

## DEPARTMENT OF COMMERCE

## National Oceanic and Atmospheric Administration

## 50 CFR Part 226

[Docket No. 110207102-1136-01]

RIN 0648-BA81

## Endangered and Threatened Wildlife and Plants: Proposed Rulemaking To Revise Critical Habitat for Hawaiian Monk Seals

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed rule; request for comments.

**SUMMARY:** We, the National Marine Fisheries Service (NMFS), propose revising the current critical habitat for the Hawaiian monk seal (*Monachus schauinslandi*) by extending the current designation in the Northwestern Hawaiian Islands (NWHI) out to the 500-meter (m) depth contour and including Sand Island at Midway Islands; and by designating six new areas in the main Hawaiian Islands (MHI), pursuant to section 4 of the Endangered Species Act (ESA). Specific areas proposed for the MHI include terrestrial and marine habitat from 5 m inland from the shoreline extending seaward to the 500-m depth contour around: Kaula Island, Niihau, Kauai, Oahu, Maui Nui (including Kahoolawe, Lanai, Maui, and Molokai), and Hawaii (except those areas that have been identified as not included in the designation). We propose to exclude the following areas from designation because the national security benefits of exclusion outweigh the benefits of inclusion, and exclusion will not result in extinction of the species: Kingfisher Underwater Training area in marine areas off the northeast coast of Niihau; Pacific Missile Range Facility Main Base at Barking Sands, Kauai; Pacific Missile Range Facility Offshore Areas in marine areas off the western coast of Kauai; the Naval Defensive Sea Area and Puuloa Underwater Training Range in marine areas outside Pearl Harbor, Oahu; and the Shallow Water Minefield Sonar Training Range off the western coast of Kahoolawe in the Maui Nui area. We solicit comments on all aspects of the proposal, including information on the economic, national security, and other relevant impacts. We will consider additional information received prior to making a final designation.

**DATES:** Comments on this proposed rule to designate critical habitat must be received no later than August 31, 2011. A public hearing will be held promptly if any person so requests by August 16, 2011. Notice of the date, location, and time of any such hearing will be published in the **Federal Register** not less than 15 days before the hearing is held.

**ADDRESSES:** You may submit comments identified by 0648-BA81 by any one of the following methods:

- *Electronic Submissions:* Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Mail or hand-delivery:* Submit written comments to Regulatory Branch Chief, Protected Resources Division, National Marine Fisheries Service, Pacific Islands Regional Office, 1601 Kapiolani Blvd., Suite 1110, Honolulu, HI, 96814, Attn.: Hawaiian monk seal proposed critical habitat.

*Instructions:* Comments must be submitted to one of these two addresses to ensure that the comments are received, documented, and considered by NMFS. Comments sent to any other address or individual, or received after the end of the comment period, may not be considered. All comments received are a part of the public record and will generally be posted to <http://www.regulations.gov> without change. All Personal Identifying Information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information. We will accept anonymous comments (enter "NA" in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only. The petition, 90-day finding, 12-month finding, draft biological report, draft economic analysis report, draft 4(b)(2) report, and other reference materials regarding this determination can be obtained via the NMFS Pacific Islands Regional Office Web site: [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html) or by submitting a request to the Regulatory Branch Chief, Protected Resources Division, National Marine Fisheries Service, Pacific Islands Regional Office, 1601 Kapiolani Blvd., Suite 1110, Honolulu, HI 96814, Attn: Hawaiian monk seal proposed critical habitat. Background documents on the biology of the Hawaiian monk seal, the July 2, 2008, petition requesting revision of its critical habitat, and documents

explaining the critical habitat designation process, can be downloaded from [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html), or requested by phone or e-mail from the NMFS staff in Honolulu (area code 808) listed under **FOR FURTHER INFORMATION CONTACT.** The October 3, 2008, 90-day finding (73 FR 57583), the public comments received on the 90-day finding, and the June 12, 2009, 12-month finding (74 FR 27988), can be viewed at <http://www.regulations.gov> by searching for docket number "NOAA-NMFS-2008-0290".

**FOR FURTHER INFORMATION CONTACT:** Jean Higgins, NMFS, Pacific Islands Regional Office, (808) 944-2157; Lance Smith, NMFS, Pacific Islands Regional Office, (808) 944-2258; or Marta Nammack, NMFS, Office of Protected Resources (301) 713-1401.

**SUPPLEMENTARY INFORMATION:****Background**

The Hawaiian monk seal (*Monachus schauinslandi*) 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 and Hermes Reef, Lisianski Island, Laysan Island, Gardner Pinnacles, French Frigate Shoals, Necker Island, and Nihoa Island in the 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) isobath (53 FR 18988; May 26, 1988).

On July 9, 2008, we received a petition dated July 2, 2008, 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, 2008) under the ESA. The Petitioners sought to revise critical habitat by adding the following areas in the 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 m. In addition, the Petitioners requested that designated 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, 2008).

On October 3, 2008, we announced in our 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; October 3, 2008). On June 12, 2009, in the 12-month finding, we announced that a revision to critical habitat is warranted because of new information available regarding habitat use by the Hawaiian monk seal, and we announced our intention to proceed toward a proposed rule (74 FR 27988; June 12, 2009). Additionally, in the 12-month finding we identified the range of the species as throughout the Hawaiian Archipelago and Johnston Atoll (74 FR 27988; June 12, 2009). Although petitioned to designate areas identified by specific boundaries or concepts (*i.e.*, “key” areas), we evaluated habitat needs for the species, including all areas within the identified range to best realize the conservation goals and needs of the species. This proposed rule describes the proposed critical habitat designation, including supporting information on Hawaiian monk seal biology, distribution, and habitat use, and the methods used to develop the proposed designation.

Under section 4(b)(2) of the ESA, we must consider the economic impacts, impacts to national security, and other relevant impacts of designating any particular area as critical habitat. We have the discretion to exclude an area from designation as critical habitat if the benefits of exclusion (*i.e.*, the impacts that would be avoided if an area was excluded from the designation) outweigh the benefits of designation (*i.e.*, the conservation benefits to the Hawaiian monk seal if an area was designated), so long as exclusion of the area will not result in extinction of the species. This evaluation process introduces various alternatives to the revision of designated critical habitat for the Hawaiian monk seal, all of which we considered. The alternative of not revising the designated critical habitat for Hawaiian monk seals would impose no additional economic, national security, or other relevant impacts, but would not provide any additional conservation benefit to the species. This alternative was considered and rejected because such an approach does not meet the legal requirements of the ESA and would not provide for the conservation of the species based on the best available science. The alternative of designating all potential critical habitat areas (*i.e.*, no areas excluded) also was considered and rejected because, for several areas, the national security

benefits of exclusion outweighed the benefits of designation, and we determined that exclusion of these areas would not significantly impede conservation or result in extinction of the species.

An alternative to designating critical habitat within all of the areas considered for designation is the designation of critical habitat within a subset of those areas. Exclusion under section 4(b)(2) of the ESA of one or more of the particular areas considered for designation would reduce the total impacts of designation. The determination of which particular areas and how many to exclude is subject to the Secretary’s discretion after the impacts have been evaluated in accordance with section 4(b)(2) of the ESA. This evaluation was conducted for each area and is described in detail in the draft ESA 4(b)(2) report (NMFS, 2010b). Under this preferred alternative we propose to exclude 5 particular areas within the areas considered. We determined that the exclusion of these areas would not significantly impede the conservation of Hawaiian monk seals nor result in extinction of the species. We selected this as the preferred alternative because it results in a critical habitat designation that provides for the conservation of the Hawaiian monk seal while reducing the national security impacts. This alternative also meets ESA and joint NMFS and U.S. Fish and Wildlife Service (USFWS) regulations concerning critical habitat at 50 CFR part 424.

#### *Hawaiian Monk Seal Natural History and Ecology*

In the following sections, we describe the natural history of the Hawaiian monk seal as it relates to the habitat needs of the species. Hawaiian monk seals are members of the Phocidae family, also known as the true seals, which are characterized by a lack of external ear and an inability to draw the hind-flippers under the body for movement on land. The Hawaiian monk seal falls within the primitive genus *Monachus*. Only two other species of seal occur in this genus, the recently extinct Caribbean monk seal (*M. tropicalis*) and the critically endangered Mediterranean monk seal (*M. monachus*). These three monk seal species were widely dispersed geographically (*i.e.*, in the Hawaiian Archipelago, the Caribbean, and the Mediterranean), and disagreement remains regarding the historical biogeography of the monachine seals’ origin and dispersal (Repenning and Ray, 1977; Fyler *et al.*, 2005; Arnason *et*

*al.*, 2006). Regardless of the debate over geographic origin or chronology, the closure of the Central American Seaway would indicate that Hawaiian monk seals were separated from the Caribbean species at least 3 million years ago (mya) (Fyler *et al.*, 2005). At this time period geologically, Hawaiian monk seals would have been able to exploit habitat in the NWHI as well as utilize some habitat in the MHI, including Kauai and Niihau, which were forming as early as 5 and 4.9 mya, respectively (Juvik and Juvik, 1998).

Hawaiian monk seals are wide-ranging, air-breathing aquatic carnivores that spend a majority of their time in the ocean, but continue to rely on terrestrial habitat. Monk seals utilize aquatic habitat for foraging, socializing, mating, resting, and traveling. Adept at propulsion in the water, individual monk seals may travel hundreds of miles in a few days (Littnan *et al.*, 2006) and dive to more than 500 m (1,600 ft) (Parrish *et al.*, 2002). Although a majority of its time is spent in the water, like many other pinnipeds, the Hawaiian monk seal utilizes terrestrial habitat to rest, avoid predators, molt, pup (give birth), and nurse. In contrast to commonly recognized pinnipeds such as sea lions, walrus, and harbor seals, which often haul out in groups of larger numbers, the Hawaiian monk seal is considered solitary, often hauling out individually. The solitary nature extends both on land and in the water; however, monk seals may congregate in small numbers (*e.g.*, males may haul out with and guard females, or several animals may be found hauled out in relative proximity to one another) in favorable haul-out areas (Antonelis *et al.*, 2006).

Adult monk seals reach a length of 2.3 m (7.5 ft) and weigh up to 273 kg (600 lb). On average the adult males are smaller in size than females (NMFS, 2007a). It is thought that Hawaiian monk seals have a lifespan of up to 30 years in the wild (NMFS, 2007a). Females reach breeding age at about 5 to 11 years of age (NMFS, 2010d) depending on their condition. Little is known regarding the sexual maturation of males of the species, but behavior and size suggest similar maturation rates to that of the females (Antonelis *et al.*, 2006). Mating occurs at sea, and gestation is thought to be approximately 11 months. Females typically will haul out on land near the birth site and give birth to a single pup (Johanos *et al.*, 1994). Monk seal births are most common between February and August, but births have been documented at all times of the year (NMFS, 2007a). Upon birth the female will nurse the pup for

approximately 6 weeks; throughout this time period the mother remains with the pup usually fasting and decreasing in mass (Kenyon and Rice, 1959). The nursing period concludes with an abrupt weaning when the mother returns to the marine environment to forage, leaving the pup on its own (Johanos *et al.*, 1994). Females will mate about 3–4 weeks after weaning her pup, and 5–6 weeks after mating she will haul out to molt (NMFS, 2007a). The weaned pups are left to teach themselves to successfully forage. While their foraging skills develop, they depend on fat stores built up during the nursing period, resulting in considerable weight loss (NMFS, 2007a). Juveniles (up to 3 years old) are typically longer but thinner than recently-weaned pups, and juveniles in the NWHI typically do not regain their post-weaning weight until approximately 2 years of age (Johanos *et al.*, 1994).

Adult seals appear silvery white ventrally with dark silvery tinged brown or slate gray pelage (fur) dorsally, and as the hair ages, the ventral pelage takes on a yellow tinge while the dorsal pelage may appear dull brown or darker (Kenyon and Rice, 1959). When monk seals stay at sea for an extensive period, they may develop a red or green tinge from algal growth on their pelage (Kenyon and Rice, 1959). Monk seals undergo an annual molt, which is termed a catastrophic molt because the entire layer of pelage (skin and hair) is shed, leaving a new silvery grey coat underneath. During their annual molt, Hawaiian monk seals may haul out on land, staying ashore 10–14 days or more (NMFS, 2007a). At birth, pelage is black and may occasionally be marked with small white patches, referred to as natural bleaches (Kenyon and Rice, 1959). The black pelage is lost during the postnatal molt, which occurs around the time of weaning.

#### Range

In the 12-month finding (74 FR 27988; June 12, 2009), we identified the range of the Hawaiian monk seal to include habitat throughout the Hawaiian Archipelago and Johnston Atoll. This determination was based on pupping (birth) and sighting data from the Hawaiian Archipelago collected by the NMFS Pacific Islands Fisheries Science Center (PIFSC), Protected Species Division (PSD). Verified past accounts from Johnston Atoll were used to determine that the Atoll may be considered as part of the geographical area occupied by the species (NMFS, 2001). Unconfirmed sightings of Hawaiian monk seals from Palmyra

Atoll (1,800 km south of NWHI); Wake Island (2,000 km southwest of NWHI); Bikini Atoll and Mejit Island in the Marshall Islands (2,400 km southwest of NWHI) (NMFS, 2010c) were recognized, but substantial evidence was not found to incorporate these areas into the species' range. In discussing the range of the species, we also acknowledged that animals have been historically relocated to manage serious threats to the population or individual animals. Relocations include: 21 males from the NWHI to the MHI, three females from the MHI to the NWHI, 11 males from the NWHI to Johnston Atoll, and 1 male from the MHI to Johnston Atoll. Female Hawaiian monk seals have not been relocated to the MHI.

#### Population Status and Trends

The current Hawaiian monk seal population is estimated at 1,161 individuals (NMFS, 2009). The estimate includes the sum of estimated abundances at the six main NWHI breeding subpopulation sites, an extrapolation of counts at Necker and Nihoa Islands, and an estimate of minimum abundance in the MHI (NMFS, 2009). Minimum population estimates for 2008 based on the number of seals identified from the six main NWHI subpopulations was 913 seals, and for the MHI, 113 seals (NMFS, 2009). Additional information regarding the methods used to determine estimates may be found in the NMFS annual stock assessment reports. The breeding subpopulations identified are geographically separated, but re-sights of identified animals indicate seal movement among the NWHI, among the MHI, and, on rare occurrence, from the NWHI to the MHI (Littnan *et al.*, 2006; NMFS, 2009). The complete history of Hawaiian monk seal population status and trends is unknown; however, data and historical accounts do indicate impacts to population trends from human exploitation and disturbance. The following is a review of pertinent information and trends with regard to population status.

The first beach counts of Hawaiian monk seals in the NWHI occurred in the late 1950s, but prior to that time period human-influenced declines in population can be inferred from historical accounts. The first written accounts during Lisianski's exploration in the 1800s indicated seals of the NWHI being exploited for oil, pelts, or food (Ragen, 1993). Reports from the end of the same century highlight the impact of early human exploitation on the seal population, with accounts of no seals being seen on extended visits to Midway and Laysan, areas where

numerous seal sightings were indicated in the past (Ragen, 1999). Following the period of exploitation in the 1800s, areas in the NWHI were settled for entrepreneurial and military reasons. Descriptions of seal sightings at this time indicate behavioral changes, including seals showing a habitat preference for sites less accessible to human inhabitants (Ragen, 1999). Starting in the late 1950s, counts were made at the islands almost every year, with a high count of 1,206 seals recorded in the spring of 1958 (NMFS, 1983). Although these counts do not provide a total population estimate (because the proportion of the total included in the count was not determined), the beach counts do demonstrate a decline between the late 1950s and mid-to-late 1970s. Counts in the 1970s ranged from 500–600 seals, less than half the high counts from the late 1950s (NMFS, 1983). This decrease was most evident in the western portions of the range and has been associated with human disturbance related to military settlement (Kenyon and Rice, 1959; Ragen, 1993). Military activities and presence eventually ceased at these sites, and the islands have been managed as a refuge; in 2006 the islands and surrounding waters were incorporated into the Northwestern Hawaiian Islands Marine National Monument, now renamed Papahānaumokuākea Marine National Monument. Periods of decline and stability have been documented since the area has been managed as a refuge, with the most recent period of decline beginning in 2001 (NMFS, 2007a). In 2008, beach counts of juveniles and adults (*i.e.*, all seals except pups) were 68 percent lower than those of the late 1950s (NMFS, 2009). Total abundance at the six primary NWHI sites (French Frigate Shoals, Laysan, Lisianski, Pearl and Hermes, Midway, and Kure) is declining at a rate of about 4.5 percent per year (NMFS, 2009). While the earlier declines are marked by human exploitation and disturbance, the current declines in the NWHI may be driven by food limitations and other sources of mortality, which disproportionately impact juvenile seal survival and consequently reduce recruitment into breeding age classes. With fewer adults of breeding age, the current age structures of the NWHI subpopulations indicate that declines are likely to continue for at least the next decade (Baker *et al.*, 2010). A detailed account of the Hawaiian monk seal population status and trends in the NWHI is provided in the recovery plan (NMFS, 2007a).

It is generally accepted that Hawaiian monk seals are native to the islands of the northwest, as discussed earlier; however, conflicting views remain regarding Hawaiian monk seal historical use of the MHI. The lack of seal references in the Hawaiian oral tradition has led some to believe that Hawaiian monk seal use of this region is a recent phenomenon. However, fossil remains of seal bones discovered at an archeological site from the Island of Hawaii dating from 1,400–1,760 years ago (Rosendahl, 1994) has led support to an alternate view suggesting that Hawaiian monk seals may have been forced to peripheral habitat by exploitation or disturbance during early Polynesian settlement (Ragen, 1993; Baker, 2004; Baker and Johanos, 2004). Anecdotal evidence, including the Polynesian extirpation of other avian species during early settlement (Olson and James, 1982; Diamond *et al.*, 1989), the availability of coastal habitat (Juvik and Juvik, 1998), and the monk seal presence in the Pacific basin well before the Polynesian settlement, lends additional credence to this theory (Olson and James, 1982; Diamond *et al.*, 1989; Juvik and Juvik, 1998; Athens *et al.*, 2002; Kirch *et al.*, 2004; Fyler *et al.*, 2005). Thus, Polynesian settlement of the MHI may have driven Hawaiian monk seals to the NWHI, where human settlements were limited by the availability of fresh water (Ragen, 1999; Baker and Johanos, 2004). In summary, this view presents the current growth and dispersal of the Hawaiian monk seal population in the MHI as a re-colonization event.

More recent MHI history provides the historical accounts of seal sightings indicating the occasional presence of seals, including sightings from as early as 1900 and later accounts spanning into the 1950s throughout the MHI (Bailey, 1952; Kenyon and Rice, 1959). Niihau residents reported that seals appeared regularly after 1970 (Baker and Johanos, 2004), and NMFS PIFSC's records from 1980–1986 reveal 125 seal sightings recorded throughout the MHI (NMFS, 2010e). These sightings do not represent a discrete number of seals, because the sightings are incidental and seal identification is unknown; however, it does reveal the presence of seals throughout the islands in the early 1980s prior to the first critical habitat designation. By as early as 1994, a small naturally-occurring population of male and female monk seals was present in the MHI. Since the mid-1990s, an increasing number of documented sightings and annual births of monk seal pups have occurred in the MHI.

Estimates using systematic surveys or sightings of uniquely identified individuals within the MHI indicate an increase in numbers as demonstrated by the following estimates: 45 individuals reported in 2000, 77 individuals in 2005, and 113 individuals in 2008 (NMFS, 2007b; NMFS, 2009). The growth in numbers in the MHI is not likely to be a consequence of increased migration from the NWHI, since only 5 seals have been documented to have migrated from the NWHI to the MHI since the 1980s when regular tagging efforts began (Baker *et al.*, 2010). It is likely that seals in the MHI are growing in numbers due to the increase in births and have been dispersing from under-documented areas (such as Niihau) to the rest of the chain (Baker and Johanos, 2004).

#### *Northwestern Hawaiian Islands vs. Main Hawaiian Islands*

There is no genetic evidence suggesting monk seals occurring in any part of the archipelago are genetically distinct from monk seals elsewhere in the range (Schultz *et al.*, 2009); thus, the Hawaiian monk seal consists of one population distributed throughout the Hawaiian Archipelago. While the population is not genetically distinct in the NWHI and MHI, differences between Hawaiian monk seal population status, habitat, research efforts, and threats to the seals utilizing these two regions support a separate approach to management and conservation efforts (Baker *et al.*, 2010). The following discussion summarizes some of the differences identified between the two management areas and refers to the seals in these geographic areas as separate populations due to these differences.

Recruitment trends differ between the NWHI and MHI. In the NWHI, many of the reproductive subpopulations are experiencing a decline in breeding subpopulations that is attributed primarily to food limitation (NMFS, 2007a). The impacts resulting from food limitation are most strongly expressed in poor juvenile condition and survival, and low age-specific reproductive rates (delayed maturity) (Antonelis *et al.*, 2006; NMFS, 2007a). High juvenile mortality rates result in fewer females achieving reproductive maturity, thereby causing an imbalanced age structure, which in turn contributes to the continued decline. In contrast, the MHI portion of the population is increasing. This is evident by the growing number of identified individuals and number of pups born annually (Baker and Johanos, 2004). In addition to the difference in population growth, monk seals in the MHI appear

to be in better physical condition than those in the NWHI. In general, MHI females begin reproducing at a younger age, and attain higher birth rates than females in the NWHI (Baker *et al.*, 2010). In 2008, a 4 year old MHI female became the youngest documented Hawaiian monk seal of known age to pup (NMFS, 2010f). The successfully reproducing females of the MHI are also producing robust pups. Measurements from axillary girths and standard lengths of weaned pups from the MHI were significantly greater in comparison to the same measurements from weaned pups from the NWHI, which are thought to have better foraging conditions for the mothers in the MHI (Baker and Johanos, 2004; Baker *et al.*, 2006). Additionally, the estimated survival from weaning to age 1 is 77 percent in the MHI, which is much higher than the 42–57 percent survival estimated for breeding subpopulations in the NWHI. This disparity in population status between the two regions is well reflected in recent efforts to estimate population growth and decline of monk seals in the separate areas. If demographic trends continued at the current rates, the MHI and NWHI portions of the population would equalize in 15 years (Baker *et al.*, 2010).

Factors influencing foraging success may explain the disparity between the two regions. These factors can be attributed to an inequity in ecological competition on several levels. First, low numbers of monk seals in the MHI may point to a greater per capita availability of prey than in the NWHI (Baker and Johanos, 2004). Specifically, the lower number of seals in the MHI across a large expanse of available foraging habitat allows for less intra-specific competition for food resources. Secondly, the NWHI is located within the Papahānaumokuākea Marine National Monument, one of the largest and best-protected marine areas in the world, where commercial fishing efforts have been minimized in past years and recently completely ceased. The protected ecosystem of the NWHI, in comparison to the MHI, has a greater number of large predators. The sharks, jacks, and other demersal fish that have been observed to compete directly with monk seals in the NWHI are much less abundant in the MHI. In other words, inter-specific competition is likely lower in the MHI (Baker and Johanos, 2004; Parrish, 2008). Additionally, competition between humans and monk seals may be limited in the MHI because seals prefer small (usually less than 20 cm, or 8 in) eels, wrasses, and other benthic species not commonly sought

by fishermen (Parrish *et al.*, 2000). All of these factors appear to positively influence the population status of monk seals in the MHI at this time, but these favorable dynamics may shift as the population grows in the MHI.

