

Revision of Critical Habitat for  
Hawaiian Monk Seals

ESA Section 4(b)(2) Report  
(To accompany the Final Rule)

Prepared by:  
National Marine Fisheries Service  
Protected Resources Division  
Pacific Islands Regional Office  
1845 Wasp Blvd., Building 176  
Honolulu, HI 96818

December 2014

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration

## Table of Contents

Background and Summary.....	5
<b>Purpose and Structure of the Report</b> .....	5
<b>Background</b> .....	5
<b>I. Statute and Regulations</b> .....	8
<b>Findings and purposes of the Act emphasize habitat conservation</b> .....	8
<b>“Critical Habitat” is specifically defined</b> .....	8
<b>“Conservation” is specifically defined</b> .....	9
<b>Specific information required for making designations and revisions</b> .....	9
<b>Impacts of Designation Must be Considered and Areas May Be Excluded</b> .....	9
<b>Federal Agencies Must Insure Their Actions Are Not Likely to Destroy or Adversely Modify Critical Habitat</b> .....	10
<b>Authority to designate critical habitat is delegated to NMFS</b> .....	10
Approach to the designation .....	10
<b>Identify Areas Meeting the Definition of Critical Habitat</b> .....	10
<b>Geographical Area Occupied by the Species</b> .....	11
<b>Physical or Biological Features Essential to Conservation of Hawaiian Monk Seals</b> .....	12
<b>“Specific Areas” Within the Occupied Geographical Area</b> .....	12
<b>Special Management Considerations or Protection</b> .....	14
<b>Unoccupied Areas</b> .....	15
<b>Certain Military Lands are Precluded from Designation</b> .....	15
<b>II. Conduct a Section 4(b)(2) Analysis</b> .....	18
<b>Identify “Particular” Areas</b> .....	18
<b>Determine the Benefits of Designation</b> .....	20
<b>Determine the Benefits of Exclusion Based on Economic Impacts</b> .....	22
Exclusions Based on Economics .....	26
<b>Exclusions Based on National Security</b> .....	26
<b>Consideration of Exclusion for Other Relevant Impacts</b> .....	28
References.....	31

**List of Tables**

Table 1. Summary of Economic Impacts..... 24  
Table 2. Areas considered for National Security Exclusion ..... 27  
Table 3. DOD particular areas proposed for National Security Exclusion..... 28  
Table 4. MHI Proposed Hawaiian monk seal Critical Habitat Coastal Habitat Segments.  
..... 46

## **List of Acronyms**

CHRT	Critical Habitat Review Team
DOD	Department of Defense
ESA	Endangered Species Act
USFWS	United States Fish and Wildlife Service
INRMP	Integrated Natural Resource Management Plan
JBPHH	Joint Base Pearl Harbor-Hickam
MHI	Main Hawaiian Islands
MCBH	Marine Corps Base Hawaii
NMFS	National Marine Fisheries Service
NPS	National Parks Service
NWHI	Northwestern Hawaiian Islands
PIRO	Pacific Islands Regional Office
PMRF	Pacific Missile Range Facility
PSD	Protected Species Division
USMC	U.S. Marine Corps

## Background and Summary

### Purpose and Structure of the Report

This report contains the National Marine Fisheries Service (NMFS), Pacific Islands Regional Office (PIRO) recommendations for the revision of critical habitat under section 4 of the Endangered Species Act (ESA), for the Hawaiian monk seal, which was listed under the ESA on November 23, 1976 (41 FR 51611). This report documents NMFS' compliance with section 4(b)(2) of the ESA regarding the impacts of designating critical habitat for the Hawaiian monk seal. The report describes the process followed, methods used, and conclusions reached for each step leading to the critical habitat designation along with the applicable laws, court rulings, executive orders, and policies.

Based on our consideration of national security impacts of the proposed critical habitat designation we recommend excluding the following particular areas located within the identified specific areas: Kingfisher Underwater Training Area off of Niihau, located in Area 12 – Niihau; Pacific Missile Range Facility (PMRF) Offshore areas (the Shallow Water Training Range and PMRF Restricted area), located in Area 13 – Kauai; the Puuloa Underwater Training Range, located in Area 14 – Oahu; and Shallow Water Minefield Sonar Training Range off Kahoolawe, located in Area 15 – Maui Nui.

### Background

The Hawaiian monk seal (*Neomonachus schauinslandi*<sup>1</sup>) was listed as endangered throughout its range under the ESA in 1976 (41 FR 51611; November 23, 1976). In 1986, critical habitat for the Hawaiian monk seal was designated at all beach areas, sand spits and islets, including all beach crest vegetation to its deepest extent inland, lagoon waters, inner reef waters, and ocean waters out to a depth of 10 fathoms (18.3 m) around Kure Atoll, Midway Islands (except Sand Island), Pearl & Hermes Reef, Lisianski Island, Laysan Island, Gardner Pinnacles, French Frigate Shoals, Necker Island, and Nihoa Island in the Northwestern Hawaiian Islands (NWHI) (51 FR 16047; April 30, 1986). In 1988, critical habitat was expanded to include Maro Reef and waters around previously designated areas out to the 20 fathom (36.6 m) isobaths (53 FR 18988; May 26, 1988).

On July 9, 2008, NMFS received a petition from the Center for Biological Diversity, Kahea, and the Ocean Conservancy (Petitioners) to revise the Hawaiian monk seal critical habitat designation (Center for Biological Diversity et al, 2008) under the ESA. The Petitioners sought to revise critical habitat by adding the following areas in the main Hawaiian Islands (MHI): key beach areas, sand spits and islets, including all beach crest vegetation to its deepest extent inland, lagoon waters, inner reef waters, and ocean waters out to a depth of 200 meters (m). In addition, the Petitioners requested that designated

---

<sup>1</sup> Listed as *Monachus schauinslandi* under the ESA, the Hawaiian monk seal has recently been classified into a newly erected genus *Neomonachus* (79 FR 68371; November 17, 2014).

critical habitat in the NWHI be extended to include Sand Island at Midway, as well as ocean waters out to a depth of 500 m (Center for Biological Diversity et al., 2008).

On October 3, 2008, NMFS announced in its 90-day finding that the petition presented substantial scientific information indicating that a revision to the current critical habitat designation may be warranted (73 FR 57583). On June 12, 2009, NMFS released the 12-month finding indicating that the revision to Hawaiian monk seal critical habitat was warranted (based primarily on new information available on Hawaiian monk seal habitat use) and announced NMFS' intention to move forward with a proposed rule (74 FR 27988). In the 12-month finding (74 FR 27988; June 12, 2009), NMFS identified the range of the species as throughout the Hawaiian Archipelago and Johnston Atoll, which extends beyond those areas identified in the petition. NMFS convened a Critical Habitat Review Team (CHRT) consisting of seven biologists with experience working on issues related to Hawaiian monk seal research and management to determine the appropriate areas for consideration for the revision. The CHRT reviewed all areas within the range of the species that may warrant consideration as critical habitat to ensure that essential features would support recovery goals for this wide-ranging species.

On June 2, 2011, NMFS published a proposed rule to revise critical habitat for the Hawaiian monk seal (76 FR 32026). This rule identified 16 specific areas throughout the Hawaiian Archipelago to be designated as critical habitat: ten in the NWHI and six in the MHI. The 2011 proposed rule included extending the current designation in the NWHI in the marine environment out to the 500 m depth contour and including Sand Island at Midway Islands, as well as designating six new areas in the MHI. Specific areas proposed for the MHI included terrestrial habitat 5 m inland from the shoreline extending seaward into the marine environment out to the 500 m depth contour around Kaula, Niihau, Kauai, Oahu, Maui Nui (including Molokai, Lanai, Kahoolawe, and Maui), and Hawaii (except those portions of the areas that were identified as not meeting the definition of critical habitat and not included in the designation). During the public comment period on the proposed rule, NMFS received comments indicating that substantial disagreement exists over the identification of the essential features that supported the scope of the 2011 proposed designation. On June 25, 2012, NMFS announced a 6-month extension to complete the final revision to critical habitat for the Hawaiian monk seal (77 FR 37867; June 25, 2012). This time was needed to evaluate new information provided through comments and additional information from GPS equipped cellular transmitter tags (MHI tracking information) deployed on seals in the MHI in order to aid in resolving the disagreement.

NMFS reconvened the CHRT to review the newly available MHI tracking information, information used to identify the proposed designation, and information provided from public comments with regard to the essential features for Hawaiian monk seals. From this evaluation, the CHRT recognized, and we agreed, that Hawaiian monk seal essential features could be described with more precision to clarify the ecological significance of certain features as they pertain to monk seal conservation. The CHRT used the best available information to refine the descriptions of the features, combining them into three areas that serve an essential service or function to Hawaiian monk seal conservation. The

CHRT then re-evaluated each area for the presence of the refined essential features and modified the boundaries of the 2011 proposed designation to ensure that areas meet the definition of critical habitat (i.e., that features exist within the delineated areas). These revised areas that now qualify as critical habitat are analyzed in this report. A full discussion of revisions to the 2011 proposed designation and the essential features and boundaries identified for this revision can be found in the Biological Report (NMFS, 2014).

For the revision to Hawaiian monk seal critical habitat, 16 specific areas incorporating terrestrial and marine habitat were identified throughout the Hawaiian Archipelago: ten in the NWHI and six in the MHI. The NWHI areas include the seafloor and marine habitat to 10 m (32.8 ft) above the seafloor from the 200 m (656.4 ft) depth contour (relative to mean lower low water) to the shoreline and beach areas, sand spits and islets, including all beach crest vegetation to its deepest extent inland around the following numbered islands, atolls and reefs: 1) Kure Atoll, 2) Midway Islands, 3) Pearl and Hermes Reef, 4) Lisianski Island, 5) Laysan Island, 6) Gardner Pinnacles, 7) French Frigate Shoals, 8) Necker Island, and 9) Nihoa Island. Areas in the MHI include the seafloor and marine habitat to 10 m (32.8 ft) above the seafloor from the 200 m (656.4 ft) depth contour (relative to mean lower low water) to the shoreline. In addition, critical habitat includes key terrestrial areas extending 5 m (16 ft) inland from the shoreline (defined between identified boundary points) around each of the MHI islands. Coastal boundary points can be found in Table 4. Consistent with the definition of critical habitat, areas inaccessible to seals throughout the NWHI and the MHI (e.g., cliffs), manmade structures, and hardened shorelines existing within the bounded areas do not have the essential features necessary for conservation and are therefore, not considered critical habitat.

Subsequent sections of this report will provide information about the process NMFS used to identify those areas meeting the definition of Hawaiian monk seal critical habitat and the process used to analyze the impacts of designating those areas in accordance with 4(b)(2) of the ESA. Additional information regarding Hawaiian monk seal natural history and status, and the determination of essential features and specific areas identified may be found in the biological report (NMFS, 2014).

## **I. Statute and Regulations**

We developed our recommendations consistent with statutory requirements and agency regulations, which are summarized below.

### **Findings and purposes of the Act emphasize habitat conservation**

In section 1 of the ESA, “Findings,” (16 U.S.C. 1531 (a)(1)) Congress declared that:

Various species of fish, wildlife and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.

Section 2 of the ESA sets forth the purposes of the Act, beginning with habitat protection:

The purposes of this chapter are to provide a means whereby *the ecosystems upon which endangered species and threatened species depend may be conserved*, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section. [emphasis added]

### **“Critical Habitat” is specifically defined**

Section 3(5)(A) of the ESA (16 U.S.C. 1532 (5)) defines critical habitat as follows;

(5)(A) “The term ‘critical habitat’ for a threatened or endangered species means –

(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and

(ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of this title, upon a determination by the Secretary that such areas are essential for the conservation of the species.”

(B) “Critical habitat may be established for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph.”

(C) “Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species.”

### **“Conservation” is specifically defined**

Section 3(3) of the Act defines conservation (16 U.S.C. 1532(3)):

(3) “The terms "conserve", "conserving", and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.”

### **Specific information required for making designations and revisions**

Section 4(a)(3) requires NMFS to make critical habitat designations concurrently with the listing determination, to the maximum extent prudent and determinable, and goes on to describe how designations may be revised as appropriate:

(3) “The Secretary, by regulation promulgated in accordance with subsection (b) of this section and to the maximum extent prudent and determinable -  
(A) shall, concurrently with making a determination under paragraph (1) that a species is an endangered species or a threatened species, designate any habitat of such species which is then considered to be critical habitat; and  
(B) may, from time-to-time thereafter as appropriate, revise such designation.”

### **Impacts of Designation Must be Considered and Areas May Be Excluded**

Specific areas that fall within the definition of critical habitat are not automatically designated as critical habitat. Section 4(b)(2) (16 U.S.C. 1533(b)(1)(A)) requires the Secretary to first consider the impact of designation and permits the Secretary to exclude areas from designation under certain circumstances. Exclusion is not required for any areas.

The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) of this section on the basis of the best scientific data available and after taking into consideration the economic impact, the impact to national security and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

## **Federal Agencies Must Insure Their Actions Are Not Likely to Destroy or Adversely Modify Critical Habitat**

The regulatory intent of critical habitat is realized through section 7(a)(2) of the Act. This section requires federal agencies to insure any actions they authorize, fund or carry out are not likely to result in the destruction or adverse modification of designated critical habitat (16 U.S.C. 1536(a)(2)). Section 7 also requires federal agencies to insure such actions do not jeopardize the continued existence of the listed species:

“Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.”

### **Authority to designate critical habitat is delegated to NMFS**

The authority to designate critical habitat, including the authority to consider the impacts of designation, the authority to weigh the benefits of exclusion against the benefits of designation, and the authority to exclude particular areas, has been delegated to the Assistant Administrator of the NMFS (Department Organization Order 10-15 (5/24/04). NOAA Organization Handbook, Transmittal #34, May 31, 1993).

### **Approach to the designation**

Based on this statutory direction, our approach to designation included the following steps:

1. Identify specific areas eligible for critical habitat designation
  - Identify areas meeting the definition of critical habitat
  - Identify military areas ineligible for designation
2. Conduct an ESA section 4(b)(2) analysis:
  - Determine the impacts of designation
  - Determine the benefits of designation
  - Determine the benefits of exclusion
  - Determine whether benefits of exclusion of any particular area outweigh benefits of designation and recommend exclusion if appropriate

### **Identify Areas Meeting the Definition of Critical Habitat**

Areas that meet the ESA definition of critical habitat include specific areas 1) within the geographical area occupied by the species at the time of listing, if they contain physical

or biological features essential to conservation of the species, and those features may require special management considerations or protection; and 2) outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation of the species. To identify these specific areas, a CHRT was convened. The CHRT consisted of seven biologists with experience working on issues related to Hawaiian monk seal research and management. The CHRT identified sixteen specific areas located throughout the Hawaiian archipelago. The CHRT analysis and conclusions regarding which specific areas meet the definition of critical habitat, and may therefore be eligible for designation, are documented in a separate Biological Report (NMFS 2014).

### **Geographical Area Occupied by the Species**

Pursuant to section 3(5)(A), NMFS' first task was to determine "the geographical area occupied by the species at the time of listing." NMFS identified the Hawaiian Archipelago and Johnston Atoll as the range for the Hawaiian monk seal due to the current and/or historical use of these areas for hauling out and parturition (birth or pupping) in the 12 month finding (74 FR 27988; June 12, 2008).

The majority of the population is located throughout the NWHI, where six main reproductive sites are described: Kure Atoll, Midway Islands, Pearl and Hermes Reef, Lisianski Island, Laysan Island, and French Frigate Shoals. Smaller reproductive sites occur on Necker Island and Nihoa Island. Tracking information in the NWHI indicates that monk seals move throughout marine habitat within the U.S. Exclusive Economic Zone (i.e., waters out to 370 km or 229 miles), foraging on the reefs, slopes and banks surrounding islands and atolls, and travel to nearby seamounts, submerged reefs, and banks to forage (Stewart et al., 2006). Most seals return to the same atoll or island for hauling out, although between 10-15 percent of seals will travel among sites (Carretta et al., 2013). Monk seals also occur throughout all of the MHI, using accessible coastlines along the MHI for hauling out. Births have been documented on Niihau, Kauai, Oahu, Molokai, Kahoolawe, Maui and Hawaii. Many seals show fidelity to a particular island or region of an island or islands, yet some will travel to multiple islands in the MHI (Cahoon, 2011). Information gained from seals tracked in the MHI is similar to the information from seals tracked in the NWHI, with most seals foraging close to their island of instrumentation (i.e., where tracking instruments were put on) (Cahoon, 2011). Travel in the marine environment for a wide ranging species, such as the monk seal, is influenced by foraging and reproductive preferences. Considerations regarding the extent of the marine habitat occupied by seals therefore incorporated knowledge regarding known diving capabilities (depths greater than 500 m) (Parrish et al., 2002; Stewart et al., 2006), video recorded foraging behavior, and observations of movement throughout the Archipelago.

In addition to considerations within the Hawaiian Archipelago, past observations from Johnston atoll (one birth and several seal sightings) have confirmed this site as an area once used by the species (NMFS, 2001). Possible sightings for the species at Palmyra Atoll, Wake Island, Bikini Atoll and Mejit Island have not been confirmed, and no

additional births have been documented outside of the Archipelago and Johnston Atoll. Thus, the occupied geographical area under consideration for this designation was limited to areas within the EEZ surrounding the Hawaiian Archipelago and Johnston Atoll.

### **Physical or Biological Features Essential to Conservation of Hawaiian Monk Seals**

The CHRT determined the physical or biological features essential to the conservation of the Hawaiian monk seal based on their biology and life history (NMFS, 2014). The CHRT considered that Hawaiian monk seals spend a majority of their time in the water, using the aquatic portion of their habitat for thermoregulation, resting, interacting, mating and foraging. Additionally, Hawaiian monk seals use terrestrial habitat to haul out for resting, molting, pupping, nursing and avoiding predators. Based on the best available scientific information, the CHRT recommended that the essential features should incorporate both terrestrial and marine areas that are necessary to support the survival and recovery of the Hawaiian monk seal.

In light of available scientific information and regulatory direction, the CHRT identified the following essential features to support the conservation of Hawaiian monk seals in coastal terrestrial and marine areas in the Hawaiian Archipelago and Johnston Atoll:

1. Terrestrial areas and the adjacent shallow sheltered aquatic areas with characteristics preferred by monk seals for pupping and nursing;
2. Marine areas from 0 to 200 m (0-656 ft) in depth that support adequate prey quality and quantity for juvenile and adult monk seal foraging; and
3. Significant areas used by monk seals for hauling out, resting or molting.

Full descriptions of the above essential features and discussion of the refinements to the 2011 proposed essential features can be found in the Biological Report (NMFS, 2014), which is available at the PIRO's Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html).

### **“Specific Areas” Within the Occupied Geographical Area**

The CHRT identified 16 specific areas within the geographical area occupied by the species by examining whether each specific area is presently 1) occupied by the Hawaiian monk seal, and 2) contains at least one essential feature that may require special management considerations or protections (NMFS, 2014). To satisfy the first criterion to meet the definition of critical habitat, each specific area was examined to ensure that data demonstrated Hawaiian monk seals use the areas of the identified range. Information regarding Hawaiian monk seal habitat use is kept by the NMFS Pacific Islands Fisheries Science Center, Protected Species Division (PSD). PSD collects records of monk seal sighting data in the terrestrial environment through a variety of sources (e.g., PSD staff observations, tracking instruments, cooperating agencies sighting reports, and the public sighting reports). Various sources of tracking information (e.g., satellite or GPS cell phone tags with depth recorders) from both the NWHI and the MHI, were used to confirm monk seal use of marine habitat. Further information regarding

monk seal status and distribution and adjustments that have been made to the essential features and boundaries of the designation since 2011 may be found in the Biological Report (NMFS, 2014). The second criterion was satisfied by reviewing PSD data as well as considering NMFS expert knowledge regarding Hawaiian monk seal pupping sites, distribution, sighting information, foraging habits, and bathymetry maps to confirm the presence of the essential features that may require special management considerations or protections. The boundaries chosen to define each specific area represent the best estimate of the areas necessary for Hawaiian monk seals to forage in marine habitat as well as haul out in terrestrial habitat that supports preferred pupping areas and significant haul-out areas.

The CHRT recognized that all of the areas identified in the NWHI for the 1988 designation of critical habitat still exhibit essential features that fit the definition for Hawaiian monk seal critical habitat; the CHRT delineated the boundaries of these original 10 areas to include the previously recognized terrestrial areas as well as deeper bottom-associated foraging areas that are important to monk seal conservation. The revisions from the 1988 designation include incorporating the seafloor and marine habitat to 10 m from the bottom out to a depth of 200 meters (656 ft) surrounding each area identified in the 1988 designation, and the addition of Sand Island (at Midway Islands) because this habitat supports preferred pupping and nursing areas, as well as significant haul-out habitat.

Specific areas identified for this revision of critical habitat for the Hawaiian monk seal in the NWHI include all beach areas, sand spits and islets, including all beach crest vegetation to its deepest extent inland, lagoon waters, inner reef waters, and including marine habitat through the water's edge, including the seafloor and all subsurface waters and marine habitat within 10 meters (m) of the seafloor, out to the 200-m (656.4 ft) depth contour line (relative to mean lower low water) around the following 10 areas: Kure Atoll, Midway Islands, Pearl and Hermes Reef, Lisianski Island, Laysan Island, Maro Reef, Gardner Pinnacles, French Frigate Shoals, Necker Island, Nihoa Island. Some areas of coastline in the NWHI lack the essential features of monk seal critical habitat, because these areas are inaccessible to seals for hauling out or lack the natural areas necessary to support monk seal conservation (e.g., cliffs on Nihoa and Necker, buildings or seawalls on Tern Island, Sand Island, and Green Island). Accordingly, cliffs, and manmade structures (and the land on which they are located) and hardened shorelines do not meet the definition of critical habitat and are not included in the designation.

