations, as well as land-based operations in the NWHI. Monument staff and facilities provide essential operational capacity for effective collaboration between the MMB and other stakeholders. Operational effectiveness will be evaluated and improved through an adaptive management process that captures lessons learned and transforms them into action.

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