Additional differences between the two regions are further reflected in the threats to the species, and, consequently, in the management priorities and activities for each population, which are discussed in detail in the Hawaiian Monk Seal Recovery Plan (NMFS, 2007a). One of the threats discussed includes that of habitat loss (NMFS, 2007a). The low-lying islets and islands of the NWHI are particularly susceptible to sea level rise, an impact that results from several factors associated with climate change, including thermal expansion of the warming oceans and melting of glaciers and ice caps (Baker *et al.*, 2006). In the 20th century sea levels rose 15 cm, and increases are expected to continue (Baker *et al.*, 2006). As a result of sea level rise, important pupping and hauling out habitat may be lost (Baker *et al.*, 2006). While the threat of sea level rise may be accelerated by anthropogenic forces, human activities which influence this threat are considered to be of a complex global scale. Management efforts in the NWHI area would more likely focus on the preservation of specific areas for pupping and hauling out and may include regular monitoring for changes in elevation at the various islets and islands. Long-term mitigation planning at specific sites may also play a role in conserving habitat in the NWHI (Baker, 2006). In the MHI, habitat loss is equally a threat, but in the MHI, coastal anthropogenic development plays a pronounced role by exacerbating the threat to coastal habitat. Like most other coastal states, Hawaii's dependence on coastal resources has led to increased development of shorelines. In response to natural erosion processes, urban shorelines were often hardened to protect assets. Efforts to harden shorelines alter the natural hydrodynamic system of waves and currents, affecting sand transport rates that control the erosion-accretion process of beaches (Defeo *et al.*, 2009). Consequences of armoring vary depending on the placement of the structure and the surrounding hydrodynamics, but have included passive erosion on the armored beach, flanking erosion of shorelines adjacent to engineered structures, and possibly the enhanced erosion on protected coasts (Venter *et al.*, 2006). On Oahu past reliance on shoreline armoring to

mitigate coastal erosion has resulted in widespread beach narrowing and sand loss (Fletcher *et al.*, 1997). Current management measures in the MHI are aimed at coastal setbacks (*i.e.*, planning development inland from the water's edge and the threat of erosion), but the increased demand for the use of coastal areas for industry, recreation, and private use may put continued pressure on developers to increase access to "new" beach areas. In the future, remote beaches may be squeezed between seaward directed development and rising sea levels, leaving no room for natural sediment dynamics (Defeo *et al.*, 2009). As the number of Hawaiian monk seals increases in the MHI and development continues, available habitat for hauling out and pupping will become increasingly important.

Direct anthropogenic threats from activities within the Papahānaumokuākea Marine National Monument have been minimized through management measures aimed at protecting the unique resources within the NWHI. Despite being located in this highly protected area, the Hawaiian monk seals continue to face threats in the NWHI that require management. Twenty years of robust population monitoring data in the NWHI aids in making these management decisions. Data reflecting poor juvenile survival has focused management efforts towards positively influencing population trajectories by increasing efforts which support monk seal health during the fragile first years. Conversely, the MHI population is only in the early stages of scientific monitoring efforts, as previous research efforts were concentrated towards NWHI. Currently, a great deal of information regarding MHI seals is received from a growing volunteer network, and management efforts in the MHI have been focused on threats centered on anthropogenic influences. Growth in seal numbers in the MHI has increased human and seal interaction, and many coastal residents and visitors are unfamiliar with the specific needs of the species. This increased overlap in use of coastal and marine habitat has led to fishery interactions (hookings and entanglements), disturbance and harassment of seals, and sometimes injuries to humans (Baker *et al.*, 2010). Impacts from pollution and runoff into the aquatic environment also pose health hazards to the species in the MHI; these threats are not factors considered in the NWHI (Littnan *et al.*, 2006). In addition to these unintentional anthropogenic threats, three seals were recently documented shot and killed in the MHI.

As discussed above, differences between the NWHI and MHI portions of the population present unique research and management challenges for the Hawaiian monk seal. With the continued decline in numbers and the fragile status of reproductive classes in the NWHI, the survival of the species as a whole may become increasingly dependent on the success of the portion of the population in the MHI along with management efforts taken to ensure that success.

#### *Habitat*

The Hawaiian monk seal depends on aquatic environments as well as terrestrial environments for survival. While Hawaiian monk seals spend a majority of their time in the water, the terrestrial component of their habitat plays a vital role throughout all life stages. Monk seals utilize terrestrial habitat to haul out for resting, molting, pupping, nursing and avoiding predators. Since monk seals may remain at sea for several days or more at a time, resting on land is essential to conserve energy. Resting commonly occurs on sandy beaches, but may also occur on rocky shores, rock ledges, emergent reefs, and even shipwrecks (Antonelis *et al.*, 2006). While on shore, monk seals may take shelter from wind and rain under shoreline vegetation. When ocean conditions are rough, monk seals may spend a greater proportion of time resting on land. Resting on land may be for a few hours to several days at a time (Antonelis *et al.*, 2006).

Terrestrial habitat is essential for pupping and nursing of pups. Pupping and nursing areas are usually sandy beaches adjacent to shallow protected water (Westlake and Gilmartin, 1990). Individual females appear to favor certain pupping locations, returning to them year after year. Pregnant females come ashore a few days before giving birth to a pup weighing approximately 16 kg (35 lb). Pups nurse for 5 to 6 weeks (Johanos *et al.*, 1994) and weigh 50–100 kg (110–220 lb) at weaning. During nursing, mother and pup remain in close proximity to each other, and the mother is protective of her pup. Although the pup is able to swim at birth, nursing is done on land and the mother-pup pair usually remains on land for the first few days after the pup is born. The mother gradually begins swimming with her pup in the shallows, returning to the general area around the pupping site. As weaning approaches, the mother-pup pair spends more time in the water, venturing further away from the pupping site. After weaning, pups typically remain in the shallows near their nursing areas for several

weeks before venturing into deeper foraging areas (Kenyon and Rice, 1959; Henderson, 1988). Hauling out on land is also required for molting, when old pelage is shed. Monk seals usually remain on land during the annual molting; the process lasts approximately 1 to 2 weeks (Kenyon and Rice, 1959).

Hawaiian monk seals utilize the aquatic components of their environment for thermoregulating, resting, interacting, mating, and foraging. Observation of 24 adult male monk seals wearing animal-borne video cameras showed that greater than 50 percent of the time spent underwater was spent resting or interacting with other seals and that much of these activities were spent in shallower depths (Parrish, 2000; Parrish, 2004). Resting may also occur at sea or in shallow, submerged caves. Little has been observed regarding monk seals' mating behavior in the marine environment; however, gains in foraging research provide new insight into monk seal foraging since the time of the previous critical habitat designation.

Previous understandings of monk seal foraging assumed monk seals were feeding on localized prey species on near shore coral reef structures and on offshore banks surrounding the haul-out areas in the NWHI (NMFS, 1983). Although transit and deeper diving behavior was acknowledged in the 1983 recovery plan, little was known regarding monk seal foraging behavior at deeper depths, and the extent and frequency of foraging transits were not well understood. Information from satellite transmitter studies began to transform these concepts by regularly demonstrating seals transiting to neighboring banks (Parrish and Littnan, 2007). Additionally, digestion studies began to illustrate that scat found on the beach might only represent prey from close reefs and not the seals' entire diet (Goodman-Lowe, 1998; Goodman-Lowe *et al.*, 1999; Parrish and Littnan, 2007). Later, Crittercam footage (or head-mounted cameras) revealed seals ignoring reef fish in the coral shallows in favor of foraging on deeper atoll slopes and neighboring banks. Additionally, depth recordings from these animals demonstrated foraging at depths greater than previously recognized (Parrish *et al.*, 2000; Stewart, 2006). These data combined have reshaped the knowledge of how seals utilize their foraging habitat and where seals are feeding.

Today monk seals are considered to be foraging generalists consuming a wide variety of prey species. Goodman and Lowe (1998) identified inshore, benthic, and offshore teleosts as the

most represented prey items in monk seal scat, followed by cephalopods and crustaceans. From the 940 scats sampled, the study was able to identify 31 families of teleosts and 13 families of cephalopods (Goodman and Lowe, 1998). Additionally, fatty acid analysis of the monk seal diet has begun to identify an even broader number of prey species consumed by the Hawaiian monk seal (Iverson, 2006). Fatty acid analysis studies have also demonstrated substantial variation in diet among individuals, demographic groups (between juveniles and adults/sub adults), and locations (Iverson, 2006), indicating that individual monk seal foraging preferences and capabilities play a role in selection of foraging habitat. Recently increased resolution of regurgitation samples has identified the remains of morid cod, which are a species typically found at subphotic depths or depths greater than 95 m (Longnecker *et al.*, 2006). These dietary analyses, that indicate individual seal foraging preferences and seals foraging at greater depths, are consistent with seal foraging ecology studies discussed below.

Recent studies using new advances in technology have demonstrated that Hawaiian monk seals forage in marine habitats anywhere from a meter to several hundred meters in depth. Time-depth recorders from several studies revealed a large portion of effort at depths between 50 and 300 m (164–984 ft), which coincides with the bank and slope habitats used by prey species often detailed in monk seals' diets (Parrish 2004; Parrish and Abernathy 2006). Foraging studies by Parrish describe these preferred foraging habitat as low-relief substrates such as sand and talus in areas of habitat uniformity at greater depths than previously considered for critical habitat (Parrish and Littnan, 2007; Parrish, 2008), where adult seals are able to move large, loose talus fragments found in the premium foraging habitat to reach the prey hiding underneath (Parrish *et al.*, 2000). Although these sites are often greater distances from haul-out sites, it appears that the less sheltered prey in the uniform habitat may make this area energetically preferable to the seals (Parrish *et al.*, 2000). Studies in the NWHI (Parrish *et al.*, 2002; Stewart, 2006) have also shown that adult monk seals may forage at 300–500 m (1,000–1,600 ft), sometimes visiting patches of deep corals (Parrish 2004; Parrish *et al.*, 2002). A summary of telemetry data from 37 male and female adults tagged throughout the NWHI revealed that 17 seals appeared to be specializing in

subphotic foraging (Parrish 2004). This calculates out to 46% of the adults tracked, which Parrish (2004) extrapolated out to be about a fourth of the entire population. The use of these deeper habitats may reflect monk seals taking advantage of readily available prey in a habitat with decreased inter-specific competition (Parrish, 2008). The maximum depth at which seals have been documented to forage is around 500 m (1640 ft) (Parrish 2004); however, monk seals are almost certainly capable of exceeding depths of 550 m and the extent of foraging depth may still be unknown (Parrish 2004; Stewart *et al.* 2006).

Foraging studies with instrumented juvenile monk seals (1–3 years old) in the NWHI illustrated foraging behavior similar to that of adult monk seals. Feeding occurred both within shallow atoll lagoons 10–30 m (33–98 ft) and on deep reef slopes (50–100 m/160–325 ft), usually over sand rather than talus (Parrish *et al.*, 2005). Video footage of juvenile seal foraging showed seals moving along the bottom, flushing prey with a variety of techniques, including probing the bottom with their nose, using their mouth to squirt streams of water at the substrate, and flipping small rocks with their heads and shoulders (Parrish *et al.*, 2005). While juvenile seals are able to dive to depths similar to adults, the smaller seals likely do not yet have the size or experience to engage in the successful large talus-foraging behavior exhibited by adults (Parrish *et al.*, 2005). In addition to the preferred habitat, limited data also indicate that juvenile seals may occasionally forage at the deeper ranges used by adults (Parrish 2004).

Although much less information is available regarding monk seals foraging in the MHI, 11 juvenile and adult monk seals were tracked in 2005 using satellite-linked radio transmitters showing location and summaries of dive depths. This study indicated that seals usually remained in near shore waters within the 200 m (650 ft) isobath (Littnan *et al.*, 2006). Since that study, recent tracking of Hawaiian monk seals with cell phone tags in the MHI demonstrates some diving depths up to 489 m (1,555 ft) (NMFS, 2010g).

In general, the selection of foraging habitat by monk seals may be influenced by many factors, including environmental conditions that influence abundance and composition of prey assemblages; conditions that influence prey availability and capture success such as intra-specific and inter-specific competition; as well as individual circumstance including size and age class, preferred prey, and individually

avored foraging tactics. These variables all influence where and how Hawaiian monk seals utilize foraging habitat within the marine environment.

In summarizing monk seal habitat, features that support resting, reproduction, molting, predator avoidance, and foraging are essential for the conservation of this species. Therefore, Hawaiian monk seal critical habitat must include terrestrial and marine areas. Terrestrial areas include a sanctuary for hauling out for resting, molting, pupping, nursing, and avoiding predators. Terrestrial habitat consists of near shore or emergent surfaces where monk seals can haul out. Those areas preferred for pupping consist of a subset of haul-out habitat and are usually on sandy beaches adjacent to shallow marine areas. These shallow marine areas provide protection for pups while they become accustomed to unaccompanied life in the marine environment and begin learning to forage on their own. The marine habitat includes areas used for thermoregulating, resting, interacting, mating, and foraging. Foraging habitat for Hawaiian monk seals has been demonstrated to be at depths as great as 500 m in the NWHI. Recent declines in the Hawaiian monk seal population point to food limitations in the NWHI, especially for juvenile monk seals, making marine foraging areas particularly critical components of monk seal habitat.

#### Critical Habitat

Section 4(b)(2) of the ESA requires us to designate critical habitat for threatened and endangered species “on the basis of the best scientific data available and 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.” This section also grants the Secretary of Commerce (Secretary) discretion to exclude any area from critical habitat if he determines “the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat.” However, the Secretary may not exclude areas that “will result in the extinction of the species.”

The ESA defines critical habitat under section 3(5)(A) as: “(i) the specific areas within the geographical area occupied by the species, at the time it is listed \* \* \*, 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 \* \* \* upon a determination by the Secretary that such areas are essential for the conservation of the species.”

Once critical habitat is designated, section 7 of the ESA requires Federal agencies to insure they do not fund, authorize, or carry out any actions that will destroy or adversely modify that habitat. This requirement is additional to the section 7 requirement that Federal agencies insure their actions do not jeopardize the continued existence of listed species.

#### Methods and Criteria Used To Identify Critical Habitat

In the following sections, we describe the relevant definitions and requirements in the ESA, our implementing regulations, and the key information and criteria used to prepare this proposed critical habitat revision. In accordance with section 4(b)(2) of the ESA and our implementing regulations (50 CFR Part 424), this proposed rule is based on the best scientific information available.

To assist with the revision of Hawaiian monk seal critical habitat, we convened a critical habitat review team (CHRT) consisting of seven biologists from NMFS PIFSC and the Pacific Islands Regional Office (PIRO). The CHRT members had experience and expertise in Hawaiian monk seal biology, distribution and abundance, and management. The CHRT used the best available scientific data and their best professional judgment to: (1) Identify the physical and biological features essential to the conservation of the species that may require special management considerations or protection; (2) identify specific areas within the occupied area containing those essential physical and biological features; (3) evaluate the conservation value of each specific area; and (4) identify activities that may affect any designated critical habitat. The evaluations and conclusions are described in detail in the following sections. We concur with these conclusions.

#### *Physical or Biological Features Essential for Conservation*

Joint NMFS–USFWS regulations (50 CFR 424.12(b)) state that in determining what areas are critical habitat, the agencies “shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protections.” Features to consider may include, but are not limited to: “(1) space for individual and population

growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally; (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.” The regulations require the agencies to “focus on the principal biological or physical constituent elements within the defined area that are essential to the conservation of the species. Known primary constituent elements shall be listed with the critical habitat description. Primary constituent elements may include, but are not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.” For the purposes of this proposed rule, the essential features are the same as primary constituent elements.

In the 12-month finding (74 FR 27988; June 12, 2009), we identified five preliminary essential features in order to identify to the public areas that may be under consideration for the critical habitat. For this proposed rule, we used the best available scientific information to modify and supplement the essential features announced in the 12-month finding to best describe those elements or areas essential for the conservation of the Hawaiian monk seal. The following six essential features were identified.

#### (1) Areas With Characteristics Preferred by Monk Seals for Pupping and Nursing

Hawaiian monk seals have been observed to give birth and nurse in a variety of terrestrial coastal habitats; however, certain beaches may be preferred for pupping at the various atolls and islands within the range. Preferred pupping areas generally include sandy, protected beaches located adjacent to shallow, sheltered aquatic areas (Westlake and Gilmartin, 1990). Terrestrial pupping habitat may include various substrates such as sand, shallow tide-pools, coral rubble, or rocky substrates, as long as these substrates provide accessibility for seals for hauling out. Characteristics of preferred sites may also incorporate areas with low lying vegetation utilized by the pair for shade or cover (Antonelis *et al.*, 2006). Preferred coastal areas may attract multiple mothers to the same area year after year for birthing (Antonelis *et al.*, 2006); however, due to



the solitary nature of the species, some mothers may prefer to return to a lesser used location year after year. As discussed in the natural history of the species, female Hawaiian monk seals nurse their pups for approximately 6 weeks, then abruptly abandon the pup (Johanos *et al.*, 1994). This dramatic weaning leaves the pup independent, subsisting on fat stores until it learns to successfully forage on its own (NMFS, 2007a). The preferred habitat for pupping and nursing provides area necessary for normal behavior, growth, and survival through the time period when pups are dependent on the mothers for sustenance and protection. These areas also provide a familiar sanctuary for the weaned pup during its transition to independence.

(2) Shallow, Sheltered Aquatic Areas Adjacent to Coastal Locations Preferred by Monk Seals for Pupping and Nursing

Preferred pupping and nursing sites are often adjacent to shallow, sheltered aquatic areas (Westlake and Gilmartin, 1990). These sheltered marine areas provide protection for the mom and pup pair from predators and extreme weather events, as well as habitat for thermoregulatory cooling and swimming (Westlake and Gilmartin, 1990; NMFS, 2007a). Upon weaning, the newly independent pup will utilize the sheltered marine area to acclimate to life on its own, utilizing the habitat for swimming, exploring, socializing, thermoregulatory cooling, and the first attempts at foraging. Characteristics of the sheltered aquatic sites may include reefs, tide pools, gently sloping beaches, and shelves or coves that provide refuge from storm surges and predators. Marine habitat adjacent to preferred pupping and nursing areas provides area necessary for the normal behavior, growth, and survival during early juvenile development for the Hawaiian monk seal.

(3) Marine Areas From 0 to 500 m in Depth Preferred by Juvenile and Adult Monk Seals for Foraging

Food limitation is identified in the recovery plan as a critical threat to the Hawaiian monk seal; therefore, foraging grounds within the marine environment are an essential component in the recovery and conservation of the species. As identified in the habitat section of this report, Hawaiian monk seals forage in marine habitat anywhere from 0 to 500 m. This habitat includes barrier reefs of atolls, leeward slopes of reefs and islands, sites along the Hawaiian Islands Archipelago's submarine ridge, nearby seamounts, and submerged reefs and banks (Stewart,

2006). Preferred foraging habitat of adult monk seals is characterized by sand terraces and talus slopes that may range in depths of 50–100 m (160–325 ft) deep around their home atoll or island (Parrish and Littnan, 2007). These habitats provide substrate and materials for preferred benthic and cryptic prey species to hide. While the slopes are characterized as preferred feeding areas, recent diving, camera, and fatty acid analysis studies demonstrate that seals are feeding at depths greater than previously believed (300 m–500 m) (Parrish *et al.*, 2002; Iverson, 2006; Stewart, 2006). The use of these deeper habitats may reflect monk seals taking advantage of readily available prey in a habitat with decreased inter-specific competition (Parrish, 2008). Habitat at these greater depths may be comprised of deep water coral beds or the barren habitats prey species move between (Parrish *et al.*, 2002). Fatty acid analysis studies have demonstrated substantial variation in diet among individuals, demographic groups (between juveniles and adults/sub adults), and locations (Iverson, 2006). Thus, individual monk seal foraging preferences and capabilities play a role in selection of foraging habitat. The steady decline of the species (attributed mainly to food limitation) coupled with individual foraging tactics and prey preferences, reveals a need for protection that incorporates the features found in these foraging areas for this species.

(4) Areas With Low Levels of Anthropogenic Disturbance

Hawaiian monk seals utilize terrestrial habitat to haul out for resting, pupping and nursing, molting, and as a refuge from predators (NMFS, 2007a). The high energetic demands of life in the marine environment make resting behavior essential to the fitness of individual animals and the overall population. Human interactions with monk seals have the potential to cause disturbance and subsequent abandonment of a favored haul-out site or pupping area for less suitable locations. New locations may lack refuge characteristics, leaving the seals more vulnerable to predation or other environmental threats. Generally, Hawaiian monk seals seek areas that are undisturbed by large numbers of humans or human induced interactions (such as interactions with dogs or vehicles). Hawaiian monk seal intolerance of human disturbance is best documented in the NWHI following human settlement on specific islands throughout the various atolls (NMFS, 2007a). Kenyon (1972) documented changes in seal haul-out patterns at the

human settled islands at Midway Islands, French Frigate Shoals, and Kure Atoll. Changes observed included seals avoiding human inhabited islands during day time hours and seals hauling out on the islands or islets less frequented by humans (Kenyon, 1972). At Kure Atoll the population experienced depressed rates of reproduction and decreased juvenile survival during this period of human settlement. Kenyon (1972) related the poor juvenile survival to female adults either selecting inferior pupping habitat prior to birth or prematurely abandoning or weaning young, as a response to human disturbance. The preference for less disturbed areas is also evident in monk seal selection of many of the favored haul-out sites in the MHI, which consequently are located in the less populated areas (Baker and Johanos, 2004).

(5) Marine Areas With Adequate Prey Quantity and Quality

Food limitation is identified in the recovery plan as a critical threat to the Hawaiian monk seal; therefore, prey quantity and quality within the marine foraging habitat is an essential component in the recovery and conservation of the species. Monk seals are considered foraging generalists, feeding on a wide variety of prey species. Goodman and Lowe (1998) identified inshore, benthic, and offshore teleosts as the most represented prey items in monk seal scat, followed by cephalopods and crustaceans. From the 940 scats sampled, the study was able to identify 31 families of teleosts and 13 families of cephalopods (Goodman and Lowe, 1998). Additionally, fatty acid analysis of the monk seal diet has identified a broad number of prey species consumed by the Hawaiian monk seal (Iverson, 2006). While the broad number of prey species makes identifying an individual prey species for specific protections difficult, the foraging habits of seals help to identify areas and habitat types that are regularly utilized, including the sand terraces, talus slopes, submerged reefs and banks, nearby seamounts, barrier reefs, slopes of reefs and islands, and deep coral beds. Within these habitats, conditions, such as water quality, substrate composition, and available habitat, should support growth and recruitment of prey species to the extent that monk seal populations are supported. Current evidence from shrinking seal subpopulations in the NWHI indicates that prey quantity and quality are essential to recovery, but further research is necessary to identify direct correlations to specific threats to the



prey species as well as to identify appropriate management actions.

#### (6) Significant Areas Used by Monk Seals for Hauling Out, Resting, or Molting

Hawaiian monk seals utilize terrestrial habitat to haul out for resting, pupping and nursing, molting, and as a refuge from predators (NMFS, 2007a). Energetic requirements of life in the marine environment make resting behavior important, and, consequently, terrestrial haul-out areas are an essential component for conservation. These haul-out sites are generally characterized by sandy beaches, sand spits, or low shelving reef rocks accessible to seals, but many substrates may be used including emergent reef (Antonelis *et al.*, 2006). Favored sites may also reflect areas remote in nature or with low levels of human disturbance. Although Hawaiian monk seals are considered to be a solitary species (in comparison to other gregarious pinnipeds, such as sea lions), they may still haul out in small numbers (Antonelis *et al.*, 2006) and are likely to frequent general areas utilized by other seals due to the preferences for accessible and remote habitat.