The CHRT also recognized that data (including birth records and sighting information) indicates that each of the islands located within the MHI chain offers essential features that fit the criteria for Hawaiian monk seal critical habitat. As in the NWHI, the CHRT determined that areas necessary for Hawaiian monk seal conservation must include both terrestrial and marine areas. In considering marine areas, the CHRT incorporated what is known from extensive research of the NWHI populations, supplemental tracking information from the MHI, and the conservation goals for the species in the MHI (i.e., the recovery goals of the recovery plan). Specific areas in the MHI include marine habitat from the 200-m (656.4 ft) depth contour line (relative to mean lower low water),

including the seafloor and all subsurface waters and marine habitat within 10 m of the seafloor, through the water's edge into the terrestrial environment where the inland boundary extends 5 m (16 ft)(in length) from the shoreline between identified boundary points around the following areas: (i) Kaula Island, (ii) Niihau, (iii) Kauai, (iv) Oahu, (v) Maui Nui (including Kahoolawe, Lanai, Maui, and Molokai), and (vi) Hawaii. Coastal boundary points used to delineate the ends of areas included in the coastal portion of the designation of critical habitat can be found Table 4. Cliffs, manmade structures, and hardened shorelines existing within the marine areas and bounded areas of the MHI do not have the essential features necessary for conservation and are therefore, not considered critical habitat.

### **Special Management Considerations or Protection**

An occupied specific area may be designated as critical habitat if it contains essential features that “may require special management considerations or protection.” Joint NMFS and United State Fish and Wildlife Service (USFWS) (50 CFR 424.02(j)) regulations define “special management considerations or protection” to mean “any methods or procedures useful in protecting physical and biological features essential to the conservation of listed species. In determining whether an area has essential features that may require special management considerations or protection, the Services do not base their decision on whether management is currently in place or whether that management is adequate.

In this analysis a number of activities that may threaten the identified essential features were revealed using past consultation history in the Hawaiian Islands, and available scientific and commercial knowledge regarding potential impacts to these features. We grouped these activities into activity types as follows: (1) in-water and coastal construction (including development), (2) dredging, (3) energy development (including renewable energy projects), (4) activities that generate water pollution; (5) aquaculture/mariculture, (6) fisheries, (7) environmental response activities (oil spills, spills of other substances, vessel groundings response, and marine debris clean-up), and (8) military activities. Because all of these activities have the potential to affect the essential features by altering one or more of the essential features and thereby reducing the quantity, quality, or the availability of preferred Hawaiian monk seal pupping areas, foraging areas, or significant haul-out areas, NMFS concludes that they may require special management consideration or protection. The Biological Report (NMFS, 2014) and the Economic Analysis Report (Industrial Economics, 2014) provide a description of the potential effects of each category of activities on the essential features.

We also considered impacts to essential features presented by the petitioner, specifically the threat of global warming as described in the petition by processes including sea level rise, warming ocean temperatures and ocean acidification. A discussion of these threats may be found in the Biological Report (NMFS, 2014). While all of the processes associated with global climate change are recognized as threats to the essential features of the Hawaiian monk seal, activities which influence these threats are considered to be of a complex global scale. Current limitations in predicting the specific changes that will

occur within ecosystems as a whole make it difficult to predict with any certainty the resultant impacts to the essential features of Hawaiian monk seal critical habitat. As impacts from these forces are demonstrated or better understood, activities that exacerbate impacts to the essential features (e.g., changes to water quality) may be further scrutinized and associated management efforts may be pursued. At this time, no single activity has been identified as contributing specifically to these threats in the economic analysis (Industrial Economics, 2014). Given the complex and uncertain impacts of climate change, this threat is best addressed during the individual consultation process across all activities undergoing consultation. Management efforts that are within the scope of an ESA Section 7 consultation dealing with a single action or activity would likely focus on the preservation of specific terrestrial areas preferred for pupping and significant for hauling out as well as marine foraging areas. In this manner NMFS will be able to incorporate special management considerations to specific activities as the extent of impacts from global climate change are demonstrated or better understood.

### **Unoccupied Areas**

Section 3(5)(A)(ii) of the ESA authorizes the designation of “specific areas outside the geographical area occupied at the time [the species] is listed” if these areas are essential for the conservation of the species. At the present time, we have not identified any unoccupied areas.

### **Certain Military Lands are Precluded from Designation**

In 2003 Congress amended section 4(a)(3)(B)(i) of the ESA that limits the designation of critical habitat on land controlled by the Department of Defense (DOD) (National Defense Authorization Act, P.L. No. 108-136):

The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

As described above, these amendments to the ESA preclude the Secretary from designating military lands as critical habitat if those lands are subject to an Integrated Natural Resource Management Plan (INRMP) under the Sikes Act and the Secretary certifies in writing that the plan provides a benefit to the listed species (Section 4(a)(3), Public Law. No. 108-136). In accordance with Section 4(a)(3)(B)(i) of the ESA, NMFS reviewed the INRMPs for installations in Hawaii that overlap with areas under consideration for Hawaiian monk seal critical habitat. Prior to the 2011 proposed revision to Hawaiian monk seal critical habitat, NMFS contacted DOD to identify INRMPs that may overlap with areas under consideration for critical habitat. Areas subject to the Marine Corps Base Hawaii (MCBH) INRMP, the Navy’s Joint Base Pearl Harbor-Hickam (JBPHH), and PMRF INRMPs were found to overlap with areas under

consideration for monk seal critical habitat. In accordance with 4(a)(3)(B)(i) of the ESA, NMFS reviewed these three INRMPS to determine if they provide a benefit to the Hawaiian monk seal and announced these determinations in the proposed rule to revise Hawaiian monk seal critical habitat (76 FR 32026; June 2, 2011). In summary, NMFS determined that the MCBH INRMP provided a benefit to the Hawaiian monk seal, because the plan demonstrated potential conservation benefits for the species, a strong history of plan implementation, and a clear structure to ensure plan effectiveness. NMFS conducted preliminary reviews for the Navy's draft JBPHH INRMP, which is a plan that combines the management of Naval Station Pearl Harbor with the Hickam Air Force base, and PMRF INRMP, and identified concerns with implementation of management measures and management effectiveness of both plans. Due to these concerns and because the drafts were not finalized, NMFS was unable to determine that these plans provide a benefit to the Hawaiian monk seal in the proposed rule to designate Hawaiian monk seal critical habitat.

Because refinements to the 2011 proposed essential features reduced the size of areas meeting the definition of critical habitat for this designation and areas managed, and because management measures implemented under the applicable DOD INRMPSs had been revised, INRMPSs for DOD installations in Hawaii were reviewed anew for the final designation. In addition, we received public comments from the U.S. Army and the U.S. Air Force requesting 4(a)(3) INRMP review for two installations; however, areas managed under these two INRMPSs do not overlap with areas under consideration for Hawaiian monk seal critical habitat and required no further review for the purposes of 4(a)(3).

A new, 2012 MCBH INRMP covers 2 locations of overlap with areas under consideration for critical habitat on Oahu including: the MCBH the Kaneohe Bay 500 yd buffer zone in marine waters surrounding Mokapu Peninsula around the main base, and the Puuloa Training Facility on the Ewa coastal plain adjacent to Pearl Harbor in south-central Oahu (see Appendix A). NMFS found that the MCBH INRMP demonstrates conservation benefits for the Hawaiian monk seal and its habitat, including debris removal, prohibitions against lay nets and gill nets in the 500-yard buffer zone, restrictions on fishing, enforcement of established rules via a Conservation Law Enforcement Officer, interagency cooperation for rehabilitation events, employment of established procedures for seal haul-out and pupping events, educational outreach for protected species (including classroom briefs, webpage, news articles, brochures, service projects, and on-site signage and monitoring), protected species scouting surveys prior to training exercises along the beach, invasive species removal (e.g. removing invasive mangroves to support native species habitat), ecological assessments in marine resources surveys and inventories, and water quality projects (minimizing erosion, and pollution). The INRMP demonstrates a history of plan implementation reported within the appendices of the INRMP, and a method of annual review to ensure management effectiveness; thus, the plan was determined to provide a benefit to the Hawaiian monk seal. Areas subject to the MCBH INRMP are therefore ineligible for designation as critical habitat.

Areas subject to the JBPHH INRMP along the southern shore of Oahu that overlap with areas under consideration for critical habitat include Nimitz Beach, White Plains Beach, the Naval Defensive Sea Area, the Barbers Point Underwater Range, and the Ewa Training Minefield (see Appendix A). In preparation for the 2011 proposed rule for Hawaiian monk seal critical habitat NMFS had reviewed a draft of the JBPHH INRMP and expressed concerns regarding plan implementation and management effectiveness (76 FR 32026; June 2, 2011). Since 2011, the Navy worked with NMFS to address these concerns and has incorporated new management measures and programs into the JBPHH INRMP. In review, we found that the JBPHH INRMP demonstrates conservation benefits for the Hawaiian monk seal and its habitat including marine debris removal, monitoring, and prevention; pet restrictions; restriction of access in some managed areas; protocols to prevent disturbance during naval activities; staff and public education and outreach; training to prevent ship groundings (habitat conservation); marine mammal stranding and response training and protocols; enforcement (through base police and the game warden); and compliance and restoration programs to address contaminant concerns in specific areas. To address NMFS' concerns about plan implementation the Navy has incorporated new measures to enhance the consistency of monk seal monitoring and reporting by improving coordination with the Hawaiian monk seal response network, and assigning Navy staff to efficiently monitor, report, and record monk seal haul-out information. Additionally, the Navy has incorporated annual review procedures to ensure management effectiveness. With these concerns addressed and the plan finalized in 2012, the plan was determined to provide a benefit to the Hawaiian monk seal and the areas mentioned above that are subject to the JBPHH INRMP are ineligible for designation as critical habitat.

In 2011 NMFS reviewed a draft revision for the PMRF INRMP, because the Island of Kaula and the main base at Barking Sands overlapped with the 2011 proposed designation for monk seal critical habitat. During the review, NMFS expressed concerns about the consistency of the plans' performance monitoring element for the Island of Kaula (76 FR 32026; June 2, 2011). Since that time the Navy has revised the PMRF INRMP to accurately reflect monitoring capabilities for Kaula Island and worked with NMFS staff to improve the quality of data collected during monitoring efforts. In addition to these changes to management measures, the Navy has also increased those areas subject to the PMRF INRMP by incorporating coastal areas 5 m inland from the shoreline and marine waters out to 10 m in depth around the Island of Niihau, which are leased and used for Navy training activities. Due to these changes to the PMRF INRMP and considering NMFS' revisions to the 2011 proposal's boundaries, PMRF INRMP managed areas that overlap with the areas that meet the definition of monk seal critical habitat now include those area around Niihau and the Island of Kaula (see Appendix A), and the main base at Barking Sands no longer overlaps with those areas meeting the definition of Hawaiian monk seal critical habitat. NMFS reviewed the finalized PMRF INRMP, including the Niihau addendum, and found that the INRMP demonstrates conservation benefits for the Hawaiian monk seal and its habitat, including fishing restrictions; marine debris removal, monitoring, and prevention; trapping of feral pigs, cats, and dogs; pet restrictions; restriction of access; protocol to prevent disturbance; public education and outreach; training to prevent ship groundings; compliance and

restoration programs for contaminants; and bans on ATVs on Niihau Island. Based on the full suite of benefits provided for the Hawaiian monk seal, and in combination with the concerted effort made by the Navy to enhance the plan's implementation and management effectiveness, NMFS determined that the PMRF INRMP provides a benefit to the Hawaiian monk seal and the areas mentioned above that are subject to the JBPHH INRMP and have HMS essential features are ineligible for designation as critical habitat.

In summary, the MCBH, JBPHH and PMRF INRMPs were each found to contain measures that benefit the ESA-listed Hawaiian monk seal through habitat protection as well as through monitoring, enforcement, public education and outreach measures, and plan implementation and review efforts. NMFS concludes below that each of these three plans provide a benefit to the Hawaiian monk seal and its habitat. For this reason those areas subject to the plans are precluded from critical habitat designation.

## **II. Conduct a Section 4(b)(2) Analysis**

Section 4(b)(2) of the ESA requires us to use the best scientific information available in designating critical habitat. It also requires that before we may designate any "particular area", we must consider the economic impact, impact on national security, and any other relevant impact. Once impacts are determined, the agency is to weigh the benefits of excluding any particular area (that is, avoiding the economic, national security or other costs) against the benefits of designating it (that is, the conservation benefits to the species). If the agency concludes that the benefits of the exclusion outweigh the benefits of designation, it has discretion to exclude (i.e., "may exclude"), so long as exclusion will not result in extinction of the species.

### **Identify "Particular" Areas**

The first step in conducting the ESA section 4(b)(2) analysis is to identify the "particular areas" to be analyzed. The "particular areas" considered for exclusion are defined based on the impacts identified. Where we considered economic impacts and weighed the economic benefits of exclusion against the conservation benefits of designation, we used the same 16 biologically-based "specific areas" we had identified under ESA section 3(5)(A) (e.g., Niihau, Kauai, Oahu). Delineating the "particular areas" as the same units as the "specific areas" allowed us to most effectively consider the conservation value of the designation. We also considered exclusions based on impacts to national security for ten particular areas identified by and used for training by the DOD and other relevant impacts for one particular area identified and managed by the USFWS (Sand Island at Midway Islands).

### **Determine Incremental Impacts**

Section 4(b)(2) of the ESA provides that the Secretary shall consider "the economic impact, impact to national security, and any other relevant impact of specifying any particular area as critical habitat." The primary impact of a critical habitat designation stems from the requirement under section 7(a)(2) of the ESA that Federal agencies insure

that their actions are not likely to result in the destruction or adverse modification of critical habitat. Determining this impact is complicated by the fact that section 7(a)(2) contains the associated requirement that Federal agencies must also insure their actions are not likely to jeopardize the species' continued existence. The true impact of designation is the extent to which Federal agencies modify their actions to insure their actions are not likely to destroy or adversely modify the critical habitat of the species, beyond any modifications they would make because of the species' listing and the jeopardy requirement. Additional impacts of designation include state and local protections that may be triggered as a result of the designation and the benefits from educating the public about the importance of each area for species conservation. Thus, the impacts of the designation include conservation impacts for Hawaiian monk seals and their habitat, economic impacts, impacts on national security, and other relevant impacts that may result from the designation and the application of ESA section 7(a)(2).

In the analysis of economic impacts (see the Economic Analysis Report (Industrial Economics, 2014)), we attempted to estimate and analyze the incremental economic impacts of designation beyond the impacts that would result from the species' listing and jeopardy provision, consistent with 50 CFR 424.19. This is also consistent with OMB's 2003 guidelines directing Federal agencies to measure the costs of the regulatory action against a baseline, which it defines as "best assessment of the way the world would look absent the proposed action<sup>2</sup>." Uncertainties exist, however, with regard to future management actions associated with Hawaiian monk seal critical habitat; specifically, past consultations regarding habitat protections have been limited to the relatively undeveloped islands of the NWHI, thus the history of project modifications that incorporate habitat concerns are limited. Additionally, protections provided under the listing of the species, as well as some existing Federal, State, and local regulations, may overlap some with protections that have been identified with the designation of critical habitat. While these uncertainties do exist, we acknowledge that the additional consideration of essential features at these sites implies an additional layer of analysis, and the potential for more stringent management efforts that have not yet been realized in the consultation process in the MHI. Due to these uncertainties, it was difficult to exclude all potential impacts that may be required under the baseline (i.e., protections already afforded Hawaiian monk seals under its listing, or under other Federal, State, and local regulations). The Economic Analysis Report (Industrial Economics, 2014) describes in more detail the types of activities that may be affected by the designation, the potential range of changes we might seek in those actions, and the estimated relative level of economic impacts that might result from administrative costs of such changes. Our considerations of economic impacts are described in the next three sections of this report.

Once we determined the impacts of the designation, we then determined the benefits of designation and the benefits of exclusion based on the impacts of the designation. The benefits of designation include the conservation benefits for Hawaiian monk seals and their habitat that result from the critical habitat designation and the application of ESA section 7(a)(2). The benefits of exclusion include the economic impacts, impacts to national security, and other relevant impacts of the designation that would be avoided if a

---

<sup>2</sup> OMB, "Circular A-4," September 17, 2003.

particular area were excluded from the critical habitat designation. The following sections describe how we determined the benefits of designation and the benefits of exclusion and how these benefits were considered, as required under section 4(b)(2) of the ESA, to identify particular areas that may be eligible for exclusion from the designation. We also summarize the results of this consideration process and determinations on the areas that may be eligible for exclusion.

### **Determine the Benefits of Designation**

The primary benefit of designation is the protection afforded under section 7 of the ESA, requiring all Federal agencies to insure their actions are not likely to destroy or adversely modify designated critical habitat. This is in addition to the requirement that all Federal agencies insure their actions are not likely to jeopardize the continued existence of the species. The designation is also expected to provide educational and awareness benefits to Federal, State and local planning agencies engaged in protecting Hawaii's natural resources. In addition to the protections described above, the Economic Analysis (Industrial Economics, 2014) discusses other forms of benefits that may be attributed to the designation, including but not limited to use benefits (wildlife-viewing), non-use benefits (existence values), and ancillary ecosystem benefits (e.g., preserved water quality and preserved or enhanced marine habitat conditions for other marine and coastal species).

As discussed earlier in this report, the ESA focuses on habitat as a fundamental tool in recovery of a species. By identifying the essential features that are described in the ESA as "essential to the conservation" of the species, we are in turn identifying those features without which conservation of the species would not be possible. This revision to the designation of Hawaiian monk seal critical habitat would revise the 1988 designation to incorporate habitat within the species' range containing features that are essential for species conservation (i.e., survival and recovery). Thus, by revising critical habitat and preventing adverse modification throughout the revised areas, we seek to provide the potential for recovery of the Hawaiian monk seal, the benefits of which would be realized in the potential future increase in abundance and successful conservation of the species. It is difficult to quantify the expected benefit that Hawaiian monk seal critical habitat is likely to have on recovery of the species. This is in part because we are unable to isolate and quantify the effect that the designation would have on recovery separate from all other ongoing or planned conservation efforts for the Hawaiian monk seal. Additionally, it is difficult to accurately predict the future harm to the habitat that would have otherwise been realized without the protections associated with critical habitat.

Revising the designation of critical habitat is also expected to provide educational and outreach benefits by informing both the entities engaged in section 7 consultations, and the general public about the status of the species, including the areas and features (or habitat) important to the species' conservation. While the Hawaiian monk seal has been listed as endangered since 1976, only those consultations in the NWHI specifically address issues regarding essential features of Hawaiian monk seal habitat. The introduction of this information in the MHI provides potential for increased education

and awareness as does the increased awareness of the value of deeper bottom-associated foraging habitat. Potential benefits from this educational awareness may be attained if parties engage in activities to benefit the species or the essential features that they were made aware of through the critical habitat designation process. Additional benefits of the designation may be reflected in the overall value that people place on the conservation of Hawaiian monk seals. While not unique to critical habitat, valuation studies identified in the Economic Analysis (Industrial Economics, 2014) indicate that people are willing to pay for, or place value on, the species' recovery. This indicates that there are social welfare benefits associated with recovery of the species and that critical habitat is a part of the suite of conservation efforts that may contribute to these benefits.

The essential features of Hawaiian monk seal habitat are tied to the recovery of the species because they are found in habitat that is appropriate for increasing the species' abundance. By preserving or protecting critical habitat's essential features, the quality of these natural areas, at a minimum, should be sustained for the continued benefit of all users. Thus, the protection of critical habitat may provide ancillary benefits to other species or to people that use or place value on this habitat. For example, marine species and ocean users may benefit from actions that minimize the impacts of development along coastal critical habitat areas. The Economic Analysis (Industrial Economics, 2014) provides a qualitative discussion of these various types of ancillary benefits that may be associated with this action.

The benefits described here are not directly comparable to the costs of designation for purposes of conducting the section 4(b)(2) analysis described below. Ideally, benefits and costs should be compared on equal terms in the same units (e.g., apples to apples and dollars to dollars); however, there is insufficient information regarding the extent of the benefits and the associated values to monetize all of these benefits. For instance, we have not identified any available data to monetize the benefits of designation. This is in part because we cannot accurately determine the incremental benefits that a critical habitat designation may have on monk seal recovery separate from other existing conservation efforts. Given the lack of information that would allow us either to quantify or monetize the benefits of the designation for Hawaiian monk seals discussed above, we determined that conservation benefits should be considered from a qualitative stand point.

In determining the benefits of designation, we considered a number of factors. We took into account the essential features present in the area, the habitat functions provided by each area, and the importance of protecting the habitat for the overall conservation of the species. In doing so, we acknowledged that Hawaiian monk seals are uniquely adapted to a tropical system defined by low productivity and environmental variability, which is reflected in their foraging and reproductive patterns. Ecologically, monk seals find success in this environment by foraging independently on assorted bottom-associated prey species, at various depths, across a wide geographic range, and their lifestyle is solitary in nature with no distinct breeding season. Therefore habitat which supports this species' recovery must reflect these ecological requirements. We also acknowledged that variability associated with prey resources in this environment means that the island/atoll habitats are likely to only support small resident numbers of these tropical seals. Thus,

recovery for this species requires that multiple independent subpopulations are sufficiently populated across the Hawaiian Archipelago such that the species may sustain random (or stochastic) decline, as outlined in the recovery plan (NMFS, 2007).

The specific areas (i.e., areas 1-16) identified in this proposal are aimed at supporting the sub-populations. Given the significant roles that these areas play in supporting monk seal conservation, the CHRT did not distinguish relative value amongst the 16 specific areas. However, we have determined that specific areas which provide all three essential features provide the highest conservation value to the species, because these areas provide habitat necessary to support the multiple independent subpopulations identified in the recovery plan. In the NWHI eight of the specific areas, Kure Atoll, Midway Islands, Pearl and Hermes Reef, Lisianski Island, Laysan Island, French Frigate Shoals, Necker Island, and Nihoa Island, support all three essential features, providing foraging, preferred pupping, and significant haul-out areas for seals that use the various islands or atolls. In the MHI, five of specific areas, Niihau, Kauai, Oahu, Maui Nui, and Hawaii, support all three essential features. Two of the areas in the NWHI, Maro Reef and Gardner Pinnacles provide important foraging areas that may be used by several subpopulations, in a portion of the range where food limitations are known to be a critical threat (Stewart et al., 2006; NMFS, 2007). Marine areas around Kaula Island include marine foraging areas that may support seals from the NWHI and the MHI, and the Island (which is precluded from designation) supports significant haul out areas. Relative to specific areas that provide all three essential features, we find that Maro Reef, Gardner Pinnacles, and Kaula Island provide a medium conservation value for Hawaiian monk seals, because these three areas provide marine foraging areas that support seals from several subpopulations.