#### Geographical Area Occupied and Specific Areas

One of the first steps in the critical habitat revision process was to define the geographical area occupied by the species at the time of listing and to identify specific areas within this geographically occupied area that contain at least one of the essential features that may require special management considerations or protection. As discussed in the Range section above, the range of the Hawaiian monk seal was defined in the 12-month finding on June 12, 2009 (74 FR 27988; June 12, 2009), as throughout the Hawaiian Archipelago and on Johnston Atoll. Using the identified range, we identified "specific areas" within the geographical area occupied by the species that may be eligible for critical habitat designation under the ESA. For an occupied area to meet the criteria of critical habitat, it must contain specific areas with one or more of the essential features that may require special management or protection. We identified areas that met the criteria of critical habitat within the range of the species, including areas in the NWHI and the MHI. Johnston Atoll was considered for potential critical habitat, but we determined that the lack of recent seal use, the remote nature of the atoll from the Hawaiian Archipelago, and the hazardous conditions associated

with past human use (including contamination, erosion, and debris (communication with USFWS staff)) rendered the features in this area inadequate for seal conservation. Each specific area was selected to reflect current seal use as well as anticipated habitat needs for recovery for the species. These specific areas are identified across the range, but areas have been grouped according to the NWHI and MHI management units to express similarities in population status, essential features present, and the activities that may affect the essential features such that special management considerations or protections are needed. The draft Biological Report (NMFS, 2010a; available via our Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html), via the Federal eRulemaking Web site at <http://www.regulations.gov>, or upon request (see ADDRESSES)) describes in detail the methods used to assess the specific areas and provides the biological information supporting the assessment. The following paragraphs provide a brief description of the essential features in each area and additional detail regarding the methods for delineating the specific areas.

#### *Specific Areas in the NWHI*

While identifying specific areas in the NWHI, we first considered areas incorporated in the current (1988) designation of critical habitat and agreed that the identified areas in the NWHI continue to meet the definition of critical habitat under the ESA. Although omitted from the current designation, we also identified that Sand Island at Midway Islands provides essential features, including pupping and nursing areas and haul-out areas for Hawaiian monk seals. The human occupation of this island presents a need for special management and protections; thus, Sand Island meets the criteria for critical habitat. In considering Sand Island for the proposed designation, we recognized that the Midway Harbor located on Sand Island did not incorporate the essential features identified and that this area should not be included in the designation. We determined that for all specific areas in the NWHI, unless otherwise noted, 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 are included out to the seaward boundary of the 500-m depth contour.

*Specific Area 1:* Kure Atoll's center point is defined at 28°25'11.00" N/178°19'45.00" W. Located at the northwestern end of the archipelago, the

coral atoll is comprised of the major island, Green Island, and a few small sand spits. Kure is one of the 6 major breeding subpopulations described for the NWHI, and population declines were described for this area in 2009 (Center, 2009). All six essential features are present within the specific area.

*Specific Area 2:* Midway Islands' center point is defined at 28°14'12.00" N/177°22'06.00" W. Located at approximately 2,100 km northwest of Honolulu, the grouping consists of three islands, Sand, Eastern, and Spit, located within the circular-shaped atoll. Today Sand Island supports a full time refuge staff, including residents that support and maintain a runway, and a visitor program. Considered one of the 6 major breeding subpopulations, the monk seal population in the Midway Islands was reported as declining in 2009 (Center, 2009). The specific area incorporates 88 mi<sup>2</sup> (227.9 km<sup>2</sup>) of terrestrial and marine habitat, and all six essential features are present within it. Midway Harbor does not meet the definition of critical habitat. The boundaries of Midway Harbor were delineated to incorporate the inner harbor and hardened shorelines of the harbor. The polygon that bounds Midway Harbor includes the area bounded by the point at the seaward edge of the northern breakwater at the harbor entrance (28°12'44.31" N/177°21'35.64" W) then north along the breakwater to where the breakwater meets the coastline at 28°12'54.06" N/177°21'38.69" W then west to 28°12'56.63" N/177°22'18.42" W then south to 28°12'30.88" N/177°22'23.89" W then east to 28°12'32.68" N/177°21'44.63" W then north to the seaward edge of the southern breakwater at the harbor entrance (28°12'39.99" N/177°21'38.04" W) and a line back to meet the seaward edge of the northern breakwater at Midway Harbor's entrance.

*Specific Area 3:* Pearl and Hermes Reef center point is defined at 27°50'37.000" N/175°50'32.00" W. The first land area southeast of Midway, this coral atoll consists of numerous islets, seven of which are above sea level. The total land area in the Atoll is approximately 80 acres (32.4 hectares), but the surrounding reef area is extensive. The specific area was estimated to be 242 mi<sup>2</sup> (626.8 km<sup>2</sup>). One of the 6 major breeding subpopulations, Pearl and Hermes Reef's monk seal population has been declining in recent years (Center, 2009); however, all six essential features are present within the specific area.

*Specific Area 4:* Lisianski Island center point is defined at 26°03'49.00" N/173°58'00.00" W. The single island is

located at about 1,667 km northwest of Honolulu, and is a low sandy island measuring approximately 1.8 km long and 1.0 km wide (NMFS, 1983). Though the island is small, a large reef area called Neva Shoals is located to the southeast. One of the 6 major breeding subpopulations, Lisianski's population has been declining in recent years (Center, 2009). However, the island and surrounding marine waters continue to support Hawaiian monk seals by providing all six essential features. The specific area was estimated to be 558 mi<sup>2</sup> (626.8 km<sup>2</sup>).

*Specific Area 5:* Laysan Island center point is defined at 25°46'11.00" N/171°43'57.00" W. The second largest land area in the NWHI, the coral-sand island encloses a hyper-saline lake in the middle of the island. The island is about 1.5 miles long (2.4 km) and 1 mile (1.6 km) wide and is partially surrounded by a fringing reef. The island lies approximately 213 km east of Lisianski Island and supports a small field camp. The Laysan monk seal population is the second largest of the 6 major breeding subpopulations, and the 2009 report concluded that the population is still in decline (Center, 2009). The specific area including and surrounding Laysan Island was estimated to be 294 mi<sup>2</sup> (761 km<sup>2</sup>) and all six essential features are present in this area.

*Specific Area 6:* Maro Reef center point is defined at 25°25'27.00" N/170°35'19.00" W. Maro Reef is the largest coral reef in the NWHI, located on top of a seamount. The reef is a complex maze of linear reefs that radiate out from the center and provide foraging habitat for the Hawaiian monk seal. Additionally, this area provides relatively undisturbed habitat with prey species present. This specific area incorporates approximately 960 mi<sup>2</sup> (2,486 km<sup>2</sup>) of marine habitat.

*Specific Area 7:* Gardner Pinnacles center point is defined at 25°0'00.00" N/167°59'55.00" W. Gardner Pinnacles consists of two pinnacles of volcanic rock between Maro Reef and French Frigate Shoals. Underwater shelves surround the pinnacles, and land and the marine habitat extending within this specific area was estimated to be approximately 1,489 mi<sup>2</sup> (3,857 km<sup>2</sup>). Home to a wide variety of prey species, Gardner Pinnacles provides relatively undisturbed marine foraging habitat and haul-out area for the Hawaiian monk seal (NMFS, 1983).

*Specific Area 8:* French Frigate Shoals center point is defined at 23°45'31.00" N/166°14'37.00" W. This coral atoll is open to the west and partially enclosed by a crescent-shaped reef to the east. It

lies about midpoint in the Hawaiian Archipelago and consists of several small sandy islets, the largest of which is Tern Island, where a year round field staff is present. French Frigate Shoals has provided habitat for a number of years to the largest breeding subpopulation of Hawaiian monk seals; however, this subpopulation has also experienced a tremendous decline in population attributed to poor juvenile survival (Antonelis *et al.*, 2006). This downward trend is expected to continue due to poor recruitment into the breeding class (Antonelis *et al.*, 2006). This specific area was determined to be approximately 469 mi<sup>2</sup> (1,215 km<sup>2</sup>) and all six essential features are present within the specific area.

*Specific Area 9:* Necker Island center point is defined at 23°34'36.00" N/164°42'01.00" W. The island also known as Mokumanamana is a small basalt island that is about 46 acres (19 hectares) in size. Habitat utilized by Hawaiian monk seals includes accessible rocky benches for hauling out, and pupping has been recorded at this site. In contrast to other areas in the NWHI, counts of Hawaiian monk seals at Necker have indicated an increasing trend in recent years (Center, 2009). Although the island is small in size, marine habitat surrounding the island is large, and the specific area was estimated to be approximately 900 mi<sup>2</sup> (2,331 km<sup>2</sup>) including land and marine habitat. All six essential features are present within the specific area. This island is uninhabited, but research crews do occasionally visit.

*Specific Area 10:* Nihoa Island center point is defined at 23°03'23.00" N/161°55'18.99" W. Nihoa is the easternmost island described in the NWHI and consists of a remnant volcanic peak with large foot cliffs, basalt rock surface, and a single beach. Hawaiian monk seals utilize the single beach and some accessible rock ledge areas for hauling out. The single beach is also used by multiple mothers for pupping and nursing. Similar to Necker, beach counts at Nihoa have indicated an increasing trend in recent years (Center, 2009). All six essential features are present within the specific area, and the specific area is estimated to be approximately 547 mi<sup>2</sup> (1,417 km<sup>2</sup>) incorporating all land and marine habitat.

#### *Specific Areas in the MHI*

In considering specific areas for the MHI, we recognized that data (including birth records and sighting information) indicate that each of the islands located within the MHI chain offers at least one of the essential features that fit the

criteria for Hawaiian monk seal critical habitat. Additionally, human activities associated with human use and development of coastal habitats and marine waters surrounding these islands may require special management or protections. The recovery needs of the species become especially important when considering the current status of the Hawaiian monk seal in the NWHI. The poor juvenile recruitment in the NWHI over the past decade will contribute to continued decline in the breeding subpopulations for some time. Thus, MHI habitat, where seals are experiencing favorable conditions, has become vital to the survival of the species as a whole.

In considering the MHI habitat, we recognized that designating critical habitat in the MHI based on current seals' beach preference would fail to take into account enough area to support the growing population or, more importantly, a recovered population. The recovered population identified by the *Recovery Plan for the Hawaiian Monk Seal* (NMFS, 2007a) set the population goal in the MHI at 500 individuals. This number is well above the estimated 150 individuals in the MHI. We considered that Hawaiian monk seals are unlike pinniped species that congregate in large numbers at specific or discrete sites (*e.g.*, rookeries or colonies). The species is considered solitary and wide ranging, which results in individuals spreading out and utilizing a large range of areas in the terrestrial and marine environment. Monk seal habitat preferences vary greatly between individuals, and additionally may change throughout the life span of the animal. With this consideration in mind, the number of seals currently utilizing the MHI is small; however, this small group occupies the entire MHI chain, and both observation and tracking data demonstrate that seals utilize terrestrial habitat around the perimeter of all of the islands.

While some seals may be well recognized at specific haul-out sites, these same seals are using multiple haul-out sites around an island or multiple islands. Seals may move around and between islands over the course of a day, several days, weeks, or several months. Basing our critical habitat designation on only currently recognized or favored Hawaiian monk seal haul-out sites may only reflect individual monk seal preference, rather than accurately characterize essential features for survival and recovery of the species as a whole. In conjunction with this concern is the fact that data gathered in the MHI are currently

dependent mostly on voluntary sighting information, and this may not accurately depict monk seal habitat use and preferences. For example, seals arriving in an area such as Poipu Beach, Kauai, which is frequented by human activity, are likely to be reported; however, seals utilizing more remote areas such as Laau Point, Molokai, having similar habitat characteristics, are likely to go unreported. We believe that a more expansive designation of critical habitat that includes areas where the species is likely to be found meets the needs of this wide ranging species and the conservation goals of the ESA. In addition to these factors, as a coastally dependent species, the Hawaiian monk seal will be impacted by sea level rise throughout its range. Habitat loss at low lying atolls in the NWHI will continue, and coastal habitats in the MHI may be impacted as well. This type of threat is not easily managed, and only a proactive approach to habitat protection will temper future losses and provide area for the recovery of the species.

In identifying the terrestrial boundaries for the MHI, we recognized that terrestrial habitat in the MHI is not consistent with the small islands of the NWHI, in that the MHI represent much larger land masses, many of which are not accessible to the Hawaiian monk seal. Not all terrestrial habitat in the MHI is equal in seal accessibility and use, and portions of the MHI coastal habitat can be considered hardened shorelines or developed areas that do not have the essential features and would not support Hawaiian monk seal conservation. These areas identified include boat harbors, cliffs, active lava, and large bays with extensive runoff. These locations are identified under each specific area as regions that are not proposed to be designated as critical habitat. Other stretches of hardened shoreline do exist in the MHI; these stretches are often positioned between accessible haul-out locations, and identification of every area would cause a piecemeal delineation. Such areas have been included in the designation area with the understanding that terrestrial areas with manmade structures (e.g., docks, fishponds, seawalls, piers, roads, pipelines), and the land on which they are located, in existence prior to the effective date of the rule are not essential to the conservation of the species and do not meet the definition of critical habitat.

To determine the marine boundaries in the MHI, we reviewed foraging information for the Hawaiian monk seal. Current foraging information from the MHI indicates that foraging monk seals

have a smaller range than seals foraging in the NWHI, but recent tracking data indicate that some seals are utilizing habitat in deeper areas (NMFS, 2010g). As discussed earlier, in the NWHI vs. MHI section, the MHI may provide less inter-specific as well as intra-specific competition for foraging monk seals. As populations increase in the MHI and intra-specific competition increases, seals will likely be forced to greater foraging depths and ranges to meet foraging needs. Thus, foraging patterns will begin to mimic foraging patterns of seals tracked in the NWHI. With this consideration in mind, we identified that foraging habitat for each specific area should be consistent with that in the NWHI to reflect the growing needs of the population and what is known regarding the species as a whole.

Specific areas in the MHI, identified by number below, include terrestrial habitat 5 m inland from the shoreline, described as upper reaches of the wash of the waves, other than storm or seismic waves, at high tide during the season in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth or the upper limit of debris, through the shoreline into the marine environment out to the 500-m depth contour around: Kaula Island, Niihau, Kauai, Oahu, Maui Nui (including Kahoolawe, Lanai, Maui, and Molokai), and Hawaii (except those portions of the areas that have been identified as not included in the designation).

*Specific Area 11:* Kaula Island is located 23 miles (37 km) west-southwest of Kawaihoa Point on Niihau. The island is the second largest offshore islet found in the MHI, after Lehua, and is the eroded result of a tuff crater. The crater wall creates a small bay along the inside curve, and a rock terrace or bench sits along this inner edge, ranging in width from 3.1 m to 24 m and providing haul-out habitat for Hawaiian monk seals. Limited access surveys from the island have demonstrated that multiple seals use the bench area for hauling out. Surveys have recorded as many as 15 individuals in 2006 and 6 individuals in 2009. Near the outer side of the crater along the northwest side of the island is a large sea cave where Hawaiian monk seals have been sighted. The islet is surrounded by 39 mi<sup>2</sup> (101 km<sup>2</sup>) of marine habitat that falls within the 500-m depth contour and is located on a shoal that supports a large variety of marine life. The U.S. Navy has jurisdictional control over the island and the 3 nautical mile (nm) (5.6 km) danger zone surrounding it, and uses the island for target practice with inert ordnances. The State of Hawaii

identifies the as a State Seabird Sanctuary. No seal births have been recorded from the limited access surveys that have been done on the island. Kaula Island provides preferred haul-out areas, marine foraging habitat with available prey species, and relatively undisturbed areas.

*Specific Area 12:* Niihau Island is located 17 miles (27 km) off the southwest coast of Kauai. Access to Niihau is limited to Niihau residents, the U.S. Navy, and invited guests. This specific area also includes Lehua Island, a tuff crater located a half mile (0.8 km) north of Niihau that provides shelves and benches for Hawaiian monk seals to haul out. The general coastline of Niihau is approximately 90 miles (145 km) and the specific area incorporates 200 mi<sup>2</sup> (518 km<sup>2</sup>) of marine habitat. Lehua is administered by the U.S. Coast Guard, and activities are subject to Hawaii Department of Land and Natural Resources regulations because it is a Hawaii State Seabird Sanctuary. Hawaiian monk seals utilize the coast of Niihau for hauling out, and a total of 24 births have been documented on the island despite limited surveys due to restricted access. Single day aerial surveys of the island have produced the highest count of seals recorded in the MHI, with 47 individuals, and residents have acknowledged that seals were regularly seen on the island since the 1970s (Baker and Johanos, 2004). The less disturbed coastlines and marine areas surrounding the island of Niihau provide all of the essential features for the Hawaiian monk seal critical habitat.

*Specific Area 13:* Kauai is the oldest of the islands in the MHI. The specific area incorporates 326 mi<sup>2</sup> (844 km<sup>2</sup>) of marine habitat, and the island has approximately 90 miles (145 km) of coastline. Kauai's beaches and coastline are utilized by Hawaiian monk seals for hauling out and for pupping and nursing. Although few births were recorded on Kauai prior to 1999, since that time 40 births have been recorded on the island. All six essential features are present within the specific area.

Areas within this specific area that do not meet the definition of critical habitat are defined as the following locations and are delineated by the identified boundaries: Hanalei Bay delineated by all terrestrial coastline areas located between the Makahoa Point (22°12'49.48" N/159°31'01.82" W) east to 22°12'56.10" N/159°29'52.82" W and all waters located inshore of a line drawn between those two points; Kikiaola Harbor delineated by all terrestrial coastline areas from 21°57'34.92" N/159°41'36.36" W east to 21°57'28.89" N/159°41'34.91" W and all

harbor waters located inshore of the line drawn between the seaward edge of western breakwater at the harbor's entrance (21°57'28.58" N/159°41'36.57" W) and the seaward edge of eastern breakwater at the harbor's entrance (21°57'27.19" N/159°41'41.34" W); Kilauea Point Cliff area delineated by all terrestrial coastlines located between 22°13'50.27" N/159°24'07.42" W east around to 22°13'50.97" N/159°24'05.68" W; Na Pali coast cliffs delineated by the mouth of the Hanakapiai stream (22°12'30.35" N/159°35'53.00" W) south west to the mouth of the Kalalau Stream (22°10'43.33" N/159°39'03.42" W); Nawiliwili Harbor delineated as all terrestrial coastlines between Kukii Point Light (21°57'23.80" N/159°20'52.70" W) south to where the southern breakwater meets the shoreline (21°56'54.65" N/159°21'03.15" W) and all waters inshore of a line drawn from Nawiliwili Harbor Breakwater Light (21°57'11.68" N/159°20'54.94" W) east to Kukii Point Light (21°57'23.80" N/159°20'52.70" W) (*i.e.*, the harbor's USCG defined COLREG line); Hanapepe Bay and Port Allen delineated by all terrestrial coastlines between the Hanapepe Light (21°53'34.55" N/159°36'15.55" W) east to where the Hanapepe breakwater meets the shoreline to the east (21°53'54.97" N/159°35'14.50" W) and all waters inshore of the line drawn from Hanapepe Light (21°53'34.55" N/159°36'15.55" W) east to Hanapepe Bay Breakwater (21°53'49.10" N/159°35'27.25" W) (*i.e.*, the harbor's USCG defined COLREG line); Waikaea Canal delineated by all terrestrial coastline, structures and waters inshore of the line drawn from the seaward edge of the southern breakwater at the mouth of the canal (22°04'14.7" N/159°18'58.98" W) north to the seaward edge of the northern breakwater at the mouth of the canal (22°04'16.41" N/159°18'58.00" W); Wailua Canal delineated as all coastline and waters located inshore of the bridge crossing the Wailua River or a line drawn between 22°02'41.13" N/159°20'11.95" W south to 22°02'44.27" N/159°20'10.93" W.

*Specific Area 14:* Oahu is the third largest island in the MHI chain. The specific area incorporates 697 mi<sup>2</sup> (1,805 km<sup>2</sup>) of marine habitat and the island has approximately 111 miles (179 km) of general coastline. Oahu's beaches, coastline and offshore islets are utilized by Hawaiian monk seals for hauling out and for pupping and nursing. Since 1991, 18 births have been recorded for the area. All six essential features are present within the specific area.

Areas within this specific area that do not meet the definition of critical habitat are defined as the following locations and are delineated by the identified boundaries: Pearl Harbor to Kapua Channel delineated by all terrestrial coastlines between Keahi point (21°18'57.95" N/157°58'42.82" W) east to eastern edge of the Kapua channel (21°15'28.77" N/157°49'07.51" W) and all waters out to depth of the 3 fathoms (5.4864 m) between the line drawn from Keahi point (21°18'57.95" N/157°58'42.82" W) to meet the 3 fathom (5.4864 m) contour following the 3-fathom (5.4864 m) contour east to a line drawn from the eastern edge of the Kapua channel (21°15'28.77" N/157°49'07.51" W) out to meet the 3 fathom (5.5 m) contour; Haleiwa Harbor delineated by all terrestrial coastlines between where the eastern breakwater meets the coastline (21°35'47.44" N/158°06'16.15" W) west to where the western breakwater meets the coastline (21°35'42.59" N/158°06'25.19" W) and all waters in the harbor inshore of the line drawn between breakwater Light 6 (21°35'47.63" N/158°06'22.42" W) and the seaward edge of the eastern breakwater (21°35'47.44" N/158°06'16.15" W); Maunaloa Bay and Hawaii Kai Harbor delineated as all coastline and waters located inshore of the line drawn between 21°16'53.22" N/157°43'21.77" W east to the point 21°15'49.13" N/157°42'41.45" W; Kalaeloa Barbers Point delineated as all coastline and waters located inshore of the line drawn between the harbor's entrance channel Light 6 (21°19'19.07" N/158°07'16.08" W) north to harbor entrance channel Light 7 (21°19'23.81" N/158°07'19.82" W); Kaneohe Bay delineated as all coastlines and waters located inshore of the line drawn from Pyramid Rock Light (21°27'44.12" N/157°45'48.69" W) through the center of Mokoli'i Island to the shoreline (21°30'59.27" N/157°50'10.01" W) (*i.e.*, the bay's USCG defined COLREG line); Waianae Small Boat harbor delineated by all coastlines between northern point where the breakwater meets the coastline 21°27'4.15" N/158°11'54.59" W south through to the range front light (21°26'55.57" N/158°11'46.70" W) and all waters inside the harbor located inshore of the line drawn between the range front light (21°26'55.57" N/158°11'46.70" W) west to the breakwater Light 1 described by the USCG at (21°26'50.68" N/158°11'48.90" W).

*Specific Area 15:* Maui Nui includes the islands Molokai, Lanai, Kahoolawe, and Maui and the surrounding marine waters. This specific area incorporates 2,510 mi<sup>2</sup> (6,500 km<sup>2</sup>) of marine habitat,

119 mi (192 km) of general coastline on Maui, 88 miles (142 km) of general coastline on Molokai, 47 miles (76 km) of coastline on Lanai, and 29 miles (47 km) of general coastline on Kahoolawe. Since 1995, 53 births have been recorded on the island of Molokai, 7 on the island of Kahoolawe, and 6 on the island of Maui. All six essential features are present within the specific area.

Areas within this specific area that do not meet the definition of critical habitat are defined as the following locations and are delineated by the identified boundaries: Hana wharf and ramp, Maui is delineated by all terrestrial coastlines from 20°45'18.53" N/155°58'56.32" W east to 20°45'19.93" N/155°58'54.12" W; Kahului Harbor is delineated by all terrestrial coastline between where the hardened shoreline meets the beach to the west of the harbor (20°53'53.05" N/156°28'47.87" W) east to where the hardened shoreline meets the beach to the east of the harbor (20°53'49.07" N/156°27'38.84" W) and all waters located inshore of the line drawn between the west breakwater Light 4 (20°54'01.16" N/156°28'26.82" W) east to the east breakwater Light 3 (20°54'02.36" N/156°28'17.43" W) (*i.e.*, the harbor's USCG defined COLREG line); Kihei boat ramp, Maui is delineated by all terrestrial coastlines between 20°42'31.34" N/156°26'46.95" W south to 20°42'27.19" N/156°26'46.13" W and all waters in the harbor located inshore of the line drawn between 20°42'31.34" N/156°26'46.95" W west to the seaward edge of the northern point on the breakwater at the harbor entrance (20°42'30.29" N/156°26'48.46" W); Lahaina harbor, Maui is delineated by all terrestrial coastlines between 20°52'21.63" N/156°40'44.05" W south to 20°52'11.67" N/156°40'38.53" W and all waters in the harbor located inshore of the line drawn from 20°52'21.63" N/156°40'44.05" W to the seaward edge of the breakwater at the harbor entrance (20°52'18.18" N/156°40'45.33" W); Maalaea Harbor is delineated by all terrestrial coastlines between where the western hardened shoreline meets the coast (20°47'23.65" N/156°30'49.85" W) east to where the eastern hardened shoreline meets the coast (20°47'32.07" N/156°30'34.24" W) and all waters in the harbor located inshore of the line drawn from the seaward edge of the west breakwater at the harbor entrance (20°47'24.74" N/156°30'39.18" W) east to the seaward edge of the east breakwater at the harbor entrance (20°47'24.59" N/156°30'36.41" W); Mala wharf and ramp, Maui is delineated by all hardened structures and coastline between the point where the hardened

structures of the wharf meets the coastline on the south side of the wharf (20°53'05.20" N/156°41'12.47" W) north to the southern edge of the Kahoma stream (20°53'07.86" N/156°41'10.78" W); Nakalahale cliff region, Lanai is delineated by all coastline between 20°44'31.86" N/156°52'46.92" W east to 20°45'05.8458" N/156°52'00.8214" W; Kaholo cliff region, Lanai is delineated by all coastline between 20°46'40.33" N/156°59'19.02" W south to 20°44'17.52" N/156°58'03.36" W; Manele Harbor, Lanai is delineated by all terrestrial coastlines from where the Manele Harbor breakwater meets the coastline (20°44'29.34" N/156°53'15.88" W) north to 20°44'34.95" N/156°53'15.45" W and all waters located inshore of a line drawn between the seaward extension of the breakwater (20°44'30.38" N/156°53'16.33" W) north to 20°44'34.95" N/156°53'15.45" W; Kamalapau Harbor, Lanai is delineated by all terrestrial coastline between 20°47'29.37" N/156°59'20.04" W south to 20°47'07.94" N/156°59'21.51" W; Haleolono Harbor, Molokai is delineated by all hardened structures and coastline between 21°05'13.04" N/157°15'03.68" W east to 21°05'04.43" N/157°14'54.82" W and all waters located inshore of the line drawn between the seaward edge of the west breakwater 21°05'01.21" N/157°14'58.95" W east to the seaward edge of the east breakwater 21°05'04.43" N/157°14'54.82" W; Kaunakakai Pier, Molokai is delineated by all terrestrial coastline between 21°05'14.83" N/157°01'30.42" W east to 21°05'09.12" N/157°01'23.05" W; and Kalaupapa Harbor is delineated by all terrestrial coastline between 21°11'26.09" N/156°59'04.76" W south to 21°11'23.57" N/156°59'04.12" W.

*Specific Area 16:* Hawaii is the largest island in the MHI, with a general coastline of 265 miles (426 km), and the specific area incorporates approximately 1,015 mi<sup>2</sup> (2,629 km<sup>2</sup>) of marine habitat. Since 2001, 9 births have been recorded on the island of Hawaii. All six essential features are present within the specified area.

Areas within this specific area that do not meet the definition of critical habitat are defined as the following locations and are delineated by the identified boundaries: Hilo harbor delineated by all water inshore of a line drawn from the seaward extremity of the Hilo Breakwater 265° true (as an extension of the seaward side of the breakwater) (19°44'34.53" N/155°04'29.98" W) west to the shoreline 0.2 nautical mile (0.4 km) north (19°44'28.74" N/155°05'23.80" W) of Alealea Point or the harbor's USCG defined COLREG line and delineated by all terrestrial

coastlines between 0.2 nautical mile (0.4 km) north (19°44'28.74" N/155°05'23.80" W) of Alealea Point east to 19°43'55.88" N/155°03'01.68" W; Honokohau harbor delineated by all terrestrial coastlines and waters inshore and inland of the line drawn between the Honokohau entrance channel Light 3 (19°40'11.52" N/156°01'37.84" W) and the Honokohau entrance channel Light 4 (19°40'09.41" N/156°01'35.90" W) Kailua-Kona Wharf delineated by all coastlines and waters located inshore of the line drawn between 19°38'17.09" N/155°59'53.05" W east to 19°38'17.69" N/155°59'39.43" W; Kawaihae Harbor all coastlines and hardened structures located between Kawaihae Light (20°02'29.12" N/155°49'58.21" W) south to 20°01'42.29" N/155°49'25.20" W and all waters located inshore of the line drawn between Kawaihae Light (20°02'29.12" N/155°49'58.21" W) and the seaward extremity of the Kawaihae breakwater Light 6 (20°02'14.21" N/155°50'02.00" W); Keauhou boat harbor all terrestrial coastlines between 19°33'39.63" N/155°57'45.06" W east to 19°33'42.89" N/155°57'42.69" W; Mahukona Harbor all coastlines and structures located between 20°10'59.62" N/155°54'03.57" W east to 20°11'02.21" N/155°54'01.99" W; and the active lava flow areas along the coastline.

#### Unoccupied Areas

Section 3(5)(A)(ii) of the ESA authorizes designation of "specific areas outside the geographical areas occupied by the species at the time it is listed" if those areas are determined to be essential to the conservation of the species. Joint NMFS and USFWS regulations (50 CFR 424.12(e)) emphasize that the agency shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species. At the present time we have not identified additional specific areas outside the geographic area occupied by Hawaiian monk seals that may be essential for the conservation of the species.

#### Special Management Considerations or Protections

Joint NMFS and USFWS regulations at 50 CFR 424.02(j) define "special management considerations or protection" to mean "any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species."

Activities that may require special management or protection were

identified by reviewing the threats identified in the Hawaiian Monk Seal Recovery Plan (NMFS, 2007a) as either impacting the seal or the essential features of the habitat. Threats identified as impacting the individual seal were considered jeopardy threats that are addressed with protections put in place with the listing of the species. Threats impacting the essential features of habitat were considered to be potential threats to critical habitat. In some cases, threats were considered both a threat to the species and to the habitat, and these threats were examined from a habitat perspective. Human activities with potential for generating or contributing to the habitat related threats were then identified in order to determine special management considerations or protections that may be necessary. Past PIRO ESA section 7 consultations were also reviewed to further identify activities that occur in the Hawaiian Islands that may impact the essential features. Additionally, threats recognized in the Petition (Center for Biological Diversity, 2008) were reviewed for possible associated activities that may impact the essential features. Human activities identified as having the potential to threaten the essential features such that special management considerations or protection may be necessary were then organized into categories for consideration during the 4(b)(2) analysis.

Major categories of activities that are related to habitat were defined as the following: (1) In water and coastal construction; (2) dredging and disposal of dredged material; (3) energy development (renewable energy projects); (4) activities that generate water pollution; (5) aquaculture; (6) fisheries; (7) oil spills and vessel groundings response activities; and (8) military activities. All of the identified activities have the potential to affect one or more of the essential features by altering the amount of the physical habitat available for Hawaiian monk seals, the quality of that area available (e.g., increasing the level of anthropogenic disturbance), or the marine environment in such a way that the prey quantity or quality, is negatively impacted. This is not an exhaustive or complete list of potential effects, but rather a description of the primary concerns and potential effects that we are aware of at this time and that should be considered in the analysis of these activities under section 7 of the ESA. These activities are described briefly in Table 1 below. The draft Biological Report (NMFS, 2010a) and

draft Economic Analysis Report (ECONorthwest 2010) provide a more detailed description of the potential effects of each category of activities and threats on the essential features. For example, activities such as in-water and coastal construction, dredging and disposal of dredged materials, energy projects, aquaculture projects, and military activities may have adverse

impacts on preferred pupping and nursing areas, marine areas associated with pupping and nursing areas, marine foraging areas, or significant haul-out areas by decreasing the amount of available space in these areas. Increased activities such as those mentioned, located in remote sites, also have the potential to impact the level of anthropogenic disturbance such that

Hawaiian monk seals abandon preferred pupping and nursing areas and significant haul-out sites. In-water and coastal construction, dredging and disposal of dredged materials, energy projects, aquaculture projects, and activities that generate water pollution may result in impacts to water quality such that the quantity and/or quality of available prey species are impacted.

TABLE 1—INFORMATION ON ACTIVITIES THAT MAY AFFECT HAWAIIAN MONK SEAL HABITAT ESSENTIAL FEATURES, INCLUDING THE SPECIFIC AREAS IN WHICH THE ACTIVITY IS LOCATED, THE ESSENTIAL FEATURES THAT ACTIVITY COULD AFFECT AND THE NATURE OF THAT THREAT, AND THE POSSIBLE MODIFICATIONS TO THE ACTIVITY DUE TO THE HAWAIIAN MONK SEAL CRITICAL HABITAT REVISION

Activity	Specific areas	Essential features and nature of the threat	Possible modifications to the activity
In water and coastal construction.	2, 8, 13, 14, 15, 16	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—development on or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—construction may impact water quality by release of contaminants or increased sedimentation, resulting in impacts to the quantity and quality of prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—development in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Restriction on the spatial and temporal extent of the project. Limitations on the size, and numbers of heavy equipment brought into the area. Increased monitoring efforts regarding seal behavior and response to disturbance. Increased education efforts for the public. Increased education efforts for project personnel.</p> <p>Monitoring efforts to identify impacts to benthic community or prey species. Limitations on access to and from the area. Monitoring efforts regarding seal foraging behavior.</p>
Dredging .....	2, 13, 14, 15, 16 ....	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—dredging or disposing in or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—dredging or disposing may impact water quality by release of contaminants or increased sedimentation, resulting in impacts to the quantity and quality of prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—dredging or disposal in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Restriction on the spatial and temporal extent of the project. Limitations on the size, and numbers of heavy equipment brought into the area. Increased monitoring efforts regarding seal behavior and response to disturbance. Increased education efforts for project personnel. Monitoring efforts to identify impacts to benthic community or prey species. Limitations on access to and from the area.</p>
Energy Development (renewable energy projects).	13, 14, 15, 16 .....	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—development on or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—construction may impact water quality by release of contaminants or increased sedimentation, resulting in impacts to the quantity and quality of prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—development in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Restriction on the spatial and temporal extent of the project. Limitations on the size, and numbers of heavy equipment brought into the area. Increased monitoring efforts regarding seal behavior and response to disturbance. Increased education efforts for the public. Increased education efforts for project personnel. Monitoring efforts to identify impacts to benthic community or prey species. Limitations on access to and from the area. Monitoring efforts regarding seal foraging behavior.</p>
Activities that generate water pollution.	13, 14, 15, 16 .....	<p><i>Adequate quantity or quality of prey</i>—release of contaminants, pollutants, or increased sediment may result in degradation of water quality, causing declines in prey quantity and/or quality.</p>	<p>Restriction on the location or amount of discharge. Increased monitoring efforts to identify impacts to benthic community or prey species. Where Federal permits are necessary, ensure that discharge meets standards other than existing Federal standards and regulations.</p>

TABLE 1—INFORMATION ON ACTIVITIES THAT MAY AFFECT HAWAIIAN MONK SEAL HABITAT ESSENTIAL FEATURES, INCLUDING THE SPECIFIC AREAS IN WHICH THE ACTIVITY IS LOCATED, THE ESSENTIAL FEATURES THAT ACTIVITY COULD AFFECT AND THE NATURE OF THAT THREAT, AND THE POSSIBLE MODIFICATIONS TO THE ACTIVITY DUE TO THE HAWAIIAN MONK SEAL CRITICAL HABITAT REVISION—Continued

Activity	Specific areas	Essential features and nature of the threat	Possible modifications to the activity
Aquaculture .....	13, 14, 15, 16 .....	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—development of facilities on or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—construction and effluent release may impact water quality by release of contaminants or increased sedimentation, resulting in impacts to the quantity and quality of prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—development of facilities in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Restriction on the spatial and temporal extent of the project. Limitations on the size, and numbers of heavy equipment brought into the area. Increased monitoring efforts regarding seal behavior and response to disturbance. Increased education efforts for project personnel. Monitoring efforts to identify impacts to benthic community or prey species. Limitations on access to and from the area. Monitoring efforts regarding seal foraging behavior. Where Federal permits are necessary, ensure that discharge meets standards other than existing Federal standards and regulations.</p>
Fisheries .....	12, 13, 14, 15, 16 ..	<p><i>Adequate quantity or quality of prey</i>—overlap between prey species and commercial fisheries may impact the amount of available prey species.</p>	<p>Restriction on the spatial or temporal extent of fishing areas. Increased monitoring efforts to identify ecosystem impacts to prey species.</p>
Oil spills and vessel groundings re-sponse activities.	<p>Due to vessel traffic any specific area may be impacted, but more developed areas may be at higher risk: 12, 13, 14, 15, and 16.</p>	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—oil spills or groundings on or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—oil spills or chemical releases from groundings may impact water quality, resulting in impacts to the quantity and quality of prey species. Additionally, removal of vessels may increase sedimentation, impacting water quality and prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—oil spills or vessel groundings in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Limitations on the size, and numbers of heavy equipment brought into the area. Increased monitoring efforts regarding seal behavior and response to disturbance. Increased education efforts for the public. Increased education efforts for project personnel. Monitoring efforts to identify impacts to benthic community or prey species. Limitations on access to and from the area. Monitoring efforts regarding seal foraging behavior.</p>
Military activities .....	10, 12, 13, 14, 15, 16.	<p><i>Preferred pupping and nursing areas, marine areas adjacent to preferred pupping and nursing areas, significant haul-out areas, and marine foraging areas</i>—military activities in or near these areas may reduce the amount or quality of the available habitat.</p> <p><i>Adequate quantity or quality of prey</i>—certain activities may impact the quantity and quality of prey species.</p> <p><i>Low levels of anthropogenic disturbance</i>—certain activities in remote or less disturbed areas may increase the potential for disturbance, making monk seals avoid or abandon preferred areas.</p>	<p>Restriction on the spatial and temporal extent of the project. Increased monitoring efforts regarding seal behavior and response to disturbance. Monitoring efforts to identify impacts to benthic community or prey species. Monitoring efforts regarding seal foraging behavior.</p>

We also considered impacts to essential features presented by the petitioner, specifically, the threat of global warming as described in the petition by the processes including sea level rise, warming ocean temperatures, and ocean acidification. A discussion of these threats may be found in the draft Biological Report (NMFS, 2010). We acknowledge that impacts as a result of

global warming or global climate change are threats to Hawaiian monk seal habitat and, therefore, may threaten the survival and conservation of the Hawaiian monk seal. In evaluating these threats, we recognize that rising sea levels have the potential to diminish the number and size of available pupping and nursing areas, as well as haul-out areas, and that this threat exists in both

the NWHI and the MHI. Additionally, sea level rise not only has the potential to impact haul-out areas, but resulting changes in ocean biochemistry and currents, coupled with increased ocean temperatures and ocean acidification, may affect Hawaiian monk seal foraging habitat by impacting prey species. It is expected that climatic shifts may result in changes to the range and distribution



of prey species, as well as to the composition and dynamics of the surrounding marine systems (Parmesan, 2006); however, the time scale and extremity in which impacts to marine ecosystems will be realized are still uncertain. These current limitations in predicting the specific changes to the ecosystem prevent us from predicting the resulting impacts to Hawaiian monk seals with any certainty. Given the complex and uncertain impacts of climate change, this threat is best addressed during the individual consultation process across all activities undergoing consultation. In this manner we will be able to incorporate special management considerations to specific activities as the extent of impacts from this threat are demonstrated or better understood. We request any additional information with regard to the threats associated with global climate change and known impacts to Hawaiian monk seal critical habitat, including its essential features (see “Public Comments Solicited”).

#### **Military Areas Ineligible for Designation (4(a)(3) Determinations)**

The Sikes Act of 1997 (Sikes Act, 16 U.S.C. 670a) requires military installations with “land and water suitable for the conservation and management of natural resources” to complete an integrated natural resource management plan (INRMP). The plans are meant to integrate implementation of the military mission of the installation with the stewardship of the natural resources found on site. Each INRMP includes: An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. Each INRMP must to the extent appropriate and applicable, provide for: Fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife or plants; and enforcement of applicable natural resource laws. INRMPs are prepared in cooperation with the USFWS and the appropriate state fish and wildlife agency, and are subject to review no less than every 5 years.

Section 4(a)(3)(B)(i) of the ESA states: “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.”

We contacted the Department of Defense (DOD) and requested information on all INRMPs for DOD facilities that overlap with the specific areas considered for designation as critical habitat and that might provide a benefit for Hawaiian monk seals. Both the U.S. Marine Corps (USMC) and the Navy provided us with INRMPs for review under 4(a)(3)(B)(i) of the ESA. The USMC provided an INRMP covering the years 2006–2011 for the Marine Corps Base Hawaii (MCBH). Areas subject to the MCBH INRMP that overlap with the areas under consideration for critical habitat include: Marine Corps Base Hawaii, Kaneohe Bay (MCBH–KB), and the 500-yard buffer zone in marine waters surrounding the Mokapu Peninsula, Oahu; Marine Corps Training Area Bellows (MCTAB) Waimanalo, Oahu; and Puuloa Training Facility, on the Ewa coastal plain, Oahu.

The Navy identified two INRMPs as relevant to this review process: The Pacific Missile Range Facility (PMRF) INRMP and the Naval Station Pearl Harbor INRMP, now referred to as the Joint Base Pearl Harbor-Hickam INRMP. The Navy has been working with cooperating partners, in accordance with the SIKES Act (Sikes Act, 16 U.S.C. 670a), to revise both documents and multiple drafts of the documents and relevant materials were presented to NMFS for review. Areas subject to the PMRF INRMP that overlap with the areas under consideration for critical habitat include: PMRF Main Base at Barking Sands, Kauai; and Kaula Island. Although the 2001 Naval Station Pearl Harbor INRMP only covers those areas in the Pearl Harbor Complex that are not included in the areas under consideration, the Navy has identified that the Joint Base Pearl Harbor-Hickam INRMP will include the following areas that overlap with the proposed designation: The Navy Defensive Sea Area (NDSA), and the marine reserved zone outside Pearl Harbor and Navy retained lands at Kalaeloa (Nimitz Beach and White Plains Beach), Oahu.

To determine whether a plan provides a benefit to the species, we evaluated each plan with regard to the potential conservation benefits to the species, the past known implementation of the management efforts, and the management effectiveness of the plan. Plans determined to be a benefit to the

species demonstrated strengths in all three areas of the review. During consideration of the criteria, we determined that an effective management plan must have a structured process to gain information (through monitoring and reporting), a process for recognizing program deficiencies and successes (review), and a procedure for addressing any deficiencies (allowing for adaption for conservation needs).

In review, the MCBH INRMP demonstrated potential conservation benefits for the species, a strong history of plan implementation, and a clear structure to ensure plan effectiveness; thus, the plan was found to be a benefit to the species. Conservation measures outlined in the ecosystem based plan included: Debris removal; prohibitions against lay nets and gill nets in the 500-yard buffer zone; enforcement of established rules via a Conservation Law Enforcement Officer; interagency cooperation for rehabilitation events; use of established procedures for seal haul out and pupping events; educational outreach (including classroom briefs, Web page, news articles, brochures, service projects, and on-site signage and monitoring); ecological assessment and inventories; and water quality projects (minimizing erosion and pollution). Implementation of past efforts was clearly outlined in the appendices for the plan through reports and a schedule of accomplishments. Management effectiveness was demonstrated by: The organized manner in which the plan and appendices outline the goals and objectives; reports and monitoring efforts; the plan’s implementation; and the achievement of the goals and objectives. Based on these benefits provided for the Hawaiian monk seal, we determined that the areas covered under the MCBH INRMP on Oahu are not eligible for designation as critical habitat.

Preliminary review of the PMRF INRMP identifies essential elements of a successful conservation program that will benefit the species including: Marine debris removal, monitoring, and prevention; trapping of feral pigs, cats, and dogs; pet restrictions; restriction of public access; protocols to prevent disturbance; public education; training to prevent ship groundings; and compliance and restoration programs for contaminants. Additionally, the Main Base at Barking Sands presents a history of plan implementation and management effectiveness. NMFS is currently working with the Navy to make revisions to the draft plan’s performance monitoring element at

Kaula Island and other sites, which will help ensure consistent and effective plan implementation under the PMRF INRMP.

Preliminary review of draft plans for the Joint Base Pearl Harbor-Hickam INRMP demonstrates potential conservation benefits for the species including: Marine debris removal, monitoring, and prevention; pet restrictions; restriction of access; protocol to prevent disturbance during naval activities; public education; training to prevent ship groundings; and compliance and restoration programs for contaminants. Currently, the Navy is working to address concerns raised by NMFS regarding consistent monitoring and management efforts across all sites subject to the INRMP, and working to add a performance monitoring element that will aid in addressing management effectiveness.

If the PMRF or the Joint Base Pearl Harbor-Hickam INRMPs are revised and finalized, meeting the identified concerns, and determined to provide a benefit to Hawaiian monk seals, as described under section 4(a)(3)(B) of the ESA, then the areas would be ineligible for designation. Therefore, a determination on whether the areas warrant exclusion under 4(b)(2) of the ESA based on national security impacts would no longer be necessary. However, for this proposed rule, areas subject to the Navy's INRMPs were separately evaluated to determine the impacts that the proposed designation may have on National Security to meet the considerations established under 4(b)(2) of the ESA. These considerations are discussed in the draft ESA section 4(b)(2) report (NMFS, 2010b) and summarized further under the "Exclusions Based on Impacts on National Security" section of this proposed rule.

#### ESA Section 4(b)(2) Analysis

Section 4(b)(2) of the ESA requires the Secretary to consider the economic, national security, and any other relevant impacts of designating any particular area as critical habitat. Any particular area may be excluded from critical habitat if the Secretary determines that the benefits of excluding the area outweigh the benefits of designating the area. The Secretary may not exclude a particular area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any areas. In this proposed designation, the Secretary has applied statutory discretion to exclude five occupied areas from critical habitat

where the benefits of exclusion outweigh the benefits of designation.

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 biologically-based "specific areas" we had identified under 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 on national security and other relevant impacts (i.e., for this designation, impacts on FWS). Delineating particular areas based on impacts on national security or other relevant impacts was based on land ownership or control (e.g., land controlled by the DOD within which national security impacts may exist or land owned or controlled by the USFWS). We request information on other relevant impacts that should be considered (see "Public Comments Solicited"). The next step in the ESA section 4(b)(2) analysis involves identification of the impacts of designation (i.e., the benefits of designation and the benefits of exclusion). We then weigh the benefits of designation against the benefits of exclusion to identify areas where the benefits of exclusion outweigh the benefits of designation. These steps and the resulting list of areas proposed for exclusion from designation are described in detail in the sections below.