From a recovery standpoint these specific areas represent habitat of medium to high conservation value, and we find that maintaining the essential features to support Hawaiian monk seals in these individual areas provides the habitat and resources to support subpopulations that buffer the population as a whole against events of random decline. Still, we recognize that the contribution to the conservation value of smaller particular areas within these larger specific areas may vary widely based on the size of the particular area in question and the number and type of the essential features present within that smaller particular area. Therefore, factors attributed to the benefits of the designation of areas were individually considered within each particular area in the exclusion analyses (an example of which may be seen in **Error! Reference source not found.**, the discussion of national security exclusions).

### **Determine the Benefits of Exclusion Based on Economic Impacts**

To determine the economic benefits of excluding particular areas from designation, the Economic Analysis report (IEC 2014) considered the Federal activities that may be subject to a section 7 consultation and the range of potential changes that may be required for each of these activities under the adverse modification provision. Where possible, the analysis focused on changes beyond those that may be required under the jeopardy provision or established within the environmental baseline. However, as discussed above,

the report acknowledges that some existing protections to prevent species jeopardy are likely to overlap with those protections that may be put in place to prevent adverse modification (IEC 2014). The administrative costs of these consultations and project modification impacts represent the benefits of excluding each particular area (that is, the impacts that would be avoided if an area were excluded from the designation).

Federal activities that occur within each of the specific areas and that may affect the Hawaiian monk seal critical habitat were identified in the Economic Analysis (IEC 2014) using PIRO's records of section 7 consultations within the Hawaiian Archipelago. Because the Hawaiian monk seal critical habitat designation of 1988 occurs in relatively undeveloped portions of the NWHI, and because of the changes to the essential features, we lack an extensive consultation history with regards to projects that specifically analyze the impacts to the essential features of Hawaiian monk seal critical habitat in the MHI. However, from PIRO's consultation history we were able to identify projects considered under the jeopardy provision of the Act occurring in the developed MHI. In addition, the *2007 Recovery Plan for the Hawaiian monk seal* (NMFS, 2007) addresses those threats (and in some cases specific activities) that are likely to affect many of the essential features of the species. Using these sources and relying on NMFS' experience and professional judgment in conducting section 7 consultations, as well as public comment on the proposed rule, the Federal activities that might trigger section 7 consultations were identified as indicated in the *Special Management Considerations or Protections* section of this report. These include (1) in water and coastal construction (including development), (2) dredging, (3) energy development (including renewable energy projects), (4) activities that generate water pollution, (5) aquaculture/mariculture, (6) fisheries, (7) environmental response activities (oil spills, spills of other substances, vessel groundings response, and marine debris clean-up), and (8) military activities. The identification of these activities and the associated threats are further discussed in the Biological Report (NMFS, 2014) and the Economic Analysis (Industrial Economics, 2014).

The range of modifications that may be sought to avoid destruction or adverse modification of critical habitat of the Hawaiian monk seal were identified for the affected activities. The baseline level of protection afforded Hawaiian monk seals by area and activity type were also identified. The Economic Analysis (Industrial Economics, 2014) estimates the impacts based on activities that are considered reasonably foreseeable, which includes activities that are currently authorized, permitted, or funded, or for which proposed plans are currently available to the public. Projections were evaluated for the next ten year period. They relied upon NMFS' records of section 7 consultations to estimate the average number of projects that were likely to occur within the specific areas (i.e., projections were also based on past numbers of consultations) and/or to determine the level of consultation (formal, informal) that would be necessary based on the described activity.

The Economic Analysis (Industrial Economics, 2014) identifies the total estimated present value of the quantified impacts at \$2.04 million over the next ten years. On an annualized basis, this is equivalent to impacts of \$290,000 per year. Impacts reflect

additional administrative effort to consider critical habitat in section 7 consultations and are largely associated with the designation of areas in the MHI, because most work is limited to research, management, and infrastructure maintenance in the NWHI. Across the MHI, impacts are projected to be experienced strongest in the Maui Nui (40% of the quantified impacts) and Oahu (27% of the quantified impacts) specific areas. These areas do experience larger economic activity and the Maui Nui area is the largest unit in size, incorporating impacts associated with marine and coastal activities for the islands of Molokai, Lanai, Kahoolawe, and Maui. Looking at impacts across the activities, 81% of the quantified impacts (i.e., \$1.65 million) are associated with transportation and in-water construction activities. Beyond the quantified impacts of the analysis, the report also emphasizes the potential for critical habitat to change the scope and scale of future projects or activities, which are difficult to quantify due to the uncertainty associated with the nature and scope of any future project modifications that will be necessary. This includes considerations associated with potential impacts to federally managed fisheries under the Hawaii Fisheries Ecosystem Plan, coastal development projects requiring Federal or State permitting, and impacts associated with the military use of Niihau.

**Table 1. Summary of Economic Impacts**

Specific Area	Total Present Value (2013 Dollars)	Annualized (2013 Dollars)	Percent of Total*
1 Kure Atoll	\$1,970	\$281	0.1%
2 Midway Islands	\$7,310	\$1,040	0.4%
3 Pearl and Hermes Reef	\$1,680	\$239	0.1%
4 Lisianski island	\$2,720	\$387	0.1%
5 Laysan Island	\$4,420	\$629	0.2%
6 Maro Reef	\$4,800	\$683	0.2%
7 Gardner Pinnacles	\$5,550	\$790	0.3%
8 French Frigate Shoals	\$7,650	\$1,090	0.4%
9 Necker Island	\$3,430	\$489	0.2%
10 Nihoa Island	\$1,240	\$177	0.1%
11 Kaula Island	\$3,860	\$550	0.2%
12 Niihau	\$23,900	\$3,400	1.2%
13 Kauai	\$137,000	\$19,600	6.7%
14 Oahu	\$545,000	\$77,600	26.7%
15 Maui Nui	\$815,000	\$116,000	40.0%
16 Hawaii	\$469,000	\$66,800	23.0%
Total	\$2,040,000	\$290,000	100.0%

Note: Costs were estimated using a discount rate of 7 percent. (IEC 2014)

\*This table only reflects quantified impacts of the designation and does not take into account those impacts that the Economic Analysis notes qualitatively.

Currently, federal fishery management modifications to avoid adverse modification are not expected, because these activities generally do not adversely modify foraging areas or

essential features found within those areas. In this regard, MHI seals do not appear to face food limitations in MHI foraging areas, and commercial fishing in NWHI is prohibited in most areas. Additionally, the overlap between these fisheries and monk seal diet is considered low and may not extend beyond the family taxonomic level (Cahoon, 2011; Sprague et al., 2013). Although considered unlikely, future modifications were not ruled out, because future revised management measures could result as more information is gained about monk seal foraging ecology, or we gain a better understanding of the relative importance of certain prey species to the health and recovery of a larger monk seal population.

Activities associated with the use of Niihau Island do not appear to affect the essential features of Hawaiian monk seal critical habitat and the designation is not expected to directly affect military training or research activities surrounding Niihau. However, Niihau Ranch, owner of the island, has expressed concern that the designation of Niihau areas as critical habitat may result in diminished income from the DOD, because military officials may wish to avoid public scrutiny associated with military activities taking place in designated critical habitat areas. Niihau Ranch indicates that 90% of the income on Niihau is derived from allowing DOD research and training (Industrial Economics, 2014). Thus, according to Niihau Ranch, losing this source of income could create an economic hardship for Niihau Ranch and the Islands' residents.

In summary, economic impacts from the designation are expected largely as a result of the additional administrative effort necessary to consider the impacts that activities could have on Hawaiian monk seal essential features under ESA section 7. Therefore, activities that are regularly occurring throughout these areas and already consulted on under section 7 to consider potential impacts associated with jeopardy to Hawaiian monk seals (such as in-water and coastal construction) reflect a majority of the burden of the designation. Similarly, those specific areas where economic activity is higher and/or where the specific area is larger also reflect the majority of the burden (e.g., Oahu and Maui Nui). The predicted impacts (or costs of designation) are expected to be spread across the specific area and the analysis did not identify any areas within these units where the costs of the designation were disproportionately higher. Throughout the specific areas, activities of concern are already subject to multiple environmental laws, regulations, and permits which afford the essential features a high level of baseline protections. Despite these protections, uncertainty remains regarding the true extent of the impacts that some activities may have on the essential features, and economic impacts of the designation may not be fully realized. Because these economic impacts are uncertain, we have no reliable means with which to balance them against the benefits of designation. However, we considered the quantified impacts and found that the highest estimated annual economic cost associated with the designation of Hawaiian monk seal critical habitat is \$116,000 annually for a large unit in the MHI. Estimated impacts of most other units in the MHI are below or well below \$100,000, and in the NWHI portion of the chain impacts are expected to be less than \$1,100. Typically, to be considered "high," an economic value would need to be above several million dollars (sometimes tens of millions), and "medium" may fall between several hundred thousand and millions of

dollars. Accordingly, we consider the economic costs associated with this designation to be “low” economic impact.

### **Exclusions Based on Economics**

As discussed in the *Determine the Benefits of the Designation* section (above), the conservation values of these specific areas were determined to be medium to high, because the areas identified provide essential features, which reflect the ecology of the species, and support the independent sub-populations of monk seals necessary to safeguard this population against events of random decline (NMFS, 2007). Because all units identified for Hawaiian monk seal critical habitat have high to medium conservation value, and because the economic impacts associated with designation is expected to be low in all identified areas, we find that the benefits of designation outweigh the benefits of exclusion, and no areas are appropriate for exclusion.

### **Exclusions Based on National Security**

The Secretary must consider possible impacts on national security when determining areas to designate as critical habitat. In developing the 2011 proposed revision to Hawaiian monk seal critical habitat we contacted the DOD and the US Coast Guard with information regarding the areas under consideration for the revision to Hawaiian monk seal critical habitat, and requested they identify areas they own or control which may overlap with the areas under consideration. They were also asked to identify if those areas of overlap are subject to an INRMP, or if NMFS should consider any particular area for exclusion from critical habitat based on the impacts to national security. The U.S. Navy and U.S. Marine Corps (USMC) identified 13 sites where national security impacts may exist as a result of a critical habitat designation. The Navy and USMC provided information regarding the activities that take place in each area and they assessed the potential for a critical habitat designation to adversely affect their ability to conduct operations, tests, training, and other essential national security activities. The possible impacts to national security summarized from both groups included restraints and constraints on military operations, training, research and development; and preparedness vital for combat operations around the world. In 2011, NMFS proposed 5 of the 13 areas for exclusion based on national security impacts (76 FR 32026; June 2, 2011).

We received comments on the 2011 proposed rule (76 FR 32026; June 2, 2011) from the U.S. Navy requesting that three areas be reconsidered for national security exclusion, and the U.S. Army requesting that one new area be excluded from the 2011 proposal due to national security impacts. However, as a result of the revisions to the essential features and the size of the specific areas identified in the Biological Report (NMFS, 2014), the area identified by the U.S. Army does not overlap with areas meeting the definition of Hawaiian monk seal critical habitat. Accordingly, since the area is not included as critical habitat, we do not address the Army’s request for exclusion. Further, since 2011, the three areas requested for reconsideration by the Navy, which were previously considered for national security impacts, are now precluded from designation (see **Certain Military Lands are Precluded from Designation section**), because the areas

are subject to INRMPs that NMFS has determined provide a benefit to Hawaiian monk seals. In conclusion, we have considered the national security impacts for 10 sites (Table 2) that overlap with the areas under consideration for the final designation. These 10 areas were all considered for exclusion for the 2011 proposed rule; however, we have re-evaluated these requests for exclusion to consider information presented in public comments, as well as to consider the revisions in the size of the designation as originally proposed as it relates to the area under consideration for exclusion.

**Table 2. Areas considered for National Security Exclusion**

Particular Areas Considered for National Security Exclusion		Approximate size of Particular Area	Overlap of Specific Area	Approximate size of Specific Area
1	Kaula Island and the 3-mile danger zone	14 mi <sup>2</sup> (37 km <sup>2</sup> )	Area 11 - Kaula	26 mi <sup>2</sup> (66 km <sup>2</sup> )
2	Niihau	115 <sup>+</sup> mi <sup>2</sup> (298 <sup>+</sup> km <sup>2</sup> )	Area 12 - Niihau	115 mi <sup>2</sup> (298 km <sup>2</sup> )
3	Kingfisher Underwater Training Area off of Niihau	2 mi <sup>2</sup> (4 km <sup>2</sup> )	Area 12 - Niihau	215 mi <sup>2</sup> (557 km <sup>2</sup> )
4	Pacific Missile Range Facility offshore areas (overlap areas include BARSTUR, SWTR, and PMRF restricted area)	58 mi <sup>2</sup> (149 km <sup>2</sup> )	Area 13 - Kauai	215 mi <sup>2</sup> (557 km <sup>2</sup> )
5	Puuloa Underwater Training Range	10 mi <sup>2</sup> (25 km <sup>2</sup> )	Area 14 - Oahu	363 mi <sup>2</sup> (940 km <sup>2</sup> )
6	Anchorage B, C, D	1 mi <sup>2</sup> (2.6 km <sup>2</sup> )	Area 14 - Oahu	363 mi <sup>2</sup> (940 km <sup>2</sup> )
7	Fleet Operational Readiness Accuracy Check Site (FORACS)	9 mi <sup>2</sup> (22 km <sup>2</sup> )	Area 14 - Oahu	363 mi <sup>2</sup> (940 km <sup>2</sup> )
8	Marine Corps Training Area Bellows Offshore	dimensions not provided	Area 14 - Oahu	363 mi <sup>2</sup> (940 km <sup>2</sup> )
9	Shallow Water Minefield Sonar Training Range off Kahoolawe	4 mi <sup>2</sup> (11 km <sup>2</sup> )	Area 15 - Maui Nui	1,445 mi <sup>2</sup> (3,742 km <sup>2</sup> )
10	Kahoolawe Danger Zone	49 mi <sup>2</sup> (127 km <sup>2</sup> )	Area 15 - Maui Nui	1,445 mi <sup>2</sup> (3,742 km <sup>2</sup> )

We corresponded with DOD representatives throughout the analysis of the impacts on national security to delineate the particular areas requested for exclusion, and to identify the potential impacts on national security that may occur if the areas are designated as critical habitat. Unlike the economic impact analysis, we are unable to quantify the

impacts on national security in monetary terms or in terms of some other quantitative measure. Instead, we based our analysis on an evaluation of the following factors for each particular area:

1. Relative proportion of area requested for exclusion in consideration with current monk seal use (including the number of animals using the area, how that area is used and relative importance to the population);
2. likelihood that DOD activities will destroy or adversely modify habitat within the area;
3. intensity of use of the area by DOD;
4. likelihood of consultation with the DOD in this area and ESA consultation history;
5. level of protection provided by one or more DOD existing safeguards; and
6. likelihood that other actions (with a federal nexus) may occur in the area, making actions no longer subject to critical habitat provisions if the area was excluded from the designation.

Information gathered regarding each of the identified factors found to be in support of exclusion for national security was then weighed against the benefit of designation. Table 3 (below) identifies the four areas which we recommend for exclusion based on national security impacts. **Error! Reference source not found.**) of this report provides more information regarding our analysis and determination for each area. See Appendix **BError! Reference source not found.**, which contains figures 1-19 for the maps depicting the revised designation of critical habitat for the Hawaiian monk seal and which identifies areas recommended for national security exclusion.

**Table 3. DOD particular areas proposed for National Security Exclusion**

DOD Particular Areas Proposed for Exclusion	Specific Area
Kingfisher Underwater Training Area off of Niihau	Area 12 - Niihau
Pacific Missile Range Facility Offshore areas (overlap areas include the SWTR, and PMRF restricted area)	Area 13 - Kauai
Puuloa Underwater Training Range	Area 14 - Oahu
Shallow Water Minefield Sonar Training Range off Kahoolawe	Area 15 - Maui Nui

### **Consideration of Exclusion for Other Relevant Impacts**

Section 4(b)(2) of the Act also allows for the consideration of other relevant impacts associated with the designation of critical habitat. We received comments following the 90-day finding indicating that both the National Park Service (NPS) and the USFWS anticipate impacts as a result of the designation. We contacted both agencies in preparation of the 2011 proposed rule with information regarding the areas under consideration for Hawaiian monk seal critical habitat and asked to identify relevant impacts to their agencies, as well as to identify measures or protections that were in place to protect the Hawaiian monk seal or the essential features. The NPS concluded that a request for exclusion was not necessary after corresponding with NMFS regarding

impacts of the designation. The USFWS requested exclusion for Sand Island at Midway Islands. USFWS identified economic and administrative burdens from the proposed designation and stated that the designation is an unnecessary burden since the Papahānaumokuākea Marine National Monument already afforded the Hawaiian monk seal the highest levels of protection and conservation. The USFWS did not quantify economic burdens but did identify that administrative requirements would detract from staff time. Similar to the National Security Analysis, we did not quantify the impacts on the USFWS in monetary terms or in terms of some other quantitative measure. Instead, we based our analysis on an evaluation of the following factors for Sand Island:

1. Relative proportion of area requested for exclusion in consideration with current monk seal use (including the number of animals using the area, how that area is used and relative importance to the population);
2. likelihood that activities will destroy or adversely modify habitat within the areal
3. intensity of use of the area;
4. likelihood of consultation with the Federal Agency in this area and ESA consultation history;
5. level of protection provided by one or more existing safeguards; and
6. likelihood that other actions may occur in the area, making actions no longer subject to critical habitat provisions if the area was excluded from the proposed designation.

In consideration of critical habitat for the proposed rule, we recognized that Sand Island at Midway Islands provides important habitat with the essential features of significant haul-out areas and preferred pupping areas in the northwest end of the NWHI chain. USFWS noted that their management plans provide protections for Hawaiian monk seals from disturbance and revealed no additional plans to encroach on haul-out areas. In considering the above-listed factors we were not able to identify any additional activities that the USFWS wished to engage in at this site that would require management measures or modifications as a result of the designation. Consultation will continue to be necessary for activities occurring on site that may affect listed species (i.e., to ensure that actions do not jeopardize the continued existence of the listed species), but we were unable to identify additional burdens on the agency resulting from consultation on critical habitat without the identification of activities that may generate impacts to the essential features. Accordingly, we found in the proposed rule that the benefits of designation of Sand Island outweighed the benefits of exclusion and Sand Island at Midway Islands was not proposed for exclusion in the proposed revision (76 FR 32026; June 2, 2011).

We received comments from USFWS on the 2011 proposed designation, which identified hardened shorelines and structures, besides Midway harbor, located in and around Sand Island that do not meet the definition of critical habitat. Among the areas identified, the USFWS also noted that the “bulky dump landfill” requires repairs to the failing cap and that a critical habitat designation would create unnecessary delays to this action.

We agree with the USFWS that the 2011 proposed rule did not identify all areas at Midway Atoll which have structures or hardened shorelines as not meeting the definition

of critical habitat. This was an oversight in describing the specific areas across the NWHI because there are structures, manmade areas, and hardened shorelines in several specific areas of the NWHI (e.g., the runway, buildings, and retaining walls at Tern Island, French Frigate Shoals) that do not support the essential features for Hawaiian monk seals and do not meet the definition of critical habitat. The final rule correctly identifies that structures and hardened shorelines found within the boundaries of the specific areas of the NWHI and the MHI do not support monk seal essential features, and because they do not meet the definition of critical habitat, they are not included in the final critical habitat designation.

For the final designation due to the refinements made to the designation and the additional comments received from USFWS, we did re-evaluate the benefit of excluding Sand Island. However, with no new information regarding the extent to which consultations would produce an outcome that has additional economic or other impacts, we are unable to conclude that the benefits of exclusion outweigh the benefits of designation. Accordingly, we do not exercise our discretion to exclude Sand Island from the final designation.

## References

### References Cited

Cahoon, M., 2011. The Foraging Ecology of Monk Seals in the Main Hawaiian Islands, Animal Science, University of Hawaii, Honolulu, Hawaii, p. 182.

Carretta, J.V., et al., 2013. U.S. Pacific Marine Mammal Stock Assessments: 2013 In: U.S. Department of Commerce, N.O.A.A., National Marine Fisheries Service (Ed.), Southwest Fisheries Science Center.

Center for Biological Diversity, Kahea, Ocean Conservancy, 2008. Petition to Revise Critical Habitat for the Hawaiian Monk Seal (*Monachus schauinslandi*) under the Endangered Species Act.

Industrial Economics 2014. Draft Economic Analysis of Critical Habitat Designation for the Hawaiian Monk Seal., Prepared for National Marine Fisheries Service.

NMFS, 2001. May 31, 1001, letter from Rebecca Lent, Regional Administrator, Southwest Region, and attachment "Johnston Atoll and Range of the Hawaiian Monk Seal.". 8 p.

NMFS, 2007. Recovery Plan for the Hawaiian Monk Seal (*Monachus schauinslandi*) Revision, NMFS, Office of Protected Resources, Silver Spring, MD., p. 165 pp.

NMFS, 2014. Revision of Critical Habitat for Hawaiian monk seals; Draft Biological Report, NMFS Pacific Islands Region Protected Resources Division, Honolulu, HI.

Parrish, F.A., et al., 2002. Hawaiian monk seals (*Monachus schauinslandi*) foraging in deep-water coral beds. Marine Mammal Science 18, 244-258.

Sprague, R.S., et al., 2013. Estimation of Hawaiian monk seal prey consumption in relation to ecosystem biomass and overlap with fisheries in the main Hawaiian Islands, In: U.S. Department of Commerce, NOAA, National Marine Fisheries Service (Ed.), Pacific Islands Fisheries Science Center, Honolulu, HI.

Stewart, B.S., et al., 2006. Foraging biogeography of Hawaiian monk seals in the Northwestern Hawaiian Islands. Atoll Research Bulletin 543, 131-146.