#### Impacts of Designation

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 overlapping requirement that Federal agencies must also insure their actions are not likely to jeopardize the species' continued existence. One incremental impact of the 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 listing and the jeopardy

requirement. When a modification would be required due to impacts to both the species and critical habitat, the impact of the designation is considered co-extensive with the ESA listing of the species. 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 seal and its 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 determining the impacts of designation, we focused on the incremental change in Federal agency actions as a result of critical habitat designation and the adverse modification provision, beyond the changes predicted to occur as a result of listing and the jeopardy provision. Following a line of recent court decisions, including: *Arizona Cattle Growers Association v. Salazar*, 606 F. 3d 1160 (9th Cir. 2010) (*Arizona Cattle Growers*); *Home Builders Association of Northern California et al., v. U.S. Fish and Wildlife Service*, 616 F.3d 983 (9th Cir. 2010) (*Home Builders*); and *Cape Hatteras Access Preservation Alliance v. Norton*, 344 F. Supp. 2d 108 (D.D.C. 2004) (*Cape Hatteras*), economic impacts that occur regardless of the critical habitat designation are treated as part of the regulatory baseline and are not factored into the analysis of the effects of the critical habitat designation. In other words, consistent with *Cape Hatteras*, *Arizona Cattle Growers*, and *Home Builders* decisions, we focus on the potential incremental impacts beyond the impacts that would result from the listing and jeopardy provision. In some instances, potential impacts from the designation could not be distinguished from protections that may already occur under the baseline (i.e., protections already afforded Hawaiian monk seals under its listing or under other Federal, state, and local regulations). For example, the project modifications to prevent the disturbance to an area of critical habitat may be similar to the project modifications necessary to prevent jeopardy to the species in an area. The extent to which these modifications differ may be project specific, and the incremental changes or impacts to the project may be difficult to tease apart without further project specificity. Thus, the analysis may include some impacts or project

modifications that may have been required under the baseline regardless of the critical habitat rule.

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 on national security, and other relevant impacts (e.g., impacts on Native lands) of the designation that would be avoided if a 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 those benefits were weighed 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 weighing process and determinations of the areas that may be eligible for exclusion.

#### *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. In addition to the protections described above, the designation may also result in other forms of benefits as discussed in detail in the draft Economic Analysis Report (ECONorthwest, 2010), including, but not limited to: educational awareness and outreach benefits, benefits to tourism and recreation, and improved or sustained habitat quality.

Most of these benefits 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 (e.g., apples to apples); however, there is insufficient information regarding the extent of the benefits and the associated values to monetize all of these benefits. We have not identified any available data to monetize the benefits of designation (e.g., estimates of the monetary value of the essential features within areas designated as critical habitat, or of the monetary value of education and outreach benefits). Further, section 4(b)(2) also requires that we consider

and weigh impacts other than economic impacts that do not lend themselves to quantification in monetary terms, such as the benefits to national security of excluding areas from critical habitat. 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 standpoint.

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 recognized that Hawaiian monk seal habitat throughout the Hawaiian Archipelago is irreplaceable due to the remote nature of the Hawaiian Islands from other areas of suitable habitat. This is especially true of the newly proposed areas within the MHI, since these areas represent not only habitat where the species is currently thriving, but also a geologically younger area that is under less threat from natural erosion processes and rising sea levels in comparison to available habitat in the NWHI. Therefore, factors attributed to the benefits of the designation of areas were individually considered within each particular area during the exclusion discussions.

#### *Benefits of Exclusion Based on Economic Impacts and Proposed Exclusions*

The economic benefits of exclusion are the economic impacts that would be avoided by excluding particular areas from the designation. To determine these economic impacts, we identified activities within each specific area that may affect Hawaiian monk seal and its critical habitat. The eight categories of activities are identified in the “*Special Management Considerations and Protections*” section above. We then considered the range of modifications that we might seek in these activities to avoid destroying or adversely modifying Hawaiian monk seal critical habitat (identified in Table 1). Where possible, we focused on changes beyond those that may be required to prevent jeopardy to the continued existence of the species (i.e., protections in place resulting from listing the species). We relied on information from other ESA section 7 consultations and NMFS expertise to determine the types of activities and potential range of changes. Although the project modifications have been identified, we

were unable to identify sufficient information to accurately monetize the estimated economic benefits of exclusion beyond the administrative costs of the section 7 consultation, but we recognize that additional economic costs may exist. These costs may vary widely depending on the project scope, location of the project, number of essential features present, as well as the extent of the anticipated impact from the activity.

We contacted a number of Federal and state agencies that are often involved in actions that require section 7 consultations to identify potential projects in areas proposed for designation and the potential economic impacts of the identified project modifications. Agencies contacted were unable to predict specific projects intended for the areas of overlap with the proposed designation, but agreed that there was potential for future projects in these areas. The inability of these agencies to identify potential projects may be in part because most projects tend to occur in highly developed areas that are outside the proposed designation areas. These highly developed harbors and ports (e.g., Pearl Harbor) were not included in the designation because these areas either lack the essential features or the quality of essential features that would be considered essential to the conservation of the Hawaiian monk seal. Another possible explanation is the uncertainty associated with projects that are still in the conceptual phase. Agencies identified that planned projects may take several years to move from conception to completion. The scope and locations which overlap with the proposed designation may not be fully realized; therefore, the costs associated with project modifications have not yet been recognized.

Additionally, agencies identified that many projects have best management practices or standards to protect natural resources. The identified project modifications associated with the proposed designation may overlap with some of these best management practices. Until the difference between the best management practices and identified project modifications are realized in the field, the exact costs of the designation are difficult to determine. For example, a Federal project currently planned may incorporate certain practices to prevent disturbance to wildlife species. If the project were located within the critical habitat designation, measures taken to prevent disturbance may be increased due to the presence of essential features at the site (e.g., a preferred pupping

beach), resulting in additional costs. Until specifications, such as the scope and location, of the project are determined, the variation between project modifications to prevent disturbance for critical habitat and the baseline protections taken to prevent wildlife disturbance at some of these sites is difficult to tease apart; thus, the additional costs are difficult to discern. This inability to realize the costs of projects modifications may also demonstrate the lack of experience with marine critical habitat designations in the developed areas of the Pacific Island region. The proposed Hawaiian monk seal designation represents the first critical habitat designation in the marine environment of the highly developed areas of the MHI.

In reviewing the factors associated with economic costs of the designation, we considered that the economic administrative costs of designation appear relatively low across the MHI where the majority of the incremental effects of the designation should be felt. The economic costs of designation in the NWHI are expected to remain similar, since consultations in this area (where critical habitat is already designated for the Hawaiian monk seal) have been subject to adverse modification considerations since 1988, and additional marine areas are not expected to increase the number of consultations for this region. An exception to this may include activities at Sand Island at Midway Islands because Sand Island was not included in the original designation. However, we have not been made aware of activity plans for Sand Island that may impact essential features. A discussion of impacts at Sand Island may be found under "Other Relevant Impacts." Throughout the proposed critical habitat areas, we found that the activities of concern are already subject to multiple environmental laws, regulations, and permits which afford the proposed essential features a high level of baseline protections, but we also believe that despite these protections, uncertainty remains regarding the true extent of the impacts that some activities may have on the essential features. This uncertainty makes estimating economic impacts of the designation difficult to determine, since, as noted above, project modifications may be considered speculative. The draft Economic Analysis Report (ECONorthwest, 2010) indicates that impacts may be felt most strongly by in-water and coastal construction activities and the disposal of dredge materials. Beyond these impacts, the potential

exists for greater economic impacts to activities associated with water quality control and fishing activities as we better understand the impacts that these activities have on the essential features of Hawaiian monk seal critical habitat.

To conduct the ESA 4(b)(2) analysis we considered the aforementioned impacts of designation against the benefits of designating critical habitat for the Hawaiian monk seal in these areas. The Economic Analysis clearly demonstrates the potential for benefits in the tourism industry and through the values that people place on Hawaiian monk seals and the environment in Hawaii, but we focused on what this designation means for the Hawaiian monk seal. In doing so, we acknowledged first that the Hawaiian monk seal population is on the decline (NMFS, 2009). Secondly, we acknowledged that rises in sea level continue to present a threat to the species, especially in the habitat previously designated in the NWHI, and we recognized that the growing population in the MHI represents the best hope for conserving the population. As discussed earlier, the benefits associated with the designation of critical habitat stem from our ability to identify the features that are essential not only for the conservation of the species but also for its recovery. The proposed rule, if finalized as proposed, will in turn provide protections for those essential features through ESA section 7(a)(2) consultations. Specifically designating critical habitat within the MHI provides a means to protect those essential features in an area where the features are most threatened by expansion and development; this will be especially important as the population of seals increases in the MHI. In summary, at this time, we have not identified a particular area where the benefits of exclusion from the designation due to economic impacts outweigh the benefits of designation of Hawaiian monk seal critical habitat; therefore, no areas are proposed for exclusion due to economic impacts.

#### *Exclusions Based on Impacts to National Security*

The national security benefits of exclusion are the national security impacts that would be avoided by excluding particular areas from the designation. We contacted representatives of DOD and the Department of Homeland Security to request information on potential national security impacts that may result from the designation of particular areas as critical habitat for the Hawaiian

monk seal. In response to the request, the U.S. Air Force, the U.S. Army, and the U.S. Coast Guard made no requests for exclusion from the critical habitat areas under consideration. Both the U.S. Navy and the USMC identified sites that overlap with the areas under consideration. Both requested that we exclude all identified sites of overlap that met the definition of critical habitat (*i.e.*, areas that contain essential features that may require special management or protection) from the Hawaiian monk seal critical habitat designation. Sites identified by the USMC subject to the MCBH INRMP (MCBH-KB and the 500-yard (457.2 m) buffer zone in marine waters surrounding the Mokapu Peninsula, Oahu; MCTAB Waimanalo, Oahu; and Puuloa Training Facility, on the Ewa coastal plain, Oahu) are not eligible for critical habitat in accordance with 4(a)(3) of the ESA (See *Military Areas Ineligible for Designation (4(a)(3) determinations)* above).

Consultation and discussion with the Navy and USMC resulted in the identification of 13 areas (See Table 2) that may warrant exclusion based on national security impacts. As in the analysis of economic impacts, we weighed the benefits of exclusion (*i.e.*, the impacts to national security that would be avoided) against the benefits of 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 military activities. The possible impacts to national security summarized by both groups included restraints and constraints on military operations, training, research and development, and preparedness vital for combat operations for around the world.

The primary benefit of exclusion is that the DOD would not be required to consult with NMFS under section 7 of the ESA regarding DOD actions that may affect critical habitat, and thus potential delays or costs associated with conservation measures for critical habitat would be avoided. To assess the benefits of exclusion, we evaluated the intensity of use of the particular area by the DOD, the likelihood that DOD actions in the particular area would affect critical habitat and trigger an ESA section 7 consultation, and the potential conservation measures that may be required and that may result in delays or costs that affect national security. We also considered the level of protection provided to critical habitat by existing DOD safeguards, such as regulations to control public access and use of the area

and other means by which the DOD may influence other Federal actions in the particular area.

The primary benefit of designation is the protections afforded Hawaiian monk seals under the ESA section 7 critical habitat provisions. To evaluate the benefit of designation for each particular area, we considered what is known regarding Hawaiian monk seal use of the particular area, the size of the particular area when compared to the specific area

and the total critical habitat area, and the likelihood that other Federal actions occur in the area that may affect critical habitat and trigger a consultation.

As discussed in “The Benefits of Designation” section, the benefits of designation may not be directly comparable to the benefits of exclusion for purposes of conducting the section 4(b)(2) analysis, because neither may be fully quantified. We identified that Hawaiian monk seal use of the area and

conservation need for the habitat should be most heavily considered against the impacts (*i.e.*, project modification costs) that the proposed designation, if finalized, may have on DOD activities; however, all factors discussed played a role in the decision. Table 2 outlines the determinations made for each particular area identified and the factors that weighed significantly in that process.

**TABLE 2—SUMMARY OF THE ASSESSMENT OF PARTICULAR AREAS REQUESTED FOR EXCLUSION BY THE DOD BASED ON IMPACTS ON NATIONAL SECURITY. LISTED FOR EACH PARTICULAR AREA ARE: DOD SITE AND AGENCY REQUESTING EXCLUSION; THE SPECIFIC AREA THAT THE PARTICULAR AREA OCCURS IN; WHETHER EXCLUSION BASED ON NATIONAL SECURITY IMPACTS IS WARRANTED, AND THE WEIGHING FACTORS FOUND TO BE SIGNIFICANT IN MAKING THE DETERMINATION**

DOD site (size mi <sup>2</sup> , or km <sup>2</sup> ) and agency	Overlapping specific area (size mi <sup>2</sup> , or km <sup>2</sup> )	Exclude(?)	Significant weighing factors
(1) Kaula Island and the 3-mile danger zone (20 mi <sup>2</sup> , or 52 km <sup>2</sup> )—Navy.	Area 11—Kaula (39 mi <sup>2</sup> , 101 or km <sup>2</sup> ).	No .....	Site was determined to be highly used by Hawaiian monk seals. Navy activities are not likely to impact essential features given current protocols; therefore, there is no impact to national security that can be avoided through exclusion.
(2) Niihau, including all waters 0–12 nmi offshore (200+ mi <sup>2</sup> , or 518+ km <sup>2</sup> )—Navy.	Area 12—Niihau (200 mi <sup>2</sup> , or 518 km <sup>2</sup> ).	No .....	Area requested for exclusion included the entire specific area which is currently the highest used area by Hawaiian monk seals in the MHI and therefore very important to monk seal conservation. The benefits of designation outweigh the benefits of exclusion.
(3) Kingfisher Underwater Training Area off of Niihau (2 mi <sup>2</sup> , or 5 km <sup>2</sup> )—Navy.	Area 12—Niihau (200 mi <sup>2</sup> , or 518 km <sup>2</sup> ).	Yes .....	The site is located near an important area used by monk seals; however, the particular area requested is relatively small in comparison to the specific area proposed for designation. Navy protocol currently provides some protection for seals utilizing this habitat. Impacts to national security may result from section 7 consultations specific to the construction and maintenance of the training range. The benefits of exclusion outweigh the benefits of designation for this area.
(4) PMRF, Main Base at Barking Sands, Kauai (8 mi, or 13 km)—Navy.	Area 13—Kauai (90 mi, or 145 km).	Yes .....	Impacts from amphibious landings may impact essential features; therefore, national security impacts may result from section 7 consultations. Although the area is used by monk seals, current protocols in place and base regulations provide protections for monk seals in this area. The benefits of exclusion outweigh the benefits of designation for this area.
(5) PMRF Offshore areas (including: PMRF restricted area, Barking Sands Tactical Underwater Range (BARSTUR), and the Shallow Water Training Range (SWTR)) (99 mi <sup>2</sup> , or 256 km <sup>2</sup> )—Navy.	Area 13—Kauai (326 mi <sup>2</sup> , or 844 km <sup>2</sup> ).	Yes .....	Essential features may be impacted by the installation of hydrophones across the range; therefore, national security impacts may result from section 7 consultations. Although the area is used by monk seals, current protocols in place provide protections for monk seals in this area. The benefits of exclusion outweigh the benefits of designation for this area.
(6) Barbers Point/Kalaeloa Navy retained areas—White Plains (15 acres, or 6 hectares) and Nimitz (21 acres, or 8.5 hectares) Beaches—Navy.	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	No .....	No activities were demonstrated for this area; therefore there is no impact to national security that could be avoided through exclusion.
(7) Naval Defensive Sea Area (NDSA) and Puuloa Underwater Training Range (<20 mi <sup>2</sup> , or 52 km <sup>2</sup> )—Navy.	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	Yes .....	Essential features may be impacted by activities on site, and the location provides a training area that is only found in one other location nationwide. National security impacts may result from section 7 consultations. Area is not highly used by Hawaiian monk seals. The benefits of exclusion outweigh the benefits of designation.
(8) Commercial Anchorages B, C, D; (1 mi <sup>2</sup> , or 2.6 km <sup>2</sup> )—Navy.	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	No .....	Area is open for commercial anchorage purposes. It is unlikely that Navy activities will impact essential features at this site; therefore, there is no impact to national security that may be avoided through exclusion.

TABLE 2—SUMMARY OF THE ASSESSMENT OF PARTICULAR AREAS REQUESTED FOR EXCLUSION BY THE DOD BASED ON IMPACTS ON NATIONAL SECURITY. LISTED FOR EACH PARTICULAR AREA ARE: DOD SITE AND AGENCY REQUESTING EXCLUSION; THE SPECIFIC AREA THAT THE PARTICULAR AREA OCCURS IN; WHETHER EXCLUSION BASED ON NATIONAL SECURITY IMPACTS IS WARRANTED, AND THE WEIGHING FACTORS FOUND TO BE SIGNIFICANT IN MAKING THE DETERMINATION—Continued

DOD site (size mi <sup>2</sup> , or km <sup>2</sup> ) and agency	Overlapping specific area (size mi <sup>2</sup> , or km <sup>2</sup> )	Exclude(?)	Significant weighing factors
(9) Fleet Operational Readiness Accuracy Check Site (FORACS) (12 mi <sup>2</sup> , 31 km <sup>2</sup> )—Navy.	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	No .....	It is unlikely that Navy activities will impact essential features at this site; therefore, there is no impact to national security that could be avoided through exclusion. Area is utilized frequently by Hawaiian monk seals.
(10) Barbers Point Underwater Range and Ewa Training Minefield (9 mi <sup>2</sup> , or 23 km <sup>2</sup> )—Navy.	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	No .....	Navy activities at this site may impact the essential features of critical habitat; however, this area is highly used by Hawaiian monk seals and important to monk seal conservation. The benefits of designation outweigh the benefits of exclusion.
(11) Marine Corps Training Area Bellows Offshore—Navy and USMC (size not estimated).	Area 14—Oahu (697 mi <sup>2</sup> , or 1,805 km <sup>2</sup> ).	No .....	It is unlikely that Navy activities will impact essential features at this site; therefore, there is no impact to national security that would be avoided through exclusion.
(12) Shallow Water Minefield Sonar Training Range off Kahoolawe (4 mi <sup>2</sup> , or 10 km <sup>2</sup> )—Navy.	Area 15—Maui Nui (2,510 mi <sup>2</sup> , or 6,500 km <sup>2</sup> ).	Yes .....	Although the site is located near an important area used by monk seals, the area requested is relatively small in comparison to the specific area. Navy protocol currently provides some protection for seals utilizing this habitat. Impacts to national security may result from section 7 consultations specific to the construction and maintenance, which may impact essential features. The benefits of exclusion outweigh the benefits of designation for this area.
(13) Kahoolawe Danger Zone (68 mi <sup>2</sup> , or 176 km <sup>2</sup> )—Navy.	Area 15—Maui Nui (2,510 mi <sup>2</sup> , or 6,500 km <sup>2</sup> ).	No .....	Area is well used by Hawaiian monk seals and supports pupping and nursing areas. Activities demonstrated for this area are a matter of public safety; therefore, there is no impact to national security that would be avoided through exclusion.

*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. Comments received following the 90-day finding indicated that both the NPS and the USFWS anticipated impacts as a result of the designation. Both agencies were contacted in preparation for the proposed rule with information regarding the areas under consideration for the revision to 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. Exclusion was requested by the USFWS 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 not only have economic impacts but would detract from staff time, which in turn would detract from conservation initiatives being properly overseen and implemented on site.

As with the national security exclusions, the primary benefit of excluding Sand Island is that the USFWS organization would not be required to consult with NMFS under section 7 of the ESA regarding actions that may affect critical habitat, and thus potential delays or costs associated with conservation measures for critical habitat would be avoided. To assess the benefits of excluding Sand Island, we evaluated the relative proportion of the area requested for exclusion, the intensity of use of the area, and the likelihood that actions on site will destroy or adversely modify habitat requiring additional section 7 delays, costs, or burdens. We also considered the likelihood of consultation with the agency in this area and the level of protection provided to critical habitat by existing USFWS safeguards.

The primary benefit of designation is the protections afforded Hawaiian monk seals under the ESA section 7 critical habitat provisions. To evaluate the

benefit of designation for each particular area, we considered what is known regarding Hawaiian monk seal use of the particular area, the size of the particular area compared to the specific area and the total critical habitat area, and the likelihood that other Federal actions may occur in the area that may affect critical habitat and trigger a consultation.

In reviewing this information, we found that Sand Island at Midway Islands provides habitat with the essential features of preferred haul-out areas and preferred pupping areas in the northwestern end of the chain. These features are very important to the declining population of the NWHI. USFWS acknowledged that its management plans provide protections for Hawaiian monk seals from disturbance, but revealed no additional plans that may impact the essential features of Hawaiian monk seal critical habitat. In considering the above listed factors, we were not able to identify any activities that the USFWS wished to engage in at this site that would impact the essential features of Hawaiian monk seal critical habitat. We acknowledge that consultation of activities on site will continue to be necessary due to listing of the species but cannot

anticipate additional burdens on the agency without the identification of activities that may generate impacts to the essential features. Thus, there appears to be no benefit of exclusion. At this time, and with the present information, we do not recommend Sand Island at Midway Islands for exclusion. We solicit information from the public regarding any additional areas that may overlap with and may warrant exclusion from critical habitat for Hawaiian monk seals (see "Public Comments Solicited").

### Critical Habitat Designation

This rule proposes to designate approximately 11,140 mi<sup>2</sup> (28,853 km<sup>2</sup>) of habitat throughout the Hawaiian Archipelago within the geographical area presently occupied by the Hawaiian monk seal. These critical habitat areas contain physical or biological features essential to the conservation of the species that may require special management considerations or protection. This rule proposes to exclude from the designation the following areas: Kingfisher Underwater Training area in marine areas off the northeast coast of Niihau; Pacific Missile Range Facility Main Base at Barking Sands, Kauai; Pacific Missile Range Facility Offshore Areas in marine areas off the western coast of Kauai; the Naval Defensive Sea Area and Puuloa Underwater Training Range in marine areas outside Pearl Harbor, Oahu; and the Shallow Water Minefield Sonar Training Range off the western coast of Kahoolawe in the Maui Nui area. Based on our best scientific knowledge and expertise, we conclude that the exclusion of these areas will not result in the extinction of the species, nor impede the conservation of the species.

### Lateral Extent of Critical Habitat

The lateral extent of the proposed critical habitat designation offshore is defined by the 500-m depth contour relative to the line of mean lower low water (MLLW) and shoreward to 5 m inland (in length) from the shoreline described by the upper reaches of the wash of the waves, other than storm or seismic waves, at high tide during the season in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth or the upper limit of debris (except those areas that are indicated with boundaries as not included in the designation listed with the identified areas and manmade structures existing within the boundaries prior to the effective date of the rule). The textual descriptions of critical habitat in the section titled

"226.221 Critical habitat for the Hawaiian monk seal (*Monachus schauinslandi*)" are the definitive source for determining the critical habitat boundaries. The overview maps provided in "226.221 Critical habitat for the Hawaiian monk seal (*Monachus schauinslandi*)" are provided for general guidance purposes only and not as a definitive source for determining critical habitat boundaries. As discussed in previous critical habitat designations, human activities that occur outside of designated critical habitat can destroy or adversely modify the essential features of these areas. This designation will help to insure that Federal agencies are aware of the impacts that activities occurring outside of the proposed critical habitat area (e.g., coastal development, activities that generate water pollution) may have on Hawaiian monk seal habitat.

### Effects of Critical Habitat Designation

Section 7(a)(2) of the ESA requires Federal agencies, including NMFS, to insure that any action authorized, funded, or carried out by the agency (agency action) does not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat. When a species is listed or critical habitat is designated, Federal agencies must consult with us on any agency action to be conducted in an area where the species is present and that may affect the species or its critical habitat. During the consultation, we evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and issue our finding in a biological opinion. If we conclude in the biological opinion that the agency action would likely result in the destruction or adverse modification of critical habitat, we would also recommend any reasonable and prudent alternatives to the action. Reasonable and prudent alternatives are defined in 50 CFR 402.02 as alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid the destruction or adverse modification of critical habitat.

Regulations at 50 CFR 402.16 require Federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinstate consultation on previously reviewed

actions in instances where: (1) Critical habitat is subsequently designated; or (2) new information or changes to the action may result in effects to critical habitat not previously considered in the biological opinion. Consequently, some Federal agencies may request re-initiation of consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat. Activities subject to the ESA section 7 consultation process include activities on Federal lands and activities on private or state lands requiring a permit from a Federal agency (e.g., a section 10(a)(1)(B) permit from NMFS) or some other Federal action, including funding (e.g., Federal Highway Administration (FHA) or Federal Emergency Management Agency (FEMA) funding). ESA section 7 consultation would not be required for Federal actions that do not affect listed species or critical habitat, nor for actions on non-Federal and private lands that are not carried out, funded, or authorized by a Federal agency.

### Activities That May Be Affected

ESA section 4(b)(8) requires, to the maximum extent practicable, in any proposed regulation to designate critical habitat, an evaluation and brief description of those activities (whether public or private) that may adversely modify such habitat or that may be affected by such designation. A wide variety of activities may affect Hawaiian monk seal critical habitat and may be subject to the ESA section 7 consultation processes when carried out, funded, or authorized by a Federal agency. The activities most likely to be affected by this critical habitat designation once finalized are: (1) In-water and coastal construction; (2) dredging and disposal of dredged material; (3) energy development (renewable energy projects); (4) activities that generate water pollution; (5) aquaculture; (6) fisheries; (7) oil spills and vessel groundings response activities; and (8) military activities. Private entities may also be affected by this critical habitat designation if a Federal permit is required, Federal funding is received, or the entity is involved in or receives benefits from a Federal project. These activities would need to be evaluated with respect to their potential to destroy or adversely modify critical habitat. Changes to the actions to minimize or avoid destruction or adverse modification of designated critical habitat may result in changes to some activities. Please see the draft Economic Analysis Report (ECONorthwest, 2010) for more details



and examples of changes that may need to occur in order for activities to minimize or avoid destruction or adverse modification of designated critical habitat. Questions regarding whether specific activities would constitute destruction or adverse modification of critical habitat should be directed to NMFS (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

#### References Cited

A complete list of all references cited in this rule making may be found on our Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html), and is available upon request from the NMFS (see **ADDRESSES**).

#### Public Comments Solicited

To ensure the final action resulting from this proposal will be as accurate and effective as possible, we solicit comments and suggestions from the public, other concerned governments and agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Specifically, public comments are sought concerning: (1) Information regarding potential impacts of designating any particular area, including the types of Federal activities that may trigger an ESA section 7 consultation and the possible modifications that may be required of those activities as a result of section 7 consultation; (2) information regarding the benefits of excluding particular areas from the critical habitat designation; (3) current or planned activities in the areas proposed for designation and their possible impacts on proposed critical habitat; (4) impacts to Native Hawaiian organizations resulting from the designation or Native Hawaiian activities that may be affected in areas other than those specifically owned by the organization; (5) additional information regarding the threats associated with global climate change and known impacts to Hawaiian monk seal critical habitat and/or Hawaiian monk seal essential features (6) any foreseeable economic, national security, Tribal, or other relevant impacts resulting from the proposed designations. With regard to these described impacts, we request that the following information be provided to inform our ESA section 4(b)(2) analysis: (1) A map and description of the affected area (*e.g.*, location, latitude and longitude coordinates to define the boundaries, extent into waterways); (2) a description of activities that may be affected within the area; (3) a description of past, ongoing, or future conservation measures conducted

within the area that may protect Hawaiian monk seal habitat; and (4) a point of contact.

You may submit your comments and materials by any one of several methods (see **ADDRESSES**). The proposed rule, maps, references, and other materials relating to this proposal can be found on our Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html) on the Federal eRulemaking Portal at <http://www.regulation.gov>, or can be made available upon request. We will consider all comments and information received during the comment period for this proposed rule in preparing the final rule.

#### Public Hearings

Regulations at 50 CFR 424.16(c)(3) require the Secretary to promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed rule to designate critical habitat. Requests for a public hearing must be made in writing (see **ADDRESSES**) by August 16, 2011. If a public hearing is requested, a notice detailing the specific hearing location and time will be published in the **Federal Register** at least 15 days before the hearing is to be held. Information on specific hearing locations and times will also be posted on our Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html). These hearings provide the opportunity for interested individuals and parties to comment, exchange information and opinions, and engage in a constructive dialogue concerning this proposed rule. We encourage the public's involvement in such ESA matters.

#### Classification

##### *Information Quality Act and Peer Review*

On December 16, 2004, the Office of Management and Budget (OMB) issued its Final Information Quality Bulletin for Peer Review (Bulletin). The Bulletin was published in the **Federal Register** on January 14, 2005 (70 FR 2664), and went into effect on June 16, 2005. The primary purpose of the Bulletin is to improve the quality and credibility of scientific information disseminated by the Federal government by requiring peer review of "influential scientific information" and "highly influential scientific information" prior to public dissemination. Influential scientific information is defined as "information the agency reasonably can determine will have or does have a clear and substantial impact on important public policies or private sector decisions." The

Bulletin provides agencies broad discretion in determining the appropriate process and level of peer review. Stricter standards were established for the peer review of "highly influential scientific assessments," defined as information whose "dissemination could have a potential impact of more than \$500 million in any one year on either the public or private sector or that the dissemination is novel, controversial, or precedent-setting, or has significant interagency interest." The draft Biological Report (NMFS, 2010a) and draft Economic Analysis report (ECONorthwest, 2010) supporting this rule proposing to designate critical habitat for the Hawaiian monk seal are considered influential scientific information and subject to peer review. These two reports were distributed to three independent reviewers for review before the publication date of this proposed rule. The peer reviewer comments will be compiled into a peer review report to be made available to the public at the time the Hawaiian monk seal critical habitat designation is finalized.

##### *Regulatory Planning and Review (E.O. 12866)*

This proposed rule has been determined to be significant for purposes of E.O. 12866. A draft Economic Analysis report and draft ESA section 4(b)(2) report (NMFS, 2010b) have been prepared to support the exclusion process under section 4(b)(2) of the ESA and our consideration of alternatives to this rulemaking as required under E.O. 12866. The draft Economic Analysis report (ECONorthwest, 2010) and draft ESA section 4(b)(2) report (NMFS, 2010b) are available on the Pacific Islands Region Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html), on the Federal eRulemaking Web site at <http://www.regulations.gov>, or upon request (see **ADDRESSES**).

##### *Regulatory Flexibility Act*

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency publishes a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis describing the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). An initial regulatory flexibility analysis (IRFA) has been prepared, which is included as

Appendix C to the draft 4(b)(2) report (NMFS, 2010b). This document is available upon request (see **ADDRESSES**), via our Web site at [http://www.fpir.noaa.gov/PRD/prd\\_critical\\_habitat.html](http://www.fpir.noaa.gov/PRD/prd_critical_habitat.html) or via the Federal eRulemaking Web site at <http://www.regulations.gov>.

We identified the impacts to small businesses by considering the eight activities that were identified as most likely impacted by the designation: (1) In-water and coastal construction; (2) dredging and disposal of dredged material; (3) energy development (renewable energy projects); (4) activities that generate water pollution; (5) aquaculture; (6) fisheries; (7) oil spills and vessel groundings response activities; and (8) military activities. Due to the inherent uncertainty involved in predicting possible economic impacts that could result from future consultations, we acknowledge that other unidentified impacts may occur, and we invite public comment on those impacts. As discussed in the “Benefits of Exclusion Based on Economic Impacts and Proposed Exclusions” section of this proposed rule, we were not able to find sufficient information to accurately monetize the estimated economic benefits of exclusion beyond the administrative costs of the ESA section 7 consultation, and found overall that administrative economic costs of the designation appear to be low. Activities most likely to be impacted by this rule, if finalized as proposed, include construction projects happening in-water or along the coastline that overlap with the proposed designation. In reviewing impacts to small businesses, we recognized that impacts may result from actions that a small business carries out within the boundaries of the proposed critical habitat areas that are permitted by the Federal Government, or funded by the Federal Government. In both cases the small business may be responsible for bearing the cost of project modifications or administrative work resulting from a section 7 consultation. In addition, small businesses may be impacted indirectly if the company’s earnings are dependent on Federal actions that undergo section 7 consultations as a result of the designation (*e.g.*, contractors that are hired to carry out Federal actions). Ideally we would be able to monetize these potential impacts, but insufficient information is available to determine the extent, scope, and location of activities that may be carried out by small businesses in the areas of overlap or to what extent small businesses are dependent on earnings

from Federal actions that may undergo section 7 consultation within the areas of the proposed designation. The inability to identify future projects in the area of overlap with the proposed designation may be in part because most projects in the MHI that are subject to the consultation requirements of ESA tend to occur in highly developed areas, and these areas were not included in the designation due to the lack of, or poor quality of, essential features (*e.g.* Pearl Harbor). Thus, many projects in the planning stages may still only overlap with areas not included in the designation. Additionally, the full extent of impacts may not yet be realized because there is currently no critical habitat designation in the marine environment of the MHI, and, therefore, no history with which to predict those impacts due to inexperience in dealing with marine critical habitat designations in the MHI.

In accordance with the requirements of the RFA, as amended, this analysis considered various alternatives to the critical habitat designation for the Hawaiian monk seal. The alternative of not designating critical habitat for the Hawaiian monk seal was considered and rejected because such an approach does not meet the legal requirements of the ESA. We considered the alternative of designating all specific areas (*i.e.*, no areas excluded); however, in some cases the benefits of excluding particular areas based on national security impacts outweighed the benefits of including them in the designation. Thus, we also considered the alternative of designating all specific areas, but excluding particular areas based on the impacts to national security. This alternative may help to reduce the indirect impact to small businesses that are economically involved with military activities in these areas; however, there is insufficient information to monetize the benefits of these exclusions at this time. In conclusion, we were unable to determine significant economic impacts (NMFS, 2010b) based on this designation; and, current information does not suggest that small businesses will be disproportionately affected by this designation. We solicit additional information regarding the impacts to small businesses that may result from this proposed designation, and we will consider any additional information received in developing our final determination to designate or exclude areas from critical habitat for the Hawaiian monk seal.

#### *Clarity of the Rule*

Executive Order (E.O.) 12866 requires each agency to write regulations and

notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the rule clearly stated? (2) Does the rule contain jargon that interferes with its clarity? (3) Does the format of the rule (grouping and order of section, use of headings, paragraphing, *etc.*) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the rule in **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the rule? (6) What else could we do to make the rule easier to understand? You may submit comments on how we could make this proposed rule easier to understand by any one of several methods (see **ADDRESSES**).

#### *Unfunded Mandates Reform Act*

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(A) This proposed rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, Tribal governments, or the private sector and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” The designation of critical habitat does not impose an enforceable duty on non-Federal government entities or private parties. The only regulatory effect of a critical habitat designation is that Federal agencies must insure that their actions do not destroy or adversely modify critical habitat under ESA section 7. Non-Federal entities who receive funding, assistance, or permits from Federal agencies or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program; however, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above to State governments.

(B) Due to the prohibition already in place against take of the Hawaiian monk seal both within and outside of the designated areas, we do not anticipate that this proposed rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

#### *Takings*

Under E.O. 12630, Federal agencies must consider the effects of their actions

on constitutionally protected private property rights and avoid unnecessary takings of property. A taking of property includes actions that result in physical invasion or occupancy of private property that substantially affect its value or use. In accordance with E.O. 12630, this proposed rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat generally affects only those activities and projects that are authorized, funded, or carried out by a Federal agency. This proposed rule would not increase or decrease the current restrictions on private property concerning take of Hawaiian monk seals, nor do we expect the proposed critical habitat designation to affect property values, or impose additional burdens on land use or landowner actions that do not require Federal funding or permits. Additionally, the proposed critical habitat designation does not preclude the development of Habitat Conservation Plans and issuances of incidental take permits for non-Federal actions. Owners of areas included within the proposed critical habitat designation would continue to have the opportunity to use their property in ways consistent with the survival of listed Hawaiian monk seals.

#### *Federalism*

E.O. 13132 requires agencies to take into account any federalism impacts of regulations under development. It includes specific consultation directives for situations where a regulation will preempt state law, or impose substantial direct compliance costs on state and local governments (unless required by statute). Pursuant to the Executive Order on Federalism, E.O. 13132, the Assistant Secretary for Legislative and Intergovernmental Affairs will provide notice of the proposed action and request comments from the governor of the State of Hawaii.

#### *Civil Justice Reform*

In accordance with E.O. 12988, the Department of Commerce has determined that this proposed rule does not unduly burden the judicial system and meets the requirements of section 3(a) and 3(b)(2) of the Order. We are proposing critical habitat in accordance with the provisions of the ESA. This proposed rule uses standard property descriptions and identifies the essential features within the designated areas to assist the public in understanding the habitat needs of the Hawaiian monk seal.

#### *Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This proposed rule does not contain new or revised information collections that require approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act. This proposed rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act (NEPA)*

We have determined that an environmental analysis as provided for under the NEPA of 1969 for critical habitat designations made pursuant to the ESA is not required. *See Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), *cert. denied*, 116 S. Ct. 698 (1996).

#### *Coastal Zone Management Act of 1972 (CZMA)*

The CZMA emphasizes the primacy of state decision-making regarding the coastal zone. Section 307 of the CZMA (16 U.S.C. 1456), called the Federal consistency provision, is a major incentive for states to join the national coastal management program and is a powerful tool that states use to manage coastal uses and resources and to facilitate cooperation and coordination with Federal agencies.

Federal consistency is the CZMA requirement where Federal agency activities that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone (also referred to as coastal uses or resources and coastal effects) must be consistent to the maximum extent practicable with the enforceable policies of a coastal state's Federally approved coastal management program. We have determined that this proposed critical habitat designation is consistent to the maximum extent practicable with the enforceable policies of the approved Coastal Zone Management Program of Hawaii. This determination will be submitted for review by the Hawaii Coastal Zone Management Program.

#### *Government to Government Relationship With Tribes*

The longstanding and distinctive relationship between the Federal and Tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate Tribal governments

from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States towards Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, Tribal trust resources, and the exercise of Tribal rights. E.O. 13175—Consultation and Coordination with Indian Tribal Governments—outlines the responsibilities of the Federal Government in matters affecting Tribal interests. Federally recognized Tribe means an Indian or Alaska Native Tribe or community that is acknowledged as an Indian Tribe under the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a. In the list published annually by the Secretary, there are no Federally recognized Tribes in the State of Hawaii (74 FR 40218; August 11, 2009). Therefore, while we value information on the effects of this rule on the interests of Native Hawaiians, Native Hawaiian lands are not Tribal lands for purposes of the requirements of the President's Memorandum or the Department Manual. However, we recognize that Native Hawaiian organizations have the potential to be impacted by Federal regulations and, as such, that consideration of these impacts may be evaluated as other relevant impacts from the designation. We have opened communication with some Native Hawaiian organizations, and at this time have not been made aware of anticipated impacts resultant from the designation. We seek comments regarding areas of overlap with the designation that may warrant exclusion from critical habitat for the Hawaiian monk seal. We also seek information from affected Native Hawaiian organizations concerning other Native Hawaiian activities that may be affected in areas other than those specifically owned by the organization (e.g. marine areas)(see Public Comments Solicited and ADDRESSES).

#### **List of Subjects in 50 CFR Part 226**

Endangered and threatened species.

Dated: May 24, 2011.

#### **John Oliver,**

*Deputy Assistant Administrator for Operations, National Marine Fisheries Service.*

For the reasons set out in the preamble, this rule proposes to amend part 226, title 50 of the Code of Federal Regulations as set forth below:

**PART 226—DESIGNATED CRITICAL HABITAT**

1. The authority citation of part 226 continues to read as follows:

**Authority:** 16 U.S.C. 1533.

2. Add § 226.221, to read as follows:

**§ 226.221 Critical habitat for the Hawaiian monk seal (*Monachus schauinslandi*).**

Critical habitat is designated for Hawaiian monk seals as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. The overview maps are provided for general guidance purposes only and not as a definitive source for determining critical habitat boundaries.

(a) *Critical habitat boundaries.*

(1) *Northwestern Hawaiian Islands:* The Hawaiian monk seal critical habitat areas located in the Northwestern Hawaiian Islands include 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 the 500-m depth contour around the following (except those areas that have been identified as not included in the designation):

(i) Kure Atoll—center coordinates: 28°25'11.00" N./178°19'45.00" W.

(ii) Midway Islands—center coordinates: 28°14'12.00" N./177°22'06.00" W. (Midway Harbor is not included in the designation. The boundaries of Midway Harbor were delineated to incorporate the inner harbor and hardened shorelines of the harbor. The polygon includes the area bounded by the point at the seaward edge of the northern breakwater at the harbor entrance (28°12'44.31" N./177°21'35.64" W.) then north along the breakwater to where the breakwater meets the coastline at 28°12'54.06" N./177°21'38.69" W. then west to 28°12'56.63" N./177°22'18.42" W. then south to 28°12'30.88" N./177°22'23.89" W. then east to 28°12'32.68" N./177°21'44.63" W. then north to the seaward edge of the southern breakwater at the harbor entrance (28°12'39.99" N./177°21'38.04" W.) and a line back to meet the seaward edge of the northern breakwater at Midway Harbor's entrance.)

(iii) Pearl and Hermes Reef—center coordinates: 27°50'37.000" N./175°50'32.00" W.

(iv) Lisianski Island—center coordinates: 26°03'49.00" N./173°58'00.00" W.

(v) Laysan Island—center coordinates: 25°46'11.00" N./171°43'57.00" W.

(vi) Maro Reef—center coordinates: 25°25'27.00" N./170°35'19.00" W.

(vii) Gardner Pinnacles—center coordinates: 25°0'00.00" N./167°59'55.00" W.

(viii) French Frigate Shoals—center coordinates: 23°45'31.00" N./166°14'37.00" W.

(ix) Necker Island—center coordinates: 23°34'36.00" N./164°42'01.00" W.

(x) Nihoa Island—center coordinates: 23°03'23.00" N./161°55'18.99" W.

(2) Main Hawaiian Islands: Hawaiian monk seal critical habitat areas surrounding the following islands listed below are defined in the marine environment by a seaward boundary that extends from the 500-m depth contour line (relative to mean lower low water), through the water's edge into the terrestrial environment where the inland boundary extends 5 m inland (in length) from the shoreline described by the upper reaches of the wash of the waves, other than storm or seismic waves, at high tide during the season in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth or the upper limit of debris (except those areas that are indicated with boundaries as not included in the designation listed with each identified area). Terrestrial areas not included have a seaward boundary of a line that marks mean lower low water between the two identified points.

(i) Kaula Island.

(ii) Niihau Island.

(iii) Kauai Island—Areas identified as not included in the designation of this specific area are defined as the following locations and are delineated by the identified boundaries: Hanalei Bay delineated by all terrestrial coastline areas located between the Makahoa Point (22°12'49.48" N./159°31'01.82" W.) east to 22°12'56.10" N./159°29'52.82" W. and all waters located inshore of a line drawn between those two points; Kikiaola Harbor delineated by all terrestrial coastline areas from 21°57'34.92" N./159°41'36.36" W. east to 21°57'28.89" N./159°41'34.91" W. and all harbor waters located inshore of the line drawn between the seaward edge of western breakwater at the harbor's entrance (21°57'28.58" N./159°41'36.57" W.) and the seaward edge of eastern breakwater at the harbor's entrance (21°57'27.19" N./159°41'41.34" W.); Kilauea Point Cliff area delineated by all terrestrial coastlines located between 22°13'50.27" N./159°24'07.42" W. east around to 22°13'50.97" N./159°24'05.68" W.; Na Pali coast cliffs delineated by the mouth of the Hanakapiai stream (22°12'30.35" N./159°35'53.00" W.) south west to the

mouth of the Kalalau Stream (22°10'43.33" N./159°39'03.42" W.); Nawiliwili Harbor delineated as all terrestrial coastlines between Kukii Point Light (21°57'23.80" N./159°20'52.70" W.) south to where the southern breakwater meets the shoreline (21°56'54.65" N./159°21'03.15" W.) and all waters inshore of a line drawn from Nawiliwili Harbor Breakwater Light (21°57'11.68" N./159°20'54.94" W.) east to Kukii Point Light (21°57'23.80" N./159°20'52.70" W.) (*i.e.*, the harbor's USCG defined COLREG line); Hanapepe Bay and Port Allen delineated by all terrestrial coastlines between the Hanapepe Light (21°53'34.55" N./159°36'15.55" W.) east to where the Hanapepe breakwater meets the shoreline to the east (21°53'54.97" N./159°35'14.50" W.) and all waters inshore of the line drawn from Hanapepe Light (21°53'34.55" N./159°36'15.55" W.) east to Hanapepe Bay Breakwater (21°53'49.10" N./159°35'27.25" W.) (*i.e.*, the harbor's USCG defined COLREG line); Waikaea Canal delineated by all terrestrial coastline, structures and waters inshore of the line drawn from the seaward edge of the southern breakwater at the mouth of the canal (22°04'14.7" N./159°18'58.98" W.) north to the seaward edge of the northern breakwater at the mouth of the canal (22°04'16.41" N./159°18'58.00" W.); Wailua Canal delineated as all coastline and waters located inshore of the bridge crossing the Wailua River or a line drawn between 22°02'41.13" N./159°20'11.95" W. south to 22°02'44.27" N./159°20'10.93" W.

(iv) Oahu—Areas identified as not included in the designation of this specific area are defined as the following locations and are delineated by the identified boundaries: Pearl Harbor to Kapua Channel delineated by all terrestrial coastlines between Keahi point (21°18'57.95" N./157°58'42.82" W.) east to eastern edge of the Kapua channel (21°15'28.77" N./157°49'07.51" W.) and all waters out to depth of the 3 fathoms between the line drawn from Keahi point (21°18'57.95" N./157°58'42.82" W.) to meet the 3 fathom contour following the 3 fathom contour east to a line drawn from the eastern edge of the Kapua channel (21°15'28.77" N./157°49'07.51" W.) out to meet the 3 fathom contour; Haleiwa Harbor delineated by all terrestrial coastlines between where the eastern breakwater meets the coastline (21°35'47.44" N./158°06'16.15" W.) west to where the western breakwater meets the coastline (21°35'42.59" N./158°06'25.19" W.) and all waters in the harbor inshore of the line drawn between breakwater Light 6

(21°35'47.63" N./158°06'22.42" W.) and the seaward edge of the eastern breakwater (21°35'47.44" N./158°06'16.15" W.); Maunaloa Bay and Hawaii Kai Harbor delineated as all coastline and waters located inshore of the line drawn between 21°16'53.22" N./157°43'21.77" W. east to the point 21°15'49.13" N./157°42'41.45" W.; Kalaheo Barbers Point delineated as all coastline and waters located inshore of the line drawn between the harbor's entrance channel Light 6 (21°19'19.07" N./158°07'16.08" W.) north to harbor entrance channel Light 7 (21°19'23.81" N./158°07'19.82" W.); Kaneohe Bay delineated as all coastlines and waters located inshore of the line drawn from Pyramid Rock Light (21°27'44.12" N./157°45'48.69" W.) through the center of Mokolii Island to the shoreline (21°30'59.27" N./157°50'10.01" W.) (*i.e.*, the bay's USCG defined COLREG line); Waianae Small Boat harbor delineated by all coastlines between northern point where the breakwater meets the coastline 21°27'4.15" N./158°11'54.59" W. south through to the range front light (21°26'55.57" N./158°11'46.70" W.) and all waters inside the harbor located inshore of the line drawn between the range front light (21°26'55.57" N./158°11'46.70" W.) west to the breakwater Light 1 described by the USCG at (21°26'50.68" N./158°11'48.90" W.).