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

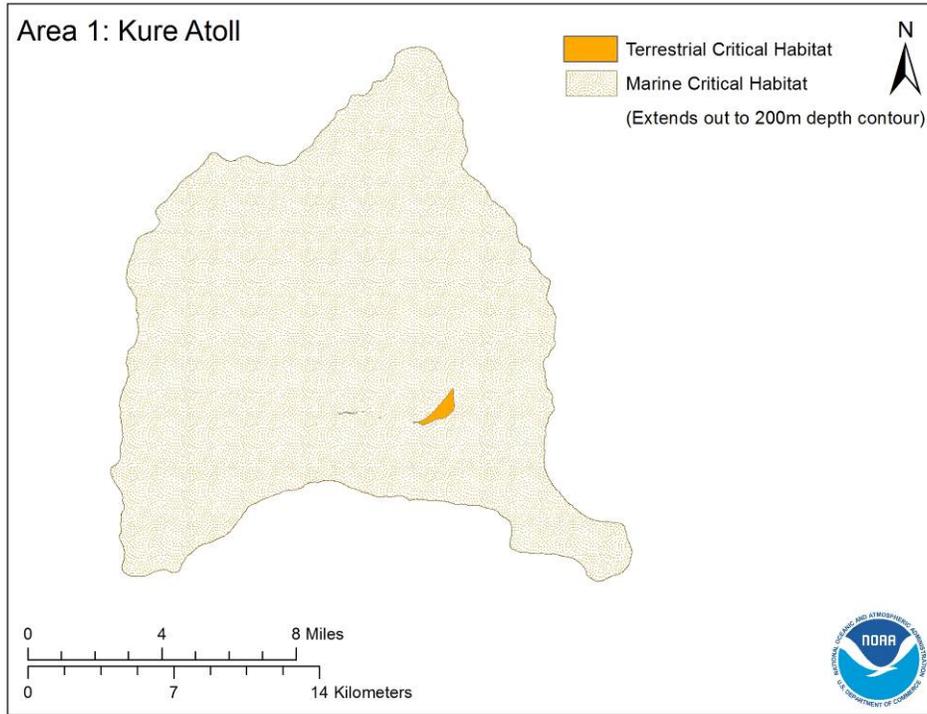


Figure 1. Kure Atoll

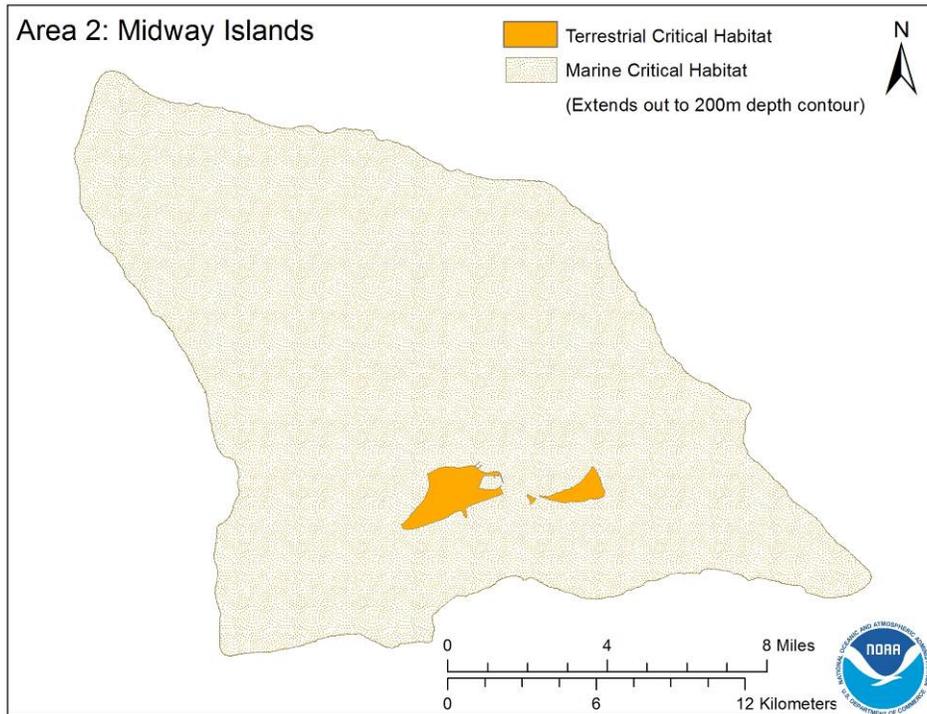
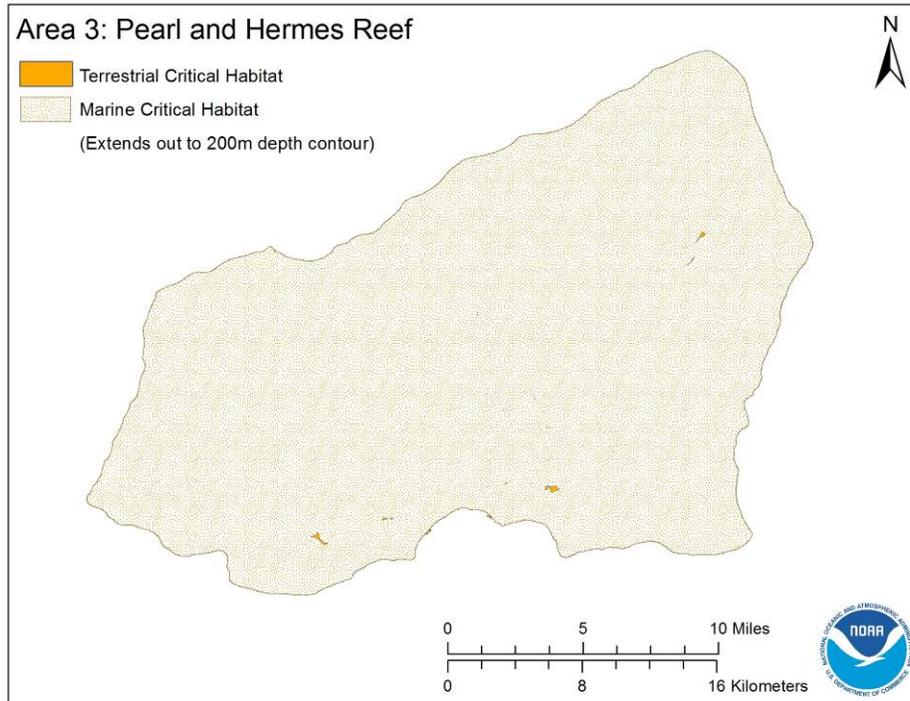
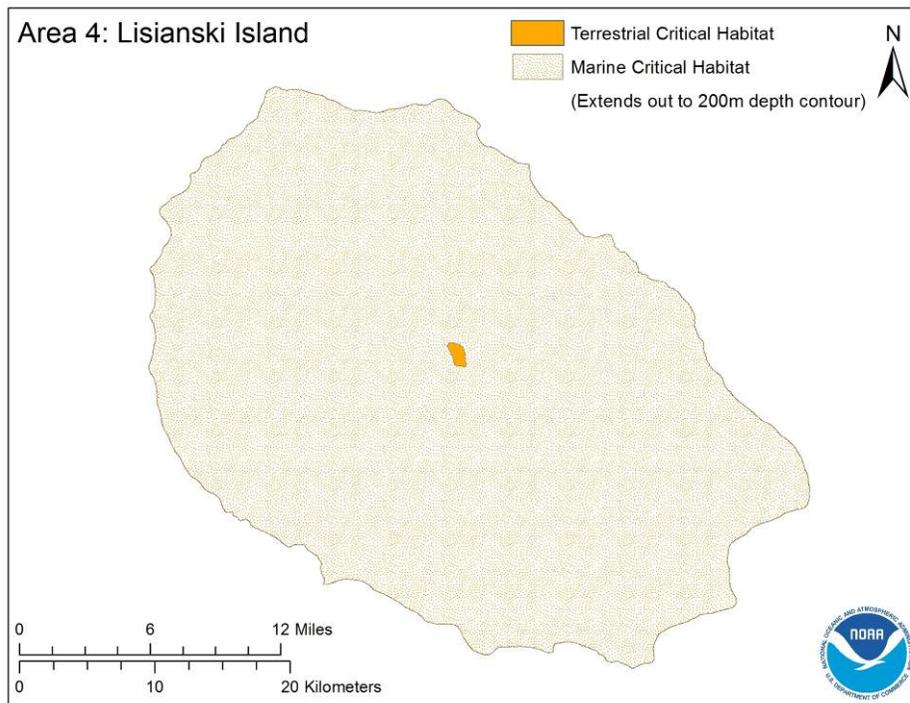


Figure 2. Midway Islands

Appendix B. Hawaiian Monk Seal Critical Habitat Maps



**Figure 3. Pearl and Hermes Reef**



**Figure 4. Lisianski Island**

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

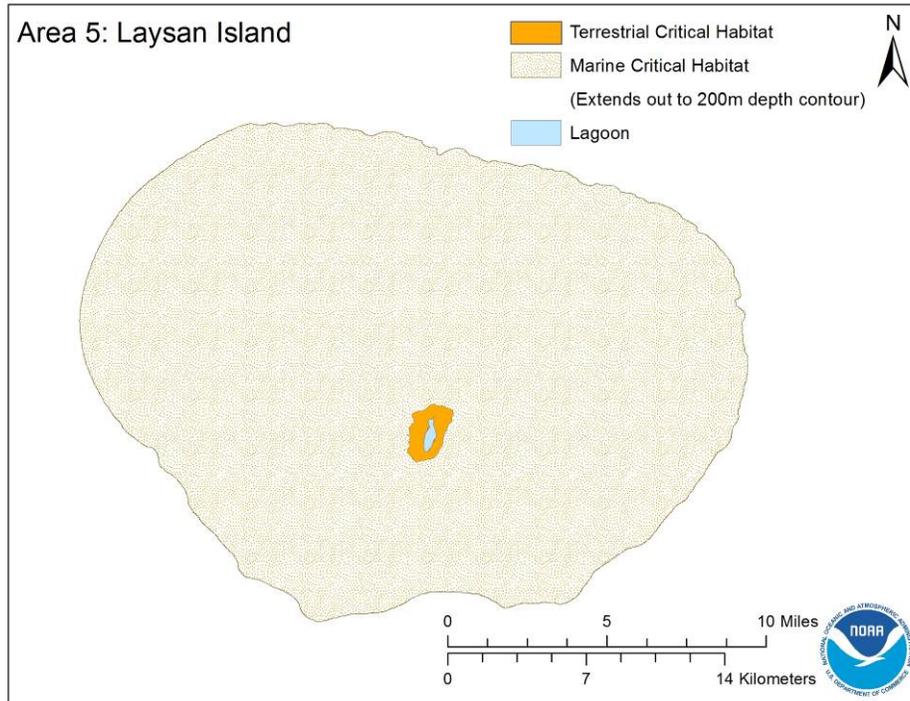


Figure 5. Laysan Island

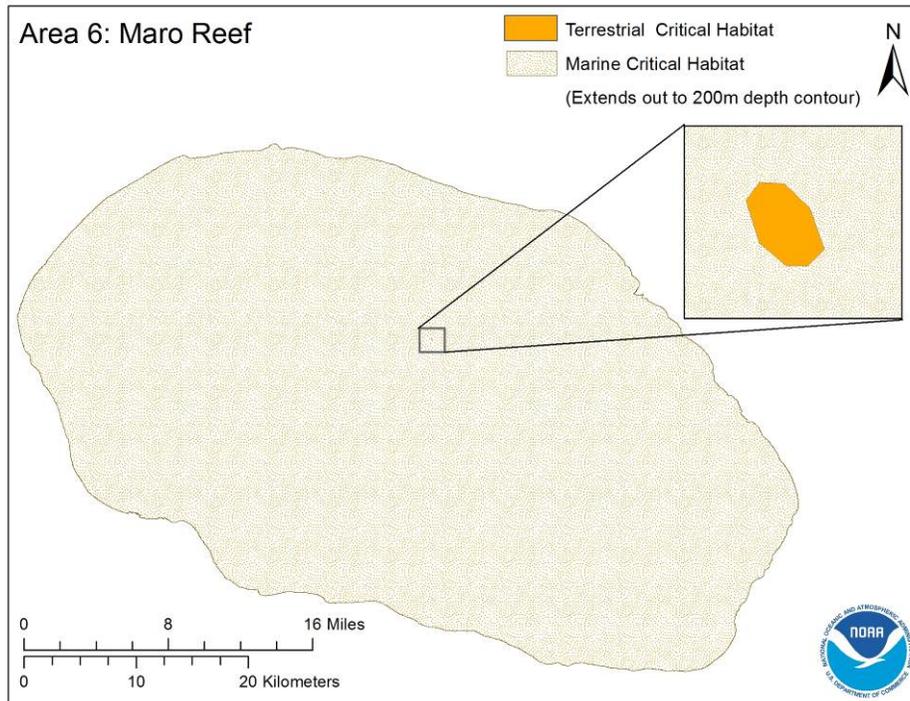


Figure 6. Maro Reef

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

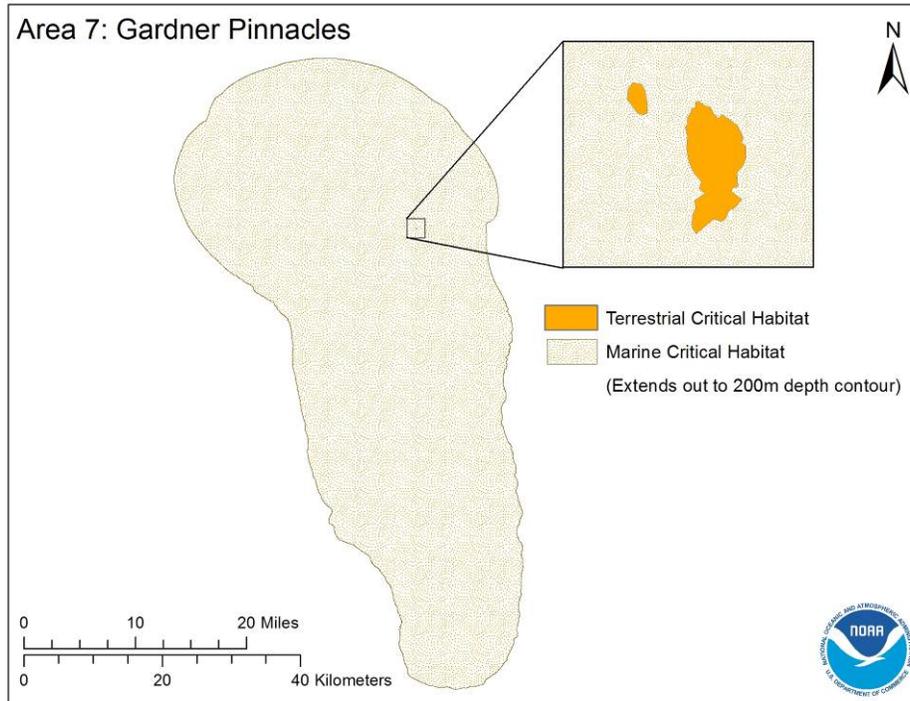


Figure 7. Gardner Pinnacles

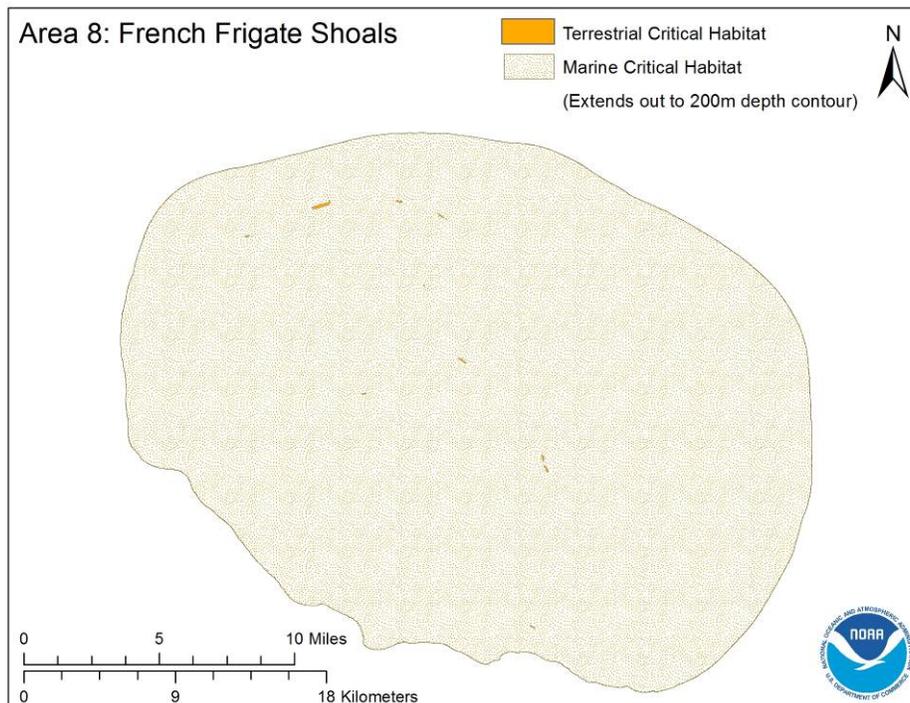
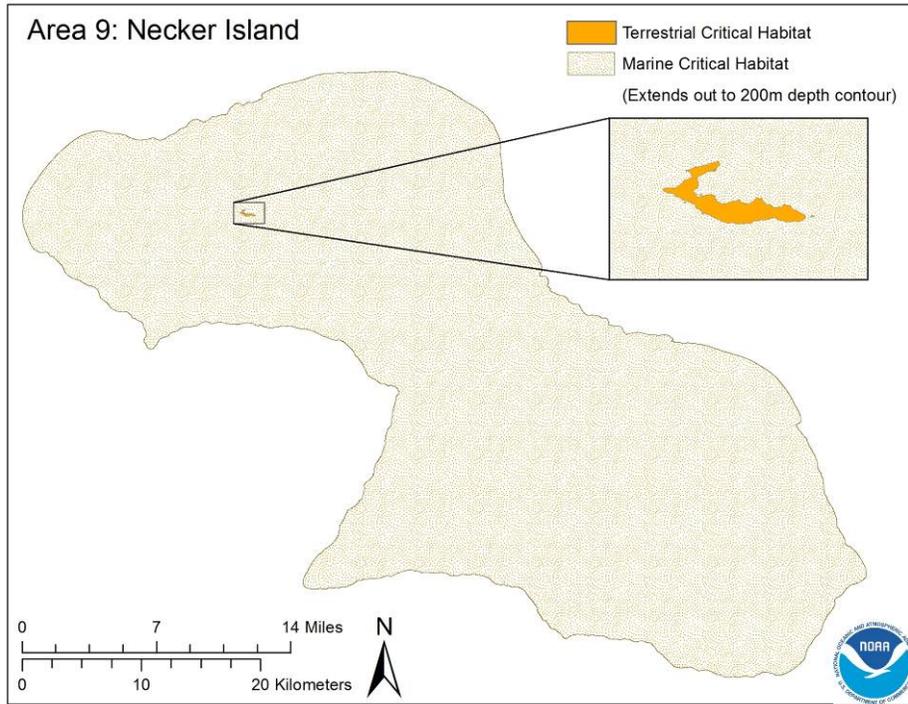
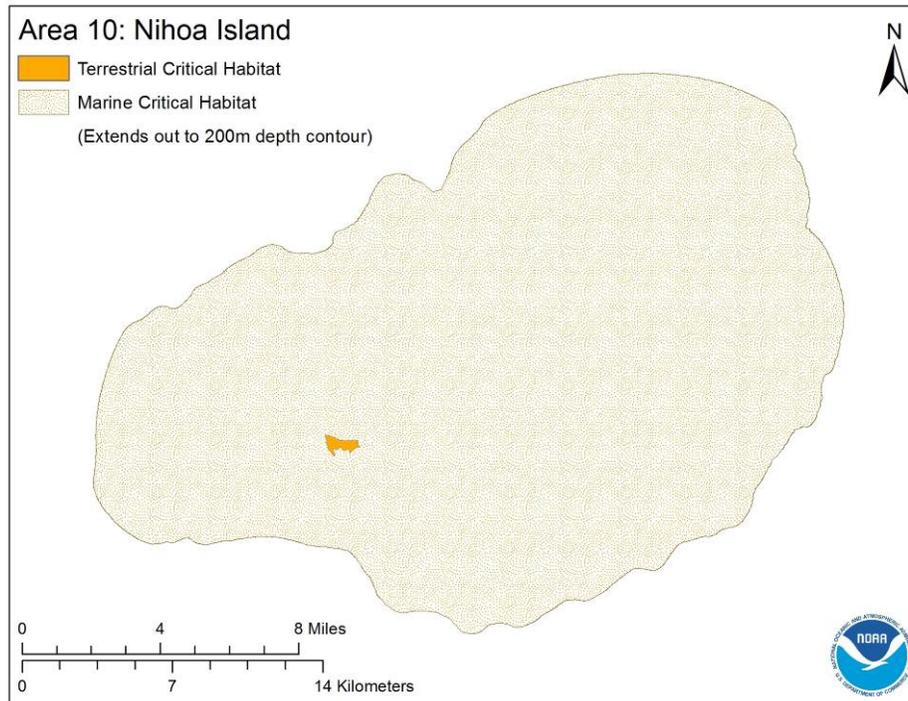


Figure 8. French Frigate Shoals

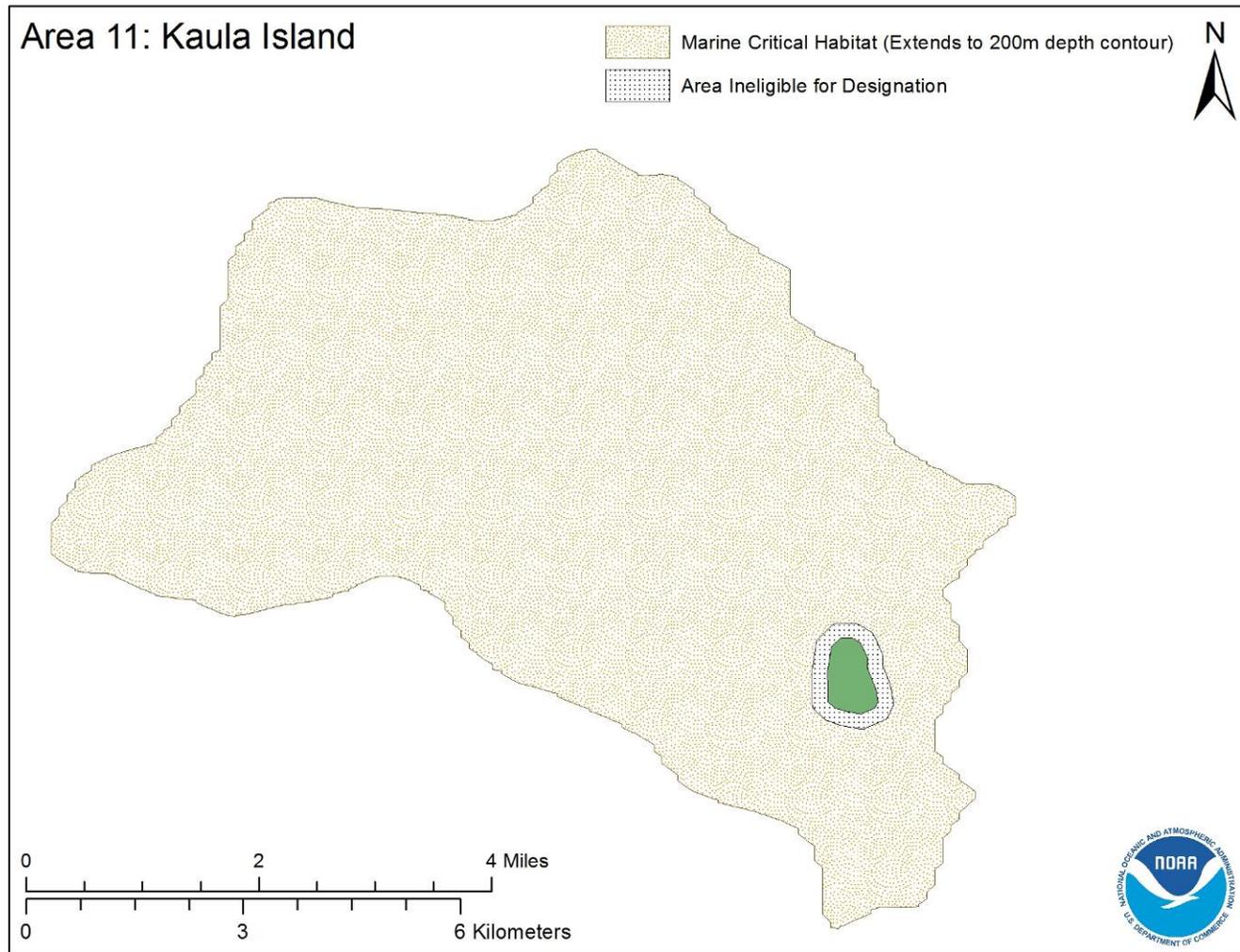
Appendix B. Hawaiian Monk Seal Critical Habitat Maps



**Figure 9. Necker Island**



**Figure 10. Nihoa Island**



**Figure 11. Kaula Island**

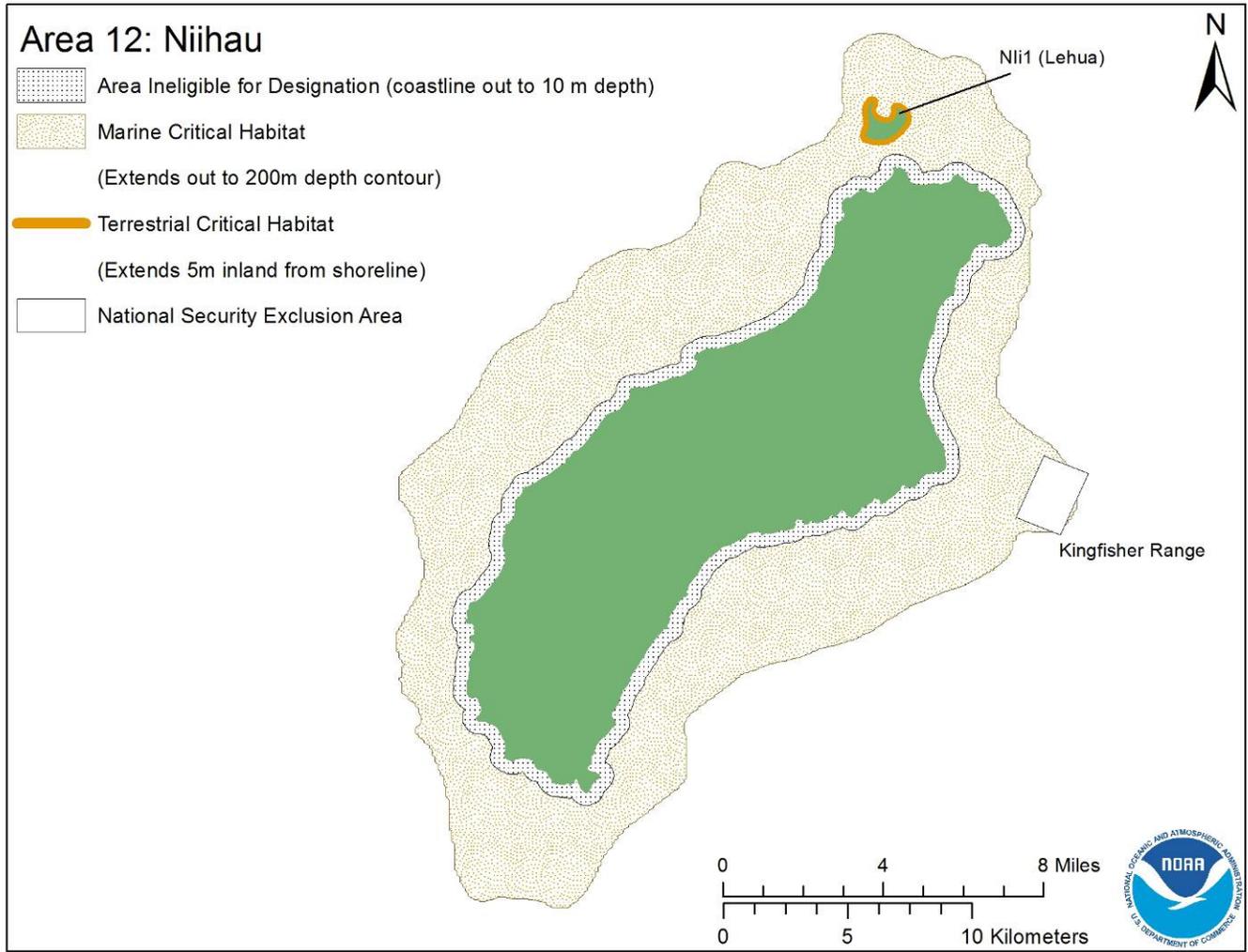


Figure 12. Niihau

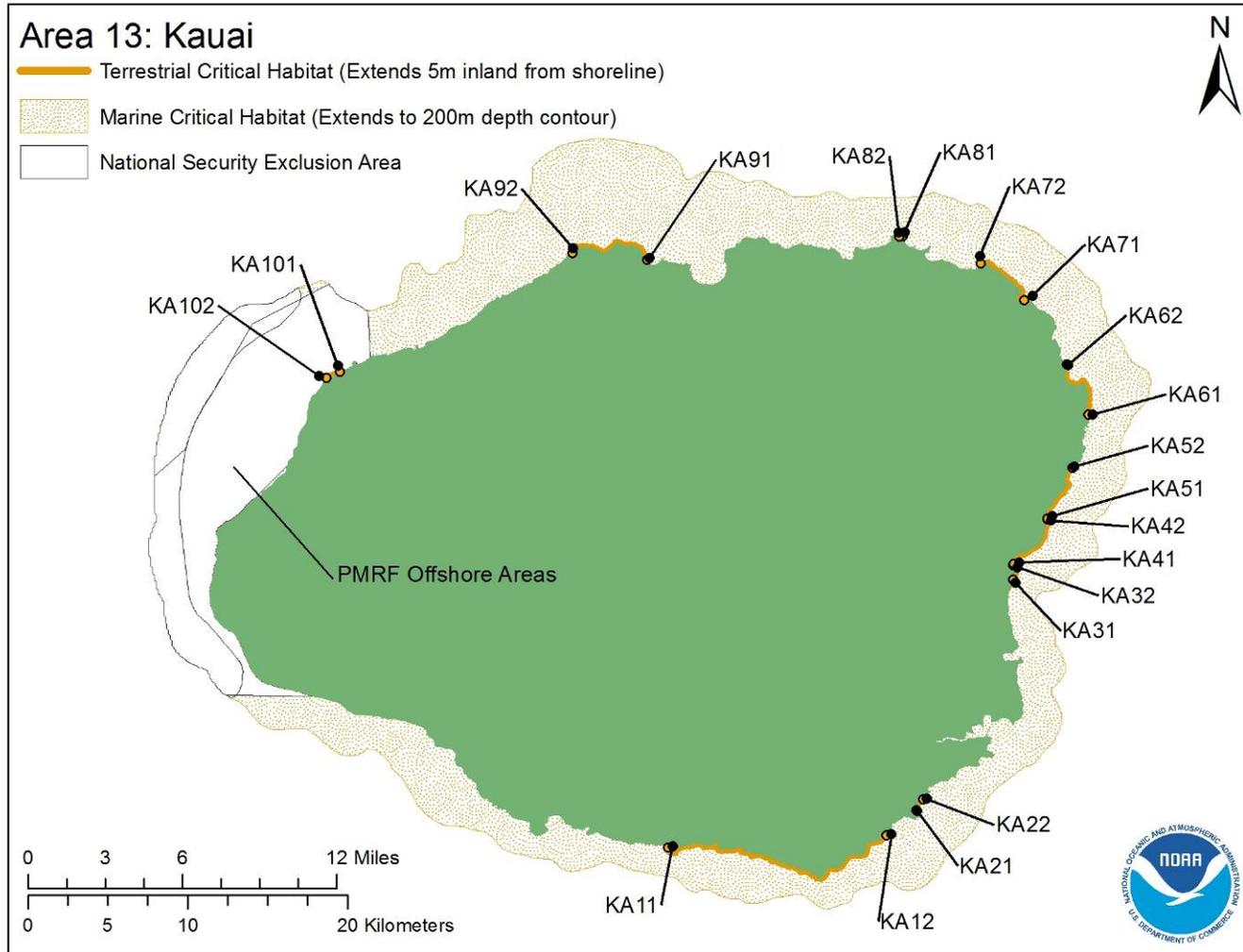


Figure 13. Kauai

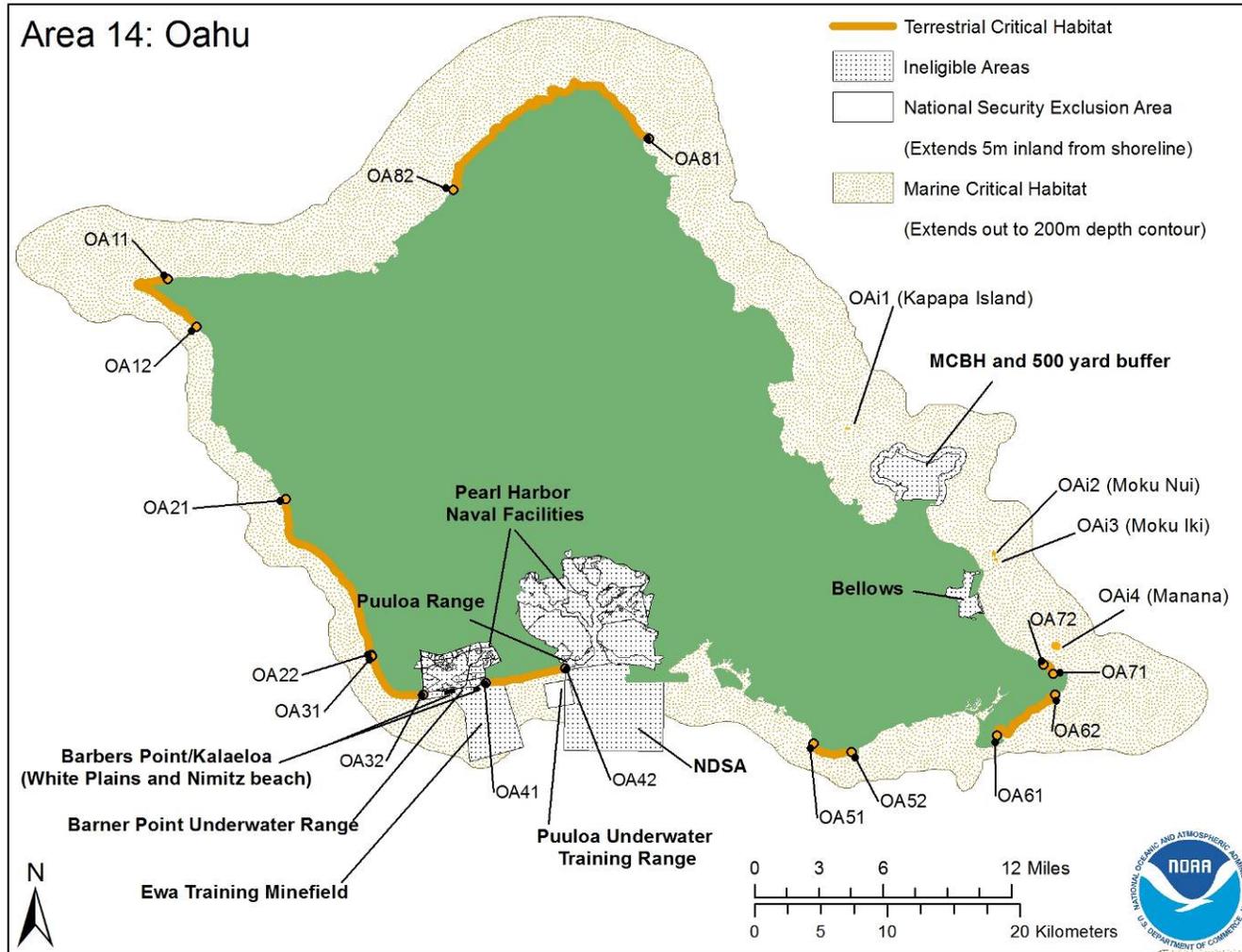


Figure 14. Oahu

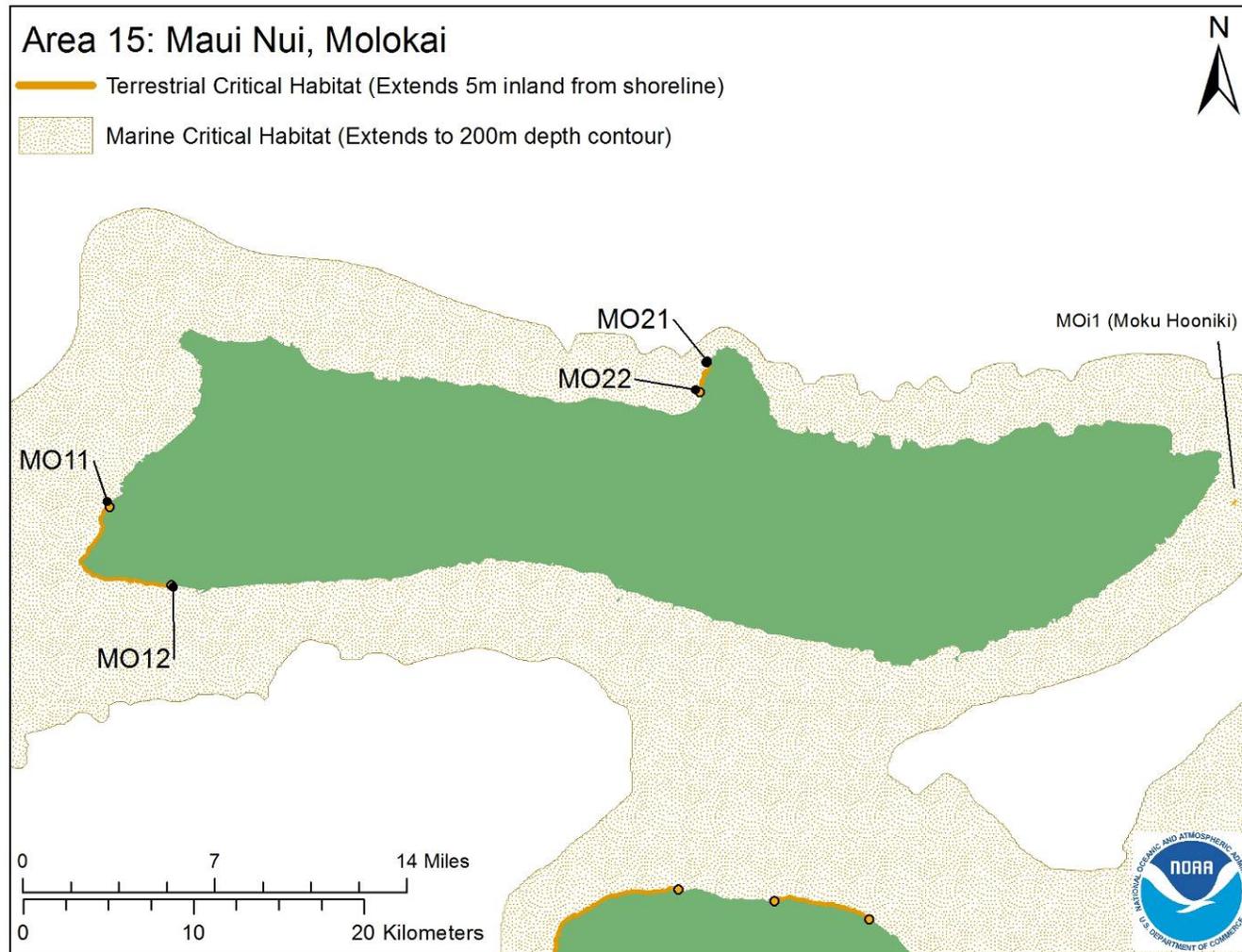


Figure 15. Maui Nui, Molokai

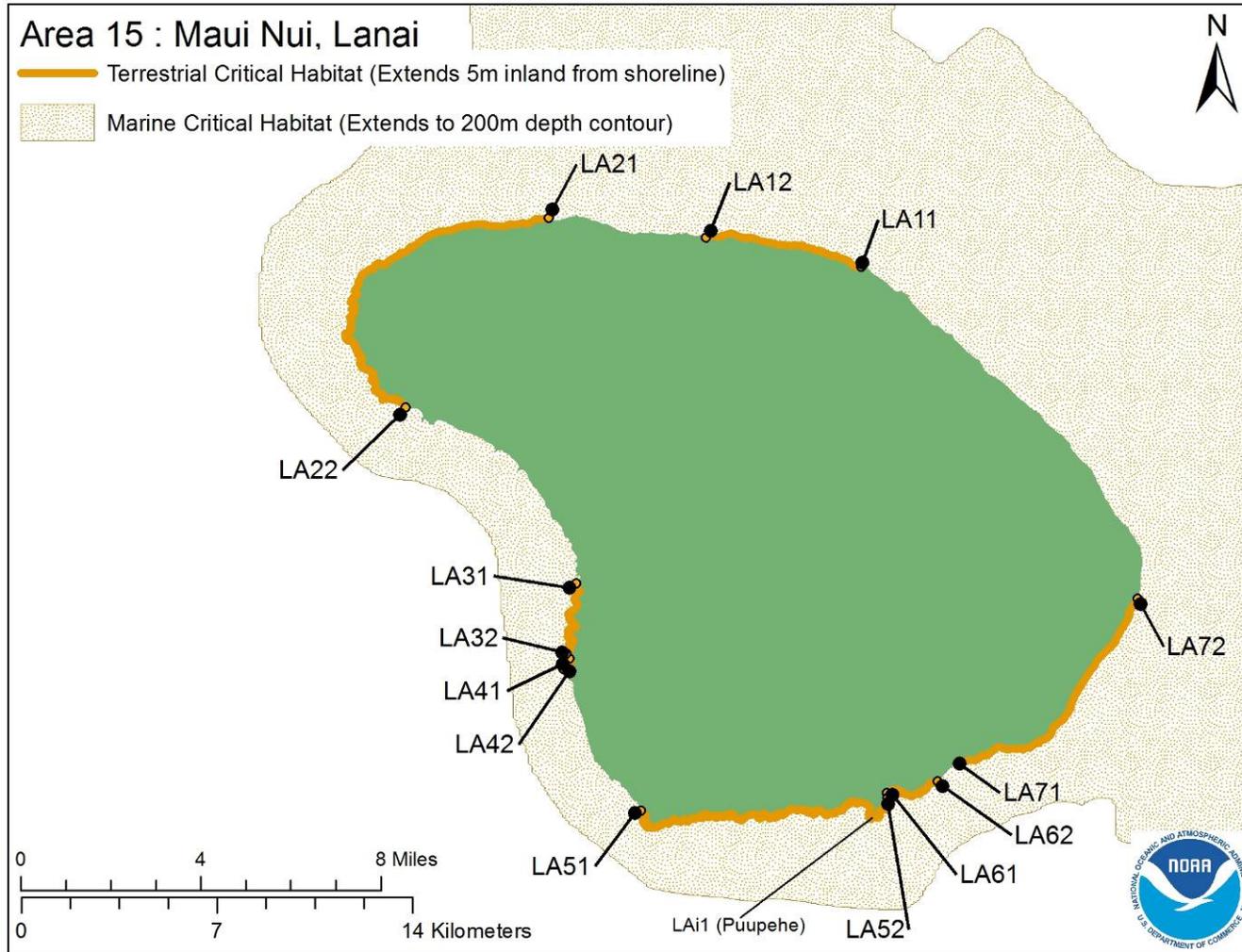


Figure 16. Maui Nui, Lanai

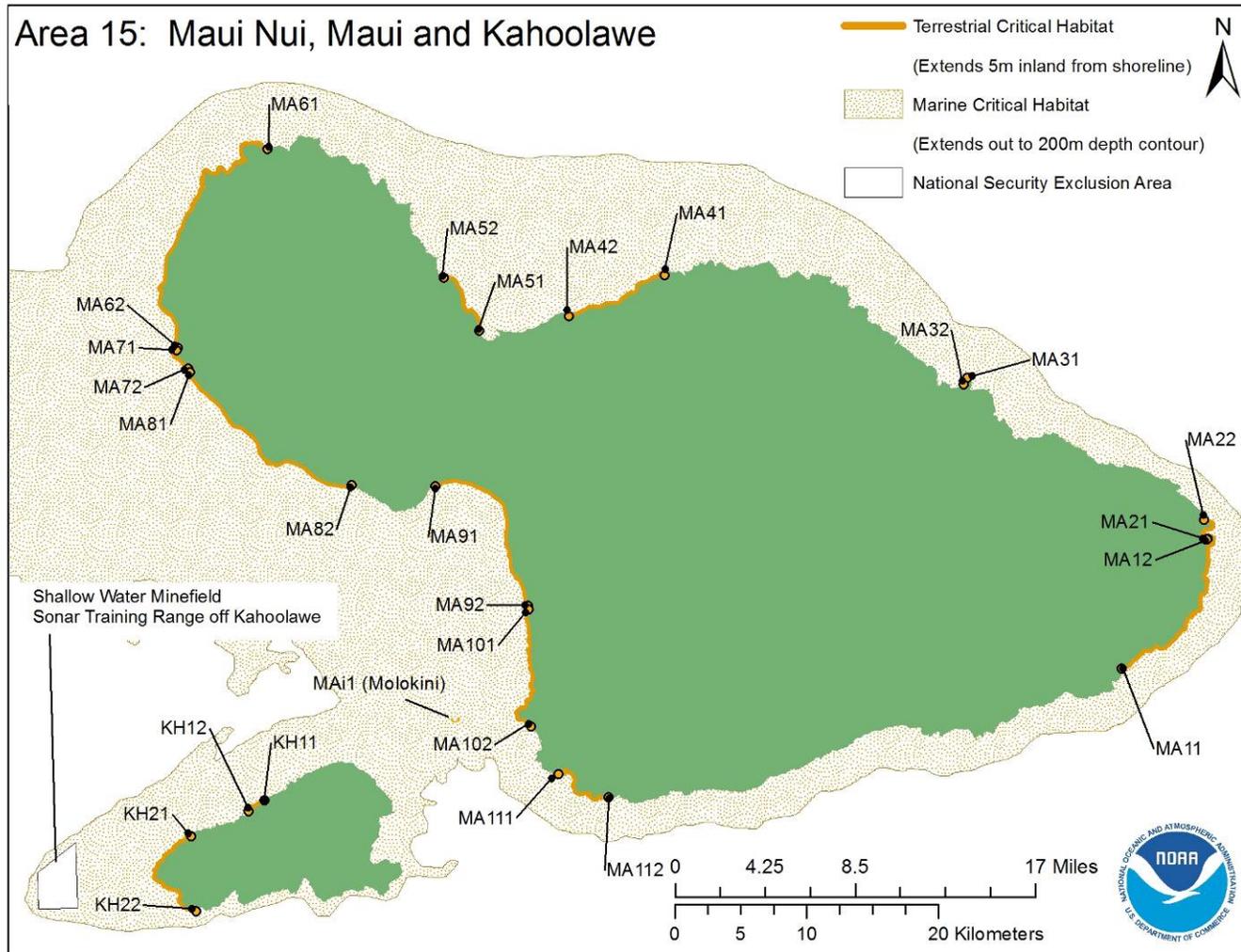


Figure 17. Maui Nui, Maui and Kahoolawe

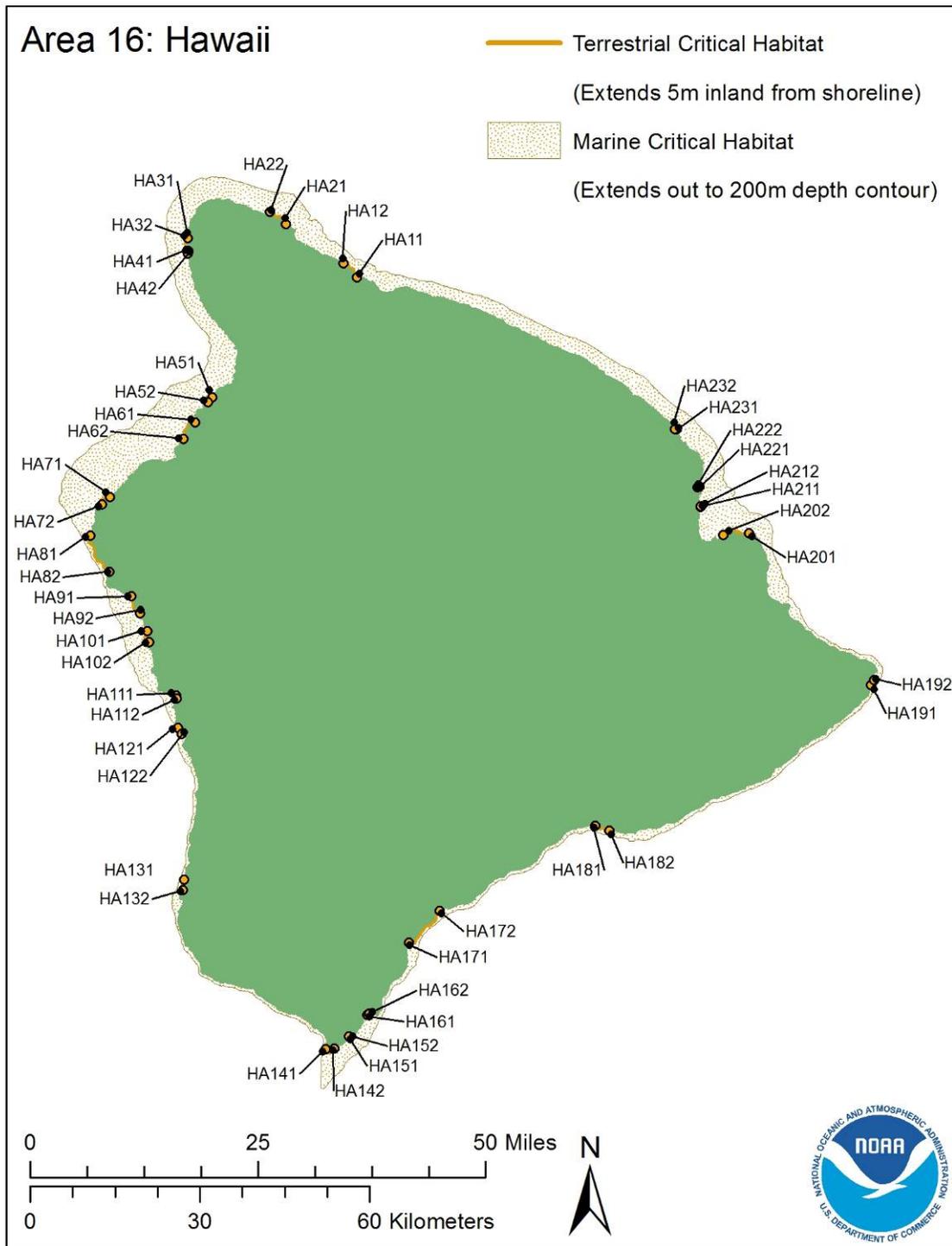


Figure 18. Hawaii

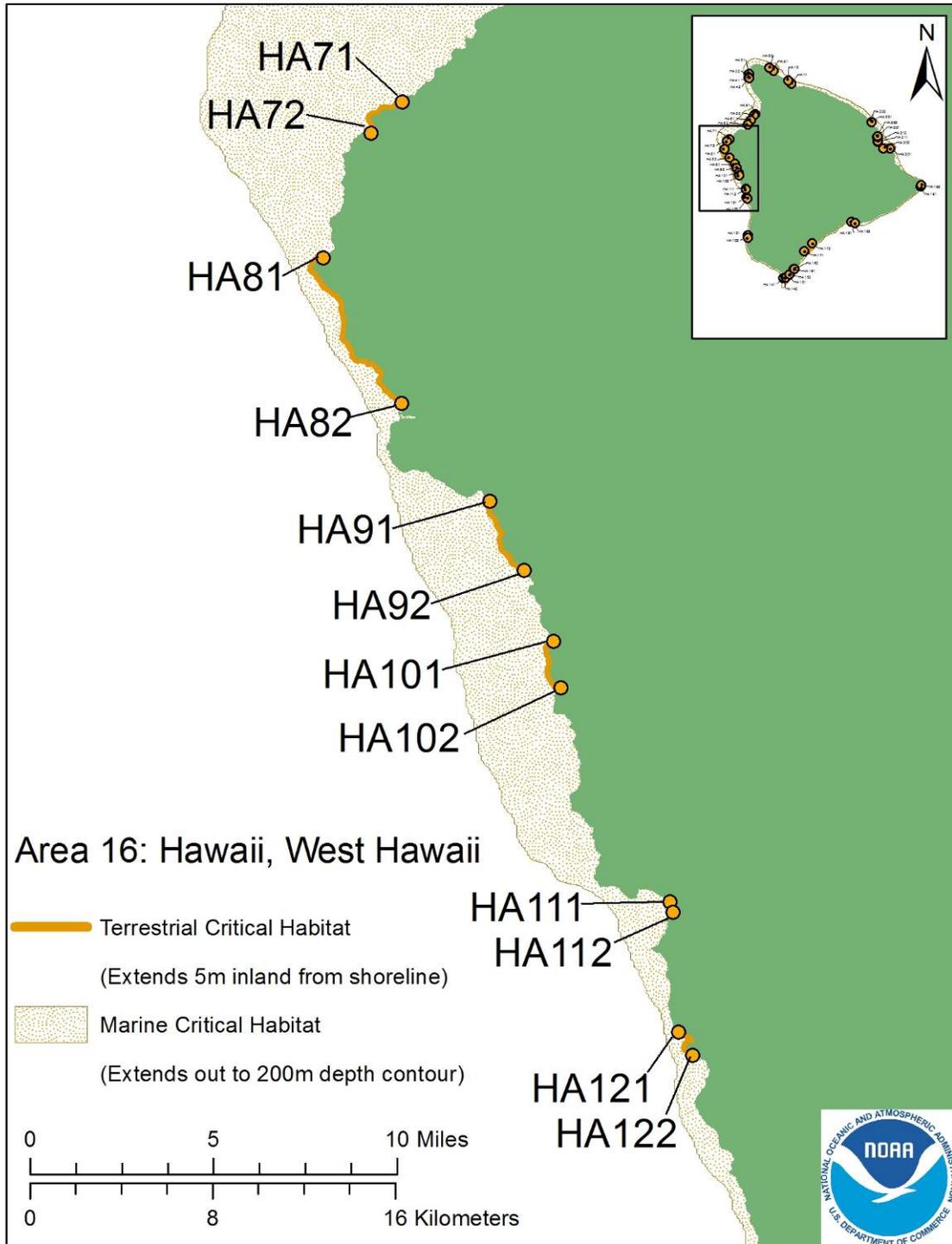


Figure 19. Hawaii, West Hawaii

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

**Table 4. MHI Proposed Hawaiian monk seal Critical Habitat Coastal Habitat Segments.**

<b>Area 13. Kauai Coastal Habitat Points</b>						
<b>Textual Description of Segment</b>	<b>Boundary Point 1</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Boundary Point 2</b>	<b>Latitude</b>	<b>Longitude</b>
Southeast coast of Kauai (Nomilu Fishpond area through Mahaulepu)	KA 11	21°53'08"N	159°31'48"W	KA 12	21°53'34"N	159°24'25"W
Kaweliko Point to Molehu	KA21	21°54'26"N	159°23'26"W	KA22	21°54'48"N	159°23'08"W
Lydgate Park through Wailua canal	KA 31	22°02'11"N	159°20'08"W	KA 32	22°02'41"N	159°20'11"W
Wailua canal through Waikaea canal	KA 41	22°02'45"N	159°20'10"W	KA 42	22°04'14"N	159°18'60"W
Waikaea canal through Kealia	KA 51	22°04'15"N	159°19'01"W	KA 52	22°05'59"N	159°18'08"W
Anahola and Aliomanu areas	KA 61	22°07'46"N	159°17'35"W	KA 62	22°09'28"N	159°18'18"W
Moloaa Bay through Kepuhi Point	KA 71	22°11'38"N	159°19'46"W	KA 72	22°12'52"N	159°21'14"W
Southeast of Kilauea	KA 81	22°13'48"N	159°23'52"W	KA 82	22°13'55"N	159°24'06"W
Wainiha Beach Park through Kee Beach Park	KA 91	22°12'60"N	159°32'30"W	KA 92	22°13'13"N	159°35'01"W
Miloli State Park Beach Area	KA 101	22°09'13"N	159°42'52"W	KA 102	22°08'59"N	159°43'21"W
<b>Area 14. Oahu Coastal Habitat Points</b>						
<b>Textual Description of Segment</b>	<b>Boundary Point 1</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Boundary Point 2</b>	<b>Latitude</b>	<b>Longitude</b>
Keana Point Area	OA 11	21°34'43"N	158°15'37"W	OA 12	21°32'45"N	158°14'25"W
Maili Beach through Kalaeloa Barbers Point Harbor	OA 21	21°25'43"N	158°10'48"W	OA 22	21°19'24"N	158°07'20"W
Kalaeloa Barbers Point Harbor through Kalaeloa Regional Park	OA 31	21°19'18"N	158°07'17"W	OA 32	21°17'45"N	158°05'12"W
East White Plains Beach area through Ewa Beach Park area	OA 41	21°18'13"N	158°02'39"W	OA 42	21°18'50"N	157°59'25"W
Diamond Head area	OA 51	21° 15' 27"N	157°49'05"W	OA 52	21°15'24"N	157°47'45"W
Hanauma Bay through Sandy Beach	OA 61	21°16'05"N	157°41'50"W	OA 62	21°17'45"N	157°39'27"W
Makapuu Beach Area	OA 71	21°18'36"N	157°39'31"W	OA 72	21°18'58"N	157°39'55"W
Lori Point through Waimea Bay	OA 81	21°40'26"N	157°56'00"W	OA 82	21° 38' 18"N	158°03'56"W
Kapapa Island (Kaneohe Bay)	OAI1	21°28'36"N	157°47'55"W			
Mokulua - Moku Nui	OAI2	21°23'30"N	157°41'56"W			
Mokulua - Moku Iki	OAI3	21°23'16"N	157°41'52"W			
Manana (Rabbit Island)	OAI4	21°19'44"N	157°39'24"W			

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

Area 15. Molokai Coastal Habitat Points						
Textual Description of Segment	Boundary Point 1	Latitude	Longitude	Boundary Point 2	Latitude	Longitude
Laau Point Area	MO 11	21°07'49"N	157°17'47" W	MO 12	21°05'21"N	157°15'50" W
Kalaupapa Area	MO 21	21°12'33"N	156°58'52" W	MO 22	21°11'28"N	156°59'06" W
Moku Hooniki	MOi1	21°07'59"N	156°42'10" W			
Area 15. Lanai Coastal Habitat Points						
Textual Description of Segment	Boundary Point 1	Latitude	Longitude	Boundary Point 2	Latitude	Longitude
Shipwreck Beach Area	LA 11	20°54'45"N	156°53'45" W	LA 12	20°55'20"N	156°56'45" W
Northwest Lanai (Including Polihua Beach)	LA 21	20°55'42"N	156°59'47" W	LA 22	20°52'02"N	157°02'33" W
North of Kamalapa Harbor	LA 31	20°48'38"N	156°59'15" W	LA 32	20°47'17"N	156°59'24" W
Kamalapa Harbor through Kaholo Pali	LA 41	20°47'13"N	156°59'27" W	LA 42	20°46'59"N	156°59'31" W
Kaholo Pali through Manele Harbor	LA 51	20°44'13"N	156°58'01" W	LA 52	20°44'29"N	156°53'15" W
Manele Harbor through Nakalahale Cliff	LA 61	20°44'35"N	156°53'14" W	LA 62	20°44'49"N	156°52'16" W
Nakalahale Cliff through Lopa Beach	LA 71	20°45'07"N	156°51'50" W	LA 72	20°48'21"N	156°48'24" W
Puupehe	LAi1	20°44'04"N	156°53'25" W			
Area 15. Kahoolawe Coastal Habitat Points						
Textual Description of Segment	Boundary Point 1	Latitude	Longitude	Boundary Point 2	Latitude	Longitude
Mid-North coast (including Kaukamoku and Ahupuiki)	KH 11	20°34'36"N	156°37'36" W	KH 12	20°34'10"N	156°38'15" W
Eastern coast of Kahoolawe (Honokoa through Sailer's Hat)	KH 21	20°33'08"N	156°40'35" W	KH 22	20°30'04"N	156°40'23" W
Area 15. Maui Coastal Habitat Points						
Textual Description of Segment	Boundary Point 1	Latitude	Longitude	Boundary Point 2	Latitude	Longitude
and Ramp	MA 11	20°40'02"N	156°02'27" W	MA 12	20°45'21"N	155°58'54" W
Kainalimu Bay	MA 21	20°45'20"N	155°58'56" W	MA 22	20°46'08"N	155°59'04" W
Keanae Peninsula to Nauailua Bay	MA 31	20°51'56"N	156°08'46" W	MA 32	20°51'41"N	156°08'55" W
Maliko Bay through Papaula Point	MA 41	20°56'11"N	156°21'11" W	MA 42	20°54'30"N	156°25'06" W
Waihee Beach Park	MA 51	20°53'53"N	156°28'47" W	MA 52	20°56'04"N	156°30'15" W
Wharf	MA 61	21°01'20"N	156°37'28" W	MA 62	20°53'09"N	156°41'10" W
to Lahaina Harbor	MA 71	20°53'04"N	156°41'12" W	MA 72	20°52'26"N	156°40'43" W
through to Papalaua	MA 81	20°52'12"N	156°40'39" W	MA 82	20°47'34"N	156°34' 00" W
Kihei boat ramp	MA 91	20°47'32"N	156°30'34" W	MA 92	20°42'29"N	156°26'46" W
Ahihi Bay	MA 101	20°42'27"N	156°26'47" W	MA 102	20°37'39"N	156°26'40" W
Point through Pohakueaea Point	MA 111	20°35'43"N	156°25'33" W	MA 112	20°34'45"N	156°23'29" W
Molokini Crater	MAi1	20°37'51"N	156°29'43" W			

Appendix B. Hawaiian Monk Seal Critical Habitat Maps

Area 16. Hawaii Coastal Habitat Points						
Textual Description of Segment	Boundary Point 1	Latitude	Longitude	Boundary Point 2	Latitude	Longitude
Waimanu through Laupahoehoeuui	HA 11	20°08'35"N	155°37'59"W	HA 12	20°09'54"N	155°39'18"W
Keokea Bay through Kauhola Point	HA 21	20°13'39"N	155°44'49"W	HA 22	20°14'44"N	155°46'18"W
Kapaa Beach County Park to Mahukona Harbor	HA 31	20°12'16"N	155°54'06"W	HA 32	20°11'04"N	155°54'05"W
South of Mahukona Harbor	HA 41	20°10'60"N	155°54'03"W	HA 42	20°10'51"N	155°54'07"W
Pauoa Bay to Makaiwa Bay area	HA 51	19°57'03"N	155°51'49"W	HA 52	19°56'38"N	155°52'10"W
Anaehoomalu Bay area through Keawaiki Bay area	HA 61	19°54'42"N	155°53'26"W	HA 62	19°53'09"N	155°54'34"W
Puu Alii Bay Area through Mahaiula Bay	HA 71	19°47'37"N	156°01'33"W	HA 72	19°46'53"N	156°02'18"W
Keahole Point through Kaloko-Honokohau National Historic Park	HA 81	19°43'54"N	156°03'26"W	HA 82	19°40'28"N	156°01'34"W
South of Oneo Bay area through to Holualoa Bay area	HA 91	19°38'10"N	155°59'29"W	HA 92	19°36'31"N	155°58'41"W
Kahaluu Bay Area through Keauhou Bay Area	HA 101	19°34'49"N	155°57'59"W	HA 102	19°33'43"N	155°57'43"W
Kealakekua Bay Area	HA 111	19°28'38"N	155°55'13"W	HA 112	19°28'25"N	155°55'10"W
Honaunau Bay Area	HA 121	19°25'35"N	155°55'02"W	HA 122	19°25'01"N	155°54'42"W
Milolii Bay Area through Honomalino Bay Area	HA 131	19°11'07"N	155°54'29"W	HA 132	19°10'04"N	155°54'35"W
Ka Lae National Historic Landmark District through Mahana Bay	HA 141	18°54'54"N	155°40'59"W	HA 142	18°55'00"N	155°40'09"W
Papakolea Green Sand Beach Area	HA 151	18°56'10"N	155°38'47"W	HA 152	18°56'11"N	155°38'45"W
Kaalualu Bay Area	HA 161	18°58'14"N	155°37'01"W	HA 162	18°58'18"N	155°36'49"W
Whittington Beach Area through Punaluu Beach Area	HA 171	19°05'04"N	155°33'03"W	HA 172	19°08'06"N	155°30'09"W
Halape Area through Keauhou Point Area	HA 181	19°16'14"N	155°15'20"W	HA 182	19°15'45"N	155°13'59"W
Kapoho Bay Area	HA 191	19°29'38"N	154°49'01"W	HA 192	19°30'10"N	154°48'46"W
Lehia Beach Park through to Hilo Harbor	HA 201	19°44'07"N	155°00'38"W	HA 202	19°43'56"N	155°03'02"W
Papaikou Area	HA 211	19°46'39"N	155°05'18"W	HA 212	19°46'43"N	155°05'18"W
Onomea Bay Area	HA 221	19°48'33"N	155°05'34"W	HA 222	19°48'37"N	155°05'22"W
Hakalau Area	HA 231	19°54'02"N	155°07'32"W	HA 232	19°54'05"N	155°07'43"W

## Appendix C. National Security Impacts

## Appendix C. National Security Impacts

MAR 16 2015

APPENDIX – CONSIDERATIONS FOR NATIONAL SECURITY EXCLUSION

MEMO

TO: PRD File for the Revision to Hawaiian Monk Seal Critical Habitat



FROM: Ann Garrett  
Assistant Regional Administrator  
Protected Resources Division, Pacific Islands Region

RE: Designating Critical habitat for the Hawaiian monk seal – considerations for department of defense Lands and Impacts on national security

---

As required under section 4(b)(2) of the federal Endangered Species Act (ESA), NMFS considered the impacts on national security in the development of the proposed critical habitat designation for the endangered Hawaiian monk seal. This memorandum summarizes NMFS' consideration for the impacts on national security and determination on areas eligible for exclusion from designation based on impacts on national security.