(v) Maui Nui—Areas identified as not included in the designation of this specific area are defined as the following locations and are delineated by the identified boundaries: Hana wharf and ramp, Maui is delineated by all terrestrial coastlines from 20°45'18.53" N./155°58'56.32" W. east to 20°45'19.93" N./155°58'54.12" W.; Kahului Harbor is delineated by all terrestrial coastline between where the hardened shoreline meets the beach to the west of the harbor (20°53'53.05" N./156°28'47.87" W.) east to where the hardened shoreline meets the beach to the east of the harbor (20°53'49.07" N./156°27'38.84" W.) and all waters located inshore of the line drawn between the west breakwater Light 4 (20°54'01.16" N./156°28'26.82" W.) east to the east breakwater Light 3 (20°54'02.36" N./156°28'17.43" W.) (*i.e.*, the harbor's USCG defined COLREG line); Kihei boat ramp, Maui is delineated by all terrestrial coastlines between 20°42'31.34" N./156°26'46.95" W. south to 20°42'27.19" N./156°26'46.13" W. and all waters in the harbor located inshore of the line drawn between 20°42'31.34" N./156°26'46.95" W. west to the seaward edge of the northern point on the breakwater at the harbor entrance

(20°42'30.29" N./156°26'48.46" W.); Lahaina harbor, Maui is delineated by all terrestrial coastlines between 20°52'21.63" N./156°40'44.05" W. south to 20°52'11.67" N./156°40'38.53" W. and all waters in the harbor located inshore of the line drawn from 20°52'21.63" N./156°40'44.05" W. to the seaward edge of the breakwater at the harbor entrance (20°52'18.18" N./156°40'45.33" W.); Maalaea Harbor is delineated by all terrestrial coastlines between where the western hardened shoreline meets the coast (20°47'23.65" N./156°30'49.85" W.) east to where the eastern hardened shoreline meets the coast (20°47'32.07" N./156°30'34.24" W.) and all waters in the harbor located inshore of the line drawn from the seaward edge of the west breakwater at the harbor entrance (20°47'24.74" N./156°30'39.18" W.) east to the seaward edge of the east breakwater at the harbor entrance (20°47'24.59" N./156°30'36.41" W.); Mala wharf and ramp, Maui is delineated by all hardened structures and coastline between the point where the hardened structures of the wharf meets the coastline on the south side of the wharf (20°53'05.20" N./156°41'12.47" W.) north to the southern edge of the Kahoma stream (20°53'07.86" N./156°41'10.78" W.); Nakalahale cliff region, Lanai is delineated by all coastline between 20°44'31.86" N./156°52'46.92" W. east to 20°45'05.8458" N./156°52'00.8214" W.; Kaholo cliff region, Lanai is delineated by all coastline between 20°46'40.33" N./156°59'19.02" W. south to 20°44'17.52" N./156°58'03.36" W.; Manele Harbor, Lanai is delineated by all terrestrial coastlines from where the Manele Harbor breakwater meets the coastline (20°44'29.34" N./156°53'15.88" W.) north to 20°44'34.95" N./156°53'15.45" W. and all waters located inshore of a line drawn between the seaward extension of the breakwater (20°44'30.38" N./156°53'16.33" W.) north to 20°44'34.95" N./156°53'15.45" W.; Kamalapa Harbor, Lanai is delineated by all terrestrial coastline between 20°47'29.37" N./156°59'20.04" W. south to 20°47'07.94" N./156°59'21.51" W.; Haleolono Harbor, Molokai is delineated by all hardened structures and coastline between 21°05'13.04" N./157°15'03.68" W. east to 21°05'04.43" N./157°14'54.82" W. and all waters located inshore of the line drawn between the seaward edge of the west breakwater 21°05'01.21" N./157°14'58.95" W. east to the seaward edge of the east breakwater 21°05'04.43" N./157°14'54.82" W.; Kaunakakai Pier, Molokai is delineated by all terrestrial coastline between 21°05'14.83" N./

157°01'30.42" W. east to 21°05'09.12" N./157°01'23.05" W.; and Kalaupapa Harbor is delineated by all terrestrial coastline between 21°11'26.09" N./156°59'04.76" W. south to 21°11'23.57" N./156°59'04.12" W.

(vi) Hawaii—Areas identified as not included in the designation of this specific area are defined as the following locations and are delineated by the identified boundaries: Hilo harbor delineated by all water inshore of a line drawn from the seaward extremity of the Hilo Breakwater 265° true (as an extension of the seaward side of the breakwater) (19°44'34.53" N./155°04'29.98" W.) west to the shoreline 0.2 nautical mile north (19°44'28.74" N./155°05'23.80" W.) of Alealea Point or the harbor's USCG defined COLREG line and delineated by all terrestrial coastlines between 0.2 nautical mile north (19°44'28.74" N./155°05'23.80" W.) of Alealea Point east to 19°43'55.88" N./155°03'01.68" W.; Honokohau harbor delineated by all terrestrial coastlines and waters inshore and inland of the line drawn between the Honokohau entrance channel Light 3 (19°40'11.52" N./156°01'37.84" W.) and the Honokohau entrance channel Light 4 (19°40'09.41" N./156°01'35.90" W.) Kailua-Kona Wharf delineated by all coastlines and waters located inshore of the line drawn between 19°38'17.09" N./155°59'53.05" W. east to 19°38'17.69" N./155°59'39.43" W.; Kawaihae Harbor all coastlines and hardened structures located between Kawaihae Light (20°02'29.12" N./155°49'58.21" W.) south to 20°01'42.29" N./155°49'25.20" W. and all waters located inshore of the line drawn between Kawaihae Light (20°02'29.12" N./155°49'58.21" W.) and the seaward extremity of the Kawaihae breakwater Light 6 (20°02'14.21" N./155°50'02.00" W.); Keauhou boat harbor all terrestrial coastlines between 19°33'39.63" N./155°57'45.06" W. east to 19°33'42.89" N./155°57'42.69" W.; Mahukona Harbor all coastlines and structures located between 20°10'59.62" N./155°54'03.57" W. east to 20°11'02.21" N./155°54'01.99" W.; and the active lava flow areas along the coastline.

(b) *Essential Features*: The essential features for the conservation of the Hawaiian monk seal are:

(1) *Areas with characteristics preferred by monk seals for pupping and nursing*. Preferred pupping areas generally include sandy, protected beaches, which are located adjacent to shallow sheltered aquatic areas. Terrestrial pupping habitat may incorporate various substrates including sand, shallow tide-pools, coral rubble, or rocky substrates as long as these substrates provide accessibility to seals

for hauling out. Characteristics of preferred sites may also incorporate areas with low lying vegetation utilized by the pair for shade or cover.

(2) *Shallow, sheltered aquatic areas adjacent to coastal locations preferred by monk seals for pupping and nursing.*

Sheltered marine areas provide protection for the mom and pup pair from predators and extreme weather events, as well as provide protected habitat necessary for newly weaned pups to learn to forage. Characteristics of the sheltered aquatic sites may include reefs, tide pools, gently sloping beaches, and shelves or coves that provide refuge from storm surges and predators.

(3) *Marine areas from 0 to 500 m in depth preferred by juvenile and adult monk seals for foraging.* Foraging habitat is necessary for the growth, and viability of all life stages. Foraging habitat may range from barrier reefs,

leeward slopes of reefs and islands, submarine ridges, nearby seamounts, submerged reefs and banks, and deep coral beds. Preferred foraging habitat of adult monk seals is characterized by sand terraces and talus slopes. These habitats provide substrate and materials for preferred benthic and cryptic prey species to hide.

(4) *Areas with low levels of anthropogenic disturbance.* Areas with low levels of anthropogenic disturbance are necessary to prevent the abandonment of preferred haul-out sites essential for pupping and nursing, and hauling out.

(5) *Marine areas with adequate prey quantity and quality.* Food resources of adequate abundance and safe from contaminants are required for the growth and survival of all of the life stages of the Hawaiian monk seal. Prey resources may include a variety of species including some benthic and

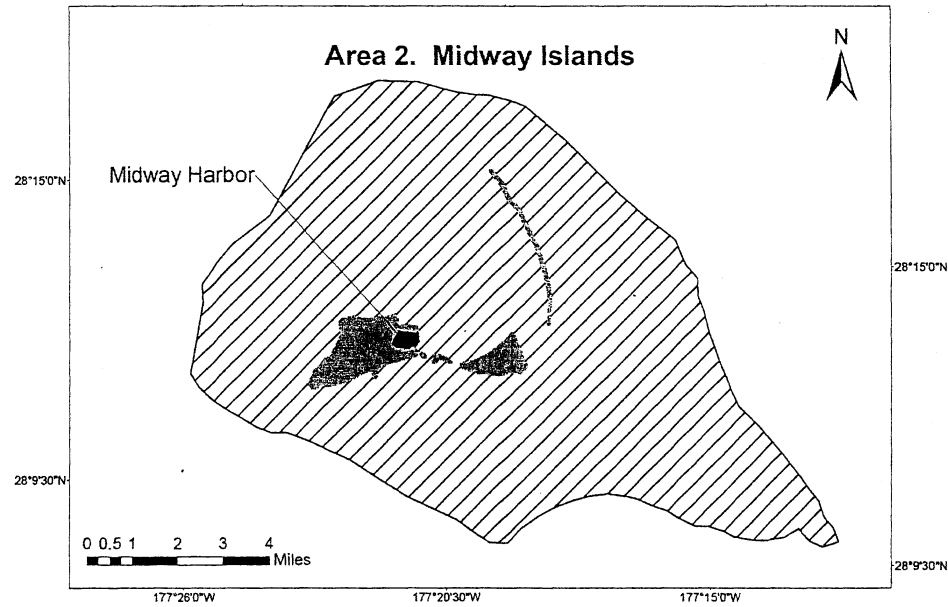
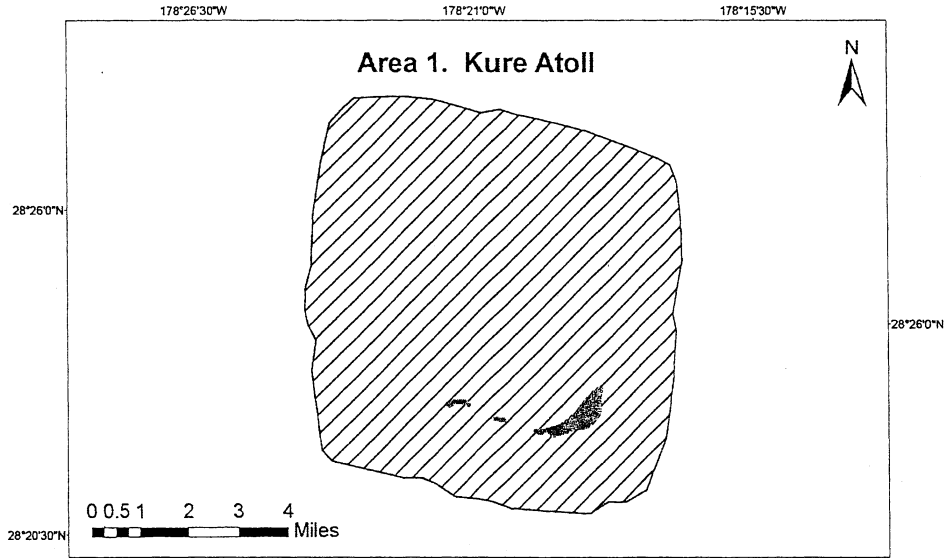
offshore teleosts, cephalopods, and crustaceans.

(6) *Significant areas used by monk seals for hauling out, resting or molting.* Haul-out sites are generally characterized by sandy beaches, sand spits, or low shelving reef rocks accessible to seals. Sites favored by seals may also reflect areas that are remote in nature or with low levels of human disturbance. Haul out areas provide necessary habitat for normal behavior, growth, and viability of all life stages. Critical habitat does not include manmade structures (e.g., docks, seawalls, piers, fishponds, roads, pipelines) and the land on which they are located existing within the boundaries on the effective date of this rule.

(c) Overview maps of Hawaiian monk seal critical habitat follow:

**BILLING CODE 3510-22-P**

Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 1-2

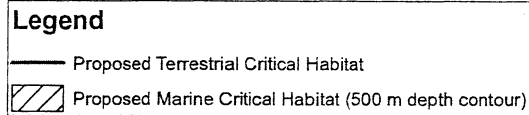
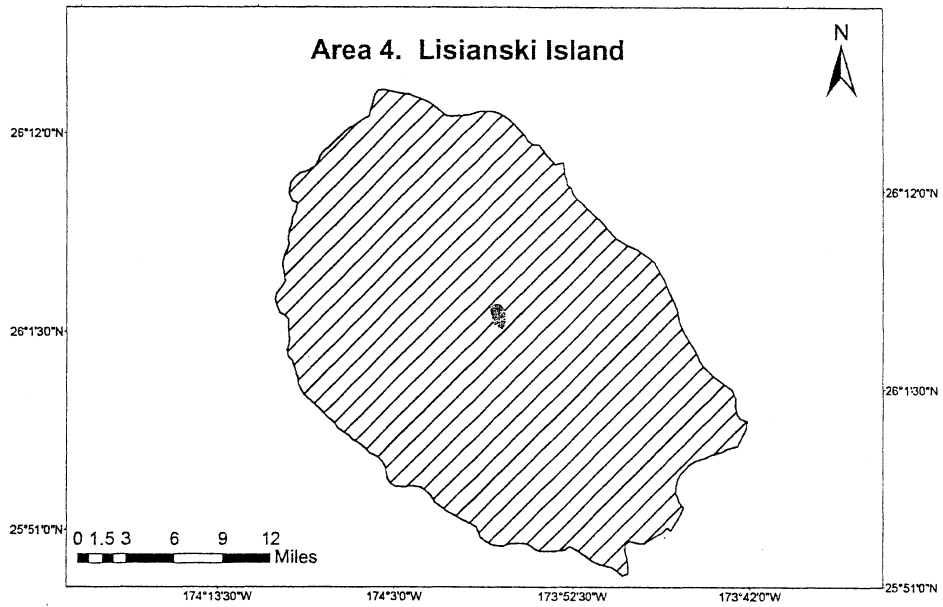
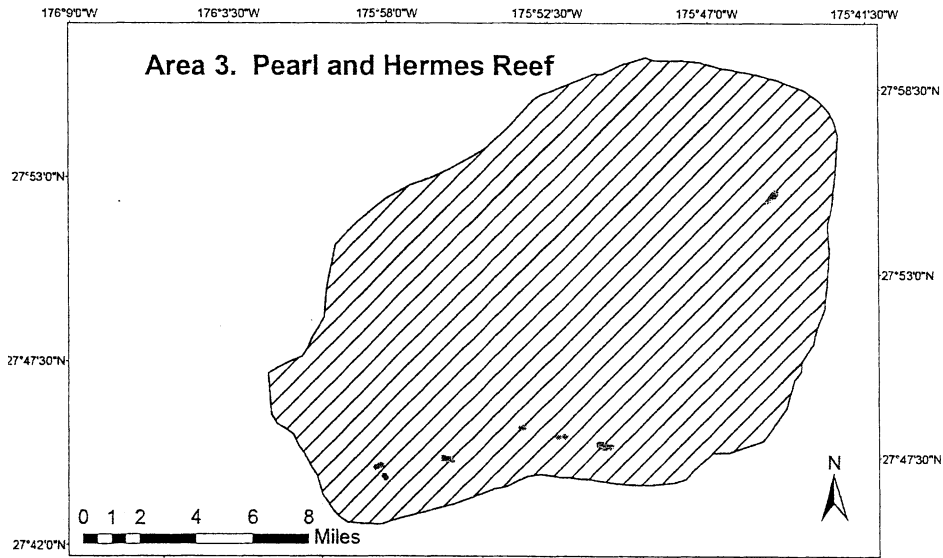


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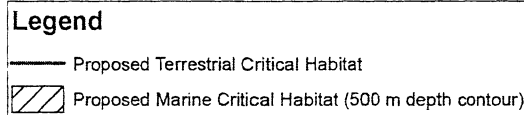
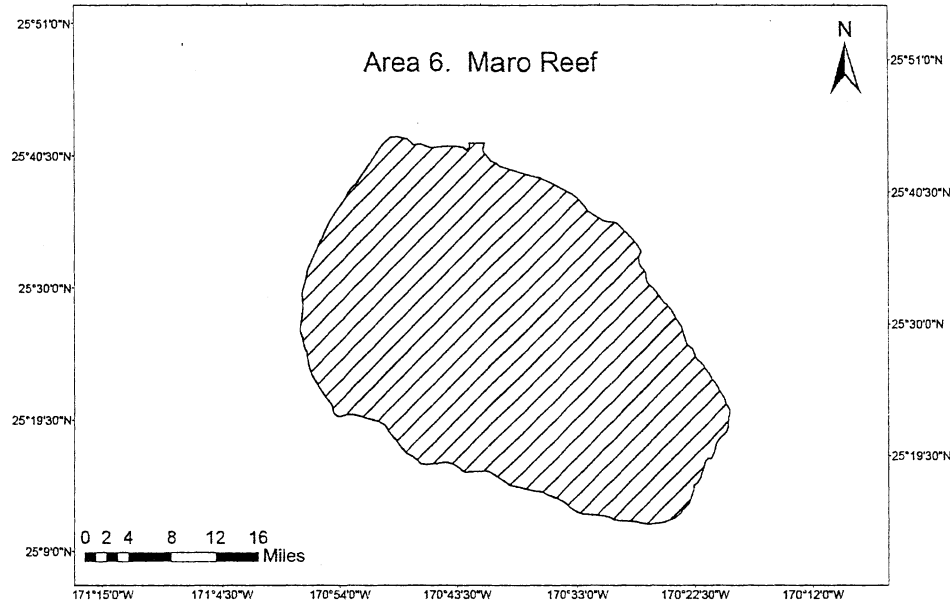
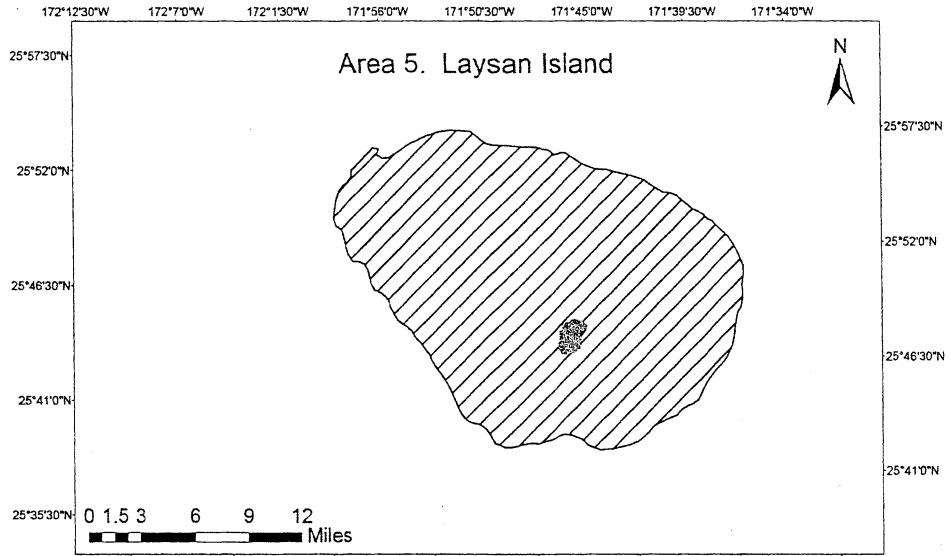
- Proposed Terrestrial Critical Habitat
- ▨ Proposed Marine Critical Habitat (500 m depth contour)
- Area Not Included in Critical Habitat



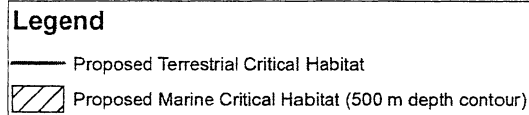
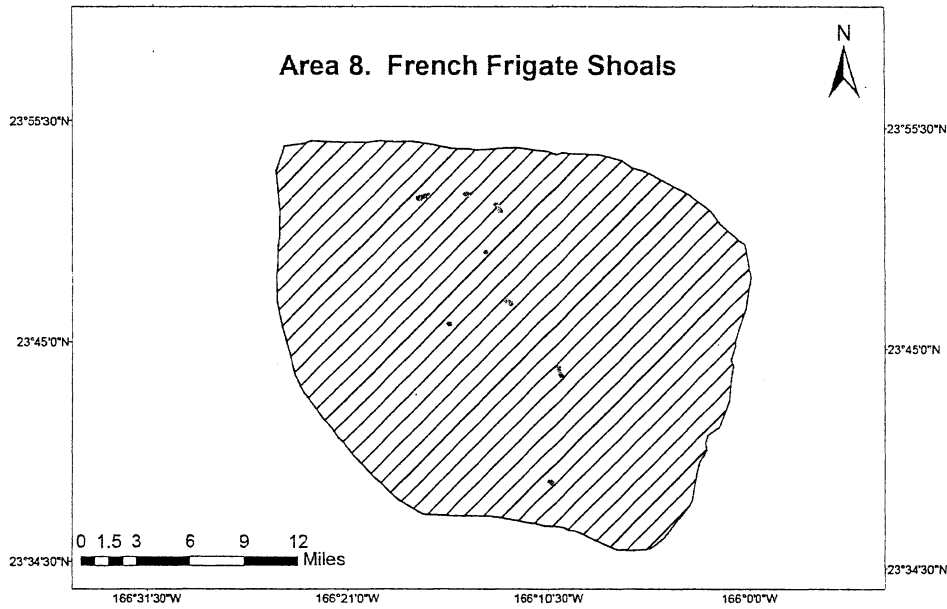
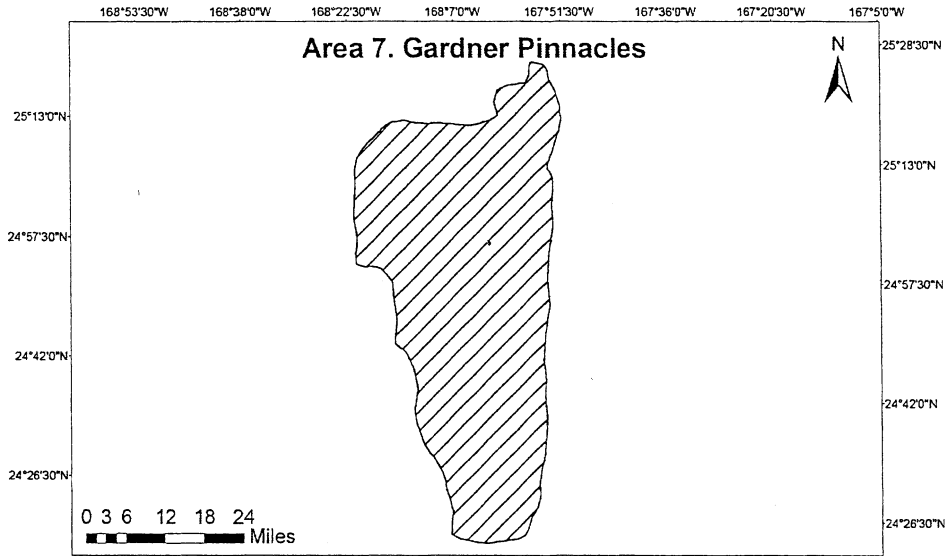
Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 3-4