**Background:**

Section 3(5)(A) defines critical habitat as “the specific areas within the geographical area occupied by the species,.... on which are found those physical or biological features essential for conservation and specific areas outside the geographical area occupied if the area is essential to the conservation of the specie.” In addition, critical habitat includes specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the Act’s provisions upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the ESA provides that the Secretary shall designate critical habitat “after taking into consideration the economic impact, **the impact on national security**, and any other relevant impact, of specifying any particular area as critical habitat.” [Emphasis added] The Secretary has discretion to exclude an area from critical habitat if [s]he determines that the benefits of exclusion outweigh the benefits of designation, unless the [s]he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

On June 2, 2011, NMFS (we) published a proposed rule to revise Hawaiian monk seal critical habitat, including more area in the Northwestern Hawaiian Islands (NWHI) and new areas surrounding the main Hawaiian Islands (MHI). We proposed 5 of 13 areas for exclusion based on national security impacts (76 FR 32026; June 2, 2011) in various areas of the MHI. Evaluation of these areas are summarized in the proposed rule, and discussed in more detail in Appendix A of the 2011 Draft ESA Section 4(b)(2) Report. We received comments on the June

identified location or the best representative information available for that location. Systematic survey effort in the main Hawaiian Islands (MHI) is limited, but information regarding monk seal use of areas throughout the Hawaiian Islands is supplemented by reporting from the general public through an information sighting<sup>1</sup> line. With this in mind, information referenced in this memo as gained from the general public should be considered to be biased by several variables that may influence the appearance of the data. Included in these biases, but not limited to, are some of the following considerations: 1) sites less accessible to humans will have less reporting, but still may be favorable to seals due to the remote location; 2) sites with high human use are likely to have a large number of sightings, but these sightings may be specific to an individual or a small number of animals; 3) not all sightings are able to distinguish unique individuals, therefore a sighting from a nearby area within the same day could be the same individual; 4) sightings may be more commonly reported from areas where the public has become enthusiastic about the appearance of seals versus areas where seal presence is less embraced.

When considering seal use of marine areas, we describe seal use of nearby or adjacent coastal habitat as a reflection of the significance of marine areas. Where available we also provide information from just over 20 GPS equipped cellular transmitter tags (MHI tracking information) deployed on seals in the MHI. Seals were tagged on the Islands of Kauai, Oahu, and Molokai, thus tracking information around other Islands reflects seal movement to these other areas (from the three named Islands) and is often limited. Descriptions of MHI tracking data throughout this memo were provided by the PIFSC and reflect an overview of the raw data, which has not been fully analyzed. Nevertheless, this raw information is useful to our identification of essential features, along with other relevant information about habitat use.

## **Assessment of DOD Areas**

### **Site #1: 3-mile danger zone surrounding Kaula Island**

*Hawaiian monk seal use of area:* This DOD site is located 23 miles (mi) or 37 kilometers (km) west-southwest of Kawaihoa Point on Niihau within the proposed specific area #11, Kaula Island. The Island is the second largest offshore islet after Lehua and is the eroded result of a tuff crater. The eroded crater walls create a small bay along the inside curve and a rock terrace or bench sits along this inner edge ranging in width from 3.1 to 24 m wide providing haul out habitat. Near the outer side of the crater along the northern “horn” of the island is a large sea cave, approximately 30 m or 98 ft deep with a 15 m or 49 ft ceiling. The Island of Kaula is included in the Pacific Missile Range Facilities Integrated Natural Resource Management Plan, which was found by NMFS to provide a benefit to the Hawaiian monk seal; therefore, the Island is not eligible for critical habitat designation in accordance with Section 4(a)(3)(B)(i) of the ESA. The islet is surrounded by 26 mi<sup>2</sup> or 66 km<sup>2</sup> of marine habitat that is within the 200-m depth contour on a shoal that supports a large variety of marine life. Monk seal use of the marine environment is likely best demonstrated by haul out sightings or patterns of adjacent terrestrial areas at and around Kaula Island. The Pacific Islands Fisheries Science Center (PIFSC) reported that information gathered from opportunistic sightings, aerial surveys, and PIFSC personnel surveys from 1991-2012 totaled 62 seal sightings. The number of seals recorded in these sightings range from 1-15 individuals at any one time, including a sighting of 8 individuals in

---

<sup>1</sup> A sighting was defined by PIFSC as “a calendar day during which an individual seal is documented as present.”

*Hawaiian monk seal use of area:* Although the Navy requested exclusion for areas from 0-12 nmi offshore of Niihau, this request for exclusion was amended to 10 m in depth to 12 nmi offshore to reflect only those areas that are eligible for designation in accordance with Section 4(a)(3)(B)(i) of the ESA (i.e., 0-10 m in depth surrounding the island of Niihau are subject to Navy management under the PMRF INRMP and therefore are not eligible for designation and require no exclusion analysis). Niihau is a privately owned island located approximately 17 mi or 27 km off the southwest coast of Kauai. Access to Niihau is limited to Niihau residents, the U.S. Navy, and invited guests. Lehua is a tuff crater located .5 mi or .8 km north of Niihau (within the specific area<sup>12</sup>) and approximately 18 mi or 29 km west of Kauai. The eroded crater provides wave-cut benches for hauling out. Island access is restricted by the U.S. Coast Guard and certain activities are subject to Hawaii Department of Land and Natural Resources because it is also a Hawaii State Seabird Sanctuary. Seal use of Niihau coastline and adjacent offshore islet Lehua are discussed to provide a fuller picture of how seals use this specific area.

Due to the restricted access to both areas earlier seal sightings in this area have come from aerial and boat surveys conducted by PIFSC. PIFSC conducted nine complete aerial surveys of Niihau and Lehua from 2000 to 2009. In addition to these surveys, there have also been sightings reported by agency partners and the general public. In total, 500 sightings have been recorded from these areas (1980-2009): 396 on Niihau and 104 on Lehua. More than half (256) of the sightings were recorded during aerial surveys, with the numbers of seals sighted on Niihau much higher than other Islands in the MHI. For example, 47 seals were sighted during a single aerial survey in October 2008. Recent conservation efforts established between the Navy, PIFSC and Niihau Ranch demonstrate that Niihau remains important habitat for Hawaiian monk seals in the MHI. In August and September of 2013, the Navy and PIFSC conducted separate surveys along the shorelines of the island of Niihau in cooperation with Niihau Ranch. In August the Navy recorded 43 seal sightings and in September PIFSC recorded 69. During the September survey at least 19 pups (including nursing and weaned pups) were sighted. Only a few seals from Niihau surveys have been matched in the PIFSC photo identification database; this suggests that a large proportion of the seals sighted on Niihau may not be using habitat on other Islands of the MHI. Tracking information from Kauai indicates that approximately half of the seals tagged and tracked from Kauai transit to Niihau; however, this information represents mostly male and juvenile seals from Kauai, and movements were generally concentrated towards the northern and northeast portion of the island, including areas in and around Lehua (personal communication C. Littnan, Lead Scientist, Hawaiian Monk Seal Research Program, March 13, 2014). Evaluation of monk seal sighting information including aerial surveys, voluntary sighting information and monk seal tracking information indicates that Niihau provides significant haul-out area, preferred pupping areas, and adjacent marine waters provide foraging areas. Lehua presents similar characteristics in providing a ledge for haul-out area in the middle of marine habitat. This islet supports a significant haul out area adjacent to marine waters that provide monk seal foraging areas. There have been no monk seal births documented for Lehua Island.

*Description of DOD area and activities:* Niihau Offshore includes proposed HRC ranges and training areas 0 to 12 nmi or 22 km from Niihau (where 0-10 m in depth is managed under the PMRF INRMP and ineligible for designation). In the Niihau Offshore Areas, training events consist of Electronic Combat Operations, Special Warfare Operations, Mine Countermeasures Exercise, and the Flare Exercises. The training and major exercises also include PMRF's remote

countermeasure exercises train forces to detect, identify, and mark mines using a variety of methods including sonar.

*National security concerns:* The Navy's primary concern is having the ability to actively utilize sonar in this area for training in detection of underwater mines. A decrease in training capabilities would be a decrease in troop preparedness.

*Recommendation:* We conclude that the benefit to national security of excluding this area outweighs the conservation benefit of designation, and recommend that Kingfisher range off of Niihau be excluded from the areas under consideration from critical habitat designation. While DOD must still insure that activities in this area do not jeopardize the continued existence of the Hawaiian monk seal, the exclusion of this area means DOD will not be required to consult to insure that its activities do not adversely modify habitat or essential features within this area. Although this area is likely utilized by Hawaiian monk seals, several factors reduce the benefit of designating this site as critical habitat, the following of which is a description. The Kingfisher area is 2 mi<sup>2</sup> or 4 km<sup>2</sup> of the specific area's 115 mi<sup>2</sup> or 298 km<sup>2</sup> area, which is approximately 2 percent of the proposed specific area.

The Navy consults with NMFS through a programmatic effort that undergoes annual review with regard to activities occurring throughout the HRC, including at this site. The Navy's HRC protocols and monitoring plan put in place additional protections for Hawaiian monk seals and increase knowledge about marine mammal use of the area, and response to activities taking place within these areas. These efforts include visual monitoring (vessel, aerial, and shore-based), passive acoustic monitoring, and marine mammal tagging. In addition to the HRC consultation, the Navy has consulted with regard to this area for the original construction of the range and maintenance of the structures could require additional consultation. Although it does not appear that sonar activities on site are likely to impact the essential features of the habitat (i.e., benthic foraging habitat), actions taken to construct or maintain the buoy system on the range may cause some disturbance to benthic habitat. The limited temporal and spatial scope of the impacts associated with this activity are not expected to result in adverse modification of critical habitat, however we acknowledge that the requirement to ensure activities do not adversely modify critical habitat, and the process of consulting on adverse modification of critical habitat, may result in additional restrictions on activities beyond those required to avoid jeopardy. We expect that the Navy's use of this more discrete area will likely discourage other federal activities requiring consultation from occurring on site, and therefore reduce the benefits of inclusion as critical habitat.

We conclude that the benefits of exclusion outweigh the benefits of designating this area for critical habitat. Based on our best scientific judgment and acknowledging the small size of this area, and other safeguards that are in place (e.g., protections already afforded Hawaiian monk seals under its listing) we conclude that exclusion of this area will not result in the extinction of the species.

**Site #4 Pacific Missile Range Facility Offshore areas (overlap areas include portions of SWTR, and PMRF Restricted area)**

*Recommendation:* We conclude that the benefit to national security of excluding this area outweighs the conservation benefit of designation, and recommend that PMRF Offshore areas (described as PMRF restricted area, and SWTR) be excluded from the areas under consideration from critical habitat designation. While DOD must still consult to insure that activities in this area do not jeopardize the continued existence of the Hawaiian monk seal, the exclusion of this area means DOD will not be required to consult regarding potential impacts to critical habitat.

Although this area is utilized by Hawaiian monk seals, several factors reduce the benefit of designating this site as critical habitat, the following of which is a description. PMRF offshore areas that overlap with critical habitat include approximately 58 mi<sup>2</sup> or 149 km<sup>2</sup> of the approximate 215 mi<sup>2</sup> or 557 km<sup>2</sup> of the specific Area 13, Kauai; this represents approximately 27% of the marine areas identified around the Island of Kauai. Although this is a sizable portion of the marine foraging habitat around Kauai, a majority of the range lies adjacent to coastal areas where monk seal use of the coastal habitat is considered to be relatively low and no significant haul-out areas have been identified along this stretch. At the northern end of the range a preferred pupping area has been identified at Milolii beach, which has been used as a pupping area since 2003 with no identified military impacts to monk seal activities. The Navy consults with NMFS through a programmatic effort that undergoes annual review with regard to activities occurring throughout the HRC, including at this site. The Navy's HRC protocols and monitoring plan put in place additional protections for Hawaiian monk seals and increase knowledge about marine mammal use of the area, and response to activities taking place within these areas. These efforts include visual monitoring (vessel, aerial, and shore-based), passive acoustic monitoring, and marine mammal tagging. Information from these research efforts is likely to provide data in support of management and conservation efforts in this area and around the Hawaiian Islands. Most of the activities described to us by the Navy do not appear likely to cause impacts to Hawaiian monk seal foraging areas. Even benthic disturbances associated with hydrophones being laid down on the seafloor, which may cause disturbance to Hawaiian monk seal prey resources, for example are likely to be limited in temporal and spatial scope and are unlikely to have long lasting effects on monk seal foraging habitat. However, requiring consultation on critical habitat may result in project modifications and additional conservation measures that could impact national security operations. Importantly, the complex nature of the hydrophone arrays and testing that occurs in these waters may provide some protection by discouraging additional federal activities that have the potential to impact benthic prey resources in this area. Therefore, we conclude that the benefits of excluding this site outweigh the benefits of designation. Based on our best scientific judgment and acknowledging other safeguards that are in place (e.g., protections already afforded Hawaiian monk seals under its listing), we believe that exclusion of these areas will not result in the extinction of the species.

#### **Site #5 The Puuloa Underwater Training Range**

*Hawaiian monk seal use of area:* This DOD site is located within specific area # 14, Oahu in the waters just outside the entrance to Pearl Harbor. Three systematic aerial surveys incorporate this site into observational data in 2000, 2001, and 2008; from these efforts one seal was observed in the water off the western entrance of Pearl Harbor in 2008 and no seals were observed in 2000 and 2001. Site #5 is located in water, Hawaiian monk seal use of marine areas is best described by terrestrial sightings at adjacent or nearby areas. Sightings from generalized areas including

of high disturbance would suggest that foraging features at this site might be of poor quality and lower conservation value to the overall population. The Navy has a programmatic consultation that evaluates impacts associated with training activities in the HRC and associated protocols and research to support knowledge regarding marine mammal impacts. Our consultation history indicates that multiple DOD-related consultations have occurred in the vicinity of Pearl Harbor; however most are associated with harbor and adjacent facility maintenance, not the Puuloa range. As noted above, half of the Puuloa range is already ineligible for designation due to its overlap with the NDSA area. Accordingly, multiple management measures taken by the Navy under the JBPHH INRMP may benefit the Hawaiian monk seal, in this area and surrounding areas. In addition to these protections, the security associated with the use of Pearl Harbor and the nearby range makes it unlikely that the Navy would allow other Federal activities to occur in the area. Although this site is located nearby to significant Hawaiian monk seal haul out areas, the site is expected to have limited value as a foraging area for the Hawaiian monk seal due to its small size, the historic use of the area for DOD activities, and its proximity to the activities of Pearl Harbor (e.g., regular maintenance dredging). Therefore, we conclude that the benefits of excluding this site outweigh the benefits of designation. Based on our best scientific judgment and acknowledging other safeguards that are in place (e.g., protections already afforded Hawaiian monk seals under its listing), we believe that exclusion of this area will not result in the extinction of the species.

#### **Site #6 Commercial Anchorages B, C, D**

*Hawaiian monk seal use of area:* Anchorages B, C, and D are located just outside the Pearl Harbor NDSA to the east and provide safe locations for surface ships to train in anchoring evolutions. Hawaiian monk seal sightings described above under *Hawaiian monk seal use of area* site #5 is likely the best reflection of potential monk seal use of these areas.

*Description of DOD area and activities:* Anchorages B, C, D are located just outside the Pearl Harbor NDSA to the east and provide safe locations for surface ships to train in anchoring evolutions. This area is also used for training for basic navigation and seamanship skills.

*National security concerns:* The Navy commented that restrictions on use of these designated anchorages would degrade the ability of ships stationed at Pearl Harbor to train in these core seamanship skills. These skills are vital for protecting vessels overseas. The Navy has not provided a specific justification for exclusion of this area based on impacts to ongoing national security activities.

*Recommendation:* We recommend that this area not be excluded from the proposed critical habitat designation because the benefits of exclusion do not appear to outweigh the benefits of designation. Given the high use of this area for commercial anchoring purposes, it is unlikely that prey features are supported in this small patch of the seafloor; as such, the act of anchoring within this designated zone is not likely to impact Hawaiian monk seal essential features. NMFS acknowledges that not every small area within these larger proposed areas will have the essential features, but that those determinations may be made on a project by project basis. In addition, we do not anticipate that requiring consultation on critical habitat in this area will require project modifications that may impact national security activities. The Navy does not have control over

to jeopardy. The FORACS area has been utilized for accuracy checking off of the coast of Oahu since 1964 and despite continuous Navy activities (including those described above), monk seal sightings have increased in recent years and monk seals continue to utilize these marine areas to travel and forage. The FORACS area covers 9 mi<sup>2</sup> or 22 km<sup>2</sup> of the marine area off the west coast of Oahu and the marine habitat is located adjacent to and between two significant haul-out areas. The Navy does not have strict control over this site and our consultation history indicates that multiple Federal activities may take place within this area; therefore, other federally associated activities requiring consultation may occur within this area that could impact essential features of monk seal critical habitat. After balancing these factors, we conclude that the benefits of excluding this area do not outweigh the benefits of including this area.

### **Site #8 Marine Corps Training Area Bellows Offshore (MCTAB offshore)**

*Hawaiian monk seal use of area:* Marine Corps Training Area Bellows is located on the eastern coast of Oahu. Areas offshore of this beach and connecting to the Mokapu Peninsula were indicated as a transit route for amphibious vehicles. As such, monk seal activity between Mokapu Peninsula and Bellows Beach are described. Systematic aerial surveys in 2000, 2001, and 2008 recorded no seals in this area. Reports from the general public, from 1987 – 2009, revealed 129 seal sightings. Sightings were divided into seven different areas based on reported locations; of these 7 locations no seals were sighted at Bellows Beach. Fourteen uniquely identifiable seals were associated with 64 of the 129 reported sightings. One birth was reported on the north side of the Peninsula in the spring of 1996. Similar to sighting information, tracking information indicates that monk seals do traverse through this area (personal communication C. Littnan, Lead Scientist, Hawaiian Monk Seal Research Program, March 13, 2014). No preferred pupping areas or significant haul-out areas have been identified along this stretch of coast.

*Description of DOD area and activities:* Marine Corps Training Area Bellows is located on the eastern coast of Oahu. Offshore areas are utilized in training events including Expeditionary Assault activities, Swimmer Insertion/Extraction, SPECWAROPS, and Mine Neutralization training events involving relatively small (20 lb net explosive weight) explosive detonations, landings by craft, multiple strike group training, and major training exercises including USWEX and RIMPAC, which may also expose offshore underwater areas to MFA/HFA sonar.

*National security concerns:* The Navy and USMC were concerned that participation in activities associated with Amphibious Warfare would be impacted by the critical habitat designation. The Navy has not provided a specific justification for exclusion of this area from critical habitat based on impacts to ongoing national security activities.

*Recommendation:* We recommend that this area not be excluded because the benefits of exclusion do not appear to outweigh the benefits of designation. Hawaiian monk seal use of adjacent beach area indicates that monk seals may be feeding and utilizing areas offshore of the MCTAB area to some degree. The Navy has a programmatic consultation that evaluates impacts associated with training activities in the HRC, including training activities that occur in these offshore waters. Despite discussions with DOD, the boundaries of this area remain ill-defined, which makes it difficult to determine the potential benefits of exclusion or inclusion for weighing purposes. Past discussions with DOD indicated a concern that amphibious landing exercises

*Recommendation:* We conclude that the benefit to national security of excluding this area outweighs the conservation benefit of designation, and recommend that Shallow Water Minefield Sonar Training Range off Kahoolawe be excluded from the proposed areas for critical habitat designation. While DOD must consult with NMFS to insure that activities in this area do not jeopardize the continued existence of the Hawaiian monk seal, the exclusion of this area means DOD will not be required to consult on activities that may impact essential features.

Several factors reduce the benefit of designating this site as critical habitat, the following of which is a description. The Navy consults with NMFS through a programmatic effort that undergoes annual review with regard to activities occurring throughout the HRC, including at this site. The Navy's HRC protocols and monitoring plan put in place additional protections for Hawaiian monk seals and increase knowledge about marine mammal use of the area, and response to activities taking place within these areas. These efforts include visual monitoring (vessel, aerial, and shore-based), passive acoustic monitoring, and marine mammal tagging. In addition to the HRC consultation, similar to the Kingfisher range maintenance of the structures on Shallow-Water Minefield Sonar Training Area off Kahoolawe could require additional consultation.

Although, it does not appear that sonar activities on site are likely to impact the essential features of the habitat (i.e., benthic foraging habitat), actions taken to construct or maintain the buoy system on the range may cause some disturbance to benthic habitat. The limited temporal and spatial scope of the impacts associated with this activity is not expected to result in adverse modification of critical habitat decision (during consultation); however without exclusion there remains the potential for additional restrictions that may require modifications to national defense activities. In addition, Navy use of this more discrete area is likely to discourage other Federal activities requiring consultation from occurring on site.

We conclude that the benefits of exclusion outweigh the benefits of designating this area for critical habitat. Based on our best scientific judgment and acknowledging other safeguards that are in place (e.g., protections already afforded Hawaiian monk seals under its listing), we believe that exclusion of these areas will not result in the extinction of the species.

### **Site #10 Kahoolawe Danger Zone**

*Hawaiian monk seal use of area:* Monk seal use of Kahoolawe is described under site # 9, the Shallow-Water Minefield Sonar Training Area off Kahoolawe (above).

*Description of DOD area and activities:* The danger zone surrounding Kahoolawe is a polygon established and described in 33 CFR Part 334 that is set up from shore outward around the entire island. The site was restricted for public safety due to the continued dangers of unexploded ordnances in the area. Typical danger zones are defined water area (or areas) used for target practice, bombing, missile firing or other especially hazardous operations, normally for the armed forces. The danger zones may be closed to the public on a full-time or intermittent basis, as stated in the regulations. No activities were described for this site.

Site #1: 3 mile danger zone around Kaula Island		
Criteria	Rating	Notes
Use of Particular Area by Hawaiian monk seals	High	As the second largest offshore islet after Lehua, this islet offers ledges for foraging monk seals to haul out and rest. Sighting information from the island is limited and seal numbers range from 0 - 15 individuals during planned surveys. Incidental reports also indicate that seals use the caves around this island for rest. Noted as its own specific area due to the depth contour difference between this island and Niuhau, the islet and surrounding marine waters provide foraging and haul out habitat most likely for seals that are resident to Niuhau. Still this islet may also provide foraging and haul out habitat for seals from the NWHI as well. Rating for the area is high because of the unique bridge that this habitat may represent between the NWHI and MHI, and in comparison to other islets in the MHI, this islet has relatively high sighting numbers.
1) Relative proportion of area requested for exclusion	High	Area requested for exclusion includes over 50% of the marine habitat within this specific area, including all habitat close to shore.
2) Likelihood of DOD consultation based on ESA consultation history	Low	The programmatic consultation for the HRC is in place to cover exercises and activities in the Hawaii Range Complex, including exercises at Kaula. There is no record of other DOD-related consultations associated with this site and it is unlikely that a critical habitat designation would prompt an increase in consultations on DOD projects. DOD activities in this specific area are directed at the Island of Kaula, which is ineligible for designation.
3) Intensity of use of the area by DOD	Low	No HRC training events are performed offshore of Kaula, however, the Navy expressed concerns that onshore activities may affect offshore resources. The island is used for aircraft gunnery and inert ordnance practice (strike). 26 gunnery exercises/yr; strike exercises last about 4 hrs but could be 4-35hrs.
4) Likelihood that DoD activities will destroy or adversely modify habitat within the area	Low	The Navy has not demonstrated activities will affect offshore resources found within Hawaiian monk seal foraging areas.
5) Level of protection provided by one or more of DoD existing safeguards	High	Navy has control of this area by Executive Order. Protocol from the Hawaii Range Complex Monitoring Efforts are in place to prevent jeopardy to Hawaiian monk seals and some environmental protocols may additionally minimize impacts to the marine environment as a whole. Recent attention from the proposed critical habitat has focused attention on the importance of monk seal monitoring in this area, the Navy is now providing monitoring information from wildlife surveys and has involved NMFS staff in surveys.
6) Likelihood that other actions may occur in the area; making actions no longer subject to CH provisions if area was excluded from CH	Low	Consultation history includes consultation with FWS for on-island activities and consultations in offshore waters also may consider fishery activities under the Hawaii Fishery ecosystem plan.

Site #3: Kingfisher Area		
Criteria	Rating	Notes
Use of Particular Area by Hawaiian monk seals	High	Habitat surrounding Niihau supports the greatest number of monk seals in the MHI; a recent single day survey counted 69 seals using the coastal habitat of the Island. With this number of seals on Island the the marine areas surrounding the Island are also believed to support important monk seal foraging areas. However the particular area noted is small within the overall marine habitat surrounding Niihau.
1) Relative proportion of area requested for exclusion	Low	Underwater training area offshore of Niihau is a 3x3 mi <sup>2</sup> box about 2 mi from Niihau; area is less than two percent of total proposed specific area. In water depths range from 92-366 m (300-1200ft); a portion of this range is outside of the proposed designation.
2) Likelihood of DOD consultation based on ESA consultation history	High	The programmatic consultation for the HRC is in place to cover exercises and activities in the Hawaii Range Complex; including those that occur at the Kingfisher range. Separate consultation has occurred in the past for the construction of the Kingfisher range and additional consultation may be needed to maintain range structures. Although range structures are unlikely to result in adverse modification (due to the limited temporal and spatial nature of likely impacts), these structures are afixed to the bottom and have the potential to affect monk seal foraging habitat, therefore requiring additional consultation.
3) Intensity of use of the area by DOD	High	Within this area Navy activities include mine countermeasures. Exercises are 6-12 hrs in length; 62 events annually throughout the range. During RIMPAC 1-30 events may occur for a duration of 1-4 hrs.
4) Likelihood that DoD activities will destroy or adversely modify habitat within the area	Low	Most of the activities described to us by the Navy are not likely to adversely modify critical habitat, even benthic disturbances during structure maintenance, which could cause disturbance to prey resources or water quality for example, are likely to be limited in temporal and spatial scope and will not have long lasting negative effects on monk seal foraging habitat.
5) Level of protection provided by one or more of DoD existing safeguards	High	Protocol from the Hawaii Range Complex Monitoring Efforts are in place to prevent jeopardy to Hawaiian monk seals and some environmental protocols may additionally minimize impacts to the marine environment as a whole. Although the Navy has no official control over this area, structures placed along the bottom may provide some protection to the area, by limiting other activities.
6) Likelihood that other actions may occur in the area; making actions no longer subject to CH provisions if area was excluded from CH	Low	Other activities could occur in these waters, but given the physical structures in place and the Navy's interest in training in this area, activities are likely to be limited, especially those that have the potential to impact the seafloor.

Site #5: Puuloa Underwater Training Range		
Criteria	Rating	Notes
Use of Particular Area by Hawaiian monk seals	High	Monk seal use of the marine environment is likely best demonstrated by haul out sightings or patterns of adjacent terrestrial areas at and around Puuloa underwater training range; this area is located nearby significant haul-out areas along the south coast of Oahu. However, the range is limited in size and adjacent to the active Pearl Harbor area, where foraging areas may be of lower quality due to the intense and historic activity in this area.
1) Relative proportion of area requested for exclusion	Low	Area is 2 nmi <sup>2</sup> in size adjacent to Pearl Harbor and represents less than 1% of the total area within the specific area of Oahu.
2) Likelihood of DOD consultation based on ESA consultation history	High	Programmatic consultation is in place to cover exercises and activities in the Hawaii Range Complex, including on the range. The consultation history indicates that multiple DOD-related consultations have occurred in the vicinity of Pearl Harbor and this area.
3) Intensity of use of the area by DOD	High	This area is a high use area for the Navy considering ship traffic and associated activities within the harbor. The range is of particular importance to the Navy because it supports the majority of underwater demolition activities and training for the Mobile Dive and Salvage Unit ONE, Explosive Ordnance Disposal Mobile Unit Three Detachment MIDPAC and SEAL Delivery Vehicle Team ONE; this is one two areas nationally used by the Navy for these activities.
4) Likelihood that DoD activities will destroy or adversely modify habitat within the area	Low	Underwater demolition activities have the potential to cause disturbance or modification to bottom-associated habitat; however, adjacent to the activity of Pearl Harbor, bottom-associated habitat is expected to be of limited value as a foraging area for Hawaiian monk seals due to the historic use of the area and its proximity to the activities of Pearl Harbor.
5) Level of protection provided by one or more of DoD existing safeguards	High	Area designated under Navy control by Executive Order to allow the safe transit of surface ships and submarines in and out of Pearl Harbor. Security requirements for the harbor are strictly enforced; as such patrols in nearby areas are frequent. The regulations for danger zones state: no person, vessel or other craft shall enter or remain in any of the areas at any time except as authorized by the enforcing agency. This is strictly enforced during activities. The NDSA is covered in the draft INRMP.
6) Likelihood that other actions may occur in the area; making actions no longer subject to CH provisions if area was excluded from CH	Low	A variety of consultations take place in Pearl Harbor and the adjacent areas, most of which are related to maintenance of the channel and facilities associated with the Harbor. Consultations specific to the range are likely to be limited to DOD actions.

Site #7: Fleet Operational Readiness Accuracy Check Site (FORACS)		
Criteria	Rating	Notes
Use of Particular Area by Hawaiian monk seals	High	Monk seal use of the marine environment is likely best demonstrated by haul out sightings or patterns of adjacent terrestrial areas; the FORACS range is situated between two important areas of Oahu, Kaena point and the Barber's Point area, that are considered significant haul-out areas for monk seals to rest, socialize and molt. The coastal areas directly adjacent to this site are considered significant haul out areas. Accordingly, these marine areas are likely regularly used for monk seal foraging.
1) Relative proportion of area requested for exclusion	Low	The FORACS area covers 9 mi <sup>2</sup> or 22 km <sup>2</sup> of marine habitat; only 2.5% of marine habitat surrounding the Oahu area. However, this area is found adjacent to two significant stretches of haul out area.
2) Likelihood of DOD consultation based on ESA consultation history	Low	Programmatic consultation is in place to cover exercises and activities in the Hawaii Range Complex. No other DOD related consultations were identified for this area in our consultation database.
3) Intensity of use of the area by DOD	High	FORACS allows for checking the range and bearing accuracy for Navy and Coast Guard ships' equipment, this includes accuracy checks for ship and submarine sonar (both in active and passive modes), and radar. Thousands of events occur each year.
4) Likelihood that DoD activities will destroy or adversely modify habitat within the area	Low	The activities occurring in this area and described to us by the Navy are not likely to adversely modify critical habitat.
5) Level of protection provided by one or more of DoD existing safeguards	Low	Protocol from the Hawaii Range Complex Monitoring Efforts are in place to prevent jeopardy to Hawaiian monk seals and some environmental protocols may additionally minimize impacts to the marine environment as a whole. The west coast of Oahu remains a very active area for coastal and marine activities, including those in-water and coastal development activities which have the potential to affect monk seal foraging habitat.
6) Likelihood that other actions may occur in the area; making actions no longer subject to CH provisions if area was excluded from CH	High	Other activities occurring in this area are likely, as evident from past consultations in the area. Except during scheduled Navy training exercises or events, the Navy does not have any authority or place restrictions on civilian vessels or activities.

**Site #9: Shallow Water Minefield Sonar Training Range off Kahoolawe**

Criteria	Rating	Notes
Use of Particular Area by Hawaiian monk seals	High	Monk seal use of the marine environment is likely best demonstrated by haul out sightings or patterns of adjacent terrestrial areas; the Island of Kahoolawe supports both significant haul-out and preferred pupping areas. Accordingly, monk seals using these areas are likely foraging in nearby marine areas off of the Island of Kahoolawe.
1) Relative proportion of area requested for exclusion	Low	Located at about 325 m off of Kahoolawe, this particular areas is about 10 mi <sup>2</sup> of total area and represents less than 1% of the habitat in the Maui Nui specific area.
2) Likelihood of DOD consultation based on ESA consultation history	High	The programmatic consultation for the HRC is in place to cover exercises and activities in the Hawaii Range Complex; including those that occur at the range. Similar to the Kingfisher range, additional consultation may be needed to maintain range structures. Although range structures are unlikely to result in adverse modification (due to the limited temporal and spatial nature of likely impacts), these structures are afixed to the bottom and have the potential to affect monk seal foraging habitat, therefore requiring additional consultation.
3) Intensity of use of the area by DOD	High	Area is used for mine detection and and avoidance training exercises. Exercises happen on the range 5-6 times a year, and is projected to be used 10-15 times a year in the future.
4) Likelihood that DoD activities will destroy or adversely modify habitat within the area	Low	Most of the activities described to us by the Navy are not likely to adversely modify critical habitat, even benthic disturbances during structure maintenance, which could cause disturbance to prey resources or water quality for example, are likely to be limited in temporal and spatial scope and will not have long lasting negative effects on monk seal foraging habitat.
5) Level of protection provided by one or more of DoD existing safeguards	High	Protocol from the Hawaii Range Complex Monitoring Efforts are in place to prevent jeopardy to Hawaiian monk seals and some environmental protocols may additionally minimize impacts to the marine environment as a whole. Although the Navy has no official control over this area, structures placed along the bottom may provide some protection to the area, by limiting other activities.
6) Likelihood that other actions may occur in the area; making actions no longer subject to CH provisions if area was excluded from CH	Low	Other activities could occur in these waters, but given the physical structures in place and the Navy's interest in training in this area, activities are likely to be limited, especially those that have the potential to impact the seafloor.

# Requests for National Security Exclusions: Kaula Island

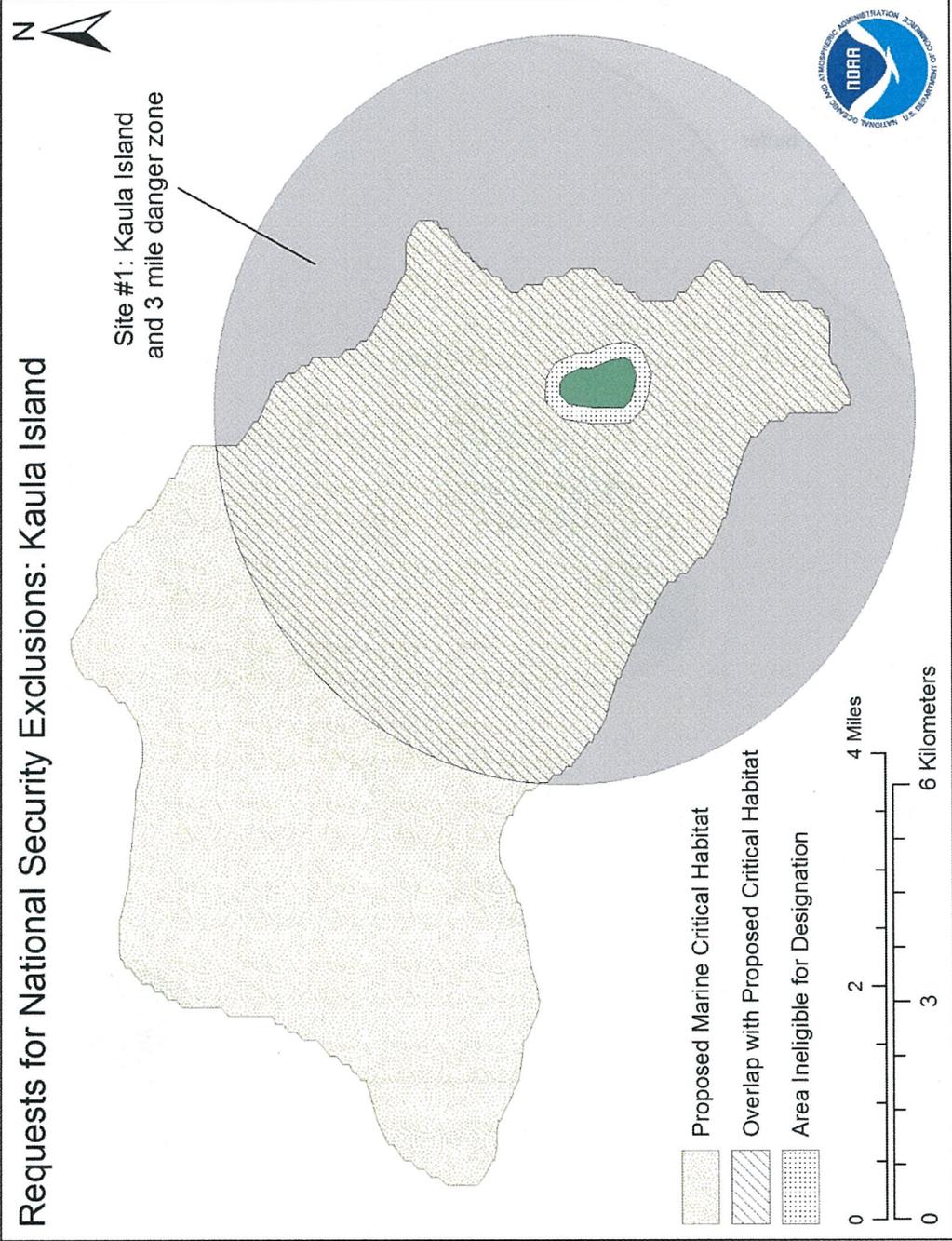


Figure 1. Area 11; Site #1 -Kaula Island and 3 mile danger zone.

# Requests for National Security Exclusions: Kauai

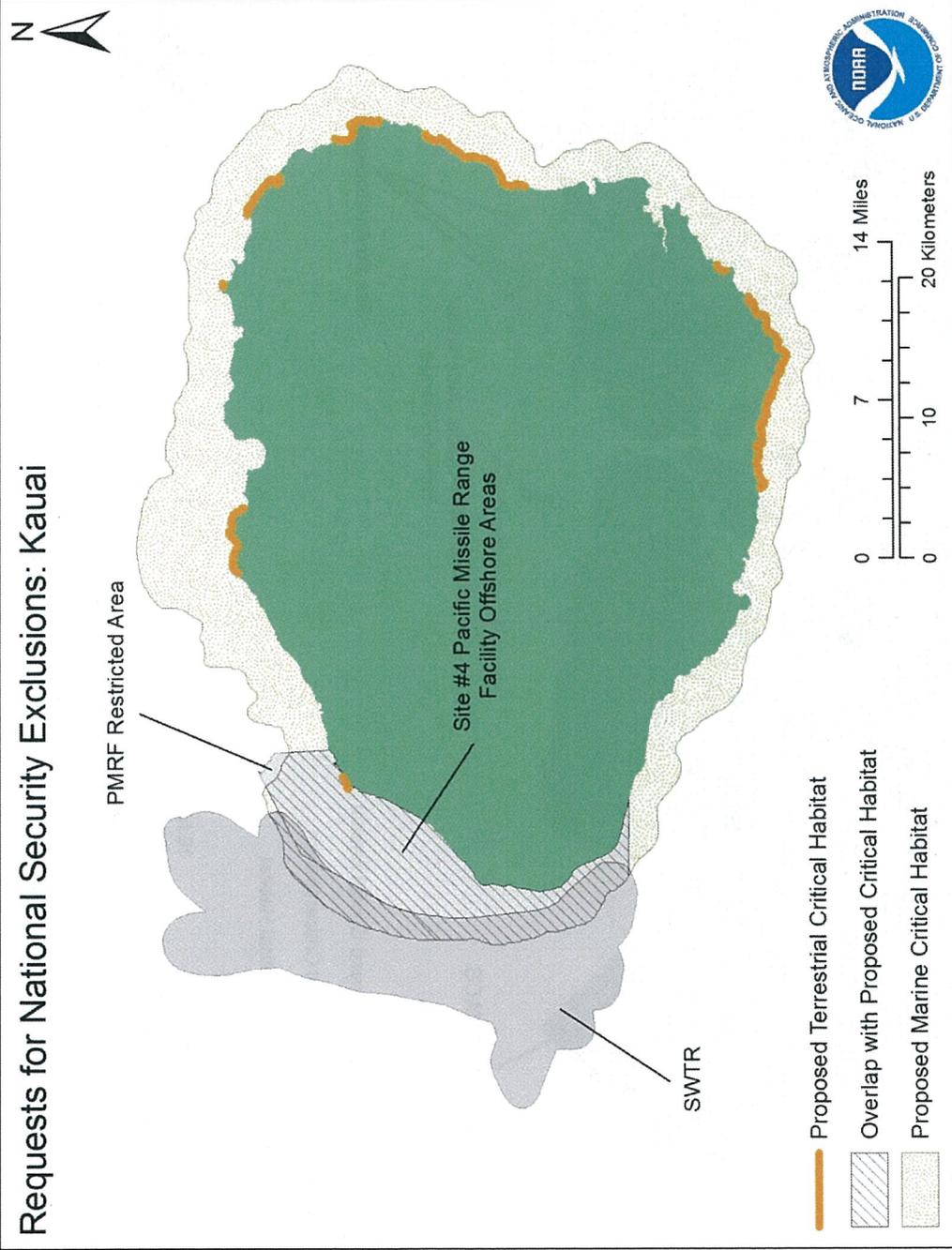


Figure 3. Area 13; Site #4 – Pacific Missile Range Facility offshore areas.

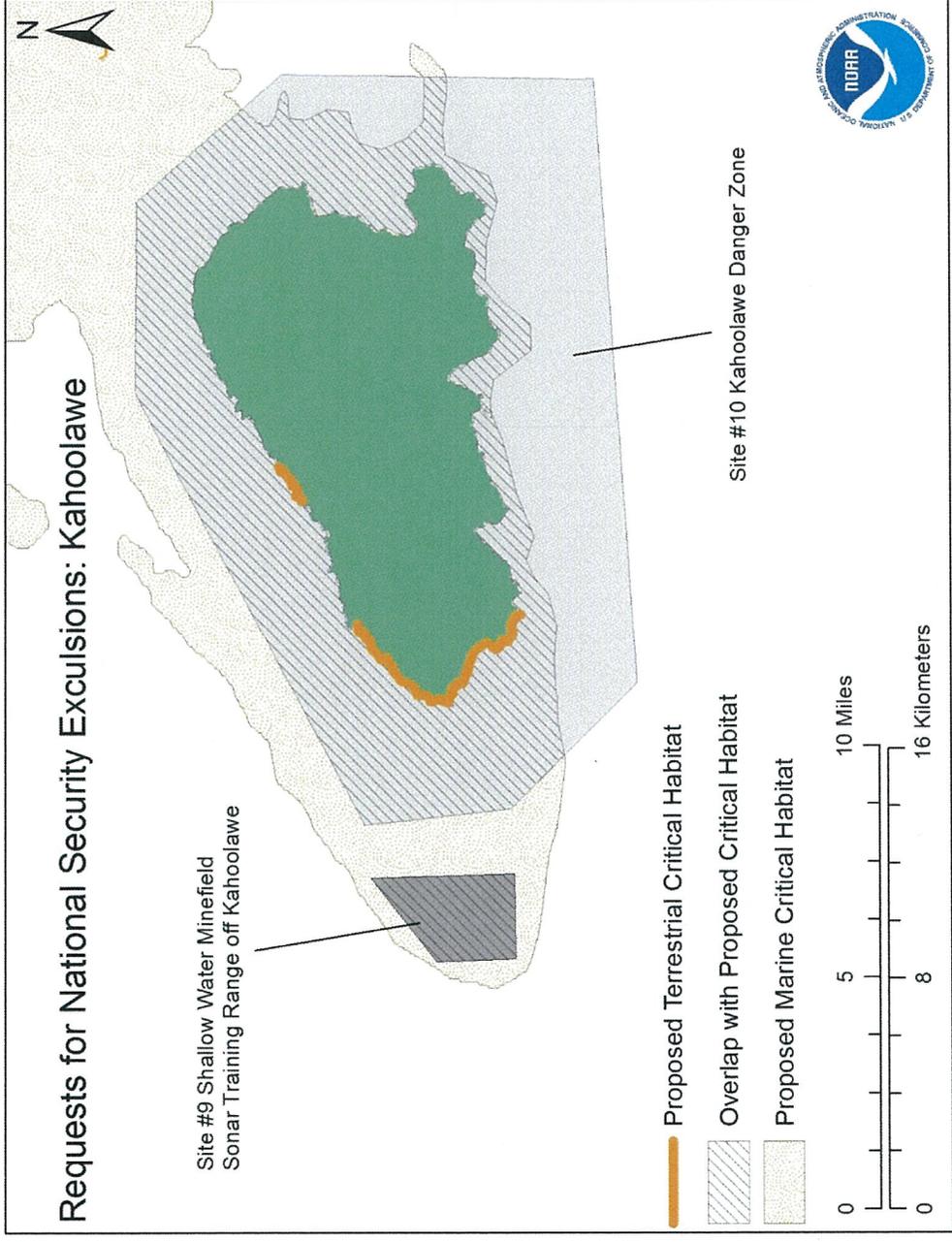


Figure 5. Area 15; Site #9 – Shallow Water Minefield Sonar Training Range, Site #10 – Kahoolawe danger zone.