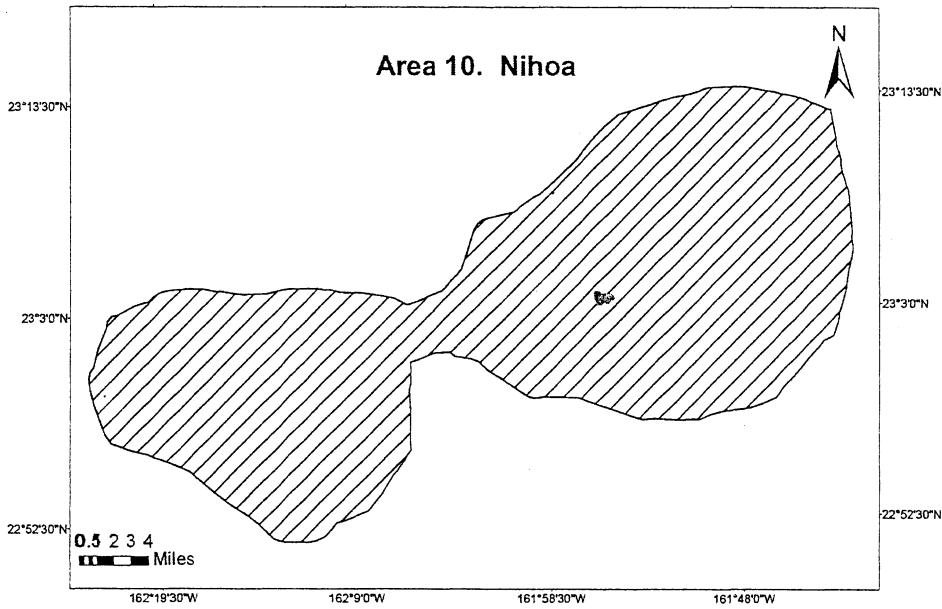
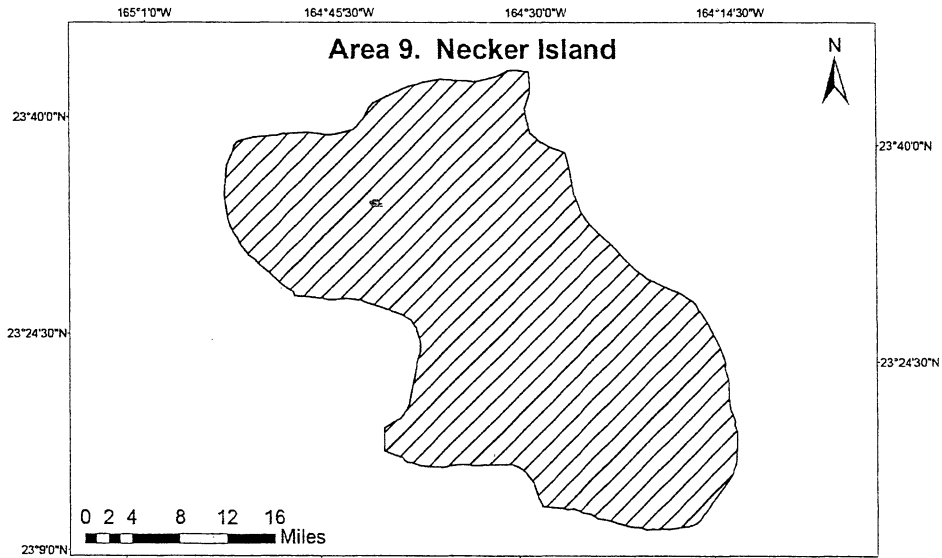
Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 5-6



Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 7-8



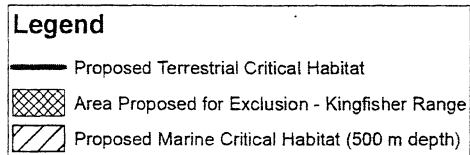
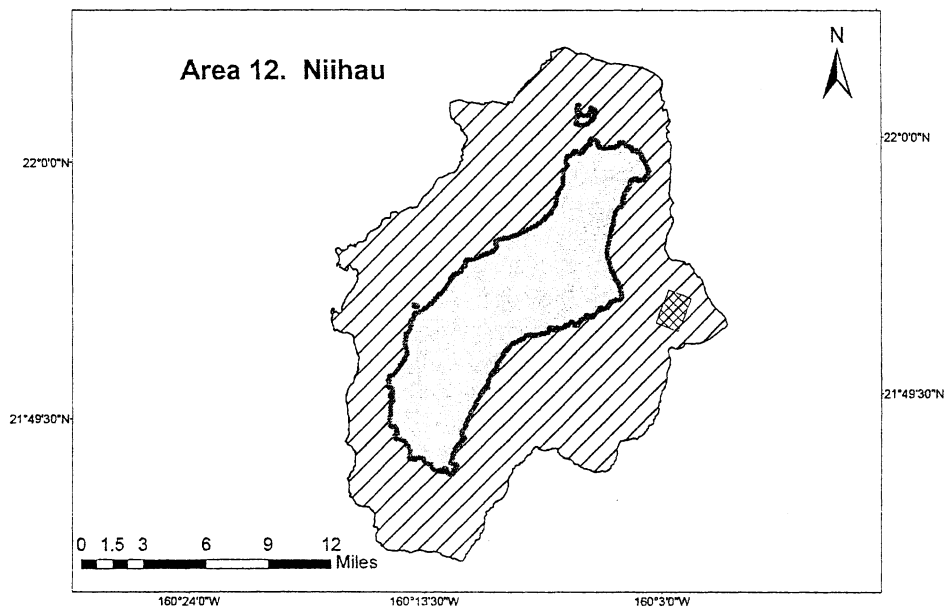
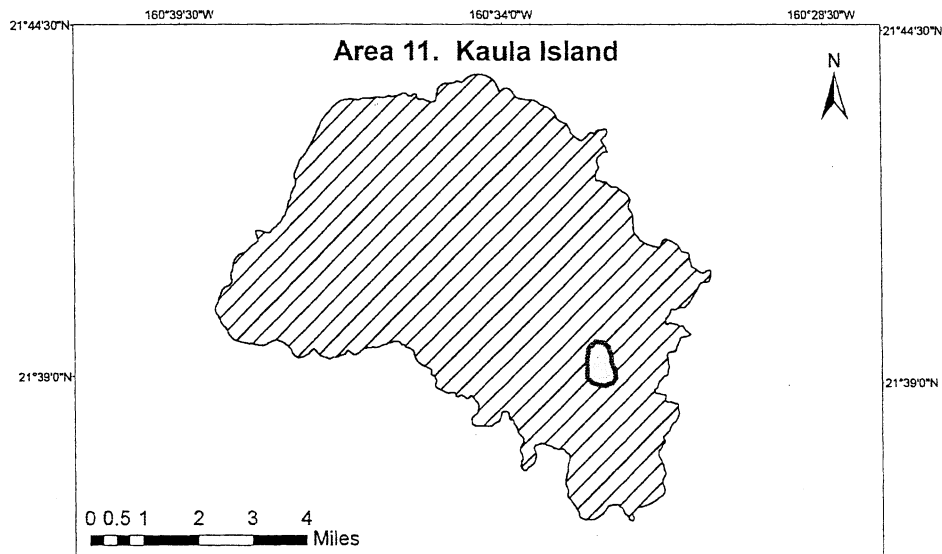
Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 9-10



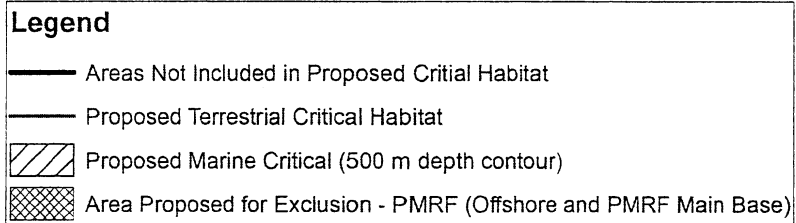
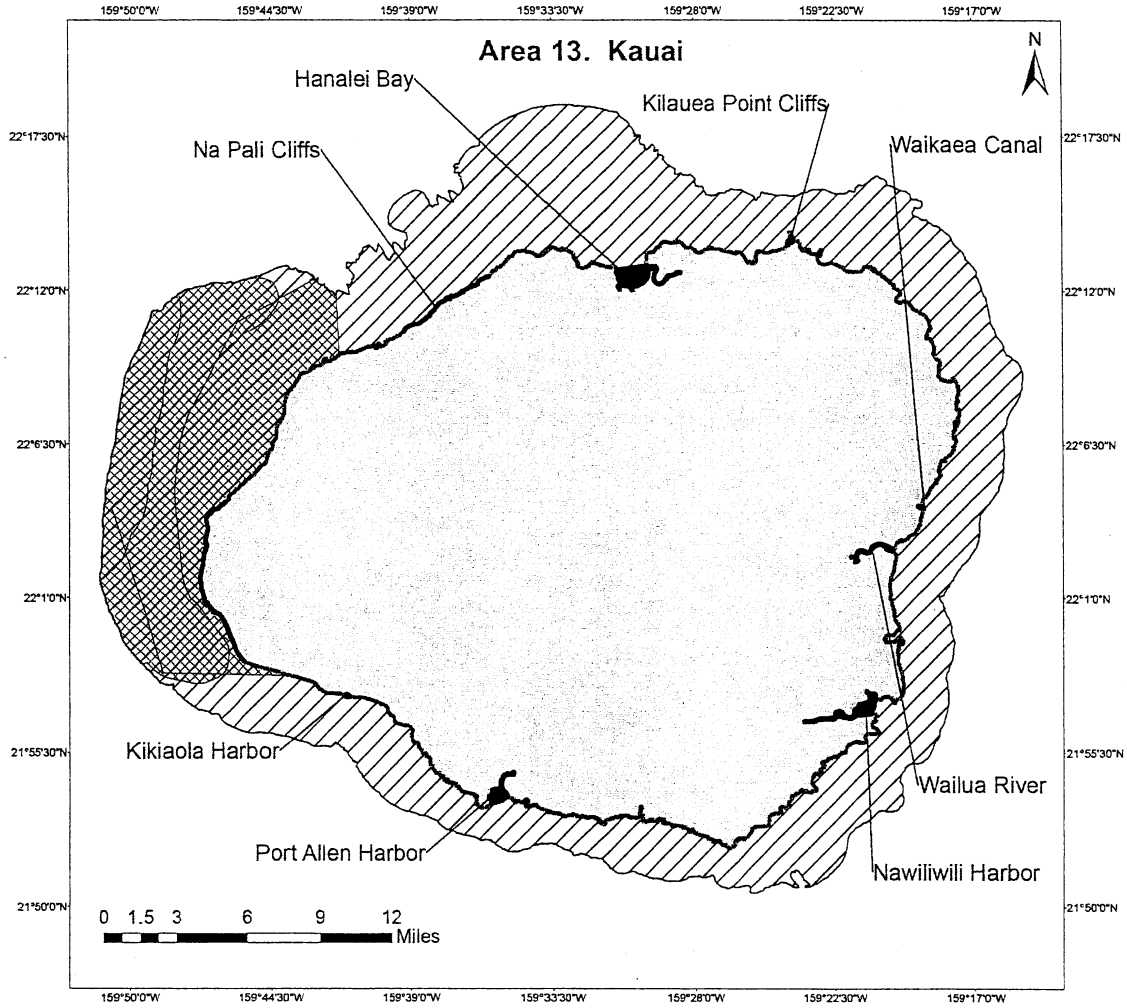
**Legend**

- Proposed Terrestrial Critical Habitat
- Proposed Marine Critical Habitat (500 m depth contour)

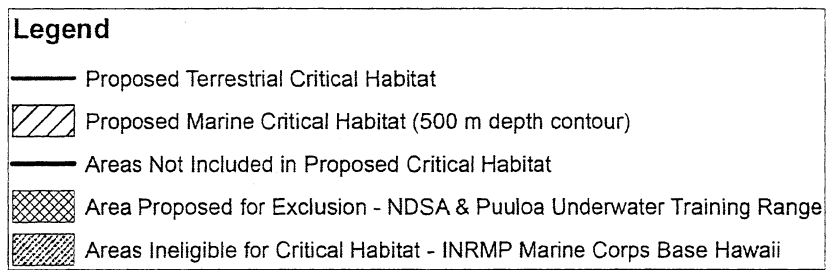
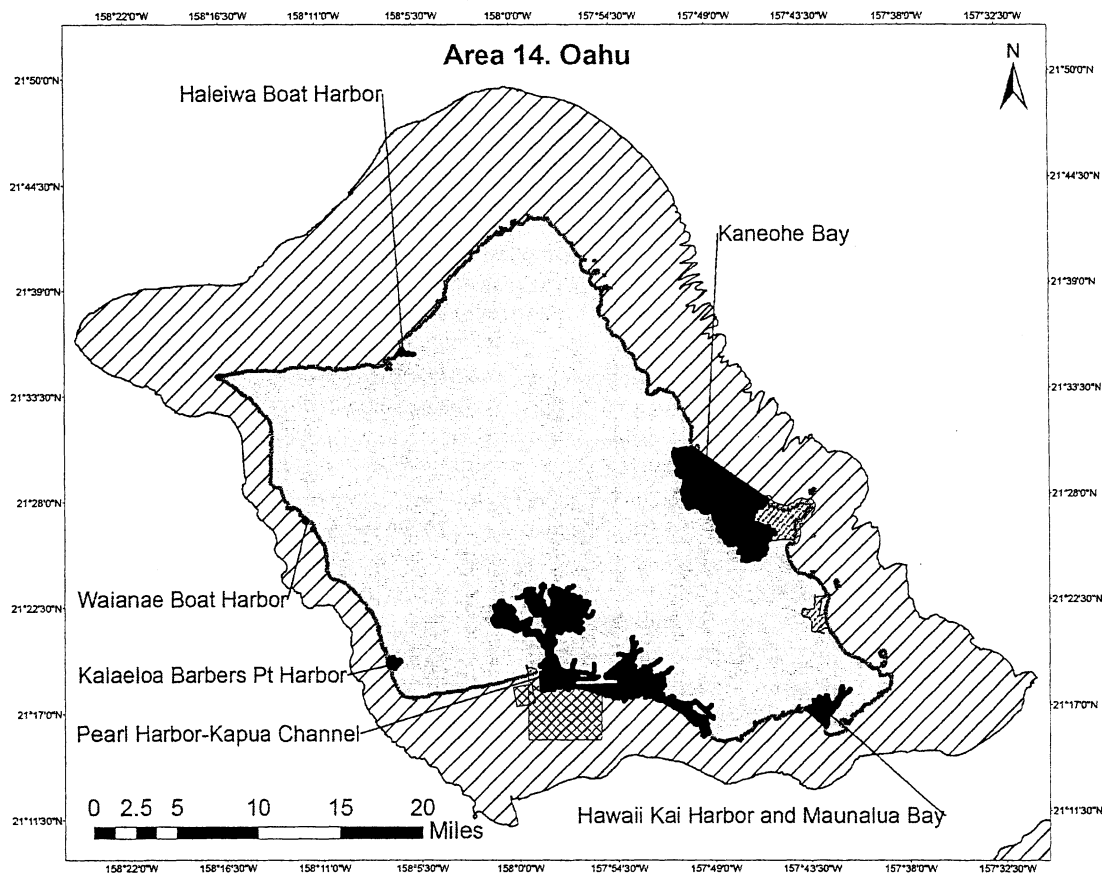
Proposed Hawaiian Monk Seal Critical Habitat  
Specific Areas 11-12



### Proposed Hawaiian Monk Seal Critical Habitat Specific Area 13

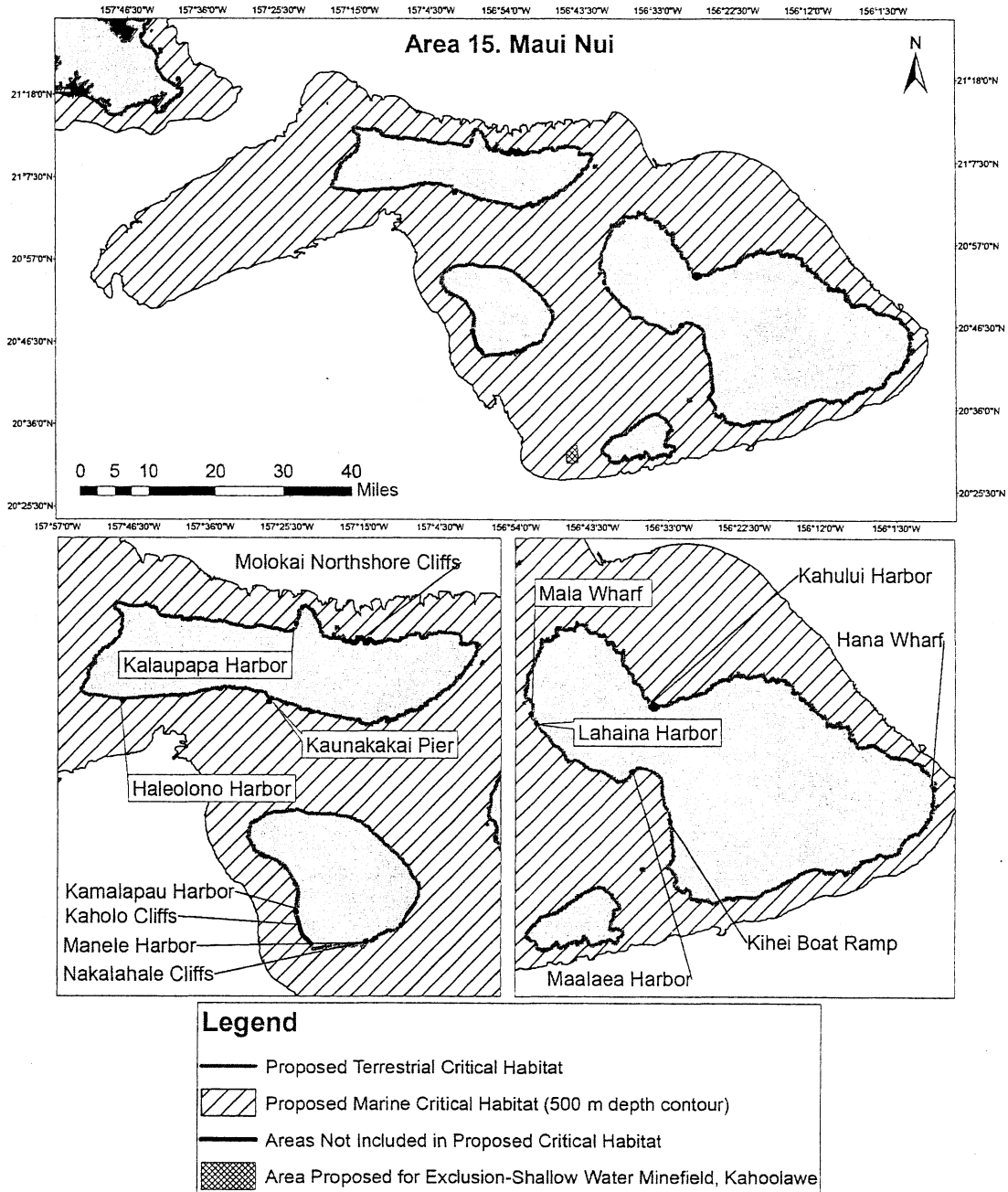


**Proposed Hawaiian Monk Seal Critical Habitat  
Specific Area 14**

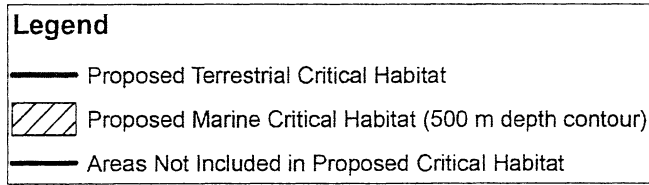
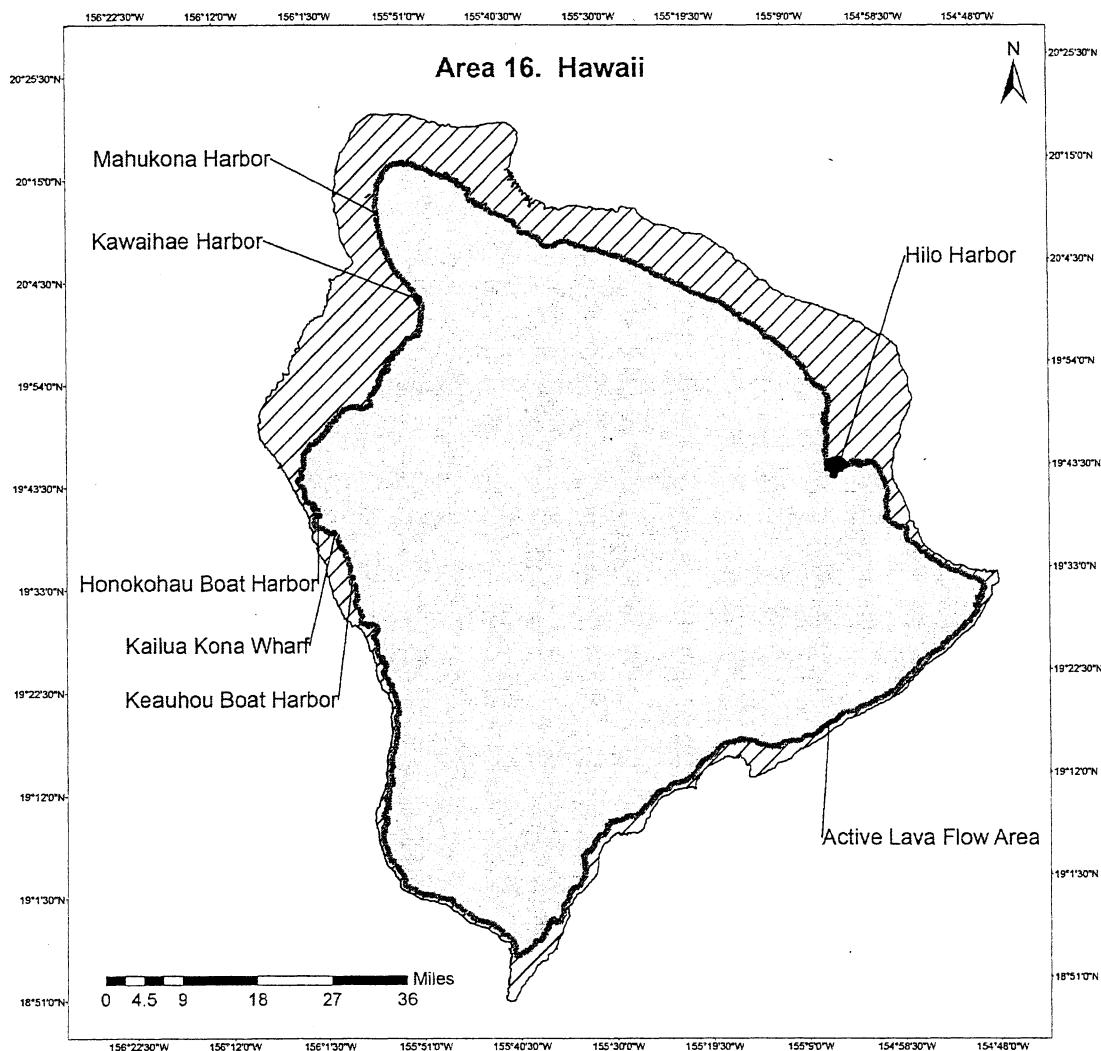




### Proposed Hawaiian Monk Seal Critical Habitat Specific Area 15



**Proposed Hawaiian Monk Seal Critical Habitat  
Specific Area 16**



[FR Doc. 2011-13381 Filed 6-1-11; 8:45 am]